



2023 Annual  
**WATER QUALITY  
REPORT**

**Joplin**

PWS ID: M05010413

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



**MISSOURI  
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 1-866-430-0820.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien al 1-866-430-0820.

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 1-866-430-0820.

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 **1-866-430-0820** 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 **1-866-430-0820** र हमें काल करें।

**Это очень важная информация о качестве Вашей воды. Если Вам требуется перевод этой информации, позвоните нам по телефону 1-866-430-0820.**

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 1-866-430-0820.

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 1-866-430-0820.

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## A message from Missouri American Water's President



**Rich Svindland**

President, Missouri  
American Water

Dear Missouri American Water Customer,

Having access to safe, reliable water service is something that can be easily taken for granted. At Missouri American Water, it's our top priority.

I am pleased to share with you our 2023 Consumer Confidence Report, which is a testament to the hard work and dedication of our employees. As you read through this annual water quality information, you will see that we continue to supply high quality drinking water service to keep your life flowing.

We monitor and test 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, we test for about 100 regulated contaminants as required by state and federal drinking water standards.

**QUALITY:** We take water quality so seriously that 6 of our surface water treatment plants have been nationally recognized with Directors Awards from the U.S. Environmental Protection Agency's (EPA) Partnership for Safe Water program for surpassing federal and state drinking water standards. We remain committed to protecting our sources of drinking water. We utilize advanced technology and detection methods that are paving the way for source water protection across the country.

**SERVICE:** Last year, we invested more than \$450 million to upgrade our water and wastewater treatment and pipeline systems in the communities we serve. These investments allowed us to improve water quality, water pressure and service reliability for our customers.

**VALUE:** While costs to provide water service continue to increase across the country, our investments help us provide high quality water service that remains an exceptional value for such an essential service.

We hope our commitment to you and our passion for water shines through in this report detailing the source and quality of your drinking water in 2023. We will continue to work to keep your life flowing – today, tomorrow and for future generations.

We are proud to be your local water service provider.

A handwritten signature in black ink, appearing to read 'Rich Svindland'.

Rich Svindland  
Missouri American Water

**This report contains important information about your drinking water. Translate it or speak with someone who understands it at 866-430-0820 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.**



## Water Quality Results

### **WATER QUALITY STATEMENT**

We are pleased to report that during calendar year 2023, the test results of your drinking water complied with all state and federal drinking water requirements.

For your information, we have compiled a list displaying the test results of your drinking water during 2023. The Missouri Department of Natural Resources 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.



## 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 Missouri 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 \$450 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.

**Missouri American Water takes water quality so seriously that:**

- **Six of our surface water treatment plants, including the treatment plant serving your area, have been nationally recognized with Directors Awards** from the Partnership for Safe Water program for our long-term commitment to optimizing operations, achieving outstanding performance and protecting public health and the environment.
- **20 Year Directors Award Recipients:**
  - Jefferson City
  - Joplin
  - St. Louis County (Central, Meramec, North, and South Plants)



# About Your Drinking Water Supply



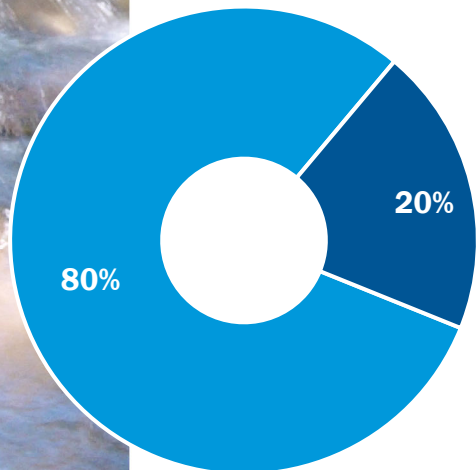
## WHERE YOUR WATER COMES FROM

Missouri American Water supplies quality drinking water to residential, commercial, and industrial customers in and around the City of Joplin that consists of a combination of surface water and groundwater. The primary source is Shoal Creek, which is supplemented by a system of deep wells. More information on your source water is available at <http://drinkingwater.Missouri.edu>. To access the information for your water system, you will need the state-assigned code (PWSID), which is printed at the top of this report. Learn more about local waterways at <https://mywaterway.epa.gov/>.

**Disinfection treatment:** The water supplied to you is treated with chloramines to maintain water quality in the distribution system.

## SOURCE WATER PROTECTION PROGRAM

Missouri American Water worked with a team of community stakeholders to develop a Source Water Protection Plan. The plan identifies ways to reduce the risk of potential contamination to the ground and surface water resources the Joplin community relies upon for its drinking water supply. As providers of high-quality water, our responsibility is to not only protect one of our most precious resources but to improve the environment.



