



2022 Annual **WATER QUALITY REPORT**

St. Louis County / St. Charles County
PWS ID: MO6010716

**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 pab 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 2022 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 \$430 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 2022. 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 blue 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 2022, 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 2022. 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 \$430 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 surpassing federal and state drinking water standards.
- **15 Year Directors Award Recipients:**
 - Jefferson City
 - Joplin
 - St. Louis County (Central, Meramec, North, and South Plants)

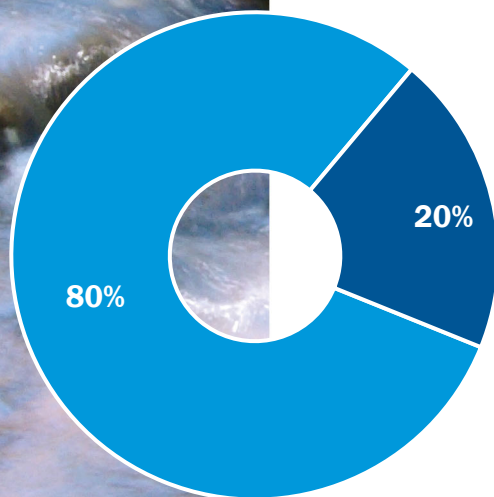


About Your Drinking Water Supply

WHERE YOUR WATER COMES FROM

About 80% of our surface water comes from the Missouri River, which borders our service area on the north and the west. About 20% comes from the Meramec River in south St. Louis County. Both rivers have a plentiful supply of water. Missouri American Water occasionally purchases a small amount of water from the City of St. Louis Water Division, which also uses the Missouri River as its source. For more information about this source, contact the City of St. Louis water Division at 314-868-5640. 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.



SOURCES OF SUPPLY FOR ST. LOUIS AND ST. CHARLES COUNTIES

- Missouri River
- Meramec River



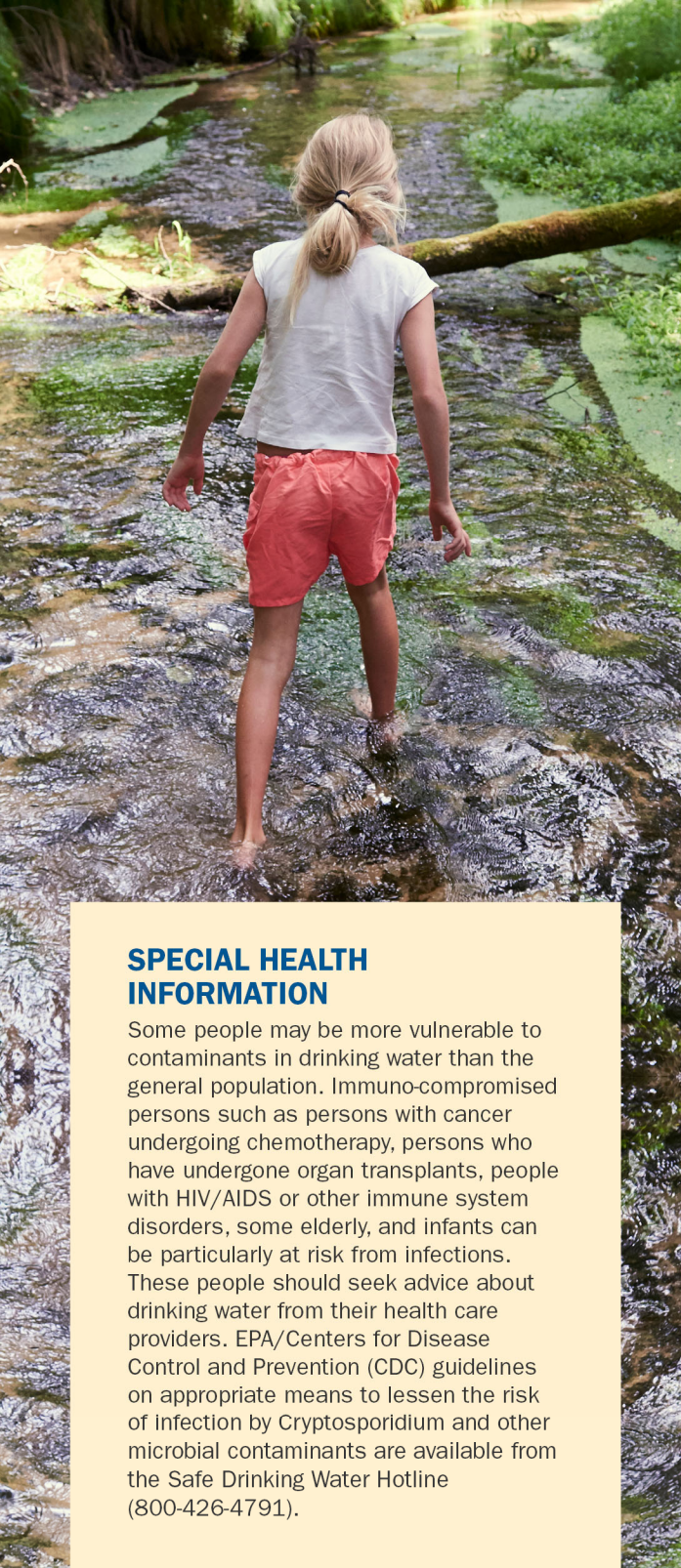
QUICK FACTS ABOUT MISSOURI AMERICAN WATER'S ST. LOUIS/ ST. CHARLES COUNTY WATER SYSTEM

