WATER QUALITY REPORT 2024

WASHINGTON COUNTY SERVICE AUTHORITY

25122 REGAL DRIVE

ABINGDON VA 24211

WWW.WCSA-WATER.COM

(276) 628-7151

This Annual Drinking Water Quality Report for calendar year 2024 is designed to inform you about your drinking water quality and the efforts the Washington County Service Authority (WCSA) takes 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, please call our office at (276) 628-7151.

As a valued customer, you are encouraged to participate in decisions that may affect the quality of your drinking water. The WCSA Board of Commissioners typically meets at 5:00 PM on the fourth Monday of each month in the E.W. Potts Board Room at 25122 Regal Dr, Abingdon, VA 24211. For a schedule of meeting times, please call our office or visit our website.

YOUR WATER SOURCES

Your water comes from one or more of the following sources:

- **Middle Fork Holston River and South Fork Holston River (Main System)** — surface water sources treated by chemical and physical means including conventional coagulation, sedimentation, and filtration to remove particulate matter; chlorination for disinfection; and fluoridation for the promotion of dental health.
- **Jones Spring, Cole Spring, and Widener Spring at Mill Creek (Main System)** — groundwater sources under the direct influence of surface water; treated by membrane filtration to remove particulate matter, chlorination for disinfection, and fluoridation for the promotion of dental health.
- **Reservation Spring (Main System)** — a groundwater source treated by chlorination for disinfection and fluoridation for the promotion of dental health.
- **Mendota Well (Mendota)** — a groundwater source disinfected with chlorine. A small amount of sequestrating agent is also added to the water to help control the oxidation of iron and manganese. Iron and manganese are naturally present in water; however, when iron and manganese oxidize, water may appear reddish in color or cause a taste in brewed beverages like coffee and tea. Fluoride is also added for the promotion of dental health.
- **Big Moccasin Gap Creek (Mendota)** – a surface water source purchased from the Scott County Public Service Authority treated by chemical and physical means including filtration to remove particulate matter, chlorination for disinfection and fluoridation for the promotion of dental health. This source is treated at the Moccasin Gap treatment plant.
- **Cardwell Town Well (Hayter's Gap)** — a groundwater source treated and purchased from the Town of Saltville. The well is approximately 450 feet deep and draws water from the Tonoloway Limestone aquifer. Water from this source is treated with chlorine for disinfection and fluoridation for the promotion of dental health.
- **Saltville No. 10 Well (Hayter's Gap)** — a groundwater source treated and purchased from the Town of Saltville. The well is approximately 1,050 feet deep and draws water from the Honaker Formation aquifer. Water from this source is treated with chlorine for disinfection and fluoridation for the promotion of dental health.
- **Big Cedar Creek (Hidden Valley)**— a surface water source purchased from the Russell County Public Service Authority treated by chemical and physical means including filtration to remove particulate matter, chlorination for disinfection and fluoridation for the promotion of dental health. This source is treated at the Lebanon Water Treatment Plant.
- **South Holston River (Green Spring Rd)** - a surface water source purchased from Intermont Utility District treated by chemical and physical means including filtration to remove particulate matter, chlorination for disinfection. Fluoride is also added for the promotion of dental health. This source is treated at the Bristol Tennessee Water Treatment Plant.

SOURCE WATER ASSESSMENT

A Source Water Assessment of the WCSA water system was conducted in 2019 and 2020 by the Virginia Department of Health. The Reservation Spring, Cole Spring, Widener Spring, Jones Spring, Middle Fork of the Holston River and the South Holston Lake were determined to be of high susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program. The Source Water Assessment is a study and report that provides information about where WCSA's drinking water comes from and what could pose a threat to the drinking water quality. For more information about the Source Water Assessment please contact WCSA at (276) 628-7151.

