Town of Rocky Mount
2018 Annual Drinking Water Quality Report

INTRODUCTION

We are proud to present to you our Annual Drinking Water Quality Report for the calendar year 2018. 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, Jeff Gauldin, Water Plant Superintendent, 540-483-5747. Email address: jgauldin@rockymountva.org. Regularly scheduled town council meetings occur on the 2nd Monday of each month at 7:00 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, 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 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 C*ryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

The Blackwater River

SOURCE AND TREATMENT OF YOUR DRINKING WATER

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.

Our source water quality can vary widely from day to day. The Blackwater River floods over the banks on average about once a year. If water demand can be supplied with water already produced and, in the system, we will shut the plant down and allow flood waters to recede. However, if needed, your experienced staff can make high-quality drinking water when the river is less than optimal.

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

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 (ppm)	10	10	0.82	**No**	Jan 2018	Runoff from fertilizer use; Leaching from septic tanks, agricultural runoff
Fluoride (ppm)	4	4	Highest: 1.1 Range: 0.6 to 1.1	**No**	Daily	Water additive which promotes strong teeth
Barium (ppm)	2	2	0.0209	**No**	Jan 2018	Erosion of natural deposits
Turbidity (NTU)	TT= 0.30	TT <95% = 0.30	Highest 0.10 Range 0.02 – 0.10	**No**	Daily	Soil Runoff - Turbidity is a measure of water cloudiness and an indicator of filter effectiveness
Aluminum	.05	0.20	0.009MG/L 0.05-0.20	**No**	Jan 2018	Water treatment chemical
Manganese	0.05MG/L	0.05 SMCL	0.002MG/L	**No**	Jan 2018	Erosion of natural deposits
Lead and Copper						
Contaminant / Unit of Measurement	***MCLG***	***MCL***	***Level Found / Range***	***Exceeded***	***Date of Sample***	***Typical Source of Contamination***
Lead - (ppb)	0	AL=15	0.7 (90th percentile) Range: ND to 2.6	**No**	June-Aug 2017	Corrosion of household plumbing systems
Copper - (ppm)	1.3	AL=1.3	.028 (90^{th} percentile) Range: 0.001 to 0.14	**No**	June-Aug 2017	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: 43 Range: 22 to 56	**Yes**	Quarterly	By-product of drinking water disinfection
TTHMs (Total Trihalomethanes) ppb	N/A	80 (Ave)	Ave: 55 Range: 21 to 85	**No**	Quarterly	By-product of drinking water disinfection
Chlorine (ppm)	MRDLG =4	MRDL = 4	Highest: 2.6 Range .43 to 2.6	**No**	Tested Daily	Water additive used to control microbes
Total Organic Carbon (ppm)	TT	TT	Ave: 0.93 0.78 to 1.2	**No**	Tested Quarterly	TOC contributes to the formation of DBPs and is naturally present in the environment
Radiological Contaminants						
Contaminant / Unit of Measurement	***MCLG***	***MCL***	***Level Found / Range***	***Violation***	***Date of Sample***	***Typical Source of Contamination***
Combined Radium	0	5 pCI/l	0.73 pCi/l	**No**	Jan 2017	Erosion of natural deposits

Unregulated Contaminants						
Contaminant / Unit of Measurement	***MCLG***	***MCL***	***Level Found / Range***	***Violation***	***Date of Sample***	***Typical Source of Contamination***
Sodium (mg/l)	N/A	N/A	13	**No**	Jan 2018	Sodium Carbonate added for pH adjustment.

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.

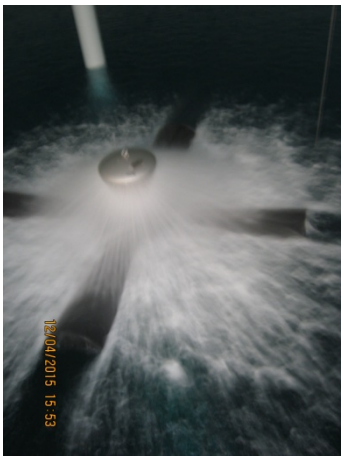
ADDITIONAL TESTING INFORMATION:

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 E.coli sampling. 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).

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 Boulevard in 2018.

- **ADDITIONAL INFORMATION FOR LEAD:**
  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. Our most recent round of testing between June and September of 2017 was our best yet.

- 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. The Town of Rocky Mount 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 15 to 30 seconds or until it becomes cold or reaches a steady temperature 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 are available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

VIOLATION INFORMATION:

There were no drinking water violations for 2018.

DEFINITIONS

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

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.

- 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.

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.