Water sources:

The Missouri and Meramec Rivers

Average amount of water supplied to customers per day:
155.4 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:

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. 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

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.



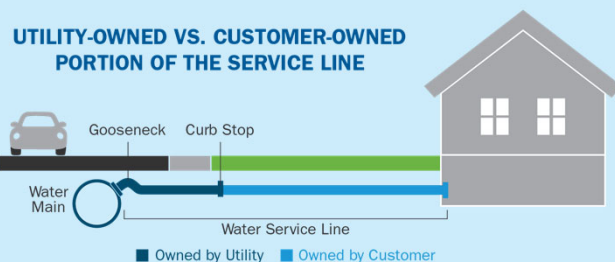
Source Water Assessment: This is a study and report unique to your source of drinking water that helps us identify potential contaminants and the potential for systems to be impacted by these sources.



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>.



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 Missouri 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 St. Louis County and St. Charles County system has naturally-occurring fluoride in the surface water and has fluoride added to meet the requirements of a St. Louis County ordinance. The fluoride levels at our treatment plants are 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 St. Louis County water fluoridation standards. As the naturally-occurring fluoride levels fluctuate throughout the year, Missouri American Water adjusts treatment 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.

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 understand how our water compares against the non-enforceable Health Advisory Level set by U.S. EPA. Sampling also allows Missouri American Water to be better prepared as U.S. EPA and the Department of Natural Resources is currently developing drinking water standards for PFOA and PFOS. Additionally, in 2024, the St. Louis / St. Charles County 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 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 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 100 tap water samples collected at customers' taps every 6 months									
Substance (with units)	Monitoring Period	Compliance Achieved	MCL G	Action Level (AL)	90 th Percentile	Range Detected	No. of Homes Sampled	Homes Above Action Level	Typical Source
Lead (ppb)	2022 (Jan-Jun)	Yes	0	15	1	ND – 104	101	1	Corrosion of household plumbing systems.
Copper (ppm)	2022 (Jan-Jun)	Yes	1.3	1.3	ND	ND – 0.066	101	0	Corrosion of household plumbing systems.
Lead (ppb)	2022 (Jul-Dec)	Yes	0	15	1	ND – 6	100	0	Corrosion of household plumbing systems.
Copper (ppm)	2022 (Jul-Dec)	Yes	1.3	1.3	ND	ND – 0.034	100	0	Corrosion of household plumbing systems.

REVISED TOTAL COLIFORM RULE - At least 300 samples collected each month in the distribution system							
Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest No. of Positive Samples	Highest Percent of Positive Samples	Typical Source
Total Coliform ¹	2022	Yes	0	TT = Less than 5% each month	3	0.9 %	Naturally present in the environment.
E. Coli ²	2022	Yes	0	MCL = 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 number and percentage of Total Coliform / E.Coli positive samples in any month for the year.

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)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest LRAA	Range Detected	Typical Source
Total Trihalomethanes (TTHMs) (ppb)	2022	Yes	NA	80	54	1 – 84	By-product of drinking water disinfection
Haloacetic Acids (HAAs) (ppb)	2022	Yes	NA	60	30	4 – 50	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	2022	Yes	4	4	2.7 ¹	0.8 – 3.4	Water additive used to control microbes
Chloramines (ppm) Treatment Plant	2022	Yes	NA	TT = Results \geq 1.00	1.6 ²	1.6 – 3.4	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)	2022	Yes	NA	TT = Results > 0.3 NTU	0.20	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
Total Organic Carbon (TOC)	2022	Yes	NA	TT = Running annual average ≥ 1.0	1.2	0.8 – 3.9	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)	Year Sampled	Compliance Achieved	MCLG	MCL	Missouri River Facilities		Meramec River Facilities		Typical Source
					Highest Result	Range Detected	Highest Result	Range Detected	
2,4'-D (ppb)	2022	Yes	70	70	0.1	ND – 0.1	ND	ND	Runoff from herbicide used on row crops
Atrazine (ppb)	2022	Yes	3	3	0.3	ND – 0.3	ND	ND	Runoff from herbicide used on row crops
Fluoride (ppm)	2022	Yes	4	4	0.67	0.61 – 0.67	0.68	0.66 – 0.68	Erosion of natural deposits; Water additive which promotes strong teeth
Nitrate (ppm)	2022	Yes	10	10	0.96	0.02 – 0.96	0.42	0.38 – 0.42	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

