

2008 Annual Water Quality Report

This Annual Water Quality (Consumer Confidence) Report is intended to make available to you important information about your drinking water and the efforts made to provide safe drinking water.

Water Source Information

Is our water system meeting rules that govern our operations?

The Missouri Department of Natural Resources (MDNR) regulates MU's water system and requires MU to conduct test the drinking water on a regular basis to ensure its safety. The drinking water at MU meets or exceeds all standards of quality set by the Environmental Protection Agency (EPA) and MDNR. Last year, MU tested for a variety of contaminants. Of the hundreds of tests conducted, all contaminants were either non-detectable or within acceptable limits set by the MDNR. The detectable results of testing regulated contaminants are listed below. This report lists only those regulated substances found in measurable quantities. Not listed are contaminants for which none were detected when tested. There were no violations of state requirements or standards. MDNR has been assigned the identification #MO-3069001 to the MU system for purposes of tracking test results.

What is the source of my water?

The sources of drinking water (both tap and bottled water) may include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells. As water travels over the surface of the land or through the ground, it may dissolve naturally-occurring minerals, in some cases, radioactive material. The water can also pick up substances resulting from the presence of animals or human activity.

The source for MU's drinking water is groundwater wells. MU's water is pumped from five deep water wells located on the campus. The average well depth is 1,370 feet below ground surface. Collectively, the wells are capable of drawing more than 5 million gallons per day of high quality groundwater from a Cambrian-Ordovician dolomite aquifer. An aquifer is an underground layer of earth gravel or porous rock that yields water. Dolomite is a magnesia-rich sedimentary rock resembling limestone. In 2008, MU used 745 million gallons of water, averaging over 2 million gallons per day.

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. Information about contaminants and potential health effects can be obtained by calling EPA's Safe Drinking Water Hotline at 800-426-4791. According to MDNR, 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 result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides, 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 gasoline 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.

In order to ensure that tap water is safe to drink, the MDNR prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. In 2008, MU tested for a variety of contaminants. All contaminants were either non-detectable or well within acceptable limits set by the MDNR. Missouri Department of Health regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

How might I become actively involved?

If you have any further questions or comments regarding your water quality report or the drinking water supply, please contact the MU Environmental, Health and Safety (EHS) Department at 573-882-7018. This report can also be found online at http://www.cf.missouri.edu/energy/em_pp/ccr.pdf.

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 from their health care providers about drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the EPA Safe Drinking Water Hotline (800-426-4791).

Water Analysis

Definitions/abbreviations

90th percentile: For lead and copper testing, 10% of test results are above this level and 90% are below this level.

Action Level (AL): The concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

Highest Value: The highest detected level of all test results for a particular contaminant.

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.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health, allows for a margin of safety.

nd: Not detectable at testing limits.

pCi/L: Picocuries per liter.

ppb: Parts per billion or micrograms per liter.

ppm: Parts per million or milligrams per liter.

Range of Detections (Range): Shows the lowest and highest levels found during a testing period. If only one sample was taken, then this number equals the Highest Value.

The MDNR has reduced monitoring requirements for certain contaminants to less than once per year because the low 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 Contaminants

INORGANIC	UNITS	MCL	MCLG	HIGHEST VALUE	RANGE	VIOLATION	TYPICAL SOURCES
Barium *	ppm	2	2	0.00647	0.00282 - 0.00647	No	Erosion of natural deposits. Discharge from metal refineries. Discharge from drilling wastes.
Chromium *	ppb	100	100	2.27	1.66 - 2.27	No	Erosion of natural deposits. Discharge from steel and pulp mills.
Fluoride *	ppm	4	4	1.18	0.93 - 1.18	No	Erosion of natural deposits. Water additive that promotes strong teeth.

LEAD/COPPER	UNITS	AL	90 th PERCENTILE	SITES EXCEEDING AL	RANGE	VIOLATION	TYPICAL SOURCES
Lead	ppb	15	3.950	0	1.04 - 9.51	No	Corrosion of building plumbing systems.
Copper	ppm	1.3	0.147	0	0.0101 - 0.3100	No	Corrosion of building plumbing products. Leaching from wood preservatives.

RADIONUCLIDE	UNITS	MCL	MCLG	HIGHEST VALUE	RANGE	VIOLATION	TYPICAL SOURCES
Gross Alpha Particles *	pCi/L	15	0	5.9	2.6 - 5.9	No	Erosion of natural deposits.
Combined Radium *	pCi/L	5	0	3.8	1.3 - 3.8	No	Erosion of natural deposits.
Radium-226 *	pCi/L	5	0	2.4	1.3 - 2.4	No	Erosion of natural deposits.
Radium-228 *	pCi/L	5	0	1.6	0.7 - 1.6	No	Erosion of natural deposits.

Information on all the contaminants that were monitored for, whether regulated or unregulated, can be obtained from this water system or the MDNR. If you want to review the individual results of the monitoring, please contact the MU Environmental, Health and Safety (EHS) Department at 573-882-7018.

Violations and Health Effects Information

During the period in which this report covers (2008 calendar year), there were no MCL, monitoring, or treatment technique violations, nor were there any health effect notices or violations issued.

Please post until September 30, 2009

This report has been prepared in accordance with the format as prescribed by the MDNR.