



2022 Annual  
**WATER QUALITY  
REPORT**

**Bluestone District**  
PWS ID: WV3304513

**QUALITY. ONE MORE WAY  
WE KEEP LIFE FLOWING.**



**WEST VIRGINIA  
AMERICAN WATER**

**WE KEEP LIFE FLOWING®**

# What is a Consumer Confidence Report (CCR)

Once again, we proudly present our Annual Water Quality Report, also referred to as a Consumer Confidence Report (CCR). CCRs let consumers know what contaminants, if any, were detected in their drinking water as well as related potential health effects. CCRs also include details about where your water comes from and how it is treated. Additionally, they educate customers on what it takes to deliver safe drinking water and highlight the need to protect drinking water sources.

We are committed to delivering high quality drinking water service. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, environmental compliance, sustainability and community education while continuing to serve the needs of all our water users.

This report contains important information about your drinking water. Translate it, or speak with someone who understands it at 1-800-685-8660.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien al 1-800-685-8660.

Ntawm no yog ib co lus qhia tseem ceeb heev txog koj cov dej seb huv npaum li cas. Yog tias koj xav tau kev pab txhais cov lus qhia no, thov hu rau peb ntawm 1-800-685-8660.

這是關於您的水質的十分重要的資訊。如果您需要幫助翻譯此資訊請致電 **1-800-685-8660** 與我們聯繫。

आपके पानी की गुणवत्ता के बारे में यह बहुत महत्वपूर्ण सूचना है। यदि इस सूचना के अनुवाद के लिए आपको सहायता की जरूरत हो, तो कृपया **1-800-685-8660** र हमें काल करें।

**Это очень важная информация о качестве Вашей воды. Если Вам требуется перевод этой информации, позвоните нам по телефону 1-800-685-8660.**

Ito ay isang napakahalagang impormasyon tungkol sa kalidad ng iyong tubig. Kung iyong kailangan ng tulong sa pagsalin ng impormasyon na ito, mangyaring tumawag sa amin sa 1-800-685-8660.

Đây là thông tin rất quan trọng về chất lượng nước của quý vị. Nếu quý vị cần thông dịch thông tin này, xin gọi chúng tôi theo số 1-800-685-8660.

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## A message from West Virginia American Water's President



**Robert Burton**

President, West Virginia  
American Water

Dear West Virginia American Water Customer,

At West Virginia American Water, our customers are at the center of everything we do. That's why we work diligently to protect our water supplies and provide our communities with safe, reliable drinking water that meets and often surpasses drinking water standards. We care about protecting our precious water resources, and we've invested millions of dollars into technology and equipment to test and monitor our drinking water supplies.

I am pleased to share with you another excellent report on the quality of your drinking water. As you read through this annual water quality information, you will see that we continue to supply the highest quality drinking water to help keep your life flowing.

Last year, we invested \$83 million to upgrade our water treatment and pipeline systems across West Virginia. This investment allowed us to improve water quality, water pressure and service reliability for our customers. These investments included the replacement of aging water lines and valves, upgrades to our water treatment processes to comply with water quality standards, enhancing fire protection and much, much more.

I am also delighted to remind customers that all seven of our water treatment plants have been nationally recognized with prestigious Directors Awards from the American Water Works Association and U.S. EPA's Partnership for Safe Water program. This program recognizes water systems that surpass federal and state drinking water standards. All of our plants have achieved this award for many years – some as many as 20 consecutive years – and are the only water treatment plants in West Virginia to do so.

West Virginia American Water remains committed to protecting your drinking water. We have been recognized nationally for advanced technology and detection methods that are paving the way for source water protection across the country. Additionally, our Kanawha Valley and Huntington treatment plants are part of the ORSANCO Organics Detection System monitoring network, providing source water monitoring data that is vital for detecting trends and understanding source water conditions.

We hope our commitment to you and our passion for water is evident in this report detailing the source and quality of your drinking water over the last year. It is our honor to help keep your life flowing – today, tomorrow and for future generations.

Proud to be your local water service provider,

A handwritten signature in blue ink, appearing to read 'Robert Burton'.

Robert Burton  
West Virginia American Water

**This report contains important information about your drinking water. Translate it or speak with someone who understands it at 1-800-685-8660, Monday-Friday, 7 a.m. to 7 p.m.**



### **ATTENTION: Landlords and Apartment Owners**

**Please share a copy of this notice with your tenants. It includes important information about their drinking water quality.**

# Mark of Excellence



## EVERY STEP OF THE WAY.

Our team monitors and tests your water at multiple points throughout our process of drawing it from its source, treating it to meet drinking water standards, and distributing it through our pipeline systems. **In fact, American Water performs over one million tests annually for about 100 regulated contaminants, nationwide.**



## EXPERTISE. RECOGNIZED AT THE HIGHEST LEVEL.

American Water is an expert in water quality testing, compliance and treatment and has established industry-leading water testing facilities. Our dedicated team of scientists and researchers are committed to finding solutions for water quality challenges and implementing new technologies. American Water is recognized as an industry leader in water quality and works cooperatively with the EPA so that drinking water standards and new regulations produce benefits for customers and public water suppliers. American Water has earned awards from the EPA's Partnership for Safe Water as well as awards for superior water quality from state regulators, industry organizations, individual communities, and government and environmental agencies.



