



2023 Annual  
**WATER QUALITY  
REPORT**

**The Mountain Water System**  
PWS ID:3301963

**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

## A Message from the President

At West Virginia American Water, our primary goal is delivering clean, safe and reliable water and wastewater services to our customers. That's why we work diligently to protect our water supplies and provide our communities with drinking water that meets and often surpasses drinking water standards. Additionally, we've invested millions of dollars into technology and equipment to test and monitor our drinking water supplies.

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

Last year, we invested over \$88 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, and much more.

I am also delighted to remind customers that all seven of our surface 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 surface water 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 providing our customers with high quality 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,

Robert Burton  
President, West Virginia American Water

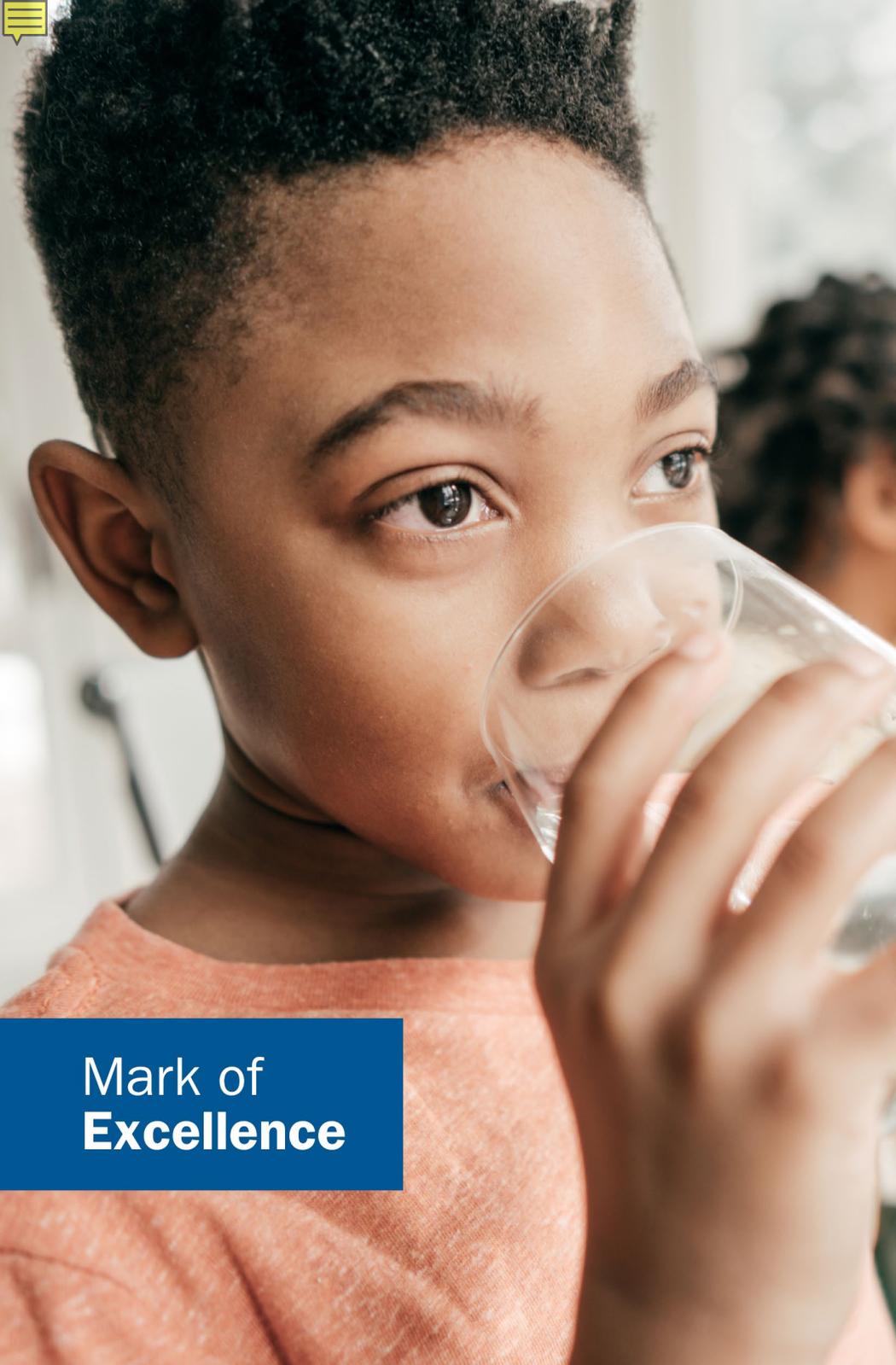
Robert Burton  
West Virginia American Water

