



2007 annual water quality report



Joplin

PWS ID: MO5010413



Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Our Customer Charter

We Are...

- dedicated to service excellence
- focused on personalized solutions
- committed to our customers' health and welfare **therefore...**

We Will...

- partner with our customers
- treat them with dignity and respect
- enhance their quality of life
- earn their loyalty
- exceed their expectations

Dear Missouri American Water Customer,

You are our top priority. And delivering reliable, high-quality water to you all day, every day is our mission. We deliver – at about a penny per gallon.

Each year, Missouri American Water publishes reports on the quality of your drinking water. We are pleased to report that investment in our water treatment plants and equipment as well as the expertise and dedication of our employees, allows us to deliver drinking water that meets state and federal drinking water requirements. In addition to ensuring we are following current standards, we work closely with federal agencies to anticipate future water quality treatment requirements and regulations.

Your community is our community. We work with local and state governments to make sure your water service needs are being met. From upgrading existing systems to developing new ones, from pitching in at local events to sponsoring school programs, we are your neighbors and take your water quality personally.

We encourage you to review this report either in this printed form or on our website at www.amwater.com. If you ever have any questions, please reach out to our customer service representatives at 1-866-430-0820. After all, you are our first priority.

Thank you for being a Missouri American Water customer.

*Sincerely,
Terry Gloriod
President
Missouri American Water*

What is a Water Quality Report?

To comply with state and U.S. Environmental Protection Agency (EPA) regulations, Missouri American Water issues a report annually describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect drinking water sources. In 2007, we conducted tests for hundreds of contaminants, all of which were below state and federal maximum allowable levels. This report provides an overview of last year's (2007) water quality. It includes details about where your water comes from and what it contains.

If you have any questions about this report or your drinking water, please call our Customer Service Center at (toll-free) 1-866-430-0820.

About Missouri American Water

Missouri American Water is a subsidiary of American Water. Founded in 1886, American Water is the largest investor-owned U.S. water and wastewater utility company. With headquarters in Voorhees, NJ, American Water employs nearly 6,900 dedicated professionals who provide drinking water, wastewater and other related services to approximately 16.2 million people in 32 states and Ontario, Canada. More information can be found by visiting www.amwater.com.

At Missouri American Water, and all of American Water, we work hard every day to provide our customers with water they can enjoy and use with confidence.

Source Water Information

Missouri American Water supplies quality drinking water to over 23,900 residential, commercial and industrial customers in the City of Joplin. Missouri American Water treats a combination of surface water and groundwater. The primary source is Shoal Creek, which is supplemented by a system of deep wells.

Partnership for Safe Drinking Water Program

In 2001 the Joplin system was awarded the prestigious Directors Award under the Partnership for Safe Water program administered by the U.S. Environmental Protection Agency (EPA), Missouri Department of Natural Resources, and other water-related organizations. The award honors water utilities for achieving operational excellence, by voluntarily optimizing their treatment facility operations and adopting more stringent performance goals than those required by federal and state drinking water standards. We are proud to report that we have maintained those standards throughout 2007.



How to Contact Us

For more information regarding this report or any of the other services provided by Missouri American Water, please call our Customer Service Center at (toll-free) 1-866-430-0820, or you may visit us on the Web at www.amwater.com.

Water Information Sources

Missouri American Water

www.amwater.com

Missouri Department of Natural Resources

www.dnr.mo.gov

United States Environmental Protection Agency

www.epa.gov/safewater

Safe Drinking Water Hotline: (800) 426-4791

Centers for Disease Control and Protection

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

Substances Expected to be in Drinking Water

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

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.

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 stormwater 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 stormwater runoff, and residential uses.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive Contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

For more information about the contaminants and potential health effects, call the U.S EPA's Safe Drinking Water Hotline at (800) 426-4791.

Radon

Radon is a radioactive gas that has been linked to lung cancer. The contribution from drinking water is usually small compared to normal indoor levels. Radon gas is naturally occurring in some ground water. Although the majority of water supplied by our Joplin district comes from surface water, approximately 15% comes from ground water. The Joplin wells were sampled for radon in 2007. Radon levels in these wells ranged from not detected to 202 pCi/L, with an average of 42 pCi/L – less than the limit currently proposed by the USEPA (there is presently no federal limit on radon in drinking water). For information on radon in indoor air, call your local health department or the National Radon Hotline at (800) 767-7236.

How to Read This Table

Missouri American Water conducts extensive monitoring to ensure that your water meets all water quality standards. The results of our monitoring are reported in the following tables. While most monitoring was conducted in 2007, certain substances are monitored less than once per year because the levels do not change frequently. For help with interpreting this table, see the "Table Definitions" section.

Starting with a **Substance**, read across. **Year Sampled** is usually in 2007 or year prior. **MCL** shows the highest level of substance (contaminant) allowed. **MCLG** is the goal level for that substance (this may be lower than what is allowed). **Average Amount Detected** (Results) represents the measured amount (less is better). **Range** tells the highest and lowest amounts measured. A **Yes** under **Compliance Achieved** means the amount of the substance met government requirements. **Typical Source** tells where the substance usually originates.

Unregulated substances are measured, but maximum contaminant levels have not been established by the government.

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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline (800) 426-4791.

To ensure that tap water is of high quality, U.S. Environmental Protection Agency prescribes regulations limiting the amount of certain substances in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Missouri American Water's advanced water treatment processes are designed to reduce any such substances to levels well below any health concern.