## WATER QUALITY. DOWN TO A SCIENCE.

Our team also has access to American Water's Central Laboratory in Belleville, Illinois, which conducts sophisticated drinking water testing and analysis. American Water scientists refine testing procedures, innovate new methods, and set new standards for detecting potentially new contaminants—even before regulations are in place.



## MAINTAINING QUALITY FOR FUTURE GENERATIONS.

Just as [state] American Water is investing in research and testing, we also understand the importance of investing in the infrastructure that provides high-quality water service to you. Last year alone, **we invested more than \$83 million to improve our water and wastewater treatment and pipeline systems.**

## NOT JUST MEETING DRINKING WATER STANDARDS— SURPASSING THEM.

The EPA regulates about 100 potential contaminants and sets stringent standards for each one. **West Virginia American Water takes water quality so seriously that:**

- **Seven of our water treatment plants, have been nationally recognized with Directors Awards** from the EPA's Partnership for Safe Water program for our long-term commitment to optimizing operations, achieving outstanding performance, and protecting public health and the environment.
- **Most of our water treatment plants have received the Directors Award year after year for more than a decade** including Bluefield, Bluestone, Gassaway, Huntington, Kanawha Valley, New River and Weston.



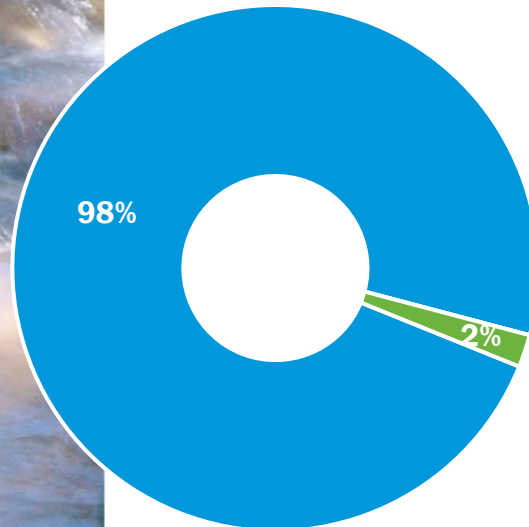


# About Your Drinking Water Supply

## WHERE YOUR WATER COMES FROM

Your drinking water is supplied by surface water from Bluestone Lake. This reservoir is formed by Bluestone Dam on the New River, which flows north into West Virginia from Virginia. Learn more about Bluestone Lake, New River, and local waterways at <https://watersgeo.epa.gov/mywaterway>.

The West Virginia Department of Health and Human Resources (DHHR) completed a source water assessment of Bluestone Lake in March 2004 to meet Federal requirements of the Safe Drinking Water Act. The study looked at the drainage area and ranked its vulnerability to contamination. DHHR ranked the susceptibility high because Bluestone Lake is a surface water body exposed above the ground. To get a copy of the assessment, contact DHHR at (304) 356-4298 or visit: <https://www.wvdhhr.org/oehs/eed/swap>.



## SOURCE OF SUPPLY FOR WEST VIRGINIA AMERICAN WATER SYSTEMS

- Surface Water
- Purchased Water

## QUICK FACTS ABOUT THE BLUESTONE SYSTEM

### Communities served:

Hinton, Jumping Branch, Nimitz, Pipestem, and Lerona areas of Summers County; Princeton, Lashmeet, Matoaka, Oakvale, and Spanishburg areas of Mercer County

### Water source:

Bluestone Lake, an impoundment of the New River

### Average amount of water supplied to customers on a daily basis:

2.4 million gallons per day

**Disinfection treatment:** Surface water supplies are treated with chlorine to maintain water quality in the distribution system.



# What are the Sources of Contaminants?

To provide tap water that is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. 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).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, aquifers and/or groundwater. 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.

**SPECIAL 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 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/Centers for Disease Control and Prevention (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).

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:	
<b>Microbial Contaminants</b>	such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
<b>Inorganic Contaminants</b>	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.
<b>Pesticides and Herbicides</b>	which may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
<b>Organic Chemical Contaminants</b>	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.
<b>Radioactive Contaminants</b>	which can be naturally occurring or be the result of oil and gas production and mining activities.



# Protecting Your Drinking Water Supply

Protecting drinking water at its source is an important part of the process to treat and deliver high quality water. It takes a community effort to protect our shared water resources. This includes utilities, businesses, residents, government agencies and organizations. Everyone who lives, works, and plays in the area has a role and stake in clean water supplies.