## SOURCES OF SUPPLY FOR JOPLIN

- Shoal Creek
- Groundwater Wells



## QUICK FACTS ABOUT THE MISSOURI AMERICAN WATER'S JOPLIN WATER SYSTEM

**Water source:**  
Shoal Creek and Groundwater Wells

**Average amount of water supplied to customers per day:**  
14.4 million gallons

**Disinfection treatment:**  
Chloramines



# 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 may result from urban storm water 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 may also, come from gas stations, urban storm water runoff, and septic systems.
<b>Radioactive Contaminants</b>	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 waterways if poured down the drain, flushed down the toilet, or dumped on the ground.
- Check for leaks from automobiles and heating fuel tanks. Clean up any spills using an absorbent material like cat litter. Sweep up the material and put it in a sealed bag. Check with the local refuse facility for proper disposal.
- Clean up after your pets and limit the use of fertilizers and pesticides.
- Take part in watershed activities.

**Report any spills, illegal dumping or suspicious activity to the Missouri Department of Natural Resources here: <https://dnr.mo.gov>**

## FOR MORE INFORMATION

To learn more about how you can protect your water supply, visit us online at [www.amwater.com/moaw](http://www.amwater.com/moaw)

## 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 evaluate all of our source waters and have developed Source Water Protection Plans as needed with the support of the Missouri Department of Natural Resources. This is a voluntary program to identify and address potential threats to drinking water supplies. Stakeholder involvement is an important part of the program.

**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 and other community activities.



**Environmental Stewardship:** Each year, employees participate in activities such as river clean-ups that help keep our waterways clean.



**Source Water Assessment:** This is a study and report unique to your source of drinking water that helps us identify potential contaminants and the potential for systems to be impacted by these sources.



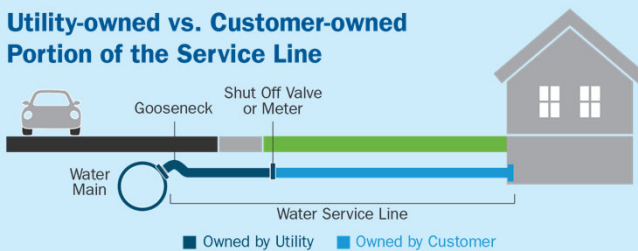
**Installation of Source Water Analyzers** at our Surface Water Treatment Facilities. This allows us to better monitor incoming water quality at our surface water treatment facilities.



# 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. American Water is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

## Utility-owned vs. Customer-owned Portion of the Service Line



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

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

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

### MINIMIZING YOUR POTENTIAL EXPOSURE

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

### CHECK YOUR PLUMBING AND SERVICE LINE

If you live in an older home, consider having a licensed plumber check your plumbing for lead. If your service line is made of lead, and you're planning to replace it, be sure to contact us at 1-866-430-0820.



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



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



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



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



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



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





# Determining Your Service Line Material

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

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

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

## TYPES OF PIPE

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

## YOUR SERVICE LINE MATERIAL

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

For more information on lead in drinking water, please visit

<https://www.amwater.com/moaw/Water-Quality/Lead-And-Drinking-Water/>.



# Important Information About **Drinking Water**

## **CHLORAMINES**

Chloramines are a [state] and federally approved alternative to free chlorine for water disinfection. Chloramines can reduce disinfection by-product formation and may help reduce concerns related to taste. Chloramines are also used by many American Water systems and many other water utilities nationally.

**Chloramines have the same effect as chlorine for typical water uses with the exception that chloramines must be removed from water used in kidney dialysis and fish tanks or aquariums.**

Treatments to remove chloramines are different than treatments for removing chlorine. Please contact your physician or dialysis specialist for questions pertaining to kidney dialysis water treatment. Contact your pet store or veterinarian for questions regarding water used for fish and other aquatic life. You may also contact our Customer Service Center at 1-866-430-0820 for more chloramine information.

## **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.

Our source water in the Joplin system has naturally-occurring fluoride in both sources and has fluoride added to meet the requirements of the Joplin City ordinance. The fluoride levels at our treatment plant are adjusted to achieve an optimal fluoride level of 0.8 parts per million (ppm) and a control range of 0.6 ppm to 1.0 ppm to comply with the city of Joplin's Fluoridation Standards. As the naturally-occurring fluoride levels in the surface and groundwater sources fluctuate throughout the year, treatment is adjusted, as necessary.

If you have any questions on fluoride, please call Missouri American Water's Customer Service Center at 866-430-0820.





