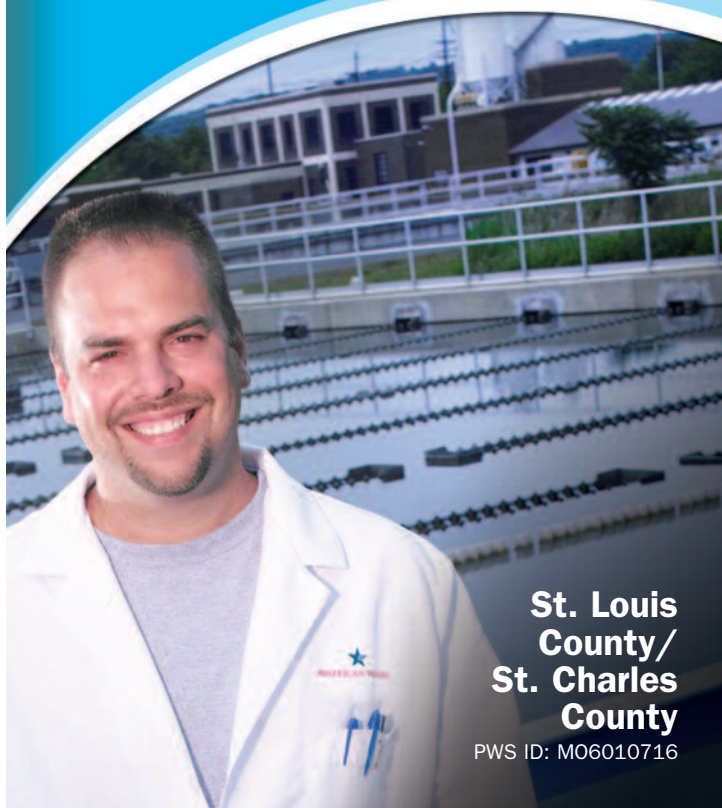


# 2008 Annual Water Quality Report



**St. Louis  
County/  
St. Charles  
County**

PWS ID: M06010716

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

## **Dear Missouri American Water Customer,**

*As a trusted leader in the industry, Missouri American Water places a strong emphasis on sharing information with our customers about the quality of the water service we provide.*

*One way we do this is by reporting to you annually the results of various tests that we conduct. Please review this Consumer Confidence Report (CCR), which outlines information applicable to your local water system for testing completed through December 2008. You'll find that we provide water service that surpasses or meets all federal and state water quality regulations. In fact, we often address regulations well before they go into effect.*

*Just as important, Missouri American Water makes the necessary investments to maintain and upgrade its facilities so that we can provide quality water service to your home 24 hours a day, seven days a week.*

*Our customers are our top priority. We are committed to providing the highest quality drinking water service possible now and in the years to come. In addition to this written report, you can view information about Missouri American Water and your water system on the website <http://www.missouriamwater.com>. For more information or for any questions about this report relating to your drinking water service, please contact us at (866) 430-0820.*

*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 2008, 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 (2008) 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

Founded in 1886, American Water is the largest investor-owned U.S. water and wastewater utility company. With headquarters in Voorhees, N.J., the company employs more than 7,000 dedicated professionals who provide drinking water, wastewater and other related services to approximately 15 million people in 32 states and Ontario, Canada.

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

## Source Water Information

Missouri American Water supplies quality drinking water to more than 364,000 customers in St. Louis County, St. Charles County and northern Jefferson County. Approximately 80 percent of our surface water comes from the Missouri River, which borders our service area on the north and the west. Nearly 20 percent comes from the Meramec River in south St. Louis County. Both rivers provide a plentiful supply of water that responds well to conventional, though rigorous, drinking water treatment processes. Missouri American Water occasionally purchases a small quantity of water from the City of St. Louis Water Division, which also uses the Missouri River as a source water. For more information about this water supply, contact the City of St. Louis Water Division at (314) 868-5640. In addition, we occasionally purchase small quantities of water from St. Charles County Public Water Supply District No. 2, whose source water comes from deep wells. For more information about this water supply, contact St. Charles County Public Water Supply District No. 2 at (636) 561-3737.

