

Massanutten Public Service Corporation

System ID# 2165525

Annual Water Quality Report 2017

Message from Steve Lubertozi, President

Dear Massanutten PSC Customers,

I am pleased to share your Annual Water Quality Report for 2017. This report is designed to inform you of the quality of water we delivered to you over the past year. As the local President of 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.

The Safe Drinking Water Act

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.

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.

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

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 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.

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 (1-800-426-4791).

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 <http://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.

If You Have Questions Or Want To Get Involved

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

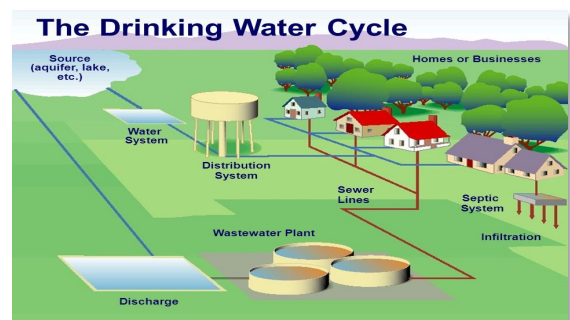
Drain Disposal Information

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.



Key to Water Quality Terms

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)** - Action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
- **EPA** – Environmental Protection Agency
- **Maximum contaminant level (MCL)** - The maximum contaminant level is 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.
- **Non-detects (ND)** - lab analysis indicates that the contaminant is not present
- **Not Applicable (N/A)** – Information not applicable/not required for

that particular water system or for that particular Rule.

- **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)** – Picocuries per liter is a measure of radioactivity in the water.
- **Treatment Technique (TT)** - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Massanutten Public Service Corp. routinely monitors for contaminants in your drinking water according to Federal and State laws. Unless otherwise noted, the tables that follow show the results of our monitoring for the period of **January 1st to December 31st, 2017**. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of our data [e.g., for organic contaminants], though representative, are more than one year old. Data obtained before January 1, 2017, and presented in this report are from the most recent testing done in accordance with the laws, rules and regulations..

Note: The Environmental Protection Agency (EPA) requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the table below are the only contaminants detected in your drinking water.

Water Quality Test Results

Radioactive Contaminants

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water Average	MCLG	MCL	Likely Source of Contamination
Alpha emitters (pCi/l)	May 2016	No	ND	0	15	Erosion of natural deposits.
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.

Inorganic Contaminants

Contaminant (units)	Sample Date	MCL 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 2017	No	0.64	0.49 - 0.88	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.

Disinfectant

Contaminant (units)	Sample Date	MCL/MRDL Violation Y/N	Your Water Average	Range Low—High	MCLG	MCL	Likely Source of Contamination
Chlorine (ppm)	Daily 2017	No	0.91	0.47 - 1.45	MRDLG=4	MRDL=4	Water additive used to control microbes.

Disinfection By-Product Contaminants

Contaminant (units)	Sample Date	MCL Violation Y/N	Level Found	MCLG	MCL	Likely Source of Contamination
TTHM (ppb) Total Trihalomethanes]	Sept 2017	No	16	N/A	80	By-product of drinking water chlorination.
HAA5 (ppb) Haloacetic Acids	Sept 2017	No	2.4	N/A	60	By-product of drinking water chlorination.

Water Quality Test Results

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.

Bacteriological Contaminants

Contaminant	MCLG	MCL	Level Found	Violation	Date of Samples	Typical Source of Contamination
Total Coliform Bacteria	0	*TT - Presence of coliform bacteria in no more than one sample each month	(1) samples total coliform positive	No	June 2017	Naturally present in environment.

If a system collecting fewer than 40 samples per month has two or more positive samples in one month, an assessment is required. *Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system.*

Violations

In 2017, 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.

