

Massanutten Public Service Corporation

PWS ID: VA2165525

Annual Water Quality Report 2018

Message from Steve Lubertozi, President

Dear Massanutten PSC Customers,

I am pleased to share your Annual Water Quality Report for 2018. This report is designed to inform you of the quality of water we delivered to you over the past year. As your community water utility, we fully appreciate our role in the local community. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources.

Our team is committed to providing safe, reliable and cost effective service to our customers. All of our employees share in our commitment to act with integrity, protect the environment, and enhance the local community.

We are proud to share this report which is based on water quality testing through December 2017. We continually strive to supply water that meets or exceeds all federal and state water quality regulations.

Our dedicated local team of water quality experts is working in the community everyday ensuring that you, our customer, are our top priority and that we are providing the highest quality service - now and in the years to come.

Best regards,



Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

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Source of Drinking Water

Our four wells draw from the Massanutten Basin aquifer in Rockingham County. An aquifer is a geological formation that contains water.

Source Water Assessment

A source water assessment has been completed by Virginia Department of Health. The assessment determined that our sources may be susceptible to contamination because they are located in an area that promotes migration of contaminants from land use activities of concern. More specific information may be obtained by contacting customer service department at (866) 928 2325.

Help Protect our Resources

Help put a stop to the more than **1 trillion gallons of water lost annually** nationwide due to household leaks. These easy to fix leaks waste the average family the amount of water used to fill a backyard swimming pool each year. Plumbing leaks can run up your family's water bill an extra 10 percent or more, but chasing down these water and money wasting culprits is as easy as 1—2—3. Simply check, twist, and replace your way to fewer leaks and more water savings:

- ⇒ **Check** for silent leaks in the toilet with a few drops of food coloring in the tank, and check your sprinkler system for winter damage.
- ⇒ **Twist** faucet valves; tighten pipe connections; and secure your hose to the spigot. For additional savings, twist a WaterSense labeled aerator onto each bathroom faucet to save water without noticing a difference in flow. They can save a household more than 500 gallons each year—equivalent to the amount water used to shower 180 times!
- ⇒ **Replace** old plumbing fixtures and irrigation controllers that are wasting water with WaterSense labeled models that are independently certified to use 20 percent less water and perform well.

For more information visit www.epa.gov/watersense.

We ask that all our customers help us protect our water sources which are the heart of our community, our way of life and our children's future.

EPA Wants You To Know

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:

- A. **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- B. **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.
- C. **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- D. **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- E. **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

What measures are in place to ensure water is safe to drink?

In order to ensure that tap water is safe to drink, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (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).

Special notice from EPA for the elderly, infants, cancer patients and people with HIV/AIDS or other immune system problems

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

Information Concerning Lead in Water

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. Massanutton Public Service Corp 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 www.epa.gov/safewater/lead

Water that remains stationary within your home plumbing for extended periods of time can leach lead out of pipes joined with lead-containing solder as well as brass fixtures or galvanized pipes. Flushing fixtures has been found to be an effective means of reducing lead levels. The flushing process could take from 30 seconds to 2 minutes or longer until it becomes cold or reaches a steady temperature. Faucets, fittings, and valves, including those advertised as "lead-free," may contribute lead to drinking water. Consumers should be aware of this when choosing fixtures and take appropriate precautions. Visit the NSF Web site at www.nsf.org to learn more about lead-containing plumbing fixtures.

Drain Disposal Information

Sewer overflows and backups can cause health hazards, damage home interiors, and threaten the environment. A common cause is sewer pipes blocked by grease, which gets into the sewer from household drains. Grease sticks to the insides of pipes. Over time, the grease can build up and block the entire pipe. Help solve the grease problem by keeping this material out of the sewer system in the first place:

- Never pour grease down sink drains or into toilets. Scrape grease into a can or trash.
- Put strainers in sink drains to catch food scraps / solids for disposal.

Prescription Medication and Hazardous Waste

Household products such as paints, cleaners, oils, and pesticides, are considered to be household hazardous waste. Prescription and over-the-counter drugs poured down the sink or flushed down the toilet can pass through the wastewater treatment system and enter rivers and lakes (or leach into the ground and seep into groundwater in a septic system). Follow the directions for proper disposal procedures. **Do not flush hazardous waste or prescription and over-the-counter drugs down the toilet or drain.** They may flow downstream to serve as sources for community drinking water supplies. Many communities offer a variety of options for conveniently and safely managing these items. For more information, visit the EPA website at: www.epa.gov/hw/household-hazardous-waste-hhw.

