

# 2024 Annual Drinking Water Quality Report

Mountain Lakes Water Company PWSID# 2079590

## INTRODUCTION

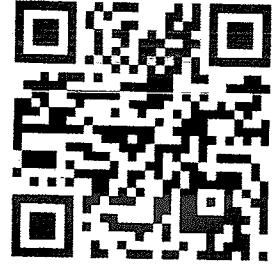
This Annual Drinking Water Quality Report for calendar year 2024 is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

If you have questions about this report or want additional information about any aspect of your drinking water or want to know how to participate in decisions that may affect the quality of your drinking water, please contact:

Mr. Larry Lamb or Mr. Eric Lamb at (434) 985-7504

Email: [esl64@embarqmail.com](mailto:esl64@embarqmail.com)

<https://mtnlakeswater.com>



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## GENERAL INFORMATION

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: (i) microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; (ii) inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; (iii) pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; (iv) organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; (v) 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 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 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 who are 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).

## SOURCE(S) and TREATMENT OF YOUR DRINKING WATER

The source of your drinking water is obtained from sixteen (16) active drilled groundwater wells located in Twin Lakes Subdivision and Greene Mountain Lake Subdivision. Storage facilities are located in both subdivisions. The water is treated with chlorine for disinfection. Additional treatment is provided to control visible effects from naturally occurring iron and manganese in some of our well sources.

The Virginia Department of Health conducted a source water assessment of our system in 2018. The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination. The report is available by contacting Mr. Larry Lamb, at the phone number or address provided elsewhere in this drinking water quality report.

## DEFINITIONS

In the data table and elsewhere in this report you will find many terms and abbreviations you might not be familiar with. The following definitions are provided to help you better understand these terms:

*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 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.

*Non-detects (ND)* - lab analysis indicates that the contaminant is not present

*Parts per million (ppm) or Milligrams per liter (mg/l)* - one part per million corresponds to one minute in two years or a single penny in \$10,000.

*Parts per billion (ppb) or Micrograms per liter* - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

*Parts per trillion (ppt) or Nanograms per liter (nanograms/l)* - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

*Picocuries per liter (pCi/L)* - picocuries per liter is a measure of the radioactivity in water.

*Action Level (AL)* - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

*Treatment Technique (TT)* - a required process intended to reduce the level of a contaminant in drinking water.

*Level 1 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 2 Assessment* - a very detailed study of the waterworks to identify potential problems and determine (if possible) why an *E. coli* PMCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

*Nephelometric Turbidity Unit (NTU)* - nephelometric turbidity unit is a measure of the clarity, or cloudiness, of water. Turbidity in excess of 5 NTU is just noticeable to the average person. Turbidity is monitored because it is a good indicator of the effectiveness of our filtration system.

*Variances and exemptions* - state or EPA permission not to meet an MCL or a treatment technique under certain conditions.

## QUALITY OF YOUR DRINKING WATER

Your drinking water is routinely monitored according to Federal and State Regulations for a variety of contaminants. The tables on the next pages show the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2024. The state 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 presented in the tables, though accurate, is more than one year old.

The U.S. Environmental Protection Agency sets MCL's at very stringent levels. In developing the standards, EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year life span. EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten thousand to one-in-a-million chance of having the described health effect for other contaminants.

## WATER QUALITY RESULTS

### Microbiological Contaminants

Contaminant	MCLG	MCL	No. of Samples Indicating Presence of Bacteria	Violation (Y/N)	Monthly Sampling	Typical Source of Contamination
<i>E. coli</i>	0	1 routine sample and a repeat sample are total coliform positive, and 1 is also <i>E. coli</i> positive	0	N	2024	Human and animal fecal waste

### Regulated Contaminants

Contaminant (units)	MCLG	MCL	Level Detected (Range)	Violation (Y/N)	Sampling Year	Typical Source of Contamination
Nitrate as N (mg/l)	10	10	4.56 (ND – 4.56)	N	2024	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (mg/l)	4.0	4.0	0.28 (ND – 0.28)	N	2023, 2024	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Barium (mg/l)	2	2	0.098 (ND – 0.098)	N	2024	Discharge of drilling waste; Discharge from metal refineries; Erosion of natural deposits
Alpha Emitters (pCi/l)	0	15	5.3 (ND – 5.3)	N	2022, 2023	Erosion of natural deposits
Beta Particle and Photon Radioactivity (pCi/l)*	0	50	7.3 (2.6 – 7.3)	N	2022, 2023	Decay of natural and man-made deposits
Combined Radium (pCi/l)	0	5	4.4 (0.4 – 4.4)	N	2022, 2023	Erosion of natural deposits

\*The PMCL for beta particles is 4 mrem/year. EPA considers 50 pCi/l to be the level of concern for beta particles.