## St. Louis County Water Treatment Facilities Receive Special Recognition

The Missouri Department of Natural Resources accepted Missouri American Water's four St. Louis County plants into the Missouri Environmental Management Partnership (MEMP) in Fall 2007. Through development of an environmental management system, we have increased environmental awareness, enhanced our working relationship with the Missouri Department of Natural Resources, and reduced environmental risks. Missouri American Water's participation in this voluntary program is an example of the company's dedication to making environmental management a fundamental part of the business.

## 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 at [www.missouriamwater.com](http://www.missouriamwater.com).

## 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**  
[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](http://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 USEPA Safe Drinking Water Hotline at (800) 426-4791.

### 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 USEPA Safe Drinking Water Hotline (800) 426-4791.

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. Missouri 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>.

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.

### 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, USEPA issued a new rule in January 2006 that requires systems with higher *Cryptosporidium* levels in their source water to provide additional treatment. Missouri American Water's St. Louis district monitored for *Cryptosporidium* in its raw water sources in 2005. Based on the results of our *Cryptosporidium* monitoring for our two Meramec River facilities, no additional treatment will be required by the new USEPA regulation. However, our tests detected higher levels of *Cryptosporidium* in the Missouri River due to poor source water conditions following significant rainfall events. We are currently performing a comprehensive review of our treatment practices to determine what changes, if any, are needed to address the potential of elevated *Cryptosporidium* levels at our two facilities drawing water from the Missouri River.

### 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 2008, 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 2008 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). **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.

### **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.

**pCi/L (picocuries per liter):** Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).

**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.

**ppt (parts per trillion):** One part substance per trillion parts water, or nanograms per liter.

**TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.

### **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. We feel it is important that you know exactly what was detected and how much of the substance was present in the water. For your information, we have compiled a list in the table, showing what substances were detected in your drinking water during 2008. 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. For additional information concerning our results, please contact our customer service department at (toll-free) 1-866-430-0820.

Monitoring was also done during 2003 and 2008 under the U.S. Environmental Protection Agency (EPA) Unregulated Contaminant Monitoring Rule (UCMR) and Unregulated Contaminant Monitoring Rule 2 (UCMR2) respectively. Data is available on the EPA's web site ([www.epa.gov/safewater/data/ucmrgetdata.html](http://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	Missouri River		Meramec River		Compliance Achieved	Typical Source
				Results	Range Low-High	Results	Range Low-High		
2,4-D (ppb)	2008	70	70	0.02	ND - 0.2	ND	ND	Yes	Runoff from herbicide used on row crops
Arsenic (ppb)	2008	10	0	0.9	ND - 2	0.25	ND - 1	Yes	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Atrazine (ppb)	2008	3	3	0.68	0.1 - 2.5	0.04	ND - 0.2	Yes	Runoff from herbicide used on row crops
Beta/pton emitters (pCi/L)	2004	50*	0*	4.2	4.2 - 4.2	2.1	1.9 - 2.2	Yes	Decay of natural and man-made deposits
Barium (ppm)	2008	2	2	0.022	0.011 - 0.039	0.02	0.019 - 0.031	Yes	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chloramines (ppm)	2008	MRDL = 4	MRDLG = 4	2.6	1.6 - 3.3	2.6	2.0 - 3.1	Yes	Water additive used to control microbes
Combined radium (pCi/L)	2007	5	0	0.2	ND - 1.3	0.5	ND - 1.6	Yes	Erosion of natural deposits
Dibromochloropropane (ppt)	2008	200	0	1.7	ND - 20	ND	ND	Yes	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Ethylene Dibromide (ppt)	2008	50	0	2.5	ND - 30	ND	ND	Yes	Discharge from petroleum refineries
Fluoride (ppm)	2008	4	4	1.0	1.0 - 1.2	1.01	1.0 - 1.1	Yes	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (as N) (ppm)	2008	10	10	1.5	0.38 - 2.23	0.32	0.01 - 0.49	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (as N) (ppm)	2008	1	1	0.012	ND - 0.025	0.01	ND - 0.018	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppb)	2008	50	50	1.4	ND - 4	ND	ND	Yes	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Total Organic Carbon (ppm)	2008	TT	NA	1.4	0.8 - 2.1	2.4	1.1 - 3.3	Yes	Naturally present in the environment