**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 West Virginia 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 \$88 million to improve our water and wastewater treatment and pipeline systems.**

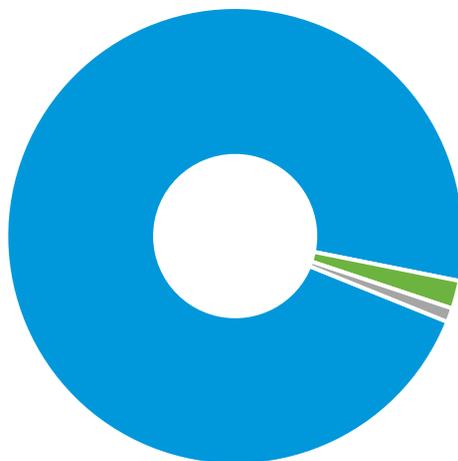
# About Your Drinking Water Supply

## WHERE YOUR WATER COMES FROM

The raw drinking water supply is ground water from Keyes Ferry Acres North well#1, Keys Ferry Acres North Well #2, R-Section Well, South section -2, Jeep Trail Well, Cardinal Trail Well. Learn more about local waterways at <https://mywaterway.epa.gov/>.

This brochure is a snapshot of the quality of the water that we provided last year. Included are the details about where your water comes from, what it contains, and how it compares to Environmental Protection Agency (EPA) and state standards. We are committed to providing you with information because informed customers are our best allies. If you have any questions or comments, please call Dawn Shoemaker at 304-353-6303

## SOURCE OF SUPPLY FOR WEST VIRGINIA AMERICAN WATER SYSTEMS



- 98% Surface Water
- 2% Groundwater
- 1% Purchased Water



## QUICK FACTS ABOUT THE MOUNTAIN WATER SYSTEM

### Communities served:

WESTRIDGE, CARDINAL, HARPERS FERRY-CAMPsites, KEYS FERRY ACRES.