The Safe Drinking Water Act was passed in 1974 due to congressional concerns about organic chemical contaminants in drinking water and the inefficient manner by which states supervised and monitored drinking water supplies. Congress' aim was to assure that all citizens served by public water systems would be provided high quality water. As a result, the EPA set enforceable standards for health-related drinking water contaminants. The Act also established programs to protect underground sources of drinking water from contamination.

Understanding This Report In order to help you understand this report, we want you to understand a few terms and abbreviations that are contained in it.

Action level (AL)	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
Action level goal (ALG)	The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.
Average (AVG)	Regulatory compliance with some MCLs is based on running annual average of monthly samples
EPA	Environmental Protection Agency.
Maximum contaminant level (MCL)	The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.
Maximum contaminant level goal (MCLG)	The "goal" is the level of a contaminant in drinking water below which there is no known or expected health risk. MCLG's allow for a margin of safety.
Maximum Residual Disinfectant Level (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.
Maximum Residual Disinfectant Level Goal (MRDLG)	The level of a 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.
Not applicable (N/A)	Information not applicable/ not required for that particular water system or for that particular Rule.
Not Detected (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 in the water.
Nephelometric Turbidity Units (NTU)	A measure of water clarity. Turbidity in excess of 5 NTU is just noticeable to the average person
Treatment Technique (TT)	A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Did You Know?

- ♦ The average family of four uses 255 gallons of water a day, 1,785 gallons a week, and 7,650 gallons per month.
- ♦ A single toilet flush uses approximately 5-7 gallons of water.
- ♦ Taking a shower will use approximately 5-10 gallons per minute. A 15-minute shower will use 75-150 gallons.
- ♦ Your kitchen or bathroom sink uses approximately 4-5 gallons a minute.
- ♦ One dishwasher load uses approximately 4-5 gallons a minute.
- ♦ Washing clothes uses approximately 35 gallons per load.

Monitoring Your Water

We routinely monitor for contaminants in your drinking water according to Federal and State laws. The following table(s) lists all the drinking water contaminants that were detected in the last round of sampling for the particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk.

Unless otherwise noted, the data presented in the table is from testing done January 1 through December 31, 2018. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to

vary significantly from year to year. Some of the data, though representative of the water quality, maybe more than one year old.

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

If You Have Questions Or Want To Get Involved

Massanutten Public Service Corporation does not hold regular public meetings. Should the Utility hold a public meeting, you will be notified through the mail or by public notice. Please contact customer service at (866) 928 2325 if you have any questions.

Violations

In 2018, Massanutten Public Service Corp. performed all required monitoring for contaminants and did not exceed any allowable levels of these contaminants. In addition, Massanutten Public Service Corp. received **no violations** and was in compliance with applicable testing and reporting requirements.

Visit us online at www.uiwater.com/virginia-m to view the Water Quality Reports. Also visit our website for water conservation tips and other educational material.

Water Quality Test Results

Inorganic Contaminants

Contaminant (units)	Sample Date	Violation Y/N	Your Water Average	Range Low—High	MCLG	MCL	Likely Source of Contamination
Barium (ppm)	May 2016	No	0.159	N/A	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride (ppm)	Monthly 2018	No	0.29	0.02 - 1.59	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.

Disinfectant

Chlorine (ppm)	Daily 2018	No	0.98	0.03 - 1.71	MRDLG=4	MRDL=4	Water additive used to control microbes.
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Disinfection By-Product Contaminants

Contaminant (units)	Sample Date	Violation	Level Found	MCLG	MCL	Likely Source of Contamination
TTHM (ppb) [Total Trihalomethanes]	2018	No	12	N/A	80	By-product of drinking water chlorination.
HAA5 (ppb) [Haloacetic Acids]	2018	No	3.6	N/A	60	By-product of drinking water chlorination.

Radioactive Contaminants

Contaminant (units)	Sample Date	Violation	Your Water Average	MCLG	MCL	Likely Source of Contamination
Beta/photon emitters (pCi/l)	May 2016	No	1	0	50*	Decay of natural and man-made deposits.
Combined radium (pCi/l)	May 2016	No	0.6	0	5	Erosion of natural deposits.

**Note: EPA considers 50 pCi/L to be the level of concern for beta particles.*

Lead & Copper Contaminants

Contaminant (units)	Sample Date	Your Water	# of sites found above the AL	MCLG	MCL	Likely Source of Contamination
Lead (ppb) (90 th percentile)	Sept-2017	ND (90th percentile) None of the twenty samples collected exceeded the AL.	0 of 20 samples exceeded AL.	0	AL= 15	Corrosion of household plumbing systems; erosion of natural deposits.
Copper (ppm) (90 th percentile)	Sept-2017	0.61 (90th percentile) None of the twenty samples collected exceeded the AL.	0 of 20 samples exceeded AL.	1.3	AL= 1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