## WHAT CAN YOU DO?

Quality drinking water starts upstream. Everyone can help maintain and improve drinking water supplies through the following actions:

- Properly dispose of pharmaceuticals, household chemicals, oils and paints. Materials can impact water ways if poured down the drain, flushed down the toilet, or dumped on the ground.
- Check for leaks from automobiles and heating fuel tanks. Clean up any spills using an absorbent material like cat litter. Sweep up the material and put it in a sealed bag. Check with the local refuse facility for proper disposal.
- Clean up after your pets and limit the use of fertilizers and pesticides.
- Take part in watershed activities.

**Report any spills, illegal dumping or suspicious activity to the West Virginia DEP Spill Line at 1-800-642-3074.**


## FOR MORE INFORMATION


To learn more about your water supply and local activities, visit us online at <https://www.amwater.com/wvaw> or contact our Source Water Protection Program Manager, Erica Pauken, at [erica.pauken@amwater.com](mailto:erica.pauken@amwater.com).


## WHAT ARE WE DOING?

Our priority is to provide reliable, quality drinking water service for customers. The source of supply is an important part of that mission. We work to understand and reduce potential risks to your drinking water supply. We have developed a Source Water Protection Plan for each West Virginia American Water system, and those plans are publicly available at <https://www.amwater.com/wvaw>. These plans proactively identify and address potential threats to drinking water supplies. Stakeholder involvement is an important part of the program, and we partner with external stakeholders to host regular meetings to review progress on the plans. We also welcome input on the plan or local water supplies through our online feedback form.

**Here are a few of the efforts underway to protect our shared water resources:**

 **Community Involvement:** We have a proactive public outreach program to help spread the word and get people involved. This includes school education, contests, and other community activities.

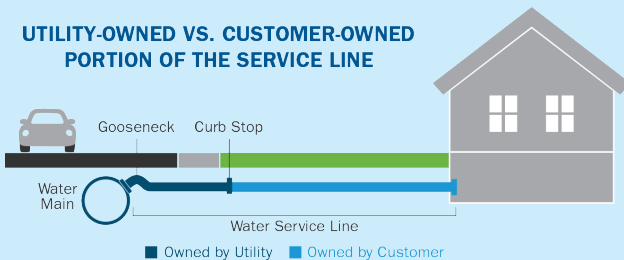
 **Environmental Grant Program:** Each year, we fund projects that improve water resources in our local communities.

 **Protect Our Watersheds Art Contest:** Open to fourth, fifth and sixth graders, the contest encourages students to use their artistic skills to express the importance of protecting our water resources.

# About Lead

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. West Virginia American 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 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>.

## UTILITY-OWNED VS. CUSTOMER-OWNED PORTION OF THE SERVICE LINE



Please note: This diagram is a generic representation. Variations may apply.

## The most common source of lead in tap water is from the customer's plumbing and their service line.

The utility-owned water mains are not made of lead; however, the water service line that carries the water from the water main in the street to your home could be. Homeowners' service lines may be made of lead, copper, galvanized steel or plastic. You can assess your service line material where it enters your home, typically in your basement, crawl space or garage, near the inlet valve.

### MINIMIZING YOUR POTENTIAL EXPOSURE

You cannot see, smell or taste lead, and boiling water will not remove lead. Here are steps you can take to reduce your potential exposure if lead exists in your home plumbing.

### CHECK YOUR PLUMBING AND SERVICE LINE

If you live in an older home, consider having a licensed plumber check your plumbing for lead. If your service line is made of lead, and you're planning to replace it, be sure to contact us at 1-800-685-8660.



**1. Flush your taps.** The longer the water lies dormant in your home's plumbing, the more lead it might contain. If the water in your faucet has gone unused for more than six hours, flush the tap with cold water for 30 seconds to two minutes before drinking or using it to cook. To conserve water, catch the running water and use it to water your plants.



**2. Use cold water for drinking and cooking.** Hot water has the potential to contain more lead than cold water. If hot water is needed for cooking, heat cold water on the stove or in the microwave.



**3. Routinely remove and clean all faucet aerators.**



**4. Look for the "Lead Free" label** when replacing or installing plumbing fixtures.



**5. Follow manufacturer's instructions for replacing water filters** in household appliances, such as refrigerators and ice makers, as well as home water treatment units and pitchers. Look for NSF 53 certified filters.



**6. Flush after plumbing changes.** Changes to your service line, meter, or interior plumbing may result in sediment, possibly containing lead, in your water supply. Remove the strainers from each faucet and run the water for 3 to 5 minutes.







# Determining Your Service Line Material

Homeowners' service lines are most commonly made of lead, copper, galvanized steel or plastic. Homes built before 1930 are more likely to have lead plumbing systems.

