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2023 Water Quality Report
South River Water System

Quality On Tap!
Our Commitment Our Profession

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This **Annual Water Quality Report** has been developed to keep you informed about Augusta Water's drinking water quality. Augusta Water is committed to supplying safe water that meets or exceeds state and federal regulations and achieves the highest standards of customer satisfaction.

Please take a few minutes to read this report.

About Your Water…

We are proud to report that the water provided by Augusta Water to our South River District customers for 2023 met all federal and state standards.

This report includes details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies.

Where Does Your Water Come From? Sources of the South River Water System's drinking water include surface water from Coles Run Reservoir and groundwater from four wells. Water is also purchased from the City of Staunton for this system. Staunton sources include groundwater from Gardner Springs and surface water from two reservoirs; Elkhorn and Staunton.

Staunton water may be distributed along the Rt. 11 corridor from Staunton City limits to the Village of Greenville, if needed. Staunton water can also be distributed along Rt. 250 east to the Woodrow Wilson complex.

Source Water Assessment

A source water assessment has been completed by the Virginia Department of Health. More specific information may be obtained by contacting Augusta Water at (540) 245-5670.

How Is Your Water Treated?

Wells: Chlorine is added to kill any disease-causing organisms and fluoride is added for cavity prevention.
Coles Run Reservoir: The water is screened and filtered prior to the addition of chlorine and fluoride. The water pH is adjusted.
Staunton: Water enters the Staunton Treatment Plant from the reservoirs or Gardner Springs. Treatment includes: (1) Screening – removes leaves, sticks, and other large debris; (2) Prechlorination – kills most disease-causing organisms; (3) Flash Mix – chemicals are added and mixed with raw water containing fine particles that will not readily settle or filter out; (4) Flocculation – gathers together fine, light particles to form larger particles to aid the settling and filtering processes; (5) Sedimentation – settles out large suspended particles; (6) Filtration – filters out remaining suspended particles; (7) Postchlorination – kills any remaining disease-causing organisms; and (8) Fluoridation – added to water for cavity prevention.

The treated water is distributed via an extensive underground piping system and is delivered to your home.

Substances Expected To Be In Drinking Water

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 land's surface or through the ground, it dissolves naturally occurring minerals and radioactive material, and can be polluted by animals or human activity.

Contaminants that may be present in source water include:

Microbiological 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 storm runoff, industrial or domestic waste water discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

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 storm water runoff and septic systems.

Radioactive materials, which can be naturally occurring or be the result of oil and gas production and mining activities.

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791) or the Virginia State Health Department (540-463-7136).

Lead Contaminants

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. Augusta Water 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 two 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 to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at http://www.epa.gov/safewater/lead.

Who's Most Vulnerable?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer under-going 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. Environmental Protection Agency (EPA) and Centers for Disease Control (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).

We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. This table lists only the regulated contaminants which had some level of detection in 2023. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment.

Treated Water Quality Roundup

Substance	Highest Level Allowed (EPA's MCL*)	Highest Level Detected	Ideal Goals (EPA's MCLGs*)	Meets EPA Standards	Date Most Recent Testing Completed	Possible Sources
Regulated at the Treatment Plant						
Alpha Emitters***	15 pCi/L	Range: ND-2.9 pCi/L	0 pCi/L	✓	Jan, July, Oct, Nov 2022	Erosion of natural deposits
Beta Emitters***	50 pCi/L	Range: 0.035-3.2 pCi/L	0 pCi/L	✓	Jan, July, Oct, Nov 2022	Decay of natural and man-made deposits
Combined Radium***	5 pCi/L	Range: 0.3-1.5 pCi/L	0 pCi/L	✓	Jan, July, Oct, Nov 2022	Erosion of natural deposits
Barium***	2 ppm	Range: 0.021-0.032 ppm	2 ppm	✓	June 2022, Jan & Sept 2023	Erosion of natural deposits
Chlorine	MRDL = 4ppm	Avg: 1.5 ppm Range: 1.1-2.0 ppm	MRDLG = 4ppm	✓	2023, Daily	Water additive used to control microbes
Nitrate Plus Nitrite as Nitrogen	10 ppm	Range: ND – 0.87 ppm	10 ppm	✓	Jan, Feb, May, Sept 2023	Runoff from fertilizer use: leaching from sewage; erosion of natural deposits
Turbidity	TT = 0.3 NTU	0.184 Max. NTU 100%**	N/A	✓	2023, Daily	Soil runoff
Fluoride	4 ppm	Avg.: 0.8 ppm Range: 0.2-1.0 ppm	4 ppm	✓	2023, Daily	Water additive
Regulated at the Customers' Tap						
Lead*** (90th Percentile)	15 ppb Action Level (AL)	<1.0 ppb None of the 30 samples collected exceeded the AL	0 ppb	✓	August 2022	Customer plumbing and service connection
Copper*** (90th Percentile)	1.3 ppm Action Level (AL)	0.192 ppm None of the 30 samples collected exceeded the AL	1.3 ppm	✓	August 2022	
Regulated in the Distribution System						
Total Trihalomethanes (TTHM)	80 ppb	7.0 ppb Avg. Range: 1.3-16.0	0 ppb	✓	2023, Quarterly	By-product of drinking water chlorination
Haloacetic Acid (HAA)	60 ppb	3 ppb Avg. Range: ND - 7	0 ppb	✓	2023, Quarterly	

