



Town of Rocky Mount 2024 Annual Drinking Water Quality Report

INTRODUCTION

We are proud to present to you our Annual Drinking Water Quality Report for the calendar year 2024. The purpose of this report is to inform you about the quality of your drinking water. 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. If you have questions about this report, or if you 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 the Rocky Mount Water Department, Kevin Adkins, Water Plant Superintendent, 540-483-5747. Email address: kadkins@rockymountva.org. Regularly scheduled town council meetings occur on the 2nd Monday of each month at 6:00 P.M. at the Allen O. Woody Jr. Municipal Building.



A view of our twin settling basins. This is where most of the particulate matter is removed.

GENERAL INFORMATION :

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or human activity. Contaminants in source water may be naturally occurring substances or may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban stormwater runoff, residential uses, and many other types of activities. Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment.

The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

To ensure that tap water is safe to drink, EPA prescribes regulations which limit the number of certain contaminants in water and provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, can be naturally occurring or result from urban stormwater 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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

All drinking water, including bottled drinking 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 can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

VULNERABLE POPULATIONS :



Wildflowers living along the river bank

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

The source of your drinking water is the Blackwater River. Water from the river is clarified and disinfected through a multistage process. Poly-aluminum chloride and soda ash are mixed with the river water to cause microscopic particles to settle out. Water that has been through the settling process is then filtered, chlorinated, and pH adjusted. Polyphosphate is added to protect pipes from lead corrosion. Fluoride is also added at a recommended level to promote healthy teeth.



There is a connection with the Western Virginia Water Authority which can be utilized in case of emergencies or as needed. During 2024, 3,648,010 gallons of water was used from this connection. Most of the water used from WVWA comes from the Spring Hollow Plant, although other contributions are possible. The testing data from Spring Hollow is included at the end of this report. If you would like more information about WVWA, please follow link to view their water quality report:

[Water Quality Reports | Western Virginia Water Authority \(westernvawater.org\)](https://westernvawater.org/Water-Quality-Reports)

SOURCE AND TREATMENT OF YOUR DRINKING WATER

A copy of the Source Water Assessment is available upon request by contacting the Water Plant Superintendent at 540-483-5747.

Our source water is taken from the river day to day. The banks on average are 100 feet wide and demand can be high during our



Downstream of the Blackwater Dam, the rocks have been restored for safety after the two Hurricanes washed them away in 2018. All canoes must portage around this dam.

produced and in the system, we will shut the plant down and allow flood waters to pass. Our experienced staff can make high-quality drinking water when the river is less than 100 feet wide.

WATER QUALITY RESULTS:

We routinely monitor for various contaminants in the water supply to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment.

Inorganic Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source of Contamination
Nitrate-Nitrite (ppm)	10	10	1.2	No	Jan 2024	Runoff from fertilizer use; Leaching from septic tanks, agricultural runoff
Fluoride (ppm)	4	4	Highest: 1.4 Range: 0.40-1.4	No	Daily	Water additive which promotes strong teeth
Barium (ppm)	2	2	0.0207	No	Jan 2024	Erosion of natural deposits
Turbidity (NTU)	TT < 0.30 NTU	< 0.3 in 95% of monthly samples	100% < 0.3 NTU Highest 0.08 Range 0.02 – 0.08	No	Daily	Soil Runoff - Turbidity is a measure of water cloudiness and an indicator of filter effectiveness
Lead and Copper						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Exceeded	Date of Sample	Typical Source of Contamination
Lead - (mg/L)	0	AL=15	0.0004 (90th percentile) Range: ND to 6.8	No	July 2023	Corrosion of household plumbing systems
Copper - (mg/L)	1.3	AL=1.3	0.0824 (90th percentile) Range: 0.002 to 0.172	No	July 2023	Corrosion of household plumbing systems
Microbiological Contaminants						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found	Violation	Date of Sample	Typical Source of Contamination
Total Coliform Bacteria	0	One positive monthly	No Detection	No	Tested Monthly	Naturally present in the environment
Disinfection Byproducts						
Contaminant / Unit of Measurement	MCLG	MCL	Level Found / Range	Violation	Date of Sample	Typical Source of Contamination