## There are different ways that you can determine if you have a lead service line.

- You can access your service line material where it enters your home, typically in your basement, crawl space or garage, near the inlet valve and identify the pipe material using the chart on the right.
- A licensed and insured plumber can inspect your pipes and plumbing.
- Lead test kits can be purchased at local hardware and home improvement stores. These kits are used to test paint, but can also be used to test pipe – not the water inside. Look for an EPA recognized kit. Wash your hands after inspecting plumbing and pipes.

## TYPES OF PIPE

	• Galvanized: A dull, silver-gray color. Use a magnet - strong magnets will typically cling to galvanized pipes.
	• Copper: The color of a copper penny.
	• Plastic: Usually white, rigid pipe that is jointed to water supply piping with a clamp. Note: It can be other colors, including blue and black.
	• Lead: A dull, silver-gray color that is easily scratched with a coin. Use a magnet - strong magnets will <u>not</u> cling to lead pipes.

## YOUR SERVICE LINE MATERIAL

Please note if your service lines contain lead, it does not mean you cannot use water as you normally do. West Virginia American Water regularly tests for lead in drinking water and our water meets state and federal water quality regulations, including those set for lead.

For more information on lead in drinking water, please visit <https://www.amwater.com/wvaw/water-quality/lead-and-drinking-water>



# Important Information About **Drinking Water**

## **FLUORIDE**

Fluoride is a naturally occurring substance. It can be present in drinking water from two sources:

1. **By nature** when groundwater comes into contact with fluoride-containing minerals naturally present in the earth; or
2. **By a water purveyor** through addition of fluoride to the water they are providing in the distribution system.

West Virginia American Water's Bluestone System has naturally-occurring fluoride in its water sources and with the addition of fluoride at our treatment plant, we achieve an optimal level of 0.7 parts per million (ppm) and a control range of 0.6 ppm to 0.8 ppm to comply with the state's Water Fluoridation Standards. If you have any questions on fluoride, please call West Virginia American Water's Customer Service Center at 1-800-685-8660.

## **SODIUM**

For healthy individuals, the sodium intake from water is not important because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the recommended upper limit of 250 ppm may be of concern to individuals on a sodium restricted diet. The sodium level is approximately 8.2 ppm

## **CRYPTOSPORIDIUM**

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.





## Important Information About **Drinking Water**

### **NITRATES**

Nitrate in drinking water at levels above 10 ppm (or mg/L) is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness. Symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant or you are pregnant, you should ask for advice from your health care provider.

### **WATER HARDNESS**

Hardness is a measure of the concentration of two minerals, calcium and magnesium, naturally present in water. Hardness levels range from 50-75 ppm, or 3-4 grains per gallon of water

### **pH**

Water in the distribution system averages 7.20 pH units, which is considered neutral (neither acidic nor basic).

# Important Information About **Drinking Water**



## **PFAS**

Per- and polyfluoroalkyl substances (PFAS) are manufactured chemicals used in many household products including nonstick cookware (e.g., Teflon™), stain repellants (e.g., Scotchgard™), and waterproofing (e.g., GORE-TEX™). They are also used in industrial applications such as in firefighting foams and electronics production. There are thousands of PFAS chemicals, and they persist in the environment. Two well-known PFAS chemicals are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). These were phased out of production in the United States and replaced by hexafluoropropylene oxide-dimer acid (commonly known as GenX), perfluorobutane sulfonic acid (PFBS) and others.

West Virginia American Water has performed voluntary sampling to better understand occurrence of certain PFAS in drinking water sources. This sampling allows us to understand how our water compares against the non-enforceable Health Advisory Level set by U.S. EPA. Sampling also allows West Virginia American Water to be better prepared as U.S. EPA and West Virginia Bureau for Public Health are currently developing drinking water standards for PFOA and PFOS. Additionally, in 2024/2025, the Bluestone district will be checking our drinking water for 29 PFAS chemicals through our participation in the U.S. EPA Unregulated Contaminant Monitoring Rule program, or UCMR. Through the UCMR program, water systems collect data on a group of contaminants that are currently not regulated in drinking water at the federal level. U.S. EPA uses this information when deciding if it needs to create new drinking water limits.

The science and regulation of PFAS and other contaminants is always evolving, and West Virginia American Water strives to be a leader in research and development. PFAS contamination is one of the most rapidly changing areas in the drinking water field. We have invested in our own independent research, as well as engaging with other experts in the field to understand PFAS occurrence in the environment. We are also actively assessing treatment technologies that can effectively remove PFAS from drinking water, because we believe that investment in research is critically important to addressing this issue.



American Water has a history of leading research to understand contaminants that can make their way through the environment. Our dedicated scientists work with leaders in the water community to develop methods to detect, sample, measure and address these contaminants. Because investment in research is critical to address PFAS, American Water actively assesses treatment technologies that can effectively remove PFAS from drinking water.