*Definitions:

(AL) Action Level - The concentration of a contaminant which, if exceeded, triggers a treatment or other requirements which a water system must follow.

(MCL) Maximum Contaminant Level - Highest level of a contaminant that is allowed by EPA in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

(MCLG) Maximum Contaminant Level Goal - 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.

(MRDL) Maximum Residual Disinfectant Level - 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.

(MRDLG) Maximum Residual Disinfectant Level Goal - The level of a drinking water disinfectant below which there is no known or expected health risk. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

ND - None detected

(NTU) Nephelometric Turbidity Unit - A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L - Picocuries per liter is a measure of the radioactivity in water.

ppb - one part per billion, example is a single penny in $10,000,000.

ppm - one part per million, example is a single penny in $10,000.

(TT) Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

**Percent (%) represents the lowest monthly percentage samples which met the turbidity limits. Compliance for turbidity is based on the level being less than or equal to 0.3 NTU in 95% of the measures taken each month. Turbidity has no health effects; however, it can interfere with disinfection and provide a medium for bacterial growth.

***Data presented in the table are the most recent testing performed in accordance with federal and state regulations. The state allows us to monitor for some contaminants less than once a year because the concentrations of these contaminant do not change frequently. Some of our data, though accurate, is more than one year old.

Additional Water Quality Parameters

Parameter	Detected Level	Suggested Limit
Alkalinity	8-141 ppm*	No Standard
Color	<5 Color Units (CU)	15 CU
Hardness	**2-150 ppm*	No Standard
Sodium	0.5-6.2 ppm*	No Standard
Manganese	ND-0.019 ppm*	0.05 ppm
Iron	0.02 ppm	0.3 ppm

*Accounts for differences between sources.
** Water from South River District Sources: 0.1-4.9 grains per gallon
** Water from Staunton: 8.8 grains per gallon

Stay Informed!

Augusta Water is committed to providing you with information about your water supply, because customers who are well informed are our best allies in supporting improvements necessary to maintain the highest drinking water standards. Refer to the following resources for additional information on drinking water.

American Water Works Association (AWWA) at www.awwa.org/

Water Environment Federation (WEF) at www.wef.org/

waterdata.usgs.gov and www.epa.gov/ground-water-and-drinking-water/

Safe Drinking Water Hotline (800) 426-4791

Virginia State Health Department (Lexington) (540) 463-7136 www.vdh.virginia.gov/drinking-water/

Monthly Board Meetings are held on the third Thursday of each month at the Augusta County Government Center in Verona. Meetings start at 1:30 p.m.

Unregulated Contaminants Monitoring Rule (UCMR)

In 2023, Augusta Water sampled the South River water system for a series of unregulated contaminants as required by the EPA under the Safe Drinking Water Act. While unregulated contaminants do not have drinking water standards set by the EPA, monitoring for these contaminants helps the EPA determine whether or not standards are needed. Samples were collected quarterly from the Coles Run Reservoir and semi-annually from the four wells. We are pleased to report that there were no detectable compounds in any of the samples taken for the UCMR in 2023. UCMR results for the South River water system are available upon request; contact Augusta Water at (540) 245-5670 or questions@augustawater.com.