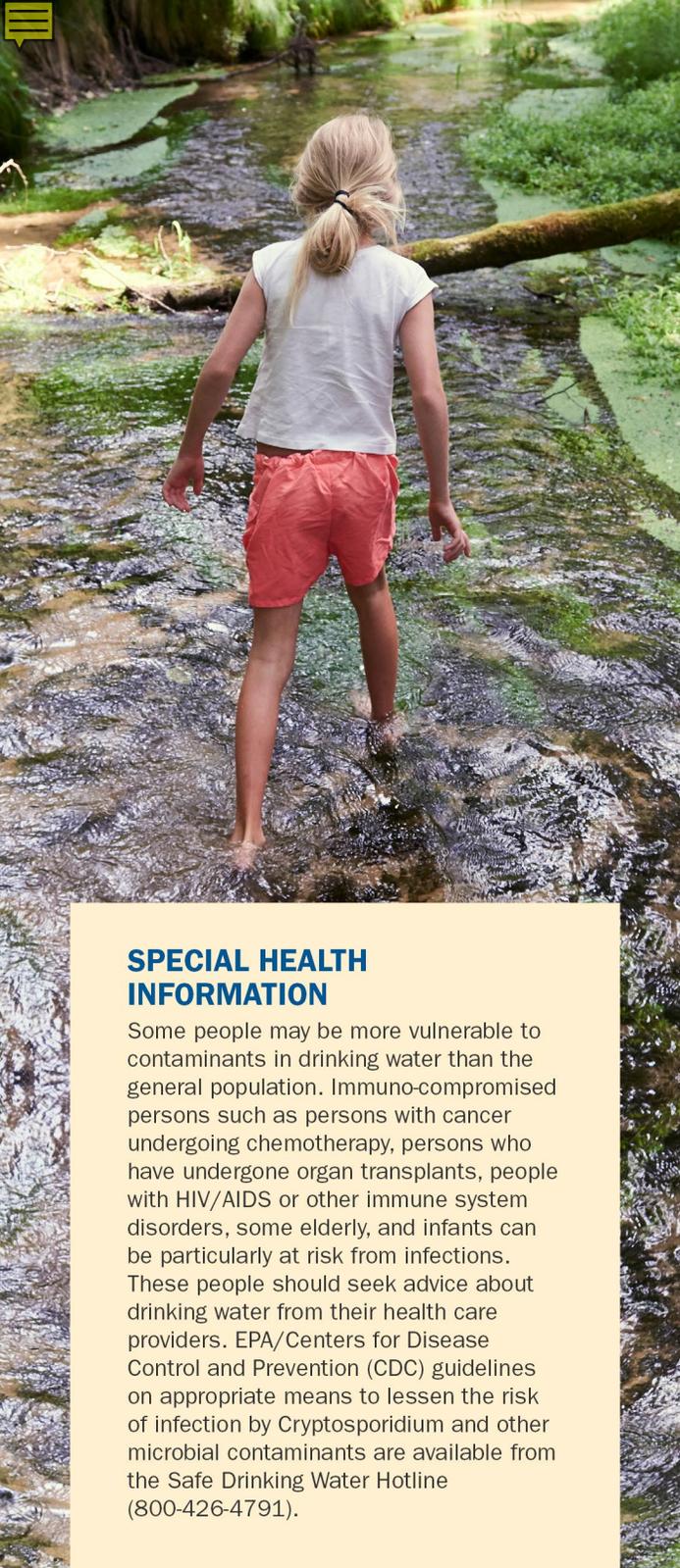
### Water source:

Keyes Ferry Acres North well#1, Keys Ferry Acres Well #2, R- Section Well, South section -2, Jeep Trail Well, Cardinal Trail Well. The Aquifer is Ordovician & Cambrian. The Soil type is Limestone - Dolomite

**Average amount of water supplied to customers on a daily basis:**  
75,000 gallons per day

### Disinfection treatment:

Groundwater supplies are disinfected 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 in the trash.
- 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 [westvirginiaamwater.com](http://westvirginiaamwater.com) 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 [westvirginiaamwater.com](http://westvirginiaamwater.com). 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.

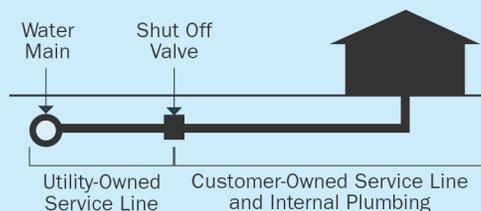


**Protect Our Watersheds Art Contest:** Open to fourth, fifth and sixth graders, the contest encourages students to use their artistic skills to express the importance of protecting our water resources.

# 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. Your water utility 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 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.