**Lauren A. Weinrich, Ph.D.**  
Principal Scientist



## Water Quality Results

### **WATER QUALITY STATEMENT**

We are pleased to report that during calendar year 2022, the results of testing of your drinking water complied with all state and federal drinking water requirements.

For your information, we have compiled a list in the table below showing the testing of your drinking water during 2022. The West Virginia Bureau for Public Health allows us to monitor for some contaminants less than once per year because the concentration of the contaminants does not change frequently. Some of our data, though representative, are more than one year old.

# Definition of Terms

These are terms that may appear in your report.

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

**Level 1 Assessment:** A Level 1 assessment is 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 Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

**LRAA:** Locational Running Annual Average

**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. See also Secondary Maximum Contaminant Level (SMCL).

**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 (MRDL):** The highest level of 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.

**MFL:** Million fibers per liter.

**micromhos per centimeter ( $\mu\text{mhos/cm}$ ):** A measure of electrical conductance.

**NA:** Not applicable

**ND:** Not detected

**Nephelometric Turbidity Units (NTU):** Measurement of the clarity, or turbidity, of the water.

**pH:** A measurement of acidity, 7.0 being neutral.

**picocuries per liter (pCi/L):** Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).

**parts per billion (ppb):** One part substance per billion parts water, or micrograms per liter.

**parts per million (ppm):** One part substance per million parts water, or milligrams per liter.

**parts per trillion (ppt):** One part substance per trillion parts water, or nanograms per liter.

**Secondary Maximum Contaminant Level (SMCL):** Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

**TON:** Threshold Odor Number

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

**%:** Percent

## MEASUREMENTS

### Parts Per Million



in a 10 gallon fish tank

### Parts Per Billion



in a 10,000 gallon swimming pool

### Parts Per Trillion



in 35 junior size Olympic pools

# Water Quality Results

West Virginia American Water conducts extensive monitoring to determine if your water meets all water quality standards. The detections of our monitoring are reported in the following tables. While most monitoring was conducted in 2022, certain substances are monitored less than once per year because the levels do not change frequently. For help with interpreting the tables below, see the “Definition of Terms” on the previous page. Some unregulated substances are measured, but maximum contaminant levels have not been established by the government. These contaminants are shown for your information.

**NOTE:** Regulated contaminants not listed in this table were not found in the treated water supply.

## TURBIDITY - Collected at the Treatment Plant

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Single Measurement and Lowest Monthly % of Samples ≤ 0.3 NTU	Range Detected	Typical Source
Turbidity (NTU)	2022	Yes	0	TT: Results > 1 NTU	0.194	0.02 to 0.194	Soil runoff.
	2022	Yes	N/A	TT: At least 95% of samples <0.3 NTU	100%	NA	Soil runoff.

## TOTAL COLIFORM RULE - At least 30 samples collected for the Bluestone System each month in the distribution system

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Percentage <b>OR</b> Highest No. of Samples	Typical Source
Total Coliform	2022	Yes	0	*MCL = Less than 5% <b>OR</b> MCL = No more than 1 positive monthly sample	0%	Naturally present in the environment.
E. Coli	2022	Yes	0	TT = No confirmed samples	0	Human and animal fecal waste.

NOTE: Coliforms are bacteria that are naturally present in the environment and are used as an indicator of the general bacteriological quality of the water. We are reporting the highest percentage of positive samples / highest number of positive samples in any month.

**TREATMENT BYPRODUCTS PRECURSOR REMOVAL - Collected at the Treatment Plant**

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Range of % Removal Required	Range of % Removal Achieved	Number of Quarters Out of Compliance	Typical Source
Total Organic Carbon (TOC)	2022	Yes	NA	TT	25% to 35%	30% to 64%	0	Naturally present in the environment.

**DISINFECTANTS - Collected in the Distribution System and at the Treatment Plant**

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Lowest Residual and Highest Monthly Average	Range Detected	Typical Source
Entry Point Free Chlorine Residual (ppm)	2022	Yes	MRDLG = 4	4	1.8 <sup>1</sup>	1.8 to 2.6	Water additive used to control microbes.
Total Chlorine (ppm) (Distribution System)	2022	Yes	MRDLG = 4	4	2.7 <sup>2</sup>	0.57 to 3.5	Water additive used to control microbes.

