

VANDALIA

2014 Annual Water Quality Report (Consumer Confidence Report)

Contaminants Report

MO2010812

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 Contaminants

Regulated Contaminants	Collection Date	Highest Value	Range of Results (low - high)	Unit	MCL	MCLG	Typical Source
ATRAZINE	6/12/2014	3.56	0 - 3.56	ppb	3	3	Runoff from herbicide used on row crops
BARIUM	12/9/2014	0.0575	0.0575	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CHROMIUM	12/9/2014	1.13	1.13	ppb	100	100	Discharge from steel and pulp mills
FLUORIDE	12/9/2014	0.44	0.44	ppm	4	4	Natural deposits; Water additive which promotes strong teeth
NITRATE-NITRITE	6/17/2014	0.16	0.16	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
SIMAZINE	2/24/2014	0.98	0 - 0.98	ppb	4	4	Herbicide runoff

Disinfection Byproducts	Sample Point	Monitoring Period	Highest LRAA	Range of Results (low/high)	Unit	MCL	MCLG	Typical Source
(HAA5)	DBPDUAL-01	2014	77	26.7 - 110	ppb	60	0	Byproduct of drinking water disinfection
(HAA5)	DBPDUAL-02	2014	105	76.4 - 154	ppb	60	0	Byproduct of drinking water disinfection
TTHM	DBPDUAL-01	2014	109	96.3 - 148	ppb	80	0	Byproduct of drinking water disinfection
TTHM	DBPDUAL-02	2014	92	87.6 - 112	ppb	80	0	Byproduct of drinking water disinfection

TOC	Collection Date	Highest Value	Range	Unit	TT	Typical Source
CARBON, TOTAL	12/8/2014	4.69	2.07 - 4.69	MG/L	0	Naturally present in the environment

Lead and Copper	Date	90th Percentile	Range of Results (low - high)	Unit	AL	Sites Over AL	Typical Source
COPPER	2011 - 2013	0.0108	0.00372 - 0.0144	ppm	1.3	0	Corrosion of household plumbing systems

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	Months Occurred	Violation	Highest Single Measurement	Month Occurred	Sources	
100	12	NO	0.23	10	SOIL RUNOFF	

Microbiological	Result	MCL	MCLG	Typical Source
No Detected Results were Found in the Calendar Year of 2014				

Violations and Health Effects Information

During the 2014 calendar year, we had the below noted violation(s) of drinking water regulations.

Compliance Period	Analyte	Type
07/01/2014 - 09/30/2014	TTHM	MCL, LRAA
07/01/2014 - 09/30/2014	TOTAL HALOACETIC ACIDS (HAA5)	MCL, LRAA
10/01/2014 - 12/31/2014	TOTAL HALOACETIC ACIDS (HAA5)	MCL, LRAA
10/01/2014 - 12/31/2014	TTHM	MCL, LRAA

Additional Required Health Effects Language:

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 systems, and may have an increased risk of getting cancer.

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.

Special Lead and Copper Notice:

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. VANDALIA 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 (800-426-4791) or at <http://water.epa.gov/drink/info/lead/index.cfm>.

You can also find sample results for all contaminants from both past and present compliance monitoring online at the Missouri DNR Drinking Water Watch website <http://dnr.mo.gov/DWWW/indexSearchDNR.jsp>. To find Lead and Copper results for your system, type your water system name in the box titled Water System Name and select *Find Water Systems* at the bottom of the page. The new screen will show you the water system name and number, select and click the *Water System Number*. At the top of the next page, under the *Help* column find, *Other Chemical Results by Analyte*, select and click on it. Scroll down alphabetically to Lead and click the blue Analyte Code (1030). The Lead and Copper locations will be displayed under the heading *Sample Comments*. Scroll to find your location and click on the *Sample No.* for the results. If your house was selected by the water system and you assisted in taking a Lead and Copper sample from your home but cannot find your location in the list, please contact VANDALIA for your results.

Thursday, March 12, 2015

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MO2010812

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

Atención!

Este informe contiene información muy importante. Tradúscalo o pregúntele a alguien que lo entienda bien.

[Translated: This report contains very important information. Translate or ask someone who understands this very well.]

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):

Source Name	Type
VANDALIA LAKE	SURFACE WATER

Source Water Assessment

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 area delineations for each well or 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/pwssid.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 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 byproducts 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 MO2010812 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 actively involved?

If you would like to observe the decision-making process that affect drinking water quality or if you have any further questions about your drinking water report, please call us at **573-592-3014** to inquire about scheduled meetings or contact persons.

Do I need to take any special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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).

Terms and Abbreviations

- Population:** 2529. This is the equivalent residential population served including non-bill paying customers.
- 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.
- SMCL:** Secondary Maximum Contaminant Level, or the secondary standards that are non-enforceable guidelines for contaminants and may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor or color) in drinking water. EPA recommends these standards but does not require water systems to comply.
- 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.
- Range of Results:** Shows the lowest and highest levels found during a testing period, if only one sample was taken, then this number equals the Highest Value.
- RAA:** Running Annual Average, or the average of sample analytical results for samples taken during the previous four calendar quarters.
- LRAA:** Locational Running Annual Average, or the locational average of sample analytical results for samples taken during the previous four calendar quarters.
- TTHM:** Total Trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) as a group.
- HAA5:** Haloacetic Acids (mono-, di- and tri-chloroacetic acid, and mono- and di-bromoacetic acid) as a group.
- 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.
- nd:** not detectable at testing limits.



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

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Optional Monitoring (not required by EPA)
Optional Contaminants

Monitoring is not required for optional contaminants.

Secondary Contaminants	Collection Date	Your Water System Highest Value	Range (low - high)	Unit	SMCL
ALKALINITY, CaCO3 STABILITY	12/9/2014	116	116	MG/L	
ALKALINITY, TOTAL	2/12/2014	136	62 - 136	MG/L	
ALUMINUM	12/9/2014	0.297	0.297	MG/L	0.05
CALCIUM	12/9/2014	51.4	51.4	MG/L	
CHLORIDE	12/9/2014	14	14	MG/L	250
HARDNESS, CARBONATE	12/9/2014	154	154	MG/L	
MAGNESIUM	12/9/2014	6.15	6.15	MG/L	
MANGANESE	12/9/2014	0.00114	0.00114	MG/L	0.05
METOLACHLOR	6/12/2014	2.31	0 - 2.31	ppb	
NICKEL	12/9/2014	0.00194	0.00194	MG/L	0.1
PH	12/9/2014	7.87	7.87	PH	8.5
POTASSIUM	12/9/2014	5.72	5.72	MG/L	
SODIUM	12/9/2014	5.9	5.9	MG/L	
SULFATE	12/9/2014	46.6	46.6	MG/L	250
TDS	12/9/2014	211	211	MG/L	500
ZINC	12/9/2014	0.139	0.139	MG/L	5