### Lead and Copper Contaminants

Contaminant (units)	MCLG	MCL or TT	90 <sup>th</sup> Percentile (Range)	AL Exceeded	Samples >AL	Sampling Year	Typical Source of Contamination
Lead (ppb)	0	AL = 15	10.1 (ND – 15)	No	0 of 10	2024	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (mg/l)	1.3	AL = 1.3	0.571 (ND – 0.84)	No	0 of 10	2024	Corrosion of household plumbing systems; Erosion of natural deposits

### Disinfectant Residual

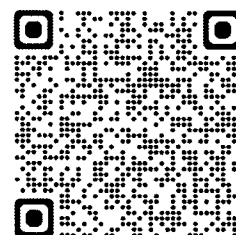
Disinfectant (units)	MRDLG	MRDL	Level Found (Range)	Violation (Y/N)	Sampling Year	Typical Source of Contamination
Chlorine as Cl <sub>2</sub> (mg/l)	4	4.0	1.1 (0.8 - 1.5)	N	Monthly 2024	Water additive used to control microbes

### Unregulated Contaminants

Contaminant (units)	MCLG	MCL	Range of Results	Violation (Y/N)	Sampling Year	Typical Source of Contamination
Sodium (mg/l)	NA	NA	5.56 – 14.7	N	2024	Erosion of natural deposits; de-icing salt runoff; water softeners
Iron (mg/l)	NA	NA	ND – 2.87	N	2024	Erosion of natural deposits
Manganese (mg/l)	NA	NA	ND – 1.10	N	2024	Erosion of natural deposits

### ADDITIONAL HEALTH INFORMATION FOR LEAD IN DRINKING WATER

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. Mountain Lakes Water Company is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact Mr. Larry Lamb, at (434) 985-7504. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.



### ADDITIONAL HEALTH INFORMATION FOR SODIUM IN DRINKING WATER

There is presently no established standard for sodium in drinking water. An EPA advisory recommends water containing 30 to 60 mg/L should not be used as drinking water due to esthetics such as taste and color. Water containing more than 20 mg/L should not be used by persons whose physician has placed them on severely restricted sodium diets.

## ADDITIONAL INFORMATION ON IRON AND MANGANESE

Some of our well sources contain elevated levels of iron and manganese, particularly the wells in the Greene Mountain Lakes area. These naturally occurring contaminants do not have health based standards but can cause problems with water discoloration. You can learn more about iron and manganese at the VDH website here:

<https://www.vdh.virginia.gov/content/uploads/sites/14/2023/04/Iron-and-Manganese-FAQs.pdf>.

Our waterworks is working with VDH to better treat our water and improve flushing to reduce these effects.

## VIOLATION INFORMATION

Our water system violated several drinking water regulations or standards in 2024. Even though these events were not an emergency, as our consumers you have a right to know what happened and what we did to correct each situation. We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards.

### Failure to Collect the Required Raw Water MPN Sample

According to VDH records we failed to collect multiple raw water MPN bacteriological samples. Raw water samples are required by VDH at varying frequencies to ensure that existing disinfection treatment is sufficient. None were collected and analyzed in the following time periods:

1. one was required during the 1<sup>st</sup> quarter (January-March) 2024 from Durham Well 2
2. one was required during the 4<sup>th</sup> quarter (October-December) 2024 from Durham Well 2
3. one was required during 2024 (yearly) from Twin Lakes Q4 WL1, however this well is offline.
4. one was required during May 2024 from Westwood Well 1

We have subsequently taken or are in process of taking the required samples.

**(Items 1 & 2 were not invoiced to Mountain Lakes Water as they were not submitted to the lab by VDH )**

### Failure to Submit a Corrective Action Plan for Significant Deficiencies On Time

On May 28, 2024, the Office of Drinking Water (ODW) notified Mountain Lakes Water Company of significant deficiencies identified during a March 13, 2024, sanitary survey inspection. ODW instructed that Mountain Lakes Water Company was required to submit a written Corrective Action Plan (CAP) to ODW by July 12, 2024. A proposed CAP was provided to Mountain Lakes Water Company with recommended deadlines, but neither this CAP or an alternative CAP was signed and returned to ODW by the deadline. We corrected this by signing and returning the CAP on July 22, 2024. We are continuing to address the deficiencies identified during the inspection.

## SERVICE LINE INVENTORY INFORMATION

In 2024 we developed a service line inventory as required by the EPA Lead and Copper Rule Revisions. None of our service lines are known to be made of lead or lead containing materials. Please call at the below phone number for details on how to access the service line inventory.

This Drinking Water Quality Report was prepared by Mountain Lakes Water Company with the assistance and approval of the Virginia Department of Health. All reportable data for the water system can be searched in the public Drinking Water Viewer (DWW) by accessing the portal at <http://www.vdh.virginia.gov/drinking-water/dww/>.

Signature: 

Date: 6-1-2025

A paper copy may be requested by calling Mountain Lakes Water at 434-985-7504 or 434-760-2172