

City of Cameron, Missouri

2011 Annual Water Quality Report

This report is intended to provide you with important information about your drinking water and the efforts made to provide safe drinking water.

Atencion!

Este informe contiene informacion muy importante. Traduscalo o prequentele a alguien que lo entienda bien.
[translated: This report contains very important information. Translate or ask someone who understands this very well.]

You are getting this report because of the requirements of the Federal Safe Drinking Water Act and state regulations. This report must be prepared by every community water system to provide their customers with information about the source of their drinking water, detects of contamination in their drinking water, and other facts related to violations and health issues if any are present. This water quality report will not be mailed out, but is available upon request.

What is the source of my water?

The sources of drinking water (both tap 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 pickup substances resulting from the presence of animals or from human activity.

Our water comes from the following sources: **Surface Water Reservoirs**

The City of Cameron sources consists of four surface water reservoirs located northwest of the city. Reservoirs #1, #2, #3 and Grindstone serve as the water supply for the City of Cameron and also serve Clinton County Public Water Supply District #3.

The Department of Natural Resources conducted a source water assessment to determine the susceptibility of our water source to potential contaminants. This process involved the establishment of source water delineations for each surface water intake and then a contaminant inventory was performed within those delineated areas to assess potential threats to each source. Assessment maps and summary information sheets are available on the internet at <http://maproom.missouri.edu/swipmaps/pwsid.htm>. To access the maps for your water system you will need the state-assigned identification code, which is printed at the top of this report. The Source Water Inventory Project maps and information sheets provide a foundation upon which a more comprehensive source water protection plan can be developed.

Why are there contaminants in my water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amount 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).

Contaminants that may be present in source water include:

- A.** Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- B.** Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining or farming.
- C.** Pesticides and herbicides, which may come from a variety of sources such as agricultural, urban storm water runoff, and residential uses.
- D.** 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 storm water runoff, and septic systems.

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

In order to ensure that tap water is safe to drink, the Department of Natural Resources prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Department of Health regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Is our water system meeting other rules that govern our operations?

The Missouri Department of Natural Resources regulates our water system and requires us to test our water on a regular basis to ensure its safety. Our system has been assigned the identification number MO1010131 for the purposes of tracking our test results. Last year, we tested for a variety of contaminants. The detectable results of these tests are on the following pages of this report. Any violations of state requirements or standards will be further explained later in this report.

How might I become more actively involved?

If you would like to observe the decision-making process that affects drinking water quality or if you have any further questions about your drinking water report, please call us at 632-2844 to inquire about scheduled meetings or contact persons.

Do I need to take special precautions?

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/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Hotline (1-800-426-4791).

Lead

The newly revised Lead and Copper Rule requires all community systems, not just those who detect lead above the action level, to include an informational statement about lead in drinking water.

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. The City of Cameron 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 drinking 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://epa.gov/safewater/lead>.

The state has reduced monitoring requirements for certain contaminants to less than once per year because the concentrations of these contaminants are expected to not vary significantly from year to year. Records marked with an *, though representative, are more than one year old.

Contaminants Report

Regulated Contaminants

<i>Disinfection By-Products</i>	Units	MCL	MCLG	RAA	Range of Detections	Violation	Monitoring Period
Total Haloacetic Acids (HAA5)	ppb	60	0	33.7125	21.6 – 49.4	No	2011
Sources	By-product of drinking water disinfection.						
Total Trihalomethanes (TTHM)	ppb	80	0	61.9250	37.5 - 103	No	2011
Sources	By-product of drinking water chlorination.						

Microbiological	Result	MCL	MCLG
No detected results were found in the calendar year of 2009.			

<i>Inorganic</i>	Units	MCL	MCLG	Level Found	Range of Detections	Violation	Sample Date
BARIUM	ppm	2	2	0.0895	0.0895	No	5/4/2011
Sources	Erosion of natural deposits; Discharge from metal refineries; Discharge of drilling wastes						
CARBON, TOTAL ORGANIC	mg/L			5.95	3.01 – 5.95	No	6/6/2011
Sources	Naturally present in the environment.						
CHLORITE	ppm	1.0	.80	0.5364	0.34-0.68	No	2011
Sources	By-product of drinking water chlorination.						
FLUORIDE	ppm	4	4	0.68	0.68	No	5/4/2011
Sources	Erosion of natural deposits; Water additive which promotes strong teeth.						
CHROMIUM	ppb	100	100	1.14	1.14	No	5/4/2011
NITRATE + NITRITE (AS N)	ppm	10	10	0.06	0.06	No	11/14/2011
Sources	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.						
NITRITE (as N)	ppm	1	1	0.3100	0.31	No	2011
Sources	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.						