Definitions of Terms Used in This Report

- **AL (Action Level):** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.
- **MCL (Maximum Contaminant Level):** 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.
- **MCLG (Maximum Contaminant Level Goal):** 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.
- **MRDL (Maximum Residual Disinfectant Level):** 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.
- **MRDLG (Maximum Residual Disinfectant Level Goal):** The level of 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 contamination.
- **mrem/year:** Millirems per year (a measure of radiation absorbed by the body).
- **NA:** Not applicable
- **ND:** Not detected
- **NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of the water.
- **ppm (parts per million):** One part substance per million parts water, or milligrams per liter.
- **ppb (parts per billion):** One part substance per billion parts water, or micrograms per liter.
- **TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.

Our Water Research Efforts

Cryptosporidium is a microbial pathogen found in surface water throughout the United States. Although *Cryptosporidium* can be removed through commonly-used filtration methods, US EPA issued a new rule in January 2006 that requires systems with higher *Cryptosporidium* levels in their source water to provide additional treatment. In anticipation of this upcoming rule, Missouri American Water's Joplin district monitored for *Cryptosporidium* in its raw water in 2005. Our tests showed elevated levels of *Cryptosporidium* in the raw water. We are currently performing a comprehensive review of our treatment practices to determine what changes, if any, are needed to address these levels of *Cryptosporidium*.

Water Quality Statement

We are pleased to report that during the past year, the water delivered to your home or business complied with all state and federal drinking water requirements. For your information, we have compiled a list in the table, showing what substances were detected in your drinking water during 2007. Although all of the substances listed below are under the Maximum Contaminant Level (MCL) set by the U.S. Environmental Protection Agency, we feel it is important that you know exactly what was detected and how much of the substance was present in the water.

Monitoring was also done during 2003 under the U.S. Environmental Protection Agency (EPA) Unregulated Contaminant Monitoring Rule (UCMR). No compounds were detected. Data is available on the EPA's web site (www.epa.gov/safewater/data/ucmrgetdata.html).

There are many unforeseen and unpredictable factors that may cause a source water to be contaminated. The Missouri Department of Natural Resources routinely monitors all public water supplies to ensure public health is protected. Source Water Assessments have been assembled by the Missouri Department of Natural Resources to evaluate the susceptibility of contamination to our drinking water sources. For more information about these assessments call the Missouri Department of Natural Resources at (800) 361-4827.

Water Quality Results

Regulated Substances (Measured on the Water Leaving the Treatment Facility)							
Substance (units)	Year Sampled	MCL	MCLG	Results	Range Low-High	Compliance Achieved	Typical Source
Alpha emitters (pCi/L)	2007	15	0	2.6	2.6 – 2.6	YES	Erosion of natural deposits
Atrazine (ppb)	2007	3	3	0.02	ND – 0.3	YES	Runoff from herbicide used on row crops
Beta/photon emitters (pCi/L)	2004	50**	0**	2.7	2.7 – 2.7	YES	Decay of natural and man-made deposits
Barium (ppm)	2007	2	2	0.113	0.001 – 0.207	YES	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloramines (ppm)	2007	MRDL = 4	MRDLG = 4	3.01	1.75 – 3.92	YES	Water additive used to control microbes
Fluoride (ppm)	2007	4	4	0.27	ND – 1.0	YES	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (as N) (ppm)	2007	10	10	0.77	ND – 3.70	YES	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (as N) (ppm)	2007	1	1	0.004	ND – 0.016	YES	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TOC [Total organic carbon] (removal factor)	2007	TT Removal > 1.0	NA	1.9	0.4 – 2.8	YES	Naturally present in the environment
** The MCL for Beta/photon emitters is written as 4 millirem/year (measure of rate of radioactive decay). EPA considers 50 pCi/L as the level of concern for beta emitters.							
Bacterial Results (from the Distribution System)							
Substance	Year Sampled	MCL	MCLG	Highest Percentage Detected	Compliance Achieved	Typical Source	
Total Coliform Bacteria	2007	5% Pos. Samples	0	1.40%	YES	Naturally present in the environment	
Other Compounds (Measured in the Distribution System)							
Substance (units)	Year Sampled	MCL	MCLG	Results	Range Low-High	Compliance Achieved	Typical Source
TTHMs [Total tri-halomethanes] (ppb)	2007	80	NA	23	11.7 – 37.1	YES	By-product of drinking water disinfection
HAA5 [Haloacetic Acids] (ppb)	2007	60	NA	22	12.8 – 31.8	YES	By-product of drinking water disinfection
Turbidity - A Measure of the Clarity of the Water (at the Treatment Facility)							
Substance (units)	Year Sampled	MCL	MCLG	Highest Single Measurement	Compliance Achieved	Typical Source	
Turbidity (NTU)	2007	TT	NA	0.17	YES	Soil runoff	
Unregulated Substances (Measured on the Water Leaving the Treatment Facility)							
Substance (units)	Year Sampled	Results	Range Low-High	Typical Source			
Bromodichloromethane (ppb)	2007	5.7	3.4 – 7.7	By-product of disinfection			
Chlorodibromomethane (ppb)	2007	1.4	1.1 – 1.7	By-product of disinfection			
Chloroform (ppb)	2007	14.8	8.1 – 21.5	By-product of disinfection			
Sulfate (ppm)	2007	13.9	11.2 – 20.6	Erosion of natural deposits			
Tap Water Samples: Lead and Copper Results							
Substance (units)	Year Sampled	Action Level	MCLG	Number of Samples	90th Percentile	Number of Samples Above Action Level	Typical Source
Copper (ppm)	2005	AL = 1.3	1.3	30	0.23	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2005	AL = 15	0	30	7.0	1	Corrosion of household plumbing systems; Erosion of natural deposits