## 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 or you are pregnant, you should ask for advice from your health care provider.

Nitrates remain consistently low and do not require treatment to maintain compliance. If you have any questions on nitrates, please call Missouri American Water's Customers Service Center at 866-430-0820.

# 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.

Missouri 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 (4ppt) 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 2024, the Joplin System will be testing the 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 Missouri 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

# 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

Missouri 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 - At least 30 tap water samples collected at customers' taps every 6 months									
Substance (with units)	Monitoring Period	Compliance Achieved	MCLG	Action Level (AL)	90 <sup>th</sup> Percentile	Range Detected	No. of Premises Sampled	Premises Above Action Level	Typical Source
Lead (ppb)	2023	Yes	0	15	4	ND - 11	30	0	Corrosion of household plumbing systems
Copper (ppm)	2023	Yes	1.3	1.3	0.030	ND - 0.193	30	0	Corrosion of household plumbing systems

TOTAL COLIFORM RULE - At least 80 samples collected each month in the distribution system							
Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Number of Positive Samples	Highest Percentage of Positive Samples	Typical Source
Total Coliform <sup>1</sup>	2023	Yes	NA	TT = Less than 5% each month	0	0 %	Naturally present in the environment
E. Coli <sup>2</sup>	2023	Yes	0	TT = No confirmed samples	0	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 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 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)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest LRAA	Range Detected	Typical Source
Total Trihalomethanes [TTHMs] (ppb)	2023	Yes	NA	80	28	9 – 41	By-product of drinking water disinfection
Haloacetic Acids [HAAs] (ppb)	2023	Yes	NA	60	26	6 – 37	By-product of drinking water disinfection

NOTE: Compliance is based on the running annual average at each location (LRAA). The Highest LRAA reflects the highest average at any location and the Range Detected reflects all samples used to calculate the running annual averages.

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

Substance (with units)	Year Sampled	Compliance Achieved	MRDLG	MRDL	Result	Range Detected	Typical Source
Chloramines (ppm) Distribution System	2023	Yes	4	4	2.6 <sup>1</sup>	2.5 – 2.6	Water additive used to control microbes
Chloramines (ppm) Treatment Plant	2023	Yes	NA	TT = Results $\geq$ 1.00	2.1 <sup>2</sup>	2.1 – 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 water treatment plant

### TURBIDITY - Continuous Monitoring at the Treatment Plant

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Single Measurement	Lowest Monthly % of Samples $\leq$ 0.3 NTU	Typical Source
Turbidity (NTU)	2023	Yes	NA	TT = Results > 0.3 NTU	0.06	100 %	Soil runoff

**Turbidity:** Turbidity is the clarity of the water. It is measured as an indicator of water quality and the effectiveness of the filtration system. Compliance with the turbidity Treatment Technique (TT) is achieved when 95% of four-hour filtered water readings are 0.3 NTU or lower and no readings are greater than 1 NTU.



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

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Lowest RAA	Range of Monthly Ratios	Number of Quarters Out of Compliance	Typical Source
<b>Total Organic Carbon (TOC)</b>	2023	Yes	NA	TT = Running annual average $\geq 1.0$	1.2	1.0 – 3.6	0	Naturally present in the environment

**Total Organic Carbon:** Compliance with the Treatment Technique (TT) requirement is based on the lowest running annual average (RAA) of monthly ratios of the treatment removal achieved compared to required removal.

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

Substance (with units)	Compliance Achieved	MCLG	MCL	Groundwater Wells			Shoal Creek Surface Water			Typical Source
				Year Sampled	Highest Result	Range Detected	Year Sampled	Highest Result	Range Detected	
<b>Alpha Emitters (pCi/L)</b>	Yes	0	15	2023	5.1	ND – 5.1	2015	ND	ND	Erosion of natural deposits
<b>Combined Radiums (pCi/L)</b>	Yes	0	5	2023	4.3	ND – 4.3	2015	ND	ND	Erosion of natural deposits
<b>Fluoride (ppm)</b>	Yes	4	4	2023	0.18	ND – 0.18	2023	0.9	0.4 – 0.9	Erosion of natural deposits; Water additive which promotes strong teeth
<b>Nitrate (ppm)</b>	Yes	10	10	2023	ND	ND	2023	3.8	3.8	Runoff from fertilizer use; Leaching from septic, sewage; Erosion of natural deposits

