



2022 Annual
**WATER QUALITY
REPORT**

**Kanawha Valley Regional Water
System**
PWS ID: 3302016

**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 pab 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

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', written over a white background.

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. We are recognized as an industry leader in water quality and work 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 \$78 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:**

- **All of our water treatment plants, including the treatment plant serving your area, 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.



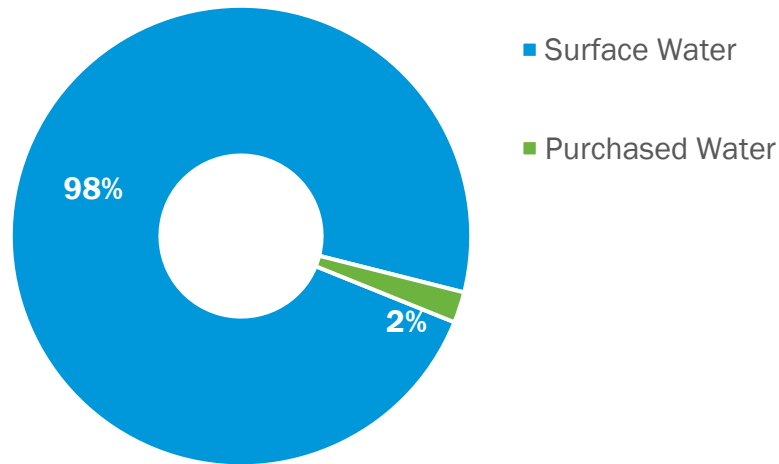


About Your Drinking Water Supply

WHERE YOUR WATER COMES FROM

West Virginia American Water and its customers in the Kanawha Valley Regional Water system are fortunate because we enjoy an abundant water supply from the Elk River, which is a surface water source. The current treatment plant provided roughly 10 billion gallons of water throughout the year to customers in Kanawha, Boone, Clay, Putnam, Lincoln, Logan, Fayette and Cabell counties. The water supply is distributed for residential, commercial and industrial use. Learn more about the Elk River and local waterways at <https://mywaterway.epa.gov/>

SOURCE OF SUPPLY FOR WEST VIRGINIA AMERICAN WATER SYSTEMS



QUICK FACTS ABOUT THE KANAWHA VALLEY WATER SYSTEM

Communities served:

Kanawha, Putnam, Boone, Cabell, Lincoln, Logan, Fayette and Clay Counties

Water source:

Elk River

Average amount of water supplied to customers on a daily basis:
25.2 million gallons per day

Current treatment: The surface water supply is treated with coagulation, flocculation and sedimentation followed by filtration and disinfection. An inhibitor is added for corrosion control and fluoridation is provided for reduction of dental cavities.



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:

Microbial Contaminants	such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
Inorganic Contaminants	such as salts and metals, which can be naturally occurring or may result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
Pesticides and Herbicides	which may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
Organic Chemical Contaminants	including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also, come from gas stations, urban storm water runoff, and septic systems.
Radioactive Contaminants	which can be naturally occurring or may 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 or contact our Source Water Protection Program Manager, Erica Pauken, at 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. 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.

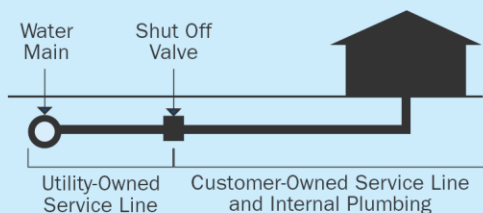


Protect Our Watersheds Art Contest: Open to fourth, fifth and sixth graders, the contest encourages students to use their artistic skills to express the importance of protecting our water resources.

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**

WATER HARDNESS

Hardness is a measure of the concentration of two minerals, calcium and magnesium, naturally present in water. Hardness levels range from 17 – 55 ppm or 1 – 4 grains per gallon of 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 Kanawha Valley Water System is approximately 7.3 ppm.

pH

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

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.

The Kanawha Valley treatment plant has naturally-occurring fluoride in the source water and also receives fluoridated water from fluoride additive. Beginning February 19, 2018, the fluoride level at the Kanawha Valley Water treatment plant was adjusted to achieve an optimal fluoride 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. The naturally-occurring fluoride levels in the Elk River are close to optimal levels (approximately 0.2 ppm) and with the Kanawha Valley treatment plant fluoride addition, the fluoride levels in the entire system are consistent year-round.