HAA5s (Total Haloacetic Acids) ppb	N/A	60 (Ave)	Ave: 40.0 Range: 15 to 56	No	Quarterly	By-product of drinking water disinfection
TTHMs (Total Trihalomethanes) ppb	N/A	80 (Ave)	Ave: 49.0 Range: 17-112	No	Quarterly	By-product of drinking water disinfection
Chlorine (ppm)	MRDLG =4	MRDL = 4	Highest: 2.9 Range 0.7-2.9	No	Tested Daily	Water additive used to control microbes
Total Organic Carbon	TT	TT	RAA TOC Removal: 1.00 Effluent Results=<1	No	Tested Quarterly	TOC contributes to the formation of DBPs and is naturally present in the environment
Radiological Contaminants						
<i>Contaminant / Unit of Measurement</i>	<i>MCLG</i>	<i>MCL</i>	<i>Level Found / Range</i>	<i>Violation</i>	<i>Date of Sample</i>	<i>Typical Source of Contamination</i>
Combined Radium	0	5 pCi/l	0.86 pCi/l	No	Jan 2023	Erosion of natural deposits

Unregulated Contaminants						
<i>Contaminant / Unit of Measurement</i>	<i>MCLG</i>	<i>MCL</i>	<i>Level Found / Range</i>	<i>Violation</i>	<i>Date of Sample</i>	<i>Typical Source of Contamination</i>
Sodium (ppm)	N/A	N/A	11.2	No	Jan 2024	Sodium Carbonate added for pH adjustment.
Manganese (mg/l)	0.05	0.05	No Detection	No	Jan 2024	Naturally present in the environment

The U.S. Environmental Protection Agency sets MCLs 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 the one-in-one-million chance of having the described health effect for other contaminants.

ADDITIONAL TESTING INFORMATION :

The Rocky Mount Water Department monitors for other contaminants not included in the table above. Non-detects are not required to be reported in the table, but we believe that you would be interested to know what was not detected in your drinking water. The following is a partial list of contaminants that were tested for but were not detected in your drinking water: cyanide, various pesticides and herbicides, volatile organic chemicals and other solvents, E. Coli, mercury, arsenic, chromium, and nickel.

*EPA requires surface water sources to be tested for E.coli and Cryptosporidium every ten years. In September 2017, we began our latest round of Cryptosporidium sampling. During testing in 2020 5 of our 12 raw water samples did test for the prescence of Cryptosporidium. Please keep in mind that these are samples collected directly from the river or our raw water sample tap and not our finished drinking water (which contains no E.coli).

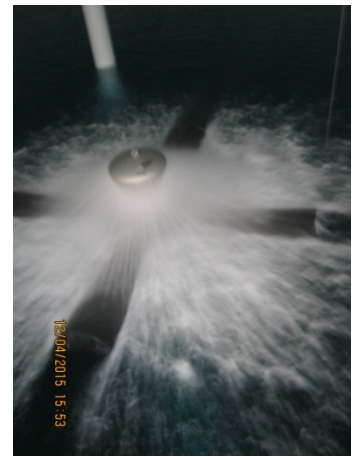
2024 UNREGULATED CONTAMINANT MONITORING RULE (UCMR 5)/ PFAS SAMPLING INFORMATION:

The Unregulated Contaminant Monitoring Rule (UCMR5) is part of the Safe Drinking Water Act, which requires the EPA to monitor for contaminants that may be present in drinking water but are not yet subject to National Primary Drinking Water Regulations (NPDWR). As part of compliance with the UCMR5, the Rocky Mount Water Department had to sample for PFAS and Lithium quarterly during the 2024 calendar year. We are pleased to report that the results of this sampling showed that we were <MRL (Method Reporting Limit) on all contaminants tested for. The Method Reporting Limit (MRL) is the lowest amount (minimum concentration) of a chemical detected in a sample that can be considered reliable.

ADDITIONAL HEALTH INFORMATION :

Certain contaminants (such as Cryptosporidium, radon, arsenic, nitrate, and lead), if present in your drinking water, may be of special concern to consumers. If any of those contaminants are present, health information is provided below to inform you about them.

- **Disinfection by-products** (DBPs) such as trihalomethanes (TTHMs) and Haloacetic acids (HAAs) are formed when chlorine is used to disinfect water. Some people who drink water containing trihalomethanes or haloacetic acids over the MCL, over many years, may have an increased risk of getting cancer. The Town has been working diligently to reduce DBPs in our distribution system. In 2015 we installed an aeration system in our one-million-gallon water tank. We also use automatic fire hydrant flushers to improve water circulation in strategic locations. An additional aeration system was added to Scuffling Hill Tank in September of 2017. We have seen a significant reduction in both HAA5 and TTHM formation since we implemented flushing at Doe Run and Hollywood Drive in 2018. 2024 HAA5 and TTHM levels remained similar to 2023 levels.