<i>Organic (Synthetic)</i>	Units	MCL	MCLG	Highest Value	Range of Detections	Violation	Sample Year
ATRAZINE	ppb	3.0	3.0	1.62	nd – 1.62	No	2011
Sources	Runoff from herbicide used on row crops.						

Turbidity

Turbidity is a measure of cloudiness of water. We monitor turbidity because it is a good indicator of the effectiveness of our filtration system.

Percentage of samples in compliance with Std.	Month Occured	Violation	Highest Single Measurement for the year	Month Occurred	Sources
100	4	No	0.18	April	Soil runoff

Copper

Collection Period	Units	MCL	90 th Percentile	Range	Sites Over AL
2008 - 2010	ppm	AL=1.3	0.0921	0.0297 – 0.1	0
Sources	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.				

Lead

Collection Period	Units	Action Level	90 th Percentile	Range	Sites Over AL
2008 - 2010	ppb	AL=15	3.84	<1.0 – 5.84	0
Sources	Corrosion of household plumbing systems; Erosion of natural deposits.				

Violations and Health Effects Information

During the 2011 calendar year, we had the below noted violation(s) of drinking water regulations.

Type	Category	Analyte	Compliance Period
No Violations Occured			

Definitions:

MCLG: Maximum Contaminant Level Goal, or 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. **MCLs**: Maximum Contaminant Level, or 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. . **AL**: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. **TT**: Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water. **Level Found**: is the average of all test results for a particular contaminant. **90th Percentile**: For Lead and Copper testing. 10% of test results are above this level and 90% are below this level. **Range of Detections**: Shows the lowest and the highest levels found during a testing period, if only one sample was taken, then this number equals the Level Found.

Abbreviations:

PPB: parts per billion or micrograms per liter-one part per billion is equal to a single penny in \$10,000,000. • **PPM**: parts per million or milligrams per liter-one part per million is equal to a single penny in \$10,000. • **n/a**: not applicable **NTU**: Nephelometric Turbidity Unit, used to measure cloudiness in drinking water • **MFL**: million fibers per liter, used to measure asbestos concentration. . **pCi/L**: Picocuries Per Liter, measurement of the radioactivity in water. **nd**: not detectable at testing limits.

Unregulated Contaminants

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Information on all contaminants that were monitored for, whether regulated or unregulated, can be obtained from this water system or the Department of Natural Resources.

Optional Monitoring (not required by EPA) **Optional Contaminants**

Monitoring is not required for optional contaminants.

Inorganic	Units	Highest Value	Range of Detections	MCL	Collection Date
Alkalinity, CaCO ₃ Stability	mg/ L	146.0	146		2011
Alkalinity, Total	mg/ L	137	106 - 137		2011
Aluminum	mg/L	0.0701	0.070		2011
Calcium	mg/L	47.2	47.2		2011
Chloride	mg/L	28.3	28.3	250	2011
Hardness, Carbonate	mg/L	152.0	152.0		2011
Magnesium	mg/L	8.39	8.39		2011
Iron	mg/L	0.0014	0.0014	0.3	2011
pH		7.71	7.71	8.5	2011
Potassium	mg/L	4.74	4.74		2011
Sodium	mg/L	18.7	18.7		2011
Solids, Total Dissolved	mg/L	219.0	219	500	2011
Sulfate	mg/L	19.8	19.8	250	2011
Nickel	mg/L	0.00154	0.00154	0.1	2011

Volatile Organic	Units	Level Found	Range of Detections	Sample Year
Bromochloroacetic Acid	ppb	6.74	4.7 - 8.6	2011
Bromodichloroacetic Acid	ppb	1.95	nd - 4.75	2011
Bromodichloromethane	ppb	14.69	10.3 – 19.7	2011
Chlorodibromoacetic Acid	ppb	0.6819	nd - 2.31	2011
Chlorodibromomethane	ppb	4.32	3.2 – 5.55	2011
Chloroform	ppb	42.04	24 - 78	2011
Dibromoacetic Acid	ppb	0.9225	nd - 1.46	2011
Dichloroacetic Acid	ppb	23.71	15.3 – 36.8	2011
Monobromoacetic Acid	ppb	0.0718	nd- 2.01	2011
Trichloroacetic Acid	ppb	9.08	4.25 – 15.0	2011