If you have any questions on fluoride, please call West Virginia American Water's Customer Service Center at 1-800-685-8660.





Important Information About **Drinking Water**

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.

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.

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 is currently developing drinking water standards for PFOA and PFOS. Additionally, in 2023, the Kanawha Valley system 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 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.

Minimum Residual Disinfectant Level (MinRDL): The minimum level of residual disinfectant required at the entry point to the distribution system.

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.

LEAD AND COPPER MONITORING PROGRAM - At least 50 tap water samples collected at customers' taps every [time period]

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	Action Level (AL)	90 th Percentile	No. of Homes Sampled	Homes Above Action Level	Typical Source
Lead (ppb)	2022	Yes	15	15	<1.0	50	0	Corrosion of household plumbing systems.
Copper (ppm)	2022	Yes	0	1.3	0.14	50	0	Corrosion of household plumbing systems.

TOTAL COLIFORM RULE - At least 120 samples collected each month in the distribution system

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Monthly Percentage	Typical Source
Total Coliform	2022	Yes	NA	*MCL = Less than 5%	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.

1 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.

2 The Treatment Technique for E. Coli requires that for any total coliform positive routine sample with one or more total coliform positive check samples and an E. coli positive result for any of the samples a Level 2 Assessment must be conducted, any sanitary defects identified, and corrective actions completed. 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.

DISINFECTION BYPRODUCTS - Collected in the Distribution System

Substance (with units)	Sample Point	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
Total Trihalomethanes (TTHMs) (ppb)	Pond Gap Booster	2022	Yes	NA	80	42.7	18.3 to 62.4	By-product of drinking water disinfection.
Total Trihalomethanes (TTHMs) (ppb)	Cicerone Sample Hydrant	2022	Yes	NA	80	33.9	14.1 to 40.8	By-product of drinking water disinfection.
Total Trihalomethanes (TTHMs) (ppb)	Raymond City Sample Hydrant	2022	Yes	NA	80	38.4	15.8 to 54.7	By-product of drinking water disinfection.
Total Trihalomethanes (TTHMs) (ppb)	Liberty Post Office	2022	Yes	NA	80	33.0	13.0 to 56.7	By-product of drinking water disinfection.
Total Trihalomethanes (TTHMs) (ppb)	Julian Mini Mart	2022	Yes	NA	80	49.0	25.6 to 56.4	By-product of drinking water disinfection.
Total Trihalomethanes (TTHMs) (ppb)	Frogs Creek Sample Hydrant	2022	Yes	NA	80	52.9	23.9 to 52.6	By-product of drinking water disinfection.
Total Trihalomethanes (TTHMs) (ppb)	Belle	2022	Yes	NA	80	18.4	5.6 to 25.7	By-product of drinking water disinfection.
Total Trihalomethanes (TTHMs) (ppb)	Clinton Area	2022	Yes	NA	80	65.3	34.7 to 80.9	By-product of drinking water disinfection.

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.

DISINFECTION BYPRODUCTS - Collected in the Distribution System

Substance (with units)	Sample Point	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
Haloacetic Acids (HAAs) (ppb)	Pond Gap Booster	2022	Yes	NA	60	24.1	11.2 to 40.7	By-product of drinking water disinfection.
Haloacetic Acids (HAAs) (ppb)	Cicerone Sample Hydrant	2022	Yes	NA	60	19.7	12.1 to 31.2	By-product of drinking water disinfection.
Haloacetic Acids (HAAs) (ppb)	Raymond City Sample Hydrant	2022	Yes	NA	60	22.4	10.8 to 38.1	By-product of drinking water disinfection.
Haloacetic Acids (HAAs) (ppb)	Liberty Post Office	2022	Yes	NA	60	22.5	11.8 to 44.7	By-product of drinking water disinfection.
Haloacetic Acids (HAAs) (ppb)	Julian Mini Mart	2022	Yes	NA	60	26.8	15.4 to 38.8	By-product of drinking water disinfection.
Haloacetic Acids (HAAs) (ppb)	Frogs Creek Sample Hydrant	2022	Yes	NA	60	25.0	15.8 to 33.6	By-product of drinking water disinfection.
Haloacetic Acids (HAAs) (ppb)	Belle	2022	Yes	NA	60	13.8	6.2 to 23.7	By-product of drinking water disinfection.
Haloacetic Acids (HAAs) (ppb)	Clinton Area	2022	Yes	NA	60	31.2	19.2 to 43.3	By-product of drinking water disinfection.

