WATER QUALITY REPORT 2025

WASHINGTON COUNTY SERVICE AUTHORITY

25122 REGAL DRIVE

ABINGDON, VA 24211

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This Annual Drinking Water Quality Report for calendar year 2025 is designed to inform customers about the drinking water quality and efforts taken by the Washington County Service Authority (WCSA) to protect its customers' water supply. If you have questions about this report or require any additional information about any aspect of the drinking water WCSA produces, 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 Drive, 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.
- **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 fluoridated to promote 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 fluoridated to promote 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 to promote 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 and chlorination for disinfection. 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 highly susceptible 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 threaten its quality.

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), Cardwell Town Well and Well No. 10 (Saltville system) were all determined to be highly susceptible to contamination under the state-approved Source Water Assessment Program. The assessment report includes 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 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 Road water system. The City of Bristol's source (South Holston River) is rated as reasonably susceptible to potential contamination.

For more information about the Source Water Assessment, please contact WCSA at (276) 628-7151.

CONTAMINANTS IN DRINKING WATER

Sources of drinking water (both tap and bottled) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the land surface or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from animals or 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 of 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 the result of oil and gas production and mining activities.

EPA REGULATIONS

The EPA sets limits for certain contaminants in tap water to ensure it is safe for consumption. The Food and Drug Administration sets similar limits for contaminants in bottled water. These limits ensure that both types of water provide the same level of public health protection.

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 at www.epa.gov/your-drinking-water.

IMPORTANT HEALTH INFORMATION

Some customers 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 from their healthcare providers about drinking water. EPA/CDC guidelines on appropriate measures to reduce the risk of infection from Cryptosporidium and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline (800-426-4791).

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 behavioral problems or exacerbate existing conditions. The children of women who are exposed to lead before or during pregnancy can have an increased risk of these adverse health effects. Adults can have an increased risk of heart disease, high blood pressure, kidney or nervous system problems.

LEAD IN DRINKING WATER

If present, elevated lead levels can cause serious health problems. This risk is greatest for expectant mothers and young children. Lead in drinking water is primarily from materials and components associated with service lines

and home plumbing. WCSA provides high-quality drinking water and has no lead pipes in its distribution system. However, WCSA cannot control the materials used in plumbing components within a home or business. WCSA customers share the responsibility for protecting themselves, their families and customers who use their business from the lead in their plumbing. Identifying and removing any lead-containing materials within the property allows customers to take steps to reduce the risk for people who use your plumbing. If lead is identified within your property, always flush your pipes for several minutes before consuming tap water. This can be done by running a tap, taking a shower, doing a load of laundry or doing the dishes, which may reduce the risk of drinking lead-contaminated tap water. Removal of all lead from plumbing systems is always the best approach. You can also use a filter certified by an American National Standards Institute (ANSI) accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water, have your water tested by contacting WCSA at 276-628-7151.

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) require 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 and found 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)

Every five years, the EPA is required by the Safe Drinking Water Act (SDWA) to 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 the collection of samples 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 all required testing for all WCSA-owned water sources in accordance with the EPA's fifth Unregulated Contaminant Monitoring Rule. There were zero detections of the 29 PFAS compounds and lithium.

VIOLATION INFORMATION

The **Green Spring, Hayter's Gap, Hidden Valley 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 customer drinking water are routinely monitored in accordance with Federal and State regulations. The tables on pages 3 and 4 show the results of the monitoring completed for the period of January 1st to December 31st, 2025, unless otherwise noted. The state allows WCSA to monitor for some contaminants less than once per year due to the concentrations of these contaminants changing infrequently. Some of the data, while representative, may be more than one year old. WCSA has tested for many more constituents than are included in the tables. Only detected constituents are required to be detailed in this report.

DEFINITIONS

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

- **Action Level (AL):** the concentration of a contaminant that, if exceeded, requires a water system to implement treatment measures or comply with additional regulatory requirements.
- **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 over 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 disinfectants' use in controlling microbial contaminants.
- **Maximum Residual Disinfectant level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the 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 a contaminant in drinking water.
- **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.

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	0.455	No	ND – 0.455	2025	0.85	No	0.282—1.41	2025	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (ppm)	4	4	0.46	No	ND - 0.46	2025	0.78	No	0.73 - 0.82	2025	Water additive which promotes strong teeth
Barium (ppm)	2	2	0.036	No	0.028 – 0.036	2025	0.105	No	0.084—0.126	2025	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	1.41	No	0.20 – 2.09	2025	1.19	No	0.69 — 1.77	2025	Water additive used to control microbes
Total Organic Carbon	NA	TT, met when ≥ 1	1.100	No	1.00 — 1.39	2025	NA	NA	-	NA	Naturally present in the environment
Haloacetic Acids (ppb)	NA	60	43	No	16—61	2025	6.1	No	-	2025	By-product of drinking water disinfection
TTHMs (Total Trihalomethanes) (ppb)	NA	80	42	No	16—70	2025	10.45	No	-	2025	By-product of drinking water disinfection
Turbidity (NTU)	NA	TT, 1 NTU Max	0.69	No	0.01 – 0.69	2025	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*	13.2 (mg/L)	1.43 — 13.2	2025	5.88	-	2025	

*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)				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**	**Typical Source of Substance**
Nitrate (ppm)	10	10	1.77	No	NA	2025	0.529	No	-	2025	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (ppm)	4	4	ND	No	NA	2025	0.201	No	0.150 — 0.250	2024	Water additive which promotes strong teeth
Barium (ppm)	2	2	0.028	No	0.028	2025	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	0.106	No	NA	2020	Erosion of Natural Deposits
Combined Radium (pCi/l)	0	5	0.2	No	—	2021	NA	NA	NA	NA	Erosion of Natural Deposits
Chlorine (ppm)	MRDLG = 4	MRDL = 4	1.06	No	0.53 — 1.99	2025	0.95	NA	0.50 - 1.36	2025	Water additive used to control microbes
Total Organic Carbon	NA	TT, met when ≥ 1	1.0	No	0.62 — 0.79	2025	NA	NA	NA	NA	Naturally present in the environment
Haloacetic Acids (ppb)	NA	60	32	No	16 — 61	2025	54.3	No	-	2025	By-product of drinking water disinfection
TTHMs (Total Trihalomethanes) (ppb)	NA	80	32	No	16 — 70	2025	51.2	No	-	2025	By-product of drinking water disinfection
Turbidity (NTU)	NA	TT, 1 NTU Max	0.04	No	0.02 – 0.06	2025	0.10	NA	0.04 — 0.10	2025	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	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		0.103	2024	0.018 — 0.136		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 Detect-ed	Range	Date Sampled	Naturally Occurring; Addition of treatment chemicals/processes
Sodium *	3.2 (mg/L)	-	2/4/2025	8.6 (mg/L)	-	2025	

*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.

Office of Drinking Water

For Achieving Virginia's Optimization Program Goals

Washington County Service Authority

Middle Fork Water Treatment Plant

Is Awarded the

2025 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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