# Important Information About **Drinking Water**

## **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 of the The Mountain Water System is approximately 18 ppm.

## **pH**

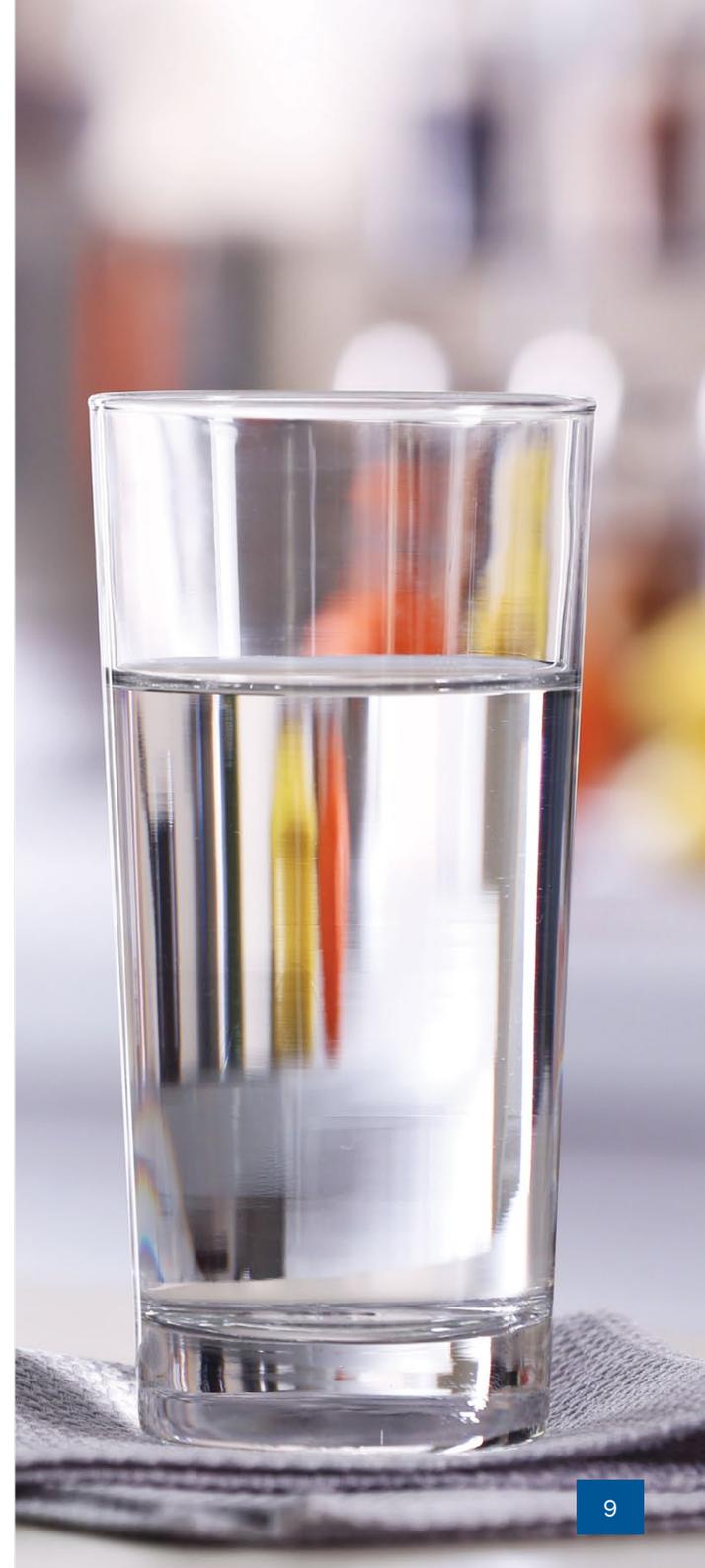
Water in the The Mountain Water System averages 7.2. A pH of 7.0 is considered neutral, neither acidic nor alkaline.

## **NITRATES**

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

## **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**

## 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 be better prepared as U.S. EPA is currently developing drinking water standards for six PFAS chemicals – PFOA (4 ppt), PFOS (4 ppt) and GenX, PFBS, PFNA, and PFHxS as a group using a Hazard Index of 1. For more information on the proposed PFAS drinking water standards, please visit <https://www.epa.gov/pfas>. Additionally, in 2023, THE MOUNTAIN WATER SYSTEM began testing on 10-25-2023 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 2023, 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 2023. The WV 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



1 drop  
in a 10 gallon fish tank

### Parts Per Billion



1 drop  
in a 10,000 gallon swimming pool

### Parts Per Trillion



1 drop  
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 2023, 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.**

## LEAD AND COPPER MONITORING PROGRAM for Cardinal TP01- At least 10 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 Premises Sampled | Premises Above Action Level | Typical Source                           |
|------------------------|--------------|---------------------|------|-------------------|-----------------------------|-------------------------|-----------------------------|------------------------------------------|
| Lead (ppb)             | 2022         | Yes                 | 0    | 15                | <5.0                        | 10                      | 0                           | Corrosion of household plumbing systems. |
| Copper (ppm)           | 2022         | Yes                 | 1.3  | 1.3               | 0.62                        | 10                      | 0                           | Corrosion of household plumbing systems. |

## REVISED TOTAL COLIFORM RULE - At least 2 samples collected each month in the distribution Mountain Water system

| Substance (with units)      | Year Sampled | Compliance Achieved | MCLG | MCL                                         | Highest Percentage | Typical Source                        |
|-----------------------------|--------------|---------------------|------|---------------------------------------------|--------------------|---------------------------------------|
| Total Coliform <sup>1</sup> | 2023         | Yes                 | 0    | TT = No more than 1 positive monthly sample | 0%                 | Naturally present in the environment. |
| E. Coli <sup>2</sup>        | 2023         | 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.