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

Substance (with units)	Groundwater Wells			Shoal Creek Surface Water			Comments
	Year Sampled	Highest Result	Range Detected	Year Sampled	Highest Result	Range Detected	
Aluminum (ppm) <sup>1</sup>	2023	ND	ND	2023	0.01	0.01	Can cause discoloration
Calcium (ppm)	2023	45	29 – 45	2023	54	54	Naturally occurring
Chloride (ppm) <sup>1</sup>	2023	3.4	3.1 – 3.4	2023	20.4	20.4	Can cause salty taste
Magnesium (ppm)	2023	21	14 – 21	2023	3	3	Naturally occurring
pH (SU) <sup>1</sup>	2023	8.4	7.3 – 8.4	2023	8.4	7.3 – 8.4	Naturally occurring
Silica (ppm)	2023	11	11	2023	ND	ND	Naturally occurring
Sodium (ppm) <sup>2</sup>	2023	6.4	4.1 – 6.4	2023	7.2	7.2	Naturally occurring
Sulfate (ppm) <sup>1</sup>	2023	17	11 – 17	2023	7	7	Can cause salty taste
Total Dissolved Solids (ppm) <sup>1</sup>	2022	164	50 – 164	2023	102	102	Can leave deposits
Total Hardness (ppm CaCO <sub>3</sub> )	2023	174	137 – 174	2023	174	137 – 174	Sum of Calcium and Magnesium

1 - Substances with Secondary MCLs do not have MCLGs; 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.

## UNREGULATED CONTAMINANT MONITORING RULE (UCMR)

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Information on all the contaminants that were monitored for, whether regulated or unregulated, can be obtained from Missouri American Water or the Missouri Department of Natural Resources. For more information, contact our Customer Service Center at 1-866-430-0820.

### UNREGULATED CONTAMINANTS – Collected at the Treatment Facility

Parameter	Year Sampled	Units	Highest Result	Range Detected	Typical Source
Manganese*	2019	ppb	4.7	0.4 – 4.7	Naturally-occurring element; used in steel production, fertilizer, batteries and fireworks; essential nutrient

\* Manganese has a Secondary MCL of 50 ppb.

### UNREGULATED CONTAMINANTS – Collected in the Distribution System

Parameter	Year Sampled	Units	Highest Result	Range Detected	Typical Source
HAA6Br [Haloacetic Acids] <sup>1</sup>	2019	ppb	5.9	1.7 – 5.9	By-product of drinking water disinfection
HAA9 [Haloacetic Acids] <sup>2</sup>	2019	ppb	110	11 – 110	By-product of drinking water disinfection

1 - HAA6Br = Haloacetic Acids (mono-, di-, and tri-bromoacetic acid, bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid) as a group

2 - HAA9 = Haloacetic Acids from HAA5 and HAA6Br as a group

## PFAS

PFAS are not regulated in Missouri. 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				
Parameter	Year Sampled	Units	Highest Result	Typical Source
Perfluorooctanoic acid (PFOA)	2023	ppt	ND	Manufactured chemical(s); used in household goods for stain, grease, heat and water resistance.
Perfluorooctane sulfonic acid (PFOS)	2023	ppt	ND	
Hexafluoropropylene oxide-dimer acid (GenX)	2023	ppt	ND	
Perfluorobutane sulfonic acid (PFBS)	2023	ppt	ND	
Perfluorononanoic acid (PFNA)	2023	ppt	ND	
Perfluorohexanesulfonic acid (PFHxS)	2023	ppt	ND	