**DISINFECTION BYPRODUCTS - Collected in the Distribution System**

Substance (with units)	Year Sampled	Compliance Achieved	Sample Site	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
Total Trihalomethanes (TTHMs) (ppb)	2022	Yes	S2HAA1 - Bear Mountain Sample Hyd	0	80	68.2	20.6 - 122.2	By-product of drinking water disinfection.
			S2HAA2 - Low Gap Road Booster			46.2	14.3 - 76.2	
			S2THM1 - Spanishburg School			63.55	24 - 106	
			S2THM2 - Lashmeet Area			59.4	23.8 - 100.8	
Haloacetic Acids (HAAs) (ppb)	2022	Yes	S2HAA1 - Bear Mountain Sample Hyd	0	60	52.0	21.4 - 72.9	By-product of drinking water disinfection.
			S2HAA2 - Low Gap Road Booster			27.5	14.1 - 45.1	
			S2THM1 - Spanishburg School			39.1	22.0 - 57.2	
			S2THM2 - Lashmeet Area			40.6	22.2 - 69.4	

NOTE: Compliance is based on the running annual average at each location. The Highest Compliance Result reflects the highest average at any location and the Range Detected reflects all samples from this year used to calculate the running annual average.



**OTHER REGULATED SUBSTANCES - Collected at the Treatment Plant**

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
Gross Alpha (pCi/L)	2019	Yes	0	15	0.7	NA	Radioactive decay of natural deposits
Radium 228 (pCi/L)	2019	Yes	0	5	1	NA	Radioactive decay of natural deposits
Fluoride (ppm)	2022	Yes	4	4	0.82	0.56-0.82	Water additive which promotes strong teeth
Nitrite (ppm)	2022	Yes	1	1	<0.1	NA	Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits.
Nitrate (ppm)	2022	Yes	1	1	0.68	NA	Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits.

**OTHER SUBSTANCES OF INTEREST - Collected at the Treatment Plant**

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	Limit	Highest Result	Range Detected	Comments
Aluminum (ppm)	2022	N/A	N/A	0.05	0.02	NA	Mineral that occurs naturally in the soil
Calcium (ppm)	2022	N/A	N/A	N/A	17	NA	Mineral that occurs naturally in the soil
Chloride (ppm) <sup>1</sup>	2022	N/A	N/A	250	17.6	NA	Mineral that occurs naturally in the soil, road salt, and water softeners
Magnesium (ppm)	2022	N/A	N/A	N/A	5	NA	Mineral that occurs naturally in the soil
Sodium (ppm) <sup>2</sup>	2022	N/A	N/A	N/A	8.2	NA	Element that occurs naturally in water and soil, road salt, and water softeners
Sulfate (ppm) <sup>1</sup>	2022	N/A	N/A	250	11	NA	Mineral that occurs naturally in the soil
Zinc (ppm) <sup>1</sup>	2022	N/A	N/A	5	0.28	0.05-0.28	Element that occurs naturally in the water; constituent of corrosion control additive.

1 - Substances with Secondary MCLs do not have MCLGs and are not legally enforceable; these limits are primarily established to address aesthetic concerns.

2 - For healthy individuals the sodium intake from water is not important because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the recommended upper limit may be of concern to individuals on a sodium restricted diet.

**LEAD AND COPPER MONITORING PROGRAM - At least 30 tap water samples collected at customers' taps every 3 years**

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	Action Level (AL)	90 <sup>th</sup> Percentile	No. of Homes Sampled	Homes Above Action Level	Typical Source
Lead (ppb)	2021	Yes	0	15	3	30	0	Corrosion of household plumbing systems.
Copper (ppm)	2021	Yes	1.3	1.3	0.291	30	0	Corrosion of household plumbing systems.

**UNREGULATED CONTAMINANT MONITORING**

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is necessary. Every five years, the EPA issues a new list of no more than 30 unregulated contaminants to be monitored.

**ADDITIONAL WATER QUALITY PARAMETERS OF INTEREST – Water in Distribution System)**

Parameter	Units	Year	Average Result	Range Detected	Typical Source
Dichloroacetic Acid	ppb	2018 to 2019	10.5	2.8 to 29	By-product of drinking water disinfection
Trichloroacetic Acid	ppb	2018 to 2019	12.3	4.2 to 30	By-product of drinking water disinfection
Bromodichloroacetic Acid	ppb	2018 to 2019	2.5	1 to 8.1	By-product of drinking water disinfection
Chlorodibromoacetic Acid	ppb	2018 to 2019	0.32	0.31 to 0.34	By-product of drinking water disinfection
Total Haloacetic Acids	ppb	2018 to 2019	23	6.9 to 59	By-product of drinking water disinfection
Total Haloacetic Acids – UCMR4	ppb	2018 to 2019	26.6	8.3 to 64	By-product of drinking water disinfection
Total Haloacetic Acids - Br	ppb	2018 to 2019	3.6	1.4 to 7.4	By-product of drinking water disinfection
Manganese	ppb	2018 to 2019	11.72	1 to 43	By-product of drinking water disinfection

## PFAS

West Virginia American Water has performed voluntary sampling to better understand the occurrence of certain PFAS in drinking water sources. This sampling allows us to understand how our water compares against the non-enforceable Health Advisory Level set by U.S. EPA. Sampling also allows West Virginia American Water to be better prepared as U.S. EPA and West Virginia Bureau for Public Health are currently developing drinking water standards for PFOA and PFOS.