<sup>1</sup> The Treatment Technique for Total Coliforms requires that if the maximum percentage OR number of total coliform positive samples are exceeded, a system assessment must be conducted, any sanitary defects identified, and corrective actions completed. Additional Level 1 Assessments or Level 2 Assessments are required depending on the circumstances.

<sup>2</sup> The Treatment Technique for E. Coli requires that for any routine sample that is positive for total coliform where either the original sample or one of the repeat check samples is also positive for E. Coli, a Level 2 Assessment must be conducted, any sanitary defects identified, and corrective actions completed.

<sup>3</sup> The E. Coli MCL is exceeded if routine and repeat samples are total coliform-positive and either is E. coli-positive, or the system fails to take repeat samples following an E. coli-positive routine sample, or the system fails to analyze total coliform-positive repeat samples for E. coli.



**DISINFECTANTS - Collected in the Distribution System and at the Cardinal TP01 Treatment Plant**

| Substance (with units)               | Year Sampled | Compliance Achieved | MCLG       | MCL | Lowest Compliance Result  | Range Detected | Typical Source                           |
|--------------------------------------|--------------|---------------------|------------|-----|---------------------------|----------------|------------------------------------------|
| Chlorine (ppm) (Distribution System) | 2023         | Yes                 | MRDLG = 4  | 4.0 | 2.9                       | 0.9 to 3.9     | Water additive used to control microbes. |
| Substance (with units)               | Year Sampled | Compliance Achieved | MCLG       | MCL | Highest Compliance Result | Range Detected | Typical Source                           |
| Chlorine (ppm) (Ground Water)        | 2023         | Yes                 | NMRDLG = 4 | 4.0 | 3.6                       | 0.7 to 3.6     | Water additive used to control microbes. |

1 - Data represents the lowest monthly average of chlorine residuals measured throughout our distribution system.

2 - Data represents the highest residual entering the distribution system from our ground water treatment plant.

**DISINFECTANTS - Collected in the Distribution System and at the Red Maple TP03 Treatment Plant**

| Substance (with units)               | Year Sampled | Compliance Achieved | MCLG       | MCL | Lowest Compliance Result  | Range Detected | Typical Source                           |
|--------------------------------------|--------------|---------------------|------------|-----|---------------------------|----------------|------------------------------------------|
| Chlorine (ppm) (Distribution System) | 2023         | Yes                 | MRDLG = 4  | 4.0 | 0.9 <sup>1</sup>          | 0.9 to 3.9     | Water additive used to control microbes. |
| Substance (with units)               | Year Sampled | Compliance Achieved | MCLG       | MCL | Highest Compliance Result | Range Detected | Typical Source                           |
| Chlorine (ppm) (Ground Water)        | 2023         | Yes                 | NMRDLG = 4 | 4.0 | 3.6 <sup>2</sup>          | 0.7 to 3.6     | Water additive used to control microbes. |

1 - Data represents the lowest monthly average of chlorine residuals measured throughout our distribution system.

2 - Data represents the highest residual entering the distribution system from our ground water treatment plant.

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

| Substance (with units)              | Sample Point | Year Sampled | Compliance Achieved | MCLG | MCL | Highest Compliance Result | Range Detected | Typical Source                             |
|-------------------------------------|--------------|--------------|---------------------|------|-----|---------------------------|----------------|--------------------------------------------|
| Total Trihalomethanes (TTHMs) (ppb) | Renie Drive  | 2023         | Yes                 | NA   | 80  | 6.00                      | NA             | By-product of drinking water disinfection. |

