

**RAPIDAN SERVICE AUTHORITY**  
**GREENE WATER SYSTEM**  
**2017**  
***Drinking Water Quality Report***

Rapidan Service Authority (RSA) is pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you, the customer, about the water quality and services delivered to you every day. RSA's constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts made to continually improve the water treatment process and protect our water resources. RSA is committed to ensuring the quality of your water.

Your drinking water is a combination of surface water and groundwater. 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. Substances (referred to as contaminants) in source water may come from septic systems, discharges from domestic or industrial wastewater treatment facilities, agricultural and farming activities, urban storm water 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 be treated.

The surface water comes from the Rapidan River and is the primary source of water. The intake and treatment facility are located on Route 29 near the Rapidan River. Treatment includes mixing, sedimentation and filtration. Chlorine is added to disinfect the water prior to its entering the distribution system. Sodium fluoride is added to help promote strong teeth and prevent tooth decay. The groundwater source is a well located on the east side of Rt. 29. Chlorine is added to disinfect the water prior to entry into the system.

A source water assessment of the Rapidan River was completed by the Virginia Department of Health in May 2002 and may be obtained by contacting RSA. While all surface water sources are vulnerable to contamination due to changing atmospheric conditions and land use activities, no known contamination was discovered during the period of review.

RSA wants its valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the third Thursday of each month at 2:00 P.M. in various locations on a rotating basis in the counties we serve of Orange, Madison, and Greene. If you have any questions about this report or your water utility, please contact **Timothy L. Clemons at (434) 985-7811**.

Rapidan Service Authority routinely monitors for contaminants in the drinking water according to Federal and State regulations. The following table shows the results of monitoring for the period **January 1 to December 31, 2017**. In this table you will find terms and abbreviations you might not be familiar with. To help you better understand these terms we have provided the following definitions:

- *Action Level (AL)*: the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- *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.
- *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 Goal (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 (MRDL)*: the highest level of a disinfectant allowed in drinking water. There is no convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants
- *Nephelometric Turbidity Unit (NTU)*: a measure of the clarity of water. Turbidity in excess of 5 NTUs is just noticeable to the average person.
- *Non-Detects (ND)*: laboratory analysis indicates that the constituent 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 (ug/l)*: one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- *Picocuries per liter (pCi/l)*: a measure of radioactivity.
- *Treatment Technique (TT)*: A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Bracketed numbers represent the range of values detected.

<b>WATER QUALITY RESULTS</b>						
<b>Contaminant</b>	<b>Violation</b>	<b>Level Detected</b>	<b>Unit Measurement</b>	<b>MCLG</b>	<b>MCL</b>	<b>Likely Source of Contamination (if present)</b>
E-coli Bacteria	No	0	Presence or absence	0	A routine sample and repeat sample are total coliform pos. and one is E-coli pos.	Human and animal fecal waste
Turbidity	No	0.58	NTU	n/a	TT	Soil runoff
% samples ≤0.3 NTU	No	99.5	%	n/a	95%	
Barium	No	0.0122	ppm	2	2	Erosion of natural deposits.
Chlorine	No	1.45 (1.01-1.93)	ppm	MRDLG=4	MRDL=4	Water additive used to control microbes.
Copper (0 of 20 samples > AL)	No	0.037	ppm	AL =1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits.
Lead (2 of 20 samples > AL)	No	4.7	ppb	AL=15	AL=15	Corrosion of household plumbing systems; erosion of natural deposits.
Fluoride	No	0.70 (0.16-0.99)	ppm	4	4	Water additive which promotes strong teeth.
Nitrites + Nitrates	No	0.26	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Total Trihalomethanes	No	43 (19-73)	ppb	n/a	80	By-product from disinfection.
Haloacetic Acids	No	55 (24-101)	ppb	n/a	60	By-product from disinfection
Alpha Emitters	No	0.51	pCi/l	0	15	Erosion of natural deposits
Beta Emitters	No	0.92	pCi/L	0	50	Erosion of natural deposits
Combined Radium	No	0.45	pCi/L	0	5	Erosion of natural deposits

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day for 70 years at the MCL level to have a one-in-a-million chance of having the described health effect.

As you can see by the table, the Greene Water System had no violations for 2017. RSA is proud that your drinking water meets or exceeds all Federal and State requirements.

All 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 the 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 at 1-800-426-4791**.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer 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).

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. Rapidan Service Authority 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 30 seconds to 2 minutes 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>.

In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make improvements in your water system. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements.

The employees at Rapidan Service Authority work around the clock to provide top quality water to every tap. We ask that all our customers help us protect and conserve our water sources, which are the heart of our community, our way of life, and our children's future. We also want to remind all of our customers to be aware of possible cross connections to the potable water system. A cross connection is a link between the potable water system and any non-potable source and can affect not only your home, it can affect the entire potable water supply. If you think you have the possibility of a cross connection, please contact RSA immediately.

Please call our office if you have questions regarding your water system.