

TRI-COUNTY WATER AUTHORITY

MO1071079

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.

What is the source of my 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.

Our water comes from the following source(s): **Groundwater-Wells located in the Missouri River Alluvium. We have an award winning Groundwater Protection Plan which controls activity around the wells.**

Why are there contaminants in my water?

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).

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 stormwater 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 agriculture, urban stormwater 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 stormwater 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 MO1071079 for the purposes of tracking our test results. Our water is routinely 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.

We at Tri-County are proud of the fact that since we started service in 1993 we have had no violations.

How might I become 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 816-796-4100 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 Water Hotline (800-426-4791).

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Contaminants Report

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.

MCL: 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.

90th percentile: For Lead and Copper testing. 10% of test results are above this level and 90% are below this level.

Level Found: Is the average of all test results for a particular contaminant.

Range of Detections: Shows the lowest and highest levels found during a test period, if only one sample was taken, this number equals the Level Found.

MRLDG: Maximum Residual Disinfectant Level Goal, or the level of a drinking water disinfectant below which there is no known or expected risk of health.

MRDL: Maximum Residual Disinfectant Level, or the highest level of a disinfectant allowed in drinking water.

Abbreviations:

PPB: parts per billion or micrograms per liter

PPM: parts per million or milligrams per liter

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.

nd: not detectable at testing limits

The state has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Records with a sample year more than one year old are still considered representative.

Regulated

<u>Inorganic</u>	<i>Units</i>	<i>MCL</i>	<i>MCLG</i>	<i>Level Found</i>	<i>Range of Detection</i>	<i>Violation</i>	<i>Sample Year</i>
ARSENIC	ppb	10	n/a	<1	<1-1.69	No	2011
Sources of Arsenic: Erosion of natural deposits; Runoff from orchards; Runoff from grass and electronics plants wastes							
BARIUM	ppb	2000		49.3	36.2-49.3	No	2011
Sources of Barium: Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits							
CHROMIUM	ppb	100	100	1.72	1.72	No	2011
Sources of Chromium: Discharge from steel and pulp mills; Erosion of natural deposits							
FLUORIDE	ppm	4	4	0.1700	0.16-0.18	No	2011
Sources of Fluoride: Erosion of Natural Deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories							
NITRATE+NITRITE (as N)	ppm	10	10	0.08	<0.05-0.13	No	2011
Sources of Nitrate +Nitrite (as N): Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits							
<u>Disinfection By-Products</u>	<i>Units</i>	<i>MCL</i>	<i>MCLG</i>	<i>Level Found</i>	<i>Range of Detection</i>	<i>Violation</i>	<i>Sample Year</i>
TOTAL TRIHALOMETHANES (TTHM)	ppb	80	n/a	2.61	<2.0-19.4	No	2010
TOTAL HALOACETIC ACIDS (THAA)	ppb	60	n/a	<8.1	4.76-15.3	No	2010

Sources of TTHM and THAA: By-Products of Drinking water chlorination

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Optional Monitoring (not required by EPA)

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<u>Inorganic</u>	<i>Units</i>	<i>Level Found</i>	<i>Range of Detections</i>	<i>Sample Year</i>
ALKALINITY, CaCO3 STABILITY	ppm	67.8	67.8-106	2011
CALCIUM	ppm	16.3	11.4-16.3	2011
CHLORIDE	ppm	21.5	21.5-24.5	2011
HARDNESS, TOTAL (AS CaCO3)	ppm	111	98.1-130	2011
IRON, DISSOLVED	ppb	31.4	10.0-34.1	2011
MAGNESIUM	ppm	17.1	16-17.1	2011
MANGANESE	ppb	1.06	1.06-4.6	2011
PH	ppm	8.2	7.99-8.45	2011
POTASSIUM	ppm	6.28	5.67-6.53	2011
SODIUM	ppm	38.0	33.4-39.1	2011
SOLIDS, TOTAL DISSOLVED (TDS)	ppm	263	227-263	2011
SULFATE	ppm	100	64.7-100	2011
<u>Volatile Organic</u>	<i>Units</i>	<i>Level Found</i>	<i>Range of Detections</i>	<i>Sample Year</i>
BROMOCHLOROACETIC ACID	ppb	1.7000	1.70-4.78	2010
BROMODICHLOROMETHANE	ppb	0.5200	0.52-6.62	2010
BROMOFORM	ppb	<0.5	<0.5-1.29	2011
CHLOROFORM	ppb	1.52	0.89-7.3	2011
DIBROMOACETIC ACID	ppb	<0.6	<0.6-2.81	2011
DICHLOROACETIC ACID	ppb	5.2600	<4-5.86	2010