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.

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

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
Distribution System Chlorine Residual (ppm) ¹	2022	Yes	MRDLG = 4	4.0	2.1 ¹	0.3 to 3.5	Water additive used to control microbes.
Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Lowest Compliance Result	Range Detected	Typical Source
Entry Point Chlorine Residual (ppm) ²	2022	Yes	NMRDLG = 4	4.0	1.6 ²	1.6 to 3.3	Water additive used to control microbes.

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

2 - Data represents the lowest residual entering the distribution system from our surface water treatment plant.

TREATMENT BYPRODUCTS PRECURSOR REMOVAL - Collected at the Treatment Plant

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Lowest Compliance Result	Range Detected	Typical Source
Total Organic Carbon (TOC)	2022	Yes	NA	TT: ≥ 35% removal	35 %	35% to 60%	Naturally present in the environment.
Ratio of Actual / Required TOC Removal	2022	Yes	NA	TT: Running annual average ≥ 1.00	1.00	0.77 to 1.70	Naturally present in the environment.

TURBIDITY - Collected at the Treatment Plant

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
Turbidity (NTU)	2022	Yes	NA	TT: Results > 1.0 NTU	0.24	0.01 to 0.13	Soil runoff.
	2022	Yes	NA	TT: At least 95% of samples <0.3 NTU	100%	NA	Soil runoff.

REGULATED SUBSTANCE - Collected at the Treatment Plant

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
Barium (ppm)	2022	Yes	2.0	2.0	<0.1	NA	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride (ppm)	2022	Yes	4.0	4.0	1.0	0.4 – 1.0	Water additive which promotes strong teeth
Nitrite (ppm)	2022	Yes	1.0	1.0	<0.1	NA	Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits.
Nitrate (ppm)	2022	Yes	10	10	0.24	NA	Runoff from fertilizer use; industrial or domestic wastewater discharges; erosion of natural deposits.
Gross Alpha (pCi/L)	2020	Yes	0	15	1.3	NA	Radioactive decay of natural deposits
Gross Alpha – excluding Uranium (pCi/L)	2020	Yes	0	15	1.3	NA	Radioactive decay of natural deposits
Radium – 228 (pCi/L)	2020	Yes	0	5	<0.8	NA	Radioactive decay of natural deposits
Uranium (ppb)	2020	Yes	0	30	<0.2	NA	Radioactive decay of natural deposits

OTHER SUBSTANCES OF INTEREST - Collected at the Treatment Plant

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	Limit ¹	Highest Result	Range Detected	Comments
Aluminum (ppm)	2022	NA	NA	0.05 to 0.2	0.02	NA	Mineral that occurs naturally in the soil
Chloride (ppm)	2022	NA	NA	250	8.7	NA	Mineral that occurs naturally in the soil and runoff from road deicing
Iron (ppb)	2022	NA	NA	300	27	0 - 27	Mineral that occurs naturally in the soil and runoff from mining operations
Manganese (ppb)	2022	NA	NA	50	36	0 - 36	Mineral that occurs naturally in the soil and runoff from mining operations
Nickel (ppb)	2022	NA	NA	NA	< 5.0	NA	Industrial sources such as metal reclamation and production of certain alloys
pH	2022	NA	NA	<6.5 or 8.5>	7.6	7.0 - 7.6	Acidity or basicity of water from natural sources or constituent of water treatment
Total Chromium (ppb)	2022	NA	NA	NA	<7.0	NA	Industrial sources such as metal reclamation and production of certain alloys
Sodium (ppm) ²	2022	NA	NA	NA	7.3	NA	Element that occurs naturally in water and soil; road salt; water softeners
Sulfate (ppm)	2022	NA	NA	250	16.7	NA	Mineral that occurs naturally in the soil
Zinc (ppm)	2022	NA	NA	5	0.3	0.0 to 0.3	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.

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.