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

| Substance (with units)        | Sample Point | Year Sampled | Compliance Achieved | MCLG | MCL | Highest Compliance Result | Range Detected | Typical Source                             |
|-------------------------------|--------------|--------------|---------------------|------|-----|---------------------------|----------------|--------------------------------------------|
| Haloacetic Acids (HAAs) (ppb) | Renie Drive  | 2023         | Yes                 | NA   | 60  | <1.200                    | NA             | By-product of drinking water disinfection. |

**REGULATED SUBSTANCE - Collected at the Cardinal TP001 Treatment Plant**

| Substance (with units) | Year Sampled | Compliance Achieved | MCLG | MCL | Highest Compliance Result | Range Detected | Typical Source                                                                                         |
|------------------------|--------------|---------------------|------|-----|---------------------------|----------------|--------------------------------------------------------------------------------------------------------|
| Barium (ppm)           | 2023         | Yes                 | 2.0  | 2.0 | 0.100                     | NA             | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.            |
| Nitrite (ppm)          | 2023         | Yes                 | 1.0  | 1.0 | ND                        | NA             | Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits. |
| Nitrate (ppm)          | 2023         | Yes                 | 10   | 10  | 0.21                      | NA             | Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits. |
| Gross Alpha (pCi/L)    | 2023         | Yes                 | 0    | 15  | ND                        | NA             | Radioactive decay of natural deposits                                                                  |
| Radium - 228 (pCi/L)   | 2023         | Yes                 | 0    | 5   | ND                        | NA             | Radioactive decay of natural deposits                                                                  |

**REGULATED SUBSTANCE - Collected at the Red Maple TP003 Treatment Plant**

| Substance (with units) | Year Sampled | Compliance Achieved | MCLG | MCL | Highest Compliance Result | Range Detected | Typical Source                                                                                         |
|------------------------|--------------|---------------------|------|-----|---------------------------|----------------|--------------------------------------------------------------------------------------------------------|
| Barium (ppm)           | 2023         | Yes                 | 2.0  | 2.0 | 0.092                     | NA             | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.            |
| Nitrite (ppm)          | 2023         | Yes                 | 1.0  | 1.0 | <0.20                     | NA             | Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits. |
| Nitrate (ppm)          | 2023         | Yes                 | 10   | 10  | <0.20                     | NA             | Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits. |



**OTHER SUBSTANCES OF INTEREST - Collected at the Cardinal TP001 Treatment Plant**

| Substance (with units)    | Year Sampled | Compliance Achieved | MCLG | Limit <sup>1</sup> | Highest Result | Range Detected | Comments                                                                            |
|---------------------------|--------------|---------------------|------|--------------------|----------------|----------------|-------------------------------------------------------------------------------------|
| Nickel (ppb)              | 2023         | NA                  | NA   | NA                 | 1.2            | NA             | Industrial sources such as metal reclamation and production of certain alloys       |
| pH                        | 2023         | NA                  | NA   | <6.5 or 8.5>       | 7.0            | 7.0 – 7.6      | Acidity or basicity of water from natural sources or constituent of water treatment |
| Sodium (ppm) <sup>2</sup> | 2023         | NA                  | NA   | NA                 | 0.021          | NA             | Element that occurs naturally in water and soil; road salt; water softeners         |

- 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.
- 3 - USEPA's Health Advisories are non-enforceable and provide technical guidance to states agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination.

**OTHER SUBSTANCES OF INTEREST - Collected at the Red Maple TP003 Treatment Plant**

| Substance (with units)    | Year Sampled | Compliance Achieved | MCLG | Limit <sup>1</sup> | Highest Result | Range Detected | Comments                                                                      |
|---------------------------|--------------|---------------------|------|--------------------|----------------|----------------|-------------------------------------------------------------------------------|
| Nickel (ppb)              | 2023         | NA                  | NA   | NA                 | <0.53          | NA             | Industrial sources such as metal reclamation and production of certain alloys |
| Sodium (ppm) <sup>2</sup> | 2023         | NA                  | NA   | NA                 | 0.018          | NA             | Element that occurs naturally in water and soil; road salt; water softeners   |

- 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.
- 3 - USEPA's Health Advisories are non-enforceable and provide technical guidance to states agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination.

