

2015 Annual Drinking Water Quality Report

Town of Rocky Mount

INTRODUCTION

We are proud to present to you our Annual Drinking Water Quality Report for calendar year 2015. 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, Bob Deitrich, Water Plant Superintendent, 540-483-5747. email address: bdeitrich@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.

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 from 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). In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount 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:

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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).

SOURCE(S) 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.

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						
<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>
Nitrate (ppm)	10	10	0.72	No	Jan 2015	Runoff from fertilizer use; Leaching from septic tanks, agricultural runoff
Fluoride (ppm)	4	4	Highest: 1.13 Range: 0 to 1.13	No	Daily	Water additive which promotes strong teeth
Barium (ppm)	2	2	0.02	No	Jan 2015	Erosion of natural deposits
Turbidity (NTU)	TT= 0.30	TT <95% = 0.30	Highest 0.15 Range 0.01 – 0.15	No	Daily	Soil Runoff - Turbidity is a measure of water cloudiness and an indicator of filter effectiveness
Lead and Copper						
<i>Contaminant / Unit of Measurement</i>	<i>MCLG</i>	<i>MCL</i>	<i>Level Found / Range</i>	<i>Exceeded</i>	<i>Date of Sample</i>	<i>Typical Source of Contamination</i>
Lead - (ppb)	0	AL=15	0.9 (90th percentile) Range: ND to 6.1	No	June/July 2014	Corrosion of household plumbing systems
Copper - (ppm)	1.3	AL=1.3	0.064 (90 th percentile) Range: 0.005 to 0.23	No	June/July 2014	Corrosion of household plumbing systems
Microbiological Contaminants						
<i>Contaminant / Unit of Measurement</i>	<i>MCLG</i>	<i>MCL</i>	<i>Level Found</i>	<i>Violation</i>	<i>Date of Sample</i>	<i>Typical Source of Contamination</i>
Total Coliform Bacteria	0	1 positive monthly	No Detection	No	Tested Monthly	Naturally present in the environment
Disinfection Byproducts						
<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>
HAA5s (Total Haloacetic Acids) ppb	N/A	60 (Ave)	Ave: 53 Range: 26 to 86	Yes*	Quarterly	By-product of drinking water disinfection
TTHMs (Total Trihalomethanes) ppb	N/A	80 (Ave)	Ave: 63 Range: 27 to 112	No	Quarterly	By-product of drinking water disinfection
Chlorine (ppm)	MRDL G=4	MRDL = 4	Highest: 3.0 Range 0.5 to 3.0 mg/L	No	Tested Daily	Water additive used to control microbes
Total Organic Carbon (ppm)	TT	TT	0.60-0.78	No	Tested Quarterly	TOC contributes to the formation of DBPs and are 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>
Gross Alpha	0	15 pCi/l	0.7 pCi/l	No	Jan 2011	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	N/A	N/A	13.3	No	Jan 2015	Sodium Carbonate added for pH adjustment.

*While our annual average was within limits for calendar year 2015, our average calculated from 10/2014 to 10/2015 exceeded 60 ppb. See violation info on page 3.

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 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 above 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 not detected in your drinking water: cyanide, various pesticides and herbicides, volatile organic chemicals used in gasoline and other solvents, E. Coli, mercury, arsenic, chromium and nickel.

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.

ADDITIONAL INFORMATION FOR LEAD:

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 is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

VIOLATION INFORMATION:

Haloacetic Acids (HAA5s) exceeded the annual allowable average, based on samples collected between September 2014 and September 2015 from only one of our two designated sample locations. HAA5's are classified as disinfection byproducts (DBPs) and are a normal byproduct formed when water is treated with chlorine disinfectant. EPA sets limits for DBPs to reduce the chance of health risks to consumers. In the fall of 2014, EPA required water systems like ours to begin collecting samples for DBPs in additional locations. When our first sample results were received we could see there was a potential problem. Violations for DBPs are determined only after an entire year of samples is collected but we did not wait a year to begin to take action. Long before our violation for HAA5s was issued, we were already engaged in flushing the system, changing the way we treated the water at the plant and installing aeration equipment in our largest storage tank to address the problem we found. With the new equipment and treatment changes, the Town was back in compliance within a month of receiving the violation notice, but DBP test results had already begun to improve much sooner than that as a result of our efforts. We have continued to improve and do not foresee future violations for DBPs. **As of November 2015 there are no outstanding violations of water quality regulations, either pending or in effect.**

DEFINITIONS

The following definitions are provided to help you better understand the terms used in the table on page 2.

- 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 ($\mu\text{g/l}$) - 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 in excess of 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 additional 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. Check them or replace them at least once a year!!
- Don't use water from your hot water heater to drink or cook with. Hot water heaters can be sources of heavy metals and bacteria. If you need hot water, heat up cold water on the stove or in the microwave.
- If you've been away for a few days, flush your taps to get rid of stale water before drinking. Water is a perishable, just like milk and bread, and the quality will be reduced with age.
- Do you use a filter in your basement, in 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 could draw those chemicals into your home or into the water main. Always have a vacuumed breaker on your outside hose bib to protect against backflow.
- Questions or concerns about your water? Feel free to call the water department at 540-483-5747.