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 I Information**

Is our water system meeting rules that govern our operations?

In order to ensure that tap water is safe to drink, the Missouri Department of Natural Resources (MDNR) and the Environmental Protection Agency (EPA) prescribe regulations which limit the amount of certain contaminants in drinking water provided by public water systems. The MDNR regulates the water system at University of Missouri (MU) and requires MU to conduct drinking water tests on a regular basis to ensure its safety. The drinking water at MU meets or exceeds all standards of quality set by the EPA and MDNR. MDNR has assigned the identification #MO-3069001 to the MU system for purposes of tracking test results. In 2014, 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 tested regulated contaminants are listed below. This report contains those regulated contaminants found in monitoring samples for which none were detected when analyzed. There were no violations of state requirements or standards. (Missouri Department of Health regulations establish limits for contaminants in bottled water which must provide the same protection for public health.)

The MDNR conducted a source water assessment to determine the susceptibility of MU’s water source to potential contaminants. This process involved the establishment of source water area delineations for each well and then a contaminant inventory was performed within those delineated areas to assess potential threats to each source. The Source Water Inventory Project maps and information sheets provide a foundation upon which a more comprehensive source water protection plan can be developed.

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. 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 drinking water at MU is groundwater. 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 2014, MU used 630 million gallons of water, averaging 1.74 million gallons per day.

Why are there contaminants in my water?

Drinking water coming from any source 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 the EPA Safe Drinking Water Hotline at 800-426-4791.

According to MDNR, 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, 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 storage stations, urban stormwater runoff, and accidental spills or releases.
- E. Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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 those with cancer undergoing chemotherapy, persons who have undergone organ transplants, persons 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. Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available through the EPA Safe Drinking Water Hotline.

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 building plumbing. MU is responsible for providing high quality drinking water and limits the exposure to lead by allowing only pipe construction materials that meet minimum standards for lead content. If you are concerned about lead in your water when the water has been sitting for several hours, you can minimize the potential for exposure by flushing your tap for ½ to 2 minutes before using water for drinking or cooking. You may wish to have your water tested. Information on lead in drinking water, testing methods, and steps to take to minimize exposure is available from the EPA Safe Drinking Water Hotline or at [http://water.epa.gov/drink/info/leadIndex.cfm](http://water.epa.gov/drink/info/leadIndex.cfm). How might I become actively involved?

If you have any further questions or comments regarding your water quality report, the contaminants that were monitored for, the individual analytical results, or the drinking water supply source, information can be obtained from the MU Environmental, Health and Safety (EHS) Department at 573-882-7018, or the MDNR at 573-751-1300. This report can also be found online at [http://www.cf.missouri.edu/energy/em_pp/ccr.pdf](http://www.cf.missouri.edu/energy/em_pp/ccr.pdf).

**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.

AL (Action Level): 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.

LRAA (Locational Running Annual Average): The average analytical results taken at a particular monitoring location during the previous four quarters.

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 reasonably expected to result in health, allows for a margin of safety.

pCi/L: Picocuries per liter.

ppb: Parts per billion or micrograms per liter.

ppm: Parts per million or milligrams per liter.

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

**Typical Sources**

Aluminum: Byproduct of drinking water disinfection process.

Barium: Discharge from drilling wastes and metal refineries. Erosion of natural deposits.

Boron: Erosion of natural deposits.

Chlorine: Byproduct of drinking water disinfection process.

Copper: Corrosion of building plumbing systems.

Disinfection byproducts: Byproduct of drinking water disinfection process.

Nitrate: Runoff from fertilizer use; erosion of natural deposits.

Discharge from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Fluoride: Natural deposits. Water additive that promotes strong teeth.

Lead: Corrosion of building plumbing systems.

Manganese: Corrosion of building plumbing systems.

Nitrite: Runoff from fertilizer use; septic tank leaching, sewage, erosion of natural deposits.

Pesticides: Byproducts including organ transplants, persons 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. Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available through the EPA Safe Drinking Water Hotline.

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**Contaminants**

<table>
<thead>
<tr>
<th>CONTAMINANT</th>
<th>UNITS</th>
<th>MCL</th>
<th>MCLG</th>
<th>HIGHEST VALUE</th>
<th>RANGE</th>
<th>VIOLATION</th>
<th>TYPICAL SOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>ppm</td>
<td>2000</td>
<td>5</td>
<td>8.13</td>
<td>3.16 – 631</td>
<td>No</td>
<td>Discharge from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.</td>
</tr>
<tr>
<td>Fluoride*</td>
<td>ppm</td>
<td>4</td>
<td>4</td>
<td>1.25</td>
<td>0.80 – 1.25</td>
<td>No</td>
<td>Natural deposits. Water additive that promotes strong teeth.</td>
</tr>
<tr>
<td>Nitrate – Nitrite</td>
<td>mg/L</td>
<td>10000</td>
<td>10000</td>
<td>23</td>
<td>13 – 23</td>
<td>No</td>
<td>Runoff from fertilizer use; septic tank leaching, sewage, erosion of natural deposits.</td>
</tr>
<tr>
<td>Lead</td>
<td>ppm</td>
<td>15</td>
<td>15</td>
<td>2.86</td>
<td>1.20 – 7.92</td>
<td>No</td>
<td>Corrosion of building plumbing systems.</td>
</tr>
<tr>
<td>Manganese</td>
<td>ppm</td>
<td>1.3</td>
<td>1.3</td>
<td>0.158</td>
<td>0.031 – 0.564</td>
<td>No</td>
<td>Corrosion of building plumbing systems.</td>
</tr>
<tr>
<td>Radium-226*</td>
<td>pCi/L</td>
<td>5</td>
<td>5</td>
<td>2.5</td>
<td>2.5</td>
<td>No</td>
<td>Erosion of natural deposits.</td>
</tr>
<tr>
<td>Total Trichloromethane</td>
<td>µg/L</td>
<td>80</td>
<td>80</td>
<td>2</td>
<td>0 – 2</td>
<td>No</td>
<td>Byproduct of drinking water disinfection process.</td>
</tr>
<tr>
<td>Gross Alpha Particles*</td>
<td>µCi/L</td>
<td>15</td>
<td>15</td>
<td>11.7</td>
<td>11.7</td>
<td>No</td>
<td>Erosion of natural deposits.</td>
</tr>
<tr>
<td>Chromium (Hex)</td>
<td>ppm</td>
<td>n/a</td>
<td>n/a</td>
<td>0.29</td>
<td>0 – 0.29</td>
<td>No</td>
<td>Erosion of natural deposits.</td>
</tr>
<tr>
<td>Strontium</td>
<td>ppm</td>
<td>n/a</td>
<td>n/a</td>
<td>0.94</td>
<td>0.94 – 0.94</td>
<td>No</td>
<td>Erosion of natural deposits.</td>
</tr>
</tbody>
</table>

During the period in which this report covers 2014 calendar year, there were no MCL, monitoring, or treatment technique violations, nor were there any health effect notices or violations issued. This report has been prepared in accordance with the format as prescribed by the MDNR.