In 2020 the Virginia Department of Health also conducted source water assessments of the Town of Lebanon system, the Moccasin Gap –Scott County PSA system, and the Town of Saltville system. The Big Cedar Creek, (Lebanon system), the Big Moccasin Creek (Scott County system), and the Cardwell Town Well and Well No. 10 (Saltville system) were all determined to be highly susceptible to contamination using the criteria developed by the state in its approved Source Water Assessment Program. The assessment report consists of maps showing the source water assessment area, an inventory of known land use activities of concern, and documentation of any known contamination within the last five years. To obtain a copy of the report for these areas please contact the appropriate agency for each system. The Town of Lebanon can be contacted at 276-889-7200 or P.O. Drawer 309, Lebanon VA 24266. The Scott County PSA can be contacted at 276-386-6337 or 156 Legion St, Weber City, VA 24290. The Town of Saltville can be contacted at 276-496-5342 or at P O Box 730, Saltville, VA 24370.

The Tennessee Department of Environment and Conservation (TDEC) has prepared a Source Water Assessment Program (SWAP) Report for the untreated water sources serving the Green Spring Rd water system. The City of Bristol's source (South Holston River) rated as reasonably susceptible to potential contamination.

CONTAMINANTS 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 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:

- **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 or sources such as agricultural and 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.

EPA REGULATIONS

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. Food and Drug Administration 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 can be obtained from the EPA's Safe Drinking Water Hotline (800-426-4791) or the EPA's website (www.epa.gov/your-drinking-water).

IMPORTANT HEALTH INFORMATION

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer who are 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 EPA's Safe Drinking Water Hotline (800-426-4791).

LEAD IN DRINKING WATER

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. WCSA is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap waters, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water.

Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the EPA's Safe Drinking Water Hotline (800-426-4791) or online at http://www.epa.gov/safewater/lead.

LEAD SERVICE LINE INVENTORY

The Lead and Copper Rule Revisions (LCRR) requires water systems to prepare and maintain an inventory of service line materials. Initial inventories were required to be submitted to state primacy agencies by October 16, 2024. WCSA completed the inventory, finding no lead service lines. To access the data from the inventory, please contact customer service at the numbers listed below.

UNREGULATED CONTAMINANT RULE 5 (UCMR5)

The Safe Drinking Water Act (SDWA) requires that once every five years the EPA issue a list of unregulated contaminants to be monitored by public water systems.

The fifth Unregulated Contaminant Monitoring Rule (UCMR 5) was published on December 27, 2021. UCMR 5 requires sample collection for 30 chemical contaminants between 2023 and 2025. The data collected under UCMR 5 improves understanding of the prevalence and amount of 29 per- and polyfluoroalkyl substances (PFAS) and lithium in the nation's drinking water systems.

WCSA performed and completed testing from June 2023 through March 2024 for all 3 of our water production plants. There were zero detections of the 29 PFAS compounds or lithium.

VIOLATION INFORMATION

The **Green Spring, Hayter's Gap, Hidden Valley, Mendota, and Washington County Service Authority Systems** did not have any PMCL, TT, monitoring, reporting, or other violations during the year.

YOUR WATER QUALITY

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The tables on pages 3 and 4 show the results of our monitoring for the period of January 1st to December 31st, 2024 unless otherwise noted. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old. We tested for many more constituents than are included in the tables. We only report on detected constituents.

DEFINITIONS

The following definitions will help you better understand the terms used in this report.

- **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. MCLs are set at very stringent levels by the US EPA. 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-a-million chance of having the described health effect for other contaminants.
- **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 convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **Nephelometric Turbidity Unit (NTU)** — a measure of the clarity, or cloudiness, of water. Turbidity in excess of 5 NTU is scarcely noticeable to the average person. Turbidity is monitored because it is a good indicator of the effectiveness of our filtration system.
- **Treatment Technique (TT)** — a required process intended to reduce the level of not applicable.
- **NA** — not applicable.
- **Non-detects (ND)** — not detectable at testing limits.
- **Parts per billion (ppb) or Micrograms per Liter (µg/L)** — one part per billion, corresponds to one minute in 2,000 years or a single penny in $10,000,000 .
- **Parts per million (ppm) or Milligrams per Liter (mg/L)** — one part per million, corresponds to one minute in 2 years or a single penny in $10,000.
- **Picocuries per Liter (pCi/L)** — a measure of radioactivity in water.
- **Level 1 Assessment** — a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
- **Level 2 Assessment** — a very detailed study of the waterworks to identify potential problems and determine (if possible) why an *E.coli* PMCL violation has occurred and /or why total coliform bacteria have been found in our water system on multiple occasions.