- **ADDITIONAL INFORMATION FOR LEAD AND SERVICE LINE INVENTORY :**

Rocky Mount has had very good lead and copper test results over the years. Due to our good performance, the Town is only required to sample every three years under current EPA regulations. After the Flint, Michigan incident, we reviewed our data and adjusted to further improve our water quality. We sampled for lead and copper in July 2023. It should be noted that EPA has updated the current Lead and Copper rule, while this doesn't affect our 2023 sampling period, future sampling periods will be somewhat different. There will be more information on that as we continue to receive guidance from The Virginia Department of Health and the EPA. However, one of the first steps is for us to conduct a lead service line (LSL) inventory throughout the Town. The Service Line Inventory was completed and submitted to the Virginia Department of Health by the October 16, 2024 deadline. You can review the Service Line Inventory on the Town's website at the following link: rockymountva.org/311/Service-Line-Material-Inventory-Spreadsh

- 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. The Town of Rocky Mount 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 The Town of Rocky Mount. 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>.

VIOLATION INFORMATION:

- We are pleased to report that we had no violations during the 2024 calendar year and will continue to strive for this level of performance and dedication in the 2025 calendar year

DEFINITIONS

The following definitions are provided to help you better understand the terms used in the table on page 3.

- Non-detects (ND) - lab analysis indicates that the contaminant is not detectable, based on the limits of the analytical equipment.
- Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one penny in \$10,000.
- Parts per billion (ppb) or Micrograms per liter (g/l) - one part per billion corresponds to one penny in \$10,000,000.
- Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.
- Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the cloudiness of water. Turbidity over 5 NTU is just noticeable to the average person.
- Action Level (AL) - the amount of a contaminant which 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.
- 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 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.
- Primary Maximum Contaminant Level (PMCL) - the highest level of a contaminant that is allowed in drinking water based on health considerations. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- Secondary Maximum Contaminant Level (SMCL) - the highest level of a contaminant that is allowed in drinking water based on aesthetic considerations.
- Maximum Residual Disinfection 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 of 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.



One of the things we do to keep water from becoming stale is to flush hydrants. This is also beneficial to our fire department as it exercises valves and provides a record of pressure and flow that can be expected from each hydrant.

Tips and tricks to improve your water at home:

- Clean or replace your aeration screens. Those little screens on the end of your faucet can catch debris and breed bacteria. Clean them or replace them at least once a year.
- Don't use water from your hot water tap to drink or cook with. Water heaters can be sources of heavy metals and bacteria if you need hot water for cooking, heat cold water on the stove in the old fashion way.
- If you've been away for a few days, flush your taps to get rid of stale water before drinking. Water is a perishable product, just like milk and bread, and the quality will decline with age.
- Do you filter your drinking water at home, in your basement, on your refrigerator or on the tap itself? These can work well to improve the taste of your water but don't leave them in beyond their recommended service life as they can make matters worse if they become fouled.
- Avoid using lawn chemical spray bottles that attach to your garden hose. Backflow or back-siphonage can occur if pressure drops in the water system, and this could draw those chemicals into your home or the water main. Always have a vacuum breaker on your outside hose bib to protect against backflow. You can get them at your local hardware store.



- Questions or concerns about your water? Feel free to call the water department at 540-483-5747.



Spring Hollow

The water source for this system comes from the Roanoke River and is pumped into the Spring Hollow Reservoir, a 3.2-billion gallon side-stream storage reservoir.

How is it treated? Water is first oxygenated in the reservoir, then the water is withdrawn from the reservoir and treated with sodium hypochlorite and sodium permanganate to oxidize dissolved organic matter, iron and manganese. Treatment at the Spring Hollow Treatment Facility includes upflow clarification, filtration, chlorine disinfection and fluoridation. Orthophosphate is added to control corrosion in pipes. The Spring Hollow Water Treatment Facility currently has the capacity to treat 18-million gallons of water a day and can be expanded to 36-million gallons a day. Treated water is stored in a two-million gallon storage tank then pumped through the north and south transmission lines to the distribution system. Annual production averaged 5.35-million gallons a day. During an emergency, standby wells may be used to supplement the source water.

Where does it serve? Spring Hollow supplies water to various neighborhoods in Roanoke County and Franklin County through the southern transmission lines. The northern transmission lines run along I-81 and serve the City of Roanoke and Roanoke County.

Many other primary and secondary contaminants have been analyzed but were either below the instrument's detection limits or below the MCLs.

Data collected during calendar year 2023 or most recent testing period. Water treated at the Spring Hollow Treatment Facility meets all state and federal monitoring and reporting requirements.

Learn About PFAS

PFAS are a group of over 6,000 man-made compounds used in various industries around the globe since the 1940s to make everyday products we use resist heat, oil, stains, grease, and water. They are extremely stable and do not breakdown in the environment.