## PFAS

PFAS are not regulated in West Virginia. In 2023, U.S. EPA proposed drinking water standards for six PFAS chemicals – PFOA (4 ppt), PFOS (4 ppt) and GenX, PFBS, PFNA, and PFHxS as a group using a Hazard Index of 1. For more information on the proposed PFAS drinking water standards, please visit <https://www.epa.gov/pfas>.

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.

### UNREGULATED PFAS CHEMICALS – AFTER TREATMENT **CARDINAL SYSTEM- EP001**

| Parameter                                                       | Year Sampled | Average Amount Detected | Range Low-High | Proposed U.S. EPA MCL           | Hazard Index Calculation | Typical Source                                                                                  |
|-----------------------------------------------------------------|--------------|-------------------------|----------------|---------------------------------|--------------------------|-------------------------------------------------------------------------------------------------|
| Perfluorooctanoic acid (PFOA)                                   | 2023         | 6.6 ppt                 | NA             | 4.0 ppt                         | N/A                      | Manufactured chemical(s); used in household goods for stain, grease, heat and water resistance. |
| Perfluorooctanesulfonic acid (PFOS)                             | 2023         | 19.4 ppt                | NA             | 4.0 ppt                         | N/A                      |                                                                                                 |
| Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX chemicals) | 2023         | ND                      | NA             | 1.0 ppt Hazard Index (unitless) | 2.7                      |                                                                                                 |
| Perfluorobutanesulfonic acid (PFBS)                             | 2023         | 8.3 ppt                 | NA             |                                 |                          |                                                                                                 |
| Perfluorohexane sulfonic acid (PFHxS)                           | 2023         | 24.3 ppt                | NA             |                                 |                          |                                                                                                 |
| Perfluorononanoic acid (PFNA)                                   | 2023         | ND                      | NA             |                                 |                          |                                                                                                 |

### UNREGULATED PFAS CHEMICALS – AFTER TREATMENT **RED MAPLE SYSTEM - EP003**

| Parameter                                                       | Year Sampled | Average Amount Detected | Range Low-High | Proposed U.S. EPA MCL           | Hazard Index Calculation | Typical Source                                                                                  |
|-----------------------------------------------------------------|--------------|-------------------------|----------------|---------------------------------|--------------------------|-------------------------------------------------------------------------------------------------|
| Perfluorooctanoic acid (PFOA)                                   | 2023         | ND                      | NA             | 4.0 ppt                         | N/A                      | Manufactured chemical(s); used in household goods for stain, grease, heat and water resistance. |
| Perfluorooctanesulfonic acid (PFOS)                             | 2023         | 3.2 ppt                 | NA             | 4.0 ppt                         | N/A                      |                                                                                                 |
| Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX chemicals) | 2023         | ND                      | NA             | 1.0 ppt Hazard Index (unitless) | 0.3                      |                                                                                                 |
| Perfluorobutanesulfonic acid (PFBS)                             | 2023         | ND                      | NA             |                                 |                          |                                                                                                 |
| Perfluorohexane sulfonic acid (PFHxS)                           | 2023         | 3.2 ppt                 | NA             |                                 |                          |                                                                                                 |
| Perfluorononanoic acid (PFNA)                                   | 2023         | ND                      | NA             |                                 |                          |                                                                                                 |