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Regulated Constituents			MAIN SYSTEM (Middle Fork Holston River; South Fork Holston River; Cole, Widener, Jones & Reservation Springs)				HAYTERS GAP (Cardwell Town Well and Saltville No. 10 Well)				
Substance (units)	**MCLG**	**MCL**	**Level Detected**	**Violation (Yes/No)**	**Range**	**Date of Sample**	**Level Detected**	**Violation (Yes/No)**	**Range**	**Date of Sample**	**Typical Source of Substance**
Nitrate (ppm)	10	10	0.65	No	ND – 0.65	2024	1.61	No	0.267—1.67	2024	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (ppm)	4	4	0.55	No	ND - 0.55	2024	0.70	No	0.62 - 0.70	2022	Water additive which promotes strong teeth
Barium (ppm)	2	2	0.036	No	0.027 – 0.036	2024	0.131	No	0.081—0.131	2022	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Alpha Emitters (pCi/l)	0	15	0.5	No	ND – 0.5	2020	2.6	No	ND—2.6	2020 & 2023	Erosion of Natural Deposits
Combined Radium (pCi/l)	0	5	0.5	No	0.1 – 0.5	2020	0.7	No	0.5—0.7	2020 & 2023	Erosion of Natural Deposits
Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.45	No	0.32 – 2.20	2024	1.11	No	0.44 — 1.62	2024	Water additive used to control microbes
Total Organic Carbon	NA	TT, met when ≥ 1	1.495	No	1.00 — 1.94	2024	NA	NA	-	NA	Naturally present in the environment
Haloacetic Acids (ppb)	NA	60	53	No	21 — 103	2024	9.6	No	-	2024	By-product of drinking water disinfection
TTHMs (Total Trihalomethanes) (ppb)	NA	80	50	No	22 – 92	2024	20.1	No	-	2024	By-product of drinking water disinfection
Turbidity (NTU)	NA	TT, 1 NTU Max	0.95	No	0.01 – 0.95	2024	Not applicable on groundwater sources				Soil Runoff
		TT, ≤ 0.3 NTU 95% of the time	100%	No	NA						
Substance (units)	**MCLG**	**Action Level**	**90th Percentile**	**Date of Sampling**	**Range**		**90th Percentile**	**Date of Sampling**	**Range**		**Typical Source of Substance**
Lead (ppb)	0	AL=15	ND	2024	0		ND	6/15/2023	0		Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	1.3	AL=1.3	0.084	2024	0—0.492		0.72	6/15/2023	0—1.27		Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Monitoring Results for Sodium (Unregulated-No Limits Designated)							
Substance	Level Detected	Range	Date Sampled	Level Detected	Range	Date Sampled	Naturally Occurring; Addition of treatment chemicals/processes
Sodium*	7.90 (mg/L)	ND — 7.90	2024	7.49	4.42 - 7.49	2022	

*For individuals on a very low sodium diet (500 mg/day), EPA recommends that drinking-water sodium not exceed 20 mg/L. Should you have a health concern, contact your health care provider.