OTHER SUBSTANCES OF INTEREST - Collected at the Treatment Plant						
Substance (with units)	Year Sampled	Missouri River Facilities		Meramec River Facilities		Comments
		Highest Result	Range Detected	Highest Result	Range Detected	
Aluminum (ppm) ¹	2022	0.01	ND – 0.01	ND	ND	Can cause discolored water
Calcium (ppm Ca ⁺²)	2022	25	20 – 25	22	17 – 22	Naturally occurring
Chlorate (ppm)	2022	NA	NA	0.38	0.11 – 0.38	By-product of disinfectant manufacturing; Agricultural defoliant or desiccant; Used in production of chlorine dioxide
Chloride (ppm) ¹	2022	21	18 – 21	43	33 – 43	Can cause salty taste
Magnesium (ppm Mg ⁺²)	2022	10	9 – 10	10	8 – 10	Naturally occurring
pH (SU) ¹	2022	10.4	9.4 – 10.4	10.4	9.6 – 10.4	Lime softening Treatment
Sodium (ppm) ²	2022	21	19.5 – 21	13	8 – 13	Naturally occurring
Strontium (ppm)	2022	0.1	0.1	ND	ND	Naturally occurring; historically, commercial use of strontium has been in the faceplate glass of CRT televisions to block x-ray emissions
Sulfate (ppm) ¹	2022	60	57 – 60	9.4	ND – 9.4	Can cause salty taste
Total Dissolved Solids (ppm) ¹	2022	364	346 – 364	116	88 – 116	Can leave deposits
Total Hardness (ppm CaCO ₃)	2022	168	76 – 168	180	76 – 180	Sum of Calcium and Magnesium
Vanadium (ppm)	2022	0.004	0.004	ND	ND	Naturally occurring

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)

The EPA created the Unregulated Contaminants Monitoring Rule (UCMR) to assist them in determining the occurrence of unregulated contaminants in drinking water and whether new regulations are warranted. The first Unregulated Contaminants Monitoring Rule (UCMR1) testing was completed in 2003 for a list of contaminants specified by the EPA. Unregulated contaminants are those for which the EPA has not established drinking water standards. UCMR2 testing was conducted between November 2008 and August 2009, and UCMR3 assessment monitoring was conducted between January 2013 and December 2016. The fourth list of contaminants to monitor as part of the UCMR was published by the EPA in December 2016. UCMR4 testing began in 2018 and was completed in 2020. The results from the UCMR monitoring are reported directly to the EPA. The results of this monitoring are incorporated in the data tables in this report as appropriate. For more information, contact our Customer Service Center at 1-866-430-0820.

UNREGULATED CONTAMINANTS – Collected at the Treatment Facility							
Parameter	Units	Year Sampled	Missouri River Facilities		Meramec River Facilities		Typical Source
			Highest Result	Range Detected	Highest Results	Range Detected	
2-Methoxyethanol	ppb	2019	5.7	0.4 – 5.7	ND	ND	Used in synthetic cosmetics, perfumes, fragrances, hair preparations, and skin lotions
Manganese*	ppb	2019	4.9	0.5 – 4.9	0.5	0.5	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	Units	Year Sampled	Missouri River Facilities		Typical Source
			Highest Result	Range Detected	
HAA6Br [Haloacetic Acids] ¹	ppb	2019	8.8	0.7 – 8.8	By-product of drinking water disinfection
HAA9 [Haloacetic Acids] ²	ppb	2019	43	9 – 43	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

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 Missouri American Water to be better prepared as U.S. EPA and the Department of Natural Resources are currently developing drinking water standards for PFOA and PFOS.

UNREGULATED PFAS CHEMICALS					
Parameter	Units	Year Sampled	Average Result	Range Detected	Typical Source
Perfluorobutanoic Acid (PFBA)	ppt	2021	3	3	Manufactured chemical(s); used in household goods for stain, grease, heat and water resistance
Perfluorooctanoic Acid (PFOA)	ppt	2021	ND	ND	Manufactured chemical(s); used in household goods for stain, grease, heat and water resistance
Perfluorooctanesulfonic Acid (PFOS)	ppt	2021	ND	ND	Manufactured chemical(s); used in household goods for stain, grease, heat and water resistance

PFAS are not regulated in Missouri. 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 Missouri American Water will take appropriate actions to meet any new regulations. Finally, PFAS chemicals are unique, so two PFAS chemicals at the same level typically do not present the same risk. Therefore, you should not compare the results for one PFAS chemical against the results of another. For more information on PFAS, please visit <https://www.amwater.com/resources/PDF/american-water-PFAS.pdf>.