The Western Virginia Water Authority (Authority) voluntarily tested for these substances as part of the unregulated contaminants monitoring program. Hexafluoropropylene oxide dimer acid (HFPO-DA), known more commonly by its trade name GenX, was detected at Spring Hollow. All other compounds were below the level of detection. At the time of this testing, there were no national or state advisories or regulations for HFPO-DA. Testing continued as did research into the source of this substance.

On June 15, 2022, the EPA issued a lifetime health advisory for HFPO-DA of 10 parts per trillion (ppt) for the first time. For reference, if expressed as a unit of time, one part per trillion would be approximately one second in 32,000 years. On March 14, 2023 the EPA announced the proposed National Primary Drinking Water Regulation (NPDWR). This rule proposed that 10 parts per trillion would effectively become the maximum contaminant level for HFPO-DA. The proposed PFAS NPDWR did not require any actions until it became final. On April 10, 2024, the rule was finalized with the release of the final National Primary Drinking Water Regulation (NPDWR). In addition to establishing Maximum Contaminant Levels for several PFAS compounds, 10 parts per trillion was established as the maximum contaminant level for HFPO-DA, the compound detected at the Spring Hollow Reservoir. UCMRS testing by the Virginia Department of Health in 2023 indicated detection of a second compound, PFOA, in the amount of 0.0089 pbb. Weekly tests in 2023 and 2024 have been non-detect for that compound in the Spring Hollow Reservoir and treated drinking water.

After the detection of HFPO-DA in the Spring Hollow Reservoir, the Authority increased the frequency of testing for this compound at Spring Hollow and adapted the use of granular activated carbon, considered the most viable treatment option for drinking water, as a treatment technique. The granular activated carbon is replaced every three months to provide optimal treatment to produce drinking water that is has HFPO-DA levels below 10 parts per trillion.

Pumping water from the Roanoke River was suspended from August 2022 to July 2023 to avoid introducing any more of the compound into the reservoir. The source of HFPO-DA in the Roanoke River, ProChem, Inc. in Elliston, Virginia stopped discharging water containing this compound and repeat tests determined that the river has remained non-detect for HFPO-DA since May 2023.

More information and current testing data is available at www.westernvawater.org/LearnAboutPFAS.

				Spring Hollow Data		
Substance	Units	Ideal Goals (EPA's MCLG)	Highest Level Allowed (EPA's MCL)	Date Collected	Violation	(range) average of levels detected
Regulated Substances						
Barium	ppm	2	2	5/9/2023	no	0.037
Fluoride	ppm	4	4	5/9/2023	no	0.91
Total Nitrate & Nitrite (as N)	ppm	10	10	8/14/2023	no	0.133
Turbidity	NTU	TT	0.3	2023	no	0.27 100% < 0.3
Radioactive Contaminants						
Gross Alpha	pCi/L	0	15	2/21/2023	no	1.04
Gross Beta	pCi/L	0	50	2/21/2023	no	1.91
Radium 228	pCi/L	0	5	2/21/2023	no	-0.55
Combined Radium	pCi/L	0	5	2/21/2023	no	0
Lead and Copper Testing						
Lead	ppb	0 ppb	AL = 15	June - Sept 2022	no	1 of 50 samples exceeded the AL. 90th percentile = ND
Copper	ppm	1.3 ppm	AL = 1.3	June - Sept 2022	no	1 of 50 samples exceeded the AL. 90th percentile = 0.36 ppm
Disinfectants and Disinfection By-Products						
Chlorine	ppm		4	2023	no	(0.2 - 1.98) 0.88
HAA5s	ppb	0	60	2023	no	(ND - 48) 39 LRAA range
TTHMs	ppb	0	80	2023	no	(1 - 76) 48 LRAA range
Unregulated and Secondary Substances						
Alkalinity	ppm	unregulated		5/9/2023	no	117
Hardness (Total)	ppm	unregulated		5/9/2023	no	172
HFPO-DA	ppt	unregulated during calendar year 2023		weekly	no	(ND - 44) 6.13
Iron	ppm		0.3	5/9/2023	no	ND
Manganese	ppm		0.05	5/9/2023	no	ND
Orthophosphate as PO4	ppm	unregulated		2023	no	(1.45 - 2.27) 1.95
pH	pH units		6.5 - 8.5	5/9/2023	no	7.57
Sodium	ppm	unregulated		5/9/2023	no	7.57
Zinc	ppm		5	5/9/2023	no	ND
Microbiological Substances						
Total Coliform	P/A	0	Presence of coliform bacteria in >5% of monthly samples	Monthly	no	0
<i>E. coli</i>	P/A	0	A routine and a repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive.	Monthly	no	0