UNREGULATED PFAS CHEMICALS					
Parameter	Year Sampled	Units	Highest Result	Range Detected	Typical Source
Perfluorooctanoic acid (PFOA)	2021	ppt	1.5	NA	Manufactured chemical(s); used in household goods for stain, grease, heat and water resistance.
Perfluorooctane sulfonic acid (PFOS)	2021	ppt	ND	NA	
Hexafluoropropylene oxide-dimer acid (GenX)	2021	ppt	ND	NA	
Perfluorobutane sulfonic acid (PFBS)	2021	ppt	ND	NA	

PFAS are not regulated in West Virginia. In 2022, U.S. EPA set health advisory levels for four PFAS chemicals – PFOA (0.004 part per trillion (ppt)), PFOS (0.02 ppt), GenX (10 ppt), and PFBS (2,000 ppt). Based on current analytical methods, however, the health advisory levels for PFOA and PFOS are below the level of both detection (determining whether or not a substance is present) and quantitation (the ability to reliably determine how much of a substance is present). This means that it is possible for PFOA or PFOS to be present in drinking water at levels that exceed health advisories even if testing indicates no level of these chemicals. U.S. EPA is currently developing drinking water regulations for PFOA and PFOS that take these challenges into consideration and West Virginia American Water will take appropriate actions to meet any new regulations. Finally, PFAS chemicals are unique, so two PFAS chemicals at the same level typically do not present the same risk. Therefore, you should not compare the results for one PFAS chemical against the results of another. For more information on PFAS, please visit <https://www.epa.gov/sdwa/questions-and-answers-drinking-water-health-advisories-pfoa-pfos-genx-chemicals-and-pfbs>.

# Tested for, but **Not Detected**

## **Volatile Organic Compounds**

- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- 1,1-Dichloroethene
- 1,2,4-Trichlorobenzene
- 1,2-Dichlorobenzene
- 1,2-Dichloroethane
- 1,2-Dichloropropane
- 1,4-Dichlorobenzene
- Benzene
- Carbon tetrachloride
- Chlorobenzene
- cis-1,2-Dichloroethene
- Ethyl Benzene
- Methyl tert-Butyl ether (MTBE)
- Methylene chloride
- Styrene
- Tetrachloroethene (PCE)
- Toluene
- trans-1,2-Dichloroethene
- Trichloroethene (TCE)
- Vinyl chloride
- Xylene (total)

## **Semi-volatile Organic Compounds**

- 1,2-Dibromo-3-chloropropane
- 1,2-Dibromoethane (EDB)
- 2,4'-D
- 2,4,5-T
- 2,4,5-TP (Silvex)
- 2,4-DB

- 3,5-Dichlorobenzoic Acid
- 3-Hydroxycarbofuran
- Acifluorfen
- Alachlor
- Aldicarb
- Aldicarb Sulfone
- Aldicarb Sulfoxide
- Arochlor-1016
- Arochlor-1221
- Arochlor-1232
- Arochlor-1242
- Arochlor-1248
- Arochlor-1254
- Arochlor-1260
- Atrazine (Aatrex)
- Bentazon
- Benzo(a)pyrene
- Carbaryl (Sevin)
- Carbofuran
- Dacthal
- Dalapon
- Di(2-ethylhexyl)adipate
- Di(2-ethylhexyl)phthalate
- Dicamba
- Dichloroprop
- Dinoseb
- Endrin
- gamma-BHC (Lindane)
- Heptachlor
- Heptachlor epoxide
- Hexachlorobenzene

- Hexachlorocyclopentadiene
- Methiocarb
- Methomyl
- Methoxychlor
- Oxamyl (Vydate)
- Picloram
- Pentachlorophenol
- Simazine (Princep)
- Technical Chlordane
- Total PCBs
- Toxaphene

## **Inorganics**

- Antimony – Total
- Arsenic – Total
- Barium – Total
- Beryllium – Total
- Boron – Total
- Cadmium – Total
- Chromium - Total
- Cobalt - Total
- Copper -Total
- Cyanide, Total
- Iron – Total
- Mercury – Total
- Molybdenum – Total
- Nickel – Total
- Potassium – Total
- Selenium - Total
- Silica - Total
- Silver – Total

- Strontium - Total
- Thallium – Total
- Vanadium – Total

## **UCMR**

- Germanium
- Ethoprop
- alpha-Hexachlorocyclohexane
- Dimethipin
- Chlorpyrifos
- Profenofos
- Tribufos
- Oxyfluorfen
- Tebuconazole
- Total Permethrin (cis & trans)
- 2-Propen-1-ol
- 1-Butanol
- 2-Methoxyethanol
- O-Toluidine
- Quinoline
- Butylated Hydroxyanisole (BHA)
- Monochloroacetic Acid
- Monobromoacetic Acid
- Dibromoacetic Acid
- Tribromoacetic Acid
- Cylindrospermopsin
- Anatoxin-a
- Total Microcystins
- Bromide