## Tested for, but **Not Detected**

- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- 1,1-Dichloroethene
- 1,2,4-Trichlorobenzene
- 1,2-Dibromo-3-chloropropane
- 1,2-Dibromoethane (EDB)
- 1,2-Dichlorobenzene
- 1,2-Dichloroethane
- 1,2-Dichloropropane
- 1,4-Dichlorobenzene
- Gross
- 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
- Aluminum
- Antimony - Total
- Arochlor-1016
- Arochlor-1221
- Arochlor-1232
- Arochlor-1242
- Arochlor-1248
- Arochlor-1254
- Arochlor-1260
- Arsenic - Total
- Atrazine
- Barium - Total
- Bentazon
- Benzene
- Benzo(a)pyrene
- Beryllium - Total
- Boron - Total
- Bromoform
- Cadmium - Total
- Carbaryl (Sevin)
- Carbofuran
- Carbon tetrachloride
- Chloride
- Chlorobenzene
- Chromium - Total
- cis-1,2-Dichloroethene
- Cobalt - Total
- Copper - Total
- Cyanide, Total
- Dacthal
- Dalapon
- Di(2-ethylhexyl)adipate
- Di(2-ethylhexyl)phthalate
- Dicamba
- Dichloroprop
- Dinoseb
- Diquat
- Endothall
- Endrin
- Ethyl Benzene
- Gamma-BHC (Lindane)
- Glyphosate
- Gross Alpha - excluding Uranium
- Heptachlor
- Heptachlor epoxide
- Hexachlorobenzene
- Hexachlorocyclopentadiene
- Iron
- Lead - Total
- Manganese
- Mercury - Total
- Methiocarb
- Methomyl
- Methoxychlor
- Methyl tert-Butyl ether (MTBE)
- Methylene chloride
- Molybdenum - Total
- Monobromoacetic Acid
- Nickel - Total
- Oxamyl (Vydate)
- Pentachlorophenol
- Perchlorate
- Picloram
- Potassium - Total
- Selenium - Total
- Silica - Total
- Silver - Total
- Simazine (Princep)
- Strontium - Total
- Styrene
- Technical Chlordane
- Tetrachloroethene (PCE)
- Thallium - Total
- Toluene
- Total PCBs
- Toxaphene
- trans-1,2-Dichloroethene
- Trichloroethene (TCE)
- Uranium
- Vanadium - Total
- Vinyl chloride
- Xylene (total)



## Six Simple Steps to Save Water



### Fix any leaking faucets.

One drop every 2 seconds from a leaky faucet wastes 2 gallons of water every day. That's water — and money — down the drain.



### Don't let faucets run when brushing, shaving, or washing the dishes.

Just turning off the water while you brush can save 200 gallons a month.



**Run washing machines and dishwashers only when they are full**, or select the properly-sized wash cycle for the current laundry load.



### Install water-saving shower heads and faucet aerators

in the bathroom and kitchen (available at most home improvement stores and some supermarkets).



**Don't wash your car at home.** A car wash uses much less water and often recycles it, too.



### Turn off automatic lawn and garden sprinklers

when it's raining outside and at the end of the growing season.

Every Drop Counts





## About Us

**American Water (NYSE: AWK)** is the largest regulated water and wastewater utility company in the United States. With a history dating back to 1886, We Keep Life Flowing® by providing safe, clean, reliable and affordable drinking water and wastewater services to more than 14 million people with regulated operations in 14 states and on 18 military installations. American Water's 6,500 talented professionals leverage their significant expertise and the company's national size and scale to achieve excellent outcomes for the benefit of customers, employees, investors and other stakeholders.

**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 services to approximately 600,000 people. For more information, visit [westvirginiaamwater.com](http://westvirginiaamwater.com) and follow us on X, Facebook, Instagram and YouTube.



## WEST VIRGINIA AMERICAN WATER FACTS AT A GLANCE

### COMMUNITIES SERVED

436 communities located in 22 counties

### POPULATION SERVED

Approx. 600,000 people

### EMPLOYEES

330 full-time

### TREATMENT FACILITIES

- Seven surface water treatment plants (average daily delivery - 44 million gallons per day (MGD))
- 12 Groundwater Stations (0.5 MGD)
- Five wastewater treatment plants (average daily treatment - 0.6 MGD)

### SOURCE OF SUPPLY

Elk River, New River, Ohio River, West Fork River, Ada Dam, Horton Dam and Kee Dam, Regional Aquifers

### MILES OF PIPELINE

4,800 miles of water and wastewater pipe

### FIRE HYDRANTS

11,574

### VALVES

51,844

### STORAGE AND TRANSMISSION

- 218 water storage facilities (combined storage capacity - 78.2 million gallons)
- 270 water booster pumping stations
- 17 wastewater lift stations

### PARTNERSHIP FOR SAFE WATER AWARDS

Directors Awards presented to all seven treatment plants

# How to Contact Us

If you have any questions about this report, your drinking water, or service, please contact West Virginia American Water's Customer Service Center Monday to Friday, 7 a.m. to 7 p.m. at 1-800-685-8660.



## 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 1-800-685-8660.**

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.