			HIDDEN VALLEY (Big Cedar Creek)				MENDOTA (Mendota Well and Big Moccasin Gap Creek)				GREEN SPRING RD (South Holston River)				
Substance (units)	**MCLG**	**MCL**	**Level Detected**	**Violation (Yes/No)**	**Range**	**Date of Sample**	**Level Detected**	**Violation (Yes/No)**	**Range**	**Date of Sample**	**Level Detected**	**Violation (Yes/No)**	**Range**	**Date of Sample**	**Typical Source of Substance**
Nitrate (ppm)	10	10	1.31	No	NA	2024	0.8	No	-	2024	0.471	No	-	2024	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (ppm)	4	4	ND	No	NA	2024	0.48	No	-	2024	0.17	No	0.164-0.249	2024	Water additive which promotes strong teeth
Barium (ppm)	2	2	0.028	No	0.028	2024	0.021	No	-	2024	NA	NA	NA	NA	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Alpha Emitters (pCi/l)	0	15	<0.36	No	–	2021	1.29	No	1.29	2020	0.106	No	NA	2020	Erosion of Natural Deposits
Combined Radium (pCi/l)	0	5	0.2	No	—	2021	0.7	No	-	2020	NA	NA	NA	NA	Erosion of Natural Deposits
Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.28	No	0.76 —1.82	2024	0.90	No	0.22 - 1.38	2024	1.01	NA	0.36 - 1.58	2024	Water additive used to control microbes
Total Organic Carbon	NA	TT, met when ≥ 1	2.67	No	NA	2024	1.8	NA	NA	2024	NA	NA	NA	2024	Naturally present in the environment
Haloacetic Acids (ppb)	NA	60	63.00	No	53.0—73.0	2024	42	No	17—66	2024	57.9	No	-	2024	By-product of drinking water disinfection
TTHMs (Total Trihalomethanes) (ppb)	NA	80	68.45	No	53.8—83.1	2024	49	No	15—73	2024	58.1	No	-	2024	By-product of drinking water disinfection
Turbidity (NTU)	NA	TT, 1 NTU Max	0.04	No	0.02– 0.06	2024	0.15	NA	0.06—0.15	2024	0.19	NA	0.03-0.19	2024	Soil Runoff
		TT, ≤ 0.3 NTU 95% of the time	100%	No	NA										
Substance (units)	**MCLG**	**Action Level**	**90th Percentile**	**Date of Sampling**	**Range**		**90th Percentile**	**Date of Sampling**	**Range**		**90th Percentile**	**Date of Sampling**	**Range**		**Typical Source of Substance**
Lead (ppb)	0	AL=15	ND	2023	0		ND	2023	0		ND	2024	0		Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	1.3	AL=1.3	0.435	2023	0—0.54		0.16	2023	0—0.245		0.348	2024	0—0.658		Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Monitoring Results for Sodium (Unregulated-No Limits Designated)										
Substance	Level Detected	Range	Date Sampled	Level Detected	Range	Date Sampled	Level Detected	Range	Date Sampled	Naturally Occurring; Addition of treatment chemicals/processes
Sodium *	3.34 (mg/L)	-	2/6/2024	6.7 (mg/L)	-	2024	7.96 (mg/L)	-	2024	

*For individuals on a very low sodium diet (500 mg/day), EPA recommends that drinking-water sodium not exceed 20 mg/L. Should you have a health concern, contact your health care provider.

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WCSA EARNS TOP RANKING IN OPERATIONS AND PERFORMANCE FOR 14TH TIME

"The Gold Award recognizes the hard work and dedication of our organization to provide the highest-quality drinking water for our customers every day throughout the year,"
Ron Seay
General Manager

Award Recognition

The Washington County Service Authority (WCSA) has earned a Gold Award in operations and performance excellence from the Virginia Department of Health (VDH) Office of Drinking Water. This recognition is the highest ranking bestowed on water utilities.

Award Details

WCSA was honored as part of the VDH Office of Drinking Water's 2024 Excellence in Waterworks Operations/Performance Awards. The water utility received the award for the Middle Fork Drinking Water Plant following a 12-month filtration and backwash data analysis by the VDH Office of Drinking Water.

Program Overview

Each year, through Virginia's Optimization Program, the VDH recognizes drinking water plants that perform above and beyond minimum water quality standards by optimizing and running their treatment process efficiently and effectively.

Leadership Statement

"The Gold Award recognizes the hard work and dedication of our organization to provide the highest-quality drinking water for our customers every day throughout the year," says Ron Seay, general manager for WCSA. "This award demonstrates our employees' commitment to making a difference for our customers throughout our service area by providing drinking water that meets or exceeds the standards set forth by the VDH."

WCSA Performance

WCSA has the largest permitted capacity and serves the largest number of service connections in the Mount Rogers Planning District, and has consistently been a top performer in the Virginia Optimization Program. This year marks the 14th time WCSA has earned the gold ranking.

Office of Drinking Water

For Achieving Virginia's Optimization Program Goals

Washington County Service Authority

Middle Fork Water Treatment Plant

Is Awarded the

2024 Gold

Water Treatment Plant Performance Award for
Excellence in Clarification, Filtration, and Backwash

Robert D. Edelman

Robert D. Edelman, PE
Director, Division of Technical Services

Office of Drinking Water
Safe Drinking Water for a Healthy Virginia

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