## WEST VIRGINIA AMERICAN WATER FACTS AT A GLANCE

- **COMMUNITIES SERVED**  
401 communities located in 19 counties
- **POPULATION SERVED**  
Water: 587,000 people  
Wastewater: 1,100 people
- **EMPLOYEES**  
318 full-time
- **TREATMENT FACILITIES**  
Seven surface water treatment plants (average daily delivery - 44 million gallons per day (MGD));  
Two wastewater plants (average daily production - 0.5 MGD)
- **MILES OF PIPELINE**  
4,618 miles of water and wastewater pipe
- **STORAGE AND TRANSMISSION**  
200 water storage facilities (combined storage capacity of 76.2 million gallons); 265 water booster pumping stations; and 9 wastewater lift stations
- **SOURCE OF SUPPLY**  
Elk River, New River, Ohio River, West Fork River, Ada Dam, Horton Dam and Kee Dam
- **PARTNERSHIP FOR SAFE WATER AWARDS**  
Seven Directors Awards

## About Us

**West Virginia American Water**, a subsidiary of American Water, is the largest investor-owned water utility in the state, providing high-quality and reliable water and/or wastewater services to approximately 587,000 people. For more information, visit [westvirginiaamwater.com](http://westvirginiaamwater.com) and follow us on Twitter, Facebook, Instagram and YouTube.

With a history dating back to 1886, **American Water (NYSE: AWK)** is the largest and most geographically diverse U.S. publicly traded water and wastewater utility company. The company employs approximately 6,500 dedicated professionals who provide regulated and regulated-like drinking water and wastewater services to an estimated 14 million people in 24 states. American Water provides safe, clean, affordable, and reliable water services to our customers to help keep their lives flowing.



# How to Contact Us

If you have any questions about this report, your drinking water, or service, please contact California American Water's Customer Service Center Monday to Friday, 7 a.m. to 7 p.m. at 1-888-237-1333.

## WATER INFORMATION SOURCES

**West Virginia American Water**  
[www.westvirginiaamwater.com](http://www.westvirginiaamwater.com)

**West Virginia Department of Health and Human Resources:**  
[www.dhhr.wv.gov](http://www.dhhr.wv.gov)

**West Virginia Bureau for Public Health:**  
[www.dhhr.wv.gov](http://www.dhhr.wv.gov)

**West Virginia Department of Environmental Protection:**  
[www.dep.wv.gov](http://www.dep.wv.gov)

**United States Environmental Protection Agency (USEPA):**  
[www.epa.gov/safewater](http://www.epa.gov/safewater)

**Safe Drinking Water Hotline:** (800) 426-4791

**Centers for Disease Control and Prevention:** [www.cdc.gov](http://www.cdc.gov)

**American Water Works Association:** [www.awwa.org](http://www.awwa.org)

**Water Quality Association:** [www.wqa.org](http://www.wqa.org)

**National Library of Medicine/National Institute of Health:**  
[www.nlm.nih.gov/medlineplus/drinkingwater.html](http://www.nlm.nih.gov/medlineplus/drinkingwater.html)

**This report contains important information about your drinking water. Translate it, or speak with someone who understands it at 1-888-237-1333.**

This report contains important information about your drinking water. Translate it, or speak with someone who understands it at 1-888-237-1333.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien al 1-888-237-1333.

Ntawm no yog ib co lus qhia tseem ceeb heev txog koj cov dej seb huv npaum li cas. Yog tias koj xav tau kev pab txhais cov lus qhia no, thov hu rau peb ntawm 1-888-237-1333.

這是關於您的水質的十分重要的資訊。如果您需要幫助翻譯此資訊請致電 **1-888-237-1333** 與我們聯繫。

आपके पानी की गुणवत्ता के बारे में यह बहुत महत्वपूर्ण सूचना है। यदि इस सूचना के अनुवाद के लिए आपको सहायता की जरूरत हो, तो कृपया **1-888-237-1333** र हमें काल करें।

**Это очень важная информация о качестве Вашей воды. Если Вам требуется перевод этой информации, позвоните нам по телефону 1-888-237-1333.**

Ito ay isang napakahalagang impormasyon tungkol sa kalidad ng iyong tubig. Kung iyong kailangan ng tulong sa pagsalin ng impormasyon na ito, mangyaring tumawag sa amin sa 1-888-237-1333.

Đây là thông tin rất quan trọng về chất lượng nước của quý vị. Nếu quý vị cần thông dịch thông tin này, xin gọi chúng tôi theo số 1-888-237-1333.