UNREGULATED CONTAMINANT MONITORING RULE

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 – Collected in the Distribution System					
Parameter	Units	Year	Average Result	Range Detected	Typical Source
Monochloroacetic Acid	ppb	2018	<2.0	<2.0 to 3.8	By-product of drinking water disinfection
Bromodichloroacetic acid	ppb	2018	2.6	0.6 to 5.1	By-product of drinking water disinfection
Chlorodibromoacetic acid	ppb	2018	0.5	<0.3 to 1.2	By-product of drinking water disinfection
Dibromoacetic Acid	ppb	2018	0.5	<0.3 to 0.9	By-product of drinking water disinfection
Dichloroacetic Acid	ppb	2018	8.9	2.4 to 39	By-product of drinking water disinfection
Monobromoacetic Acid	ppb	2018	<0.3	<0.3 to 0.5	By-product of drinking water disinfection
Total Haloacetic Acids	ppb	2018	17.5	4.5 to 71	By-product of drinking water disinfection
Total Haloacetic Acids - Br	ppb	2018	5.4	1.5 to 11	By-product of drinking water disinfection
Total Haloacetic Acids-UCMR4	ppb	2018	22.7	6 to 76	By-product of drinking water disinfection
Trichloroacetic Acid	ppb	2018	8.1	2.2 to 28	By-product of drinking water disinfection
ADDITIONAL WATER QUALITY PARAMETERS OF INTEREST - Water Leaving the Treatment Facility					
Manganese*	ppb	2018	0.88	0.55 to 1.2	Naturally-occurring elemental metal; largely used in aluminum alloy production. Essential dietary element.

* Manganese has a Secondary MCL of 50 ppb.

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 is 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)	2020	ppt	<5.0	NA	Manufactured chemical(s); used in household goods for stain, grease, heat and water resistance.
Perfluorooctane sulfonic acid (PFOS)	2020	ppt	<5.0	NA	
Hexafluoropropylene oxide-dimer acid (GenX)	2020	ppt	<5.0	NA	
Perfluorobutane sulfonic acid (PFBS)	2020	ppt	<5.0	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 .

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
- 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
- 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
- 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
- Heptachlor
- Heptachlor epoxide
- Hexachlorobenzene
- Hexachlorocyclopentadiene
- Lead - Total
- 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)
- Vanadium - Total
- Vinyl chloride
- Xylene (total)

Public Notification

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

ESTE INFORME CONTIENE INFORMACION MUY IMPORTANTE SOBRE SU AGUA DE BEBER. TRADUZCALO O HABLE CON ALGUIEN QUE LO ENTIENDA BIEN.

Monitoring Requirements Not Met for WV-Kanawha Valley

Our water system violated drinking water standards over the past year. Even though these were not emergencies, as our employees/customers, you have a right to know what happened and what we did to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. Following a conversion from gaseous chlorine to sodium hypochlorite as the primary disinfectant at the Kanawha Valley Water Treatment Plant, WVAW was required to perform standard lead and copper testing throughout the distribution system at 100 sites within 30 days, with all sites approved by the Bureau for Public Health. In order to meet the sampling deadline, one of those samples was collected at a location that had not yet been approved by the Bureau for Public Health. The site was eventually approved by the Bureau for Public Health after the sampling period had closed.

What should I do?

There is nothing you need to do at this time.

The table below lists the contaminant(s) we did not properly test for during the last year, how often we are supposed to sample for *these contaminants* and how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.

Contaminants	Required sampling frequency	Number of samples taken	When all samples should have been taken	When samples were or will be taken
Lead and Copper	Semi-annually	100	01/09/2022 to 02/09/2022	All samples were collected, with 1 sample at an unapproved site.

What happened? What was done?

The final required sample was collected prior to being approved by the Bureau for Public Health. There was a delay by the Bureau for Public Health in approving the final site which would have forced collection of the sample past the sampling deadline.

For more information, please contact Jon Jarvis at 304-347-1510.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by WV American Water – Kanawha Valley



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 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.



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

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

West Virginia Department of Health and Human Resources:
www.dhhr.wv.gov

West Virginia Bureau for Public Health:
www.dhhr.wv.gov

West Virginia Department of Environmental Protection:
www.dep.wv.gov

United States Environmental Protection Agency (USEPA):
www.epa.gov/safewater

Safe Drinking Water Hotline: (800) 426-4791

Centers for Disease Control and Prevention: www.cdc.gov

American Water Works Association: www.awwa.org

Water Quality Association: www.wqa.org

National Library of Medicine/National Institute of Health:
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.