\* The MCL for Beta/pton 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 for the Missouri and Meramec River Facilities)

Substance (units)	Year Sampled	MCL	MCLG	Highest Percentage Detected	Compliance Achieved	Typical Source
Total Coliform Bacteria	2008	5% Pos. Samples	0	0.97%	Yes	Naturally present in the environment

### Other Compounds (Measured in the Distribution System)

Substance (units)	Year Sampled	MCL	MCLG	Missouri River		Meramec River		Compliance Achieved	Typical Source
				Results	Range Low-High	Results	Range Low-High		
TTHMs [Total trihalomethanes] (ppb)	2008	80	NA	18.3	4.9 - 76.3	31.2	8.2 - 85.9*	Yes	By-product of drinking water disinfection
HAA5 [Haloacetic Acids] (ppb)	2008	60	NA	20.6	9.6 - 43.2	17.1	4.9 - 42.8	Yes	By-product of drinking water disinfection

\*Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.

### Turbidity (A Measure of the Clarity of the Water at the Treatment Facility)

Substance (units)	Year Sampled	MCL	MCLG	Missouri River	Meramec River	Compliance Achieved	Typical Source
				Highest Single Measurement	Highest Single Measurement		
Turbidity (NTU)	2008	TT	NA	0.23	0.14	Yes	Soil runoff

### Unregulated Substances (Measured on the Water Leaving the Treatment Facility)

Substance (units)	Year Sampled	Missouri River		Meramec River		Typical Source
		Results	Range Low-High	Results	Range Low-High	
Bromodichloromethane (ppb)	2008	3.2	ND - 14.9	3.9	1.3 - 8.3	By-product of disinfection
Bromoform (ppb)	2008	0.3	ND - 2	ND	ND	By-product of disinfection
Chlorodibromomethane (ppb)	2008	1.6	ND - 11.2	0.6	ND - 1.7	By-product of disinfection
Chloroform (ppb)	2008	13.9	1.6 - 31.6	31.6	9.7 - 74.9	By-product of disinfection
Sulfate (ppm)	2008	74.4	52.1 - 99.8	28.2	21.1 - 36.7	Erosion of natural deposits

### Unregulated Substances (Measured in the Distribution System)

Substance (units)	Year Sampled	Missouri River		Meramec River		Typical Source
		Results	Range Low-High	Results	Range Low-High	
N-nitrosodimethylamine (ppt)	2008	2.2	2.2 - 2.2	ND	ND	Nitrosamines can form as intermediates and byproducts in chemical synthesis and manufacture of rubber, leather, and plastics; Can form spontaneously by reaction of precursor amines with nitrosating agents (nitrate and related compounds), or by action of nitrate-reducing bacteria; Foods such as bacon and malt beverages can contain nitrosamines; There is also evidence that they form in the upper GI tract
N-nitrosopyrrolidine (ppt)	2008	ND	ND	5.7	5.7 - 5.7	

### Tap Water Samples (Lead and Copper Results for the Missouri and Meramec River Facilities)

Substance (units)	Year Sampled	Action Level	MCLG	Number of Samples	90th Percentile	Number of Samples Above Action Level	Typical Source
Copper (ppm)	2007	AL = 1.3	1.3	50	0.019	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2007	AL = 15	0	50	2.0	0	Corrosion of household plumbing systems; Erosion of natural deposits