# Tested for, but **Not Detected**

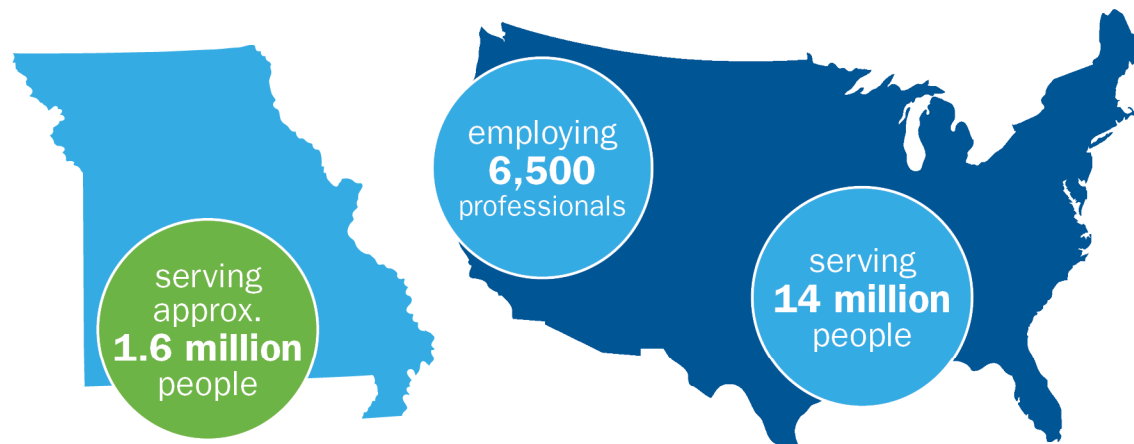
- 1,1,1-Trichloroethane
- 1,1,2-Trichloroethane
- 1,1-Dichloroethene
- 1,2,4-Trichlorobenzene
- 1,2-Dibromo-3-chloropropane
- 1,2-Dibromoethane (EDB)
- 1,2-Dichlorobenzene
- 1,2-Dichloroethane
- 1,2-Dichloropropane
- 1,4-Dichlorobenzene
- 2,4,5-T
- 2,4,5-TP (Silvex)
- 2,4'-D
- 2,4-DB
- 3,5-Dichlorobenzoic 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 (Aatrex)
- 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
- Dibromoacetic Acid
- Dicamba
- Dichloroprop
- Dinoseb
- Diquat
- Endothall
- Endrin
- Ethylbenzene
- Gamma-BHC (Lindane)
- Gen X
- Glyphosate
- Heptachlor
- Heptachlor epoxide
- Hexachlorobenzene
- Hexachlorocyclopentadiene
- Iron - Total
- Lead - Total
- Manganese - Total
- Mercury - Total
- Methiocarb
- Methomyl
- Methoxychlor
- Methyl tert-butyl ether (MTBE)
- Methylene chloride
- Molybdenum - Total
- Monobromoacetic Acid
- Monochloroacetic Acid
- Nickel - Total
- Nitrite - N
- Oxamyl (Vydate)
- Pentachlorophenol
- PFBS
- PFHxS
- PFNA
- PFOA
- PFOS
- Picloram
- Selenium - Total
- Silver - Total
- Simazine (Princep)
- Styrene
- Technical Chlordane
- Tetrachloroethene (PCE)
- Thallium - Total
- Toluene
- Total PCBs
- Toxaphene
- trans-1,2-Dichloroethene
- Trichloroethene (TCE)
- Vanadium - Total
- Vinyl chloride
- Zinc - Total



## 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.

**Missouri American Water**, a subsidiary of American Water, is the largest investor-owned water utility in the state, providing high-quality and reliable water and wastewater services to approximately 1.6 million people. For more information, visit [missouriamwater.com](http://missouriamwater.com) and follow us on Facebook, X, Instagram, LinkedIn and YouTube.



## MISSOURI AMERICAN WATER FACTS AT A GLANCE

- **COUNTIES SERVED**  
30 counties throughout the state
- **PEOPLE SERVED**  
Approximately 1.6 million, or one in four Missourians
- **EMPLOYEES**  
More than 700
- **TREATMENT FACILITIES**
  - **Water:** Eight surface water treatment facilities and 32 groundwater treatment facilities
  - **Wastewater:** 84 facilities
- **AVERAGE DAILY DELIVERY**  
202 million gallons per day (MGD)
- **MILES OF PIPELINE**  
Approximately 7,500
- **STORAGE AND TRANSMISSION**  
More than 100 storage facilities and 200 water and wastewater pumping stations
- **SOURCE OF SUPPLY**  
Surface water including the Missouri River, Meramec River, Shoal Creek, Garden City Lake and Shepherd Mountain Lake. Groundwater sources include the Ozark Aquifer.
- **COMMITMENT TO WATER QUALITY**  
Six of Missouri American Water's surface water treatment plants are part of the EPA's Partnership for Safe Water Program.

# How to Contact Us

If you have any questions about this report, your drinking water, or service, please contact Missouri American Water's Customer Service Center Monday to Friday, 7 a.m. to 7 p.m. at 1-866-430-0820.

## WATER INFORMATION SOURCES

Missouri American Water  
[www.missouriamwater.com](http://www.missouriamwater.com)

Missouri Department of Natural Resources  
[www.dnr.mo.gov](http://www.dnr.mo.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 1-866-430-0820.**

This report contains important information about your drinking water. Translate it, or speak with someone who understands it at 1-866-430-0820.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien al 1-866-430-0820.

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 1-866-430-0820.

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 **1-866-430-0820** 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 **1-866-430-0820** र हमें काल करें।

**Это очень важная информация о качестве Вашей воды. Если Вам требуется перевод этой информации, позвоните нам по телефону 1-866-430-0820.**

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 1-866-430-0820.

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 1-866-430-0820.