Tested for, but **Not Detected**

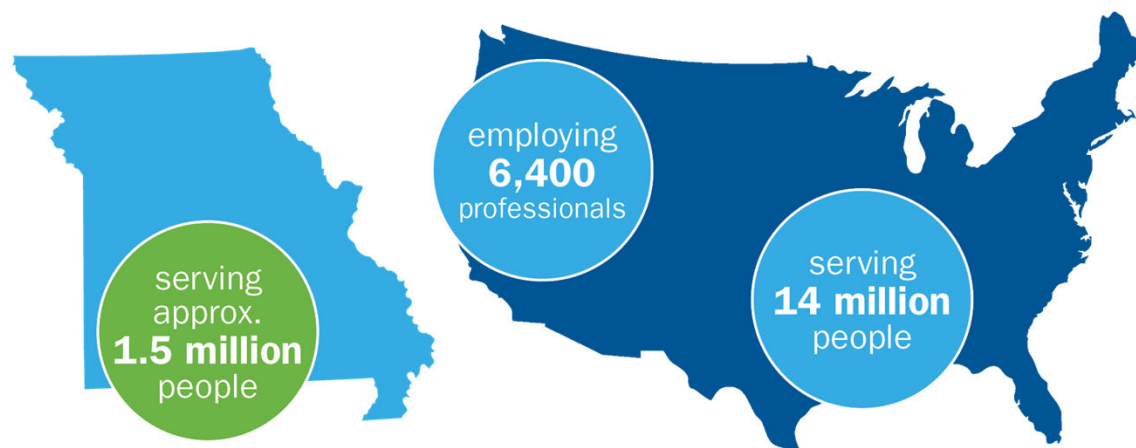
- | | | | |
|---|--|---|---|
| <ul style="list-style-type: none">• 1,1,1-Trichloroethane• 1,1,2-Trichloroethane• 1,1-Dichloroethene• 1,2,4-Trichlorobenzene• 1,2-Dibromo-3-chloropropane• 1,2-Dibromoethane (EDB)• 1,2-Dichlorobenzene• 1,2-Dichloroethane• 1,2-Dichloropropane• 1,4-Dichlorobenzene• 2,4,5-T• 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 | <ul style="list-style-type: none">• Arochlor-1242• Arochlor-1248• Arochlor-1254• Arochlor-1260• Arsenic - Total• Barium - Total• Bentazon• Benzene• Benzo(a)pyrene• Beryllium - Total• Boron - Total• 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 | <ul style="list-style-type: none">• Di(2-ethylhexyl)phthalate• Dicamba• Dichloroprop• Dinoseb• Diquat• Endothall• Endrin• Ethyl Benzene• Gamma-BHC (Lindane)• 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 | <ul style="list-style-type: none">• Nickel - Total• Nitrite - N• Oxamyl (Vydate)• Pentachlorophenol• Picloram• Selenium - Total• Silica - Total• Silver - Total• Simazine (Princep)• Styrene• Technical Chlordane• Tetrachloroethene (PCE)• Thallium - Total• Toluene• Total PCBs• Toxaphene• trans-1,2-Dichloroethene• Trichloroethene (TCE)• Vinyl chloride• Xylene (total)• Zinc - Total |
|---|--|---|---|



About Us

Missouri American Water, a subsidiary of American Water (NYSE: AWK), is the largest investor-owned water utility in the state, providing high-quality and reliable water and wastewater services to approximately 1.5 million people.

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 more than 6,400 dedicated professionals who provide regulated and regulated-like drinking water and wastewater services to more than 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.



MISSOURI AMERICAN WATER FACTS AT A GLANCE

- **COUNTIES SERVED**
30 counties throughout the state
- **PEOPLE SERVED**
Approximately 1.5 million, or one in four Missourians
- **EMPLOYEES**
Nearly 700
- **TREATMENT FACILITIES**
 - **Water:** Seven surface water treatment facilities and eight groundwater treatment facilities
 - **Wastewater:** 81 facilities
- **AVERAGE DAILY DELIVERY**
205 million gallons per day (MGD)
- **MILES OF PIPELINE**
Approximately 7,500
- **STORAGE AND TRANSMISSION**
107 storage facilities: 214 water and wastewater pumping stations
- **SOURCE OF SUPPLY**
Surface water including the Missouri River, the Meramec River, Shoal Creek and Garden City 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.
 - Three of our operations have received Source Water Protection Awards from the Missouri Rural Water Association.

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.amwater.com/moaw

Missouri Department of Natural Resources

www.dnr.mo.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 1-866-430-0820.

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.