OSAGE BEACH WEST

MO3011346

2012 Annual Water Quality Report

(Consumer Confidence Report)

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

Attencion!

Este informe contiene información muy importante. Tradúscalo o prequntele 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
WELL #1 - DUENKE	GROUND WATER
WELL #2 - SWISS VILLAGE	GROUND 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 MO3011346 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 **573-302-2020** 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).

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. OSAGE BEACH WEST 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.

OSAGE BEACH WEST

MO3011346

2012 Annual Water Quality Report

(Consumer Confidence Report)

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.
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.
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 testing period, if only one sample was taken, then 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 to health.
MRDL: Maximum Residual Disinfectant Level, or the highest level of a disinfectant allowed in drinking water.
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.

Abbreviations:

TTHM: Total Trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) as a group.
HAA5: Haloacetic Acids (mono-, di- and tri-chloracetic acid, and mono- and di-bormoacetic 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.
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 Contaminants

Regulated Contaminants	Collection Date	Highest Value	Range (low – high)	Unit	MCL	MCLG	Typical Source
BARIUM	5/13/2010	0.354	0.352 - 0.354	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE	5/13/2010	0.71	0.71	ppm	4	4	Natural deposits; Water additive which promotes strong teeth

Disinfection Byproducts	Monitoring Period	RAA	Range (low – high)	Unit	MCL	MCLG	Typical Source
No Detected Results were Found in the Calendar Year of 2012							

Lead and Copper	Date	90th Percentile	Range (low – high)	Unit	AL	Sites Over AL	Typical Source
COPPER	2009 - 2011	0.205	0.00734 - 0.291	ppm	1.3	0	Corrosion of household plumbing systems
LEAD	2009 - 2011	4.7	1.15 - 17	ppb	15	1	Corrosion of household plumbing systems

Microbiological	Result	MCL	MCLG	Typical Source
No Detected Results were Found in the Calendar Year of 2012				

Violations and Health Effects Information

During the 2012 calendar year, we had the below noted violation(s) of drinking water regulations.

Compliance Period	Analyte	Type
No Violations Occurred in the Calendar Year of 2012		

Additional Required Health Effects Language:

Infants and children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4761).

OSAGE BEACH WEST

MO3011346

2012 Annual Water Quality Report

(Consumer Confidence Report)

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	5/13/2010	306	303 - 306	MG/L	
CALCIUM	5/13/2010	65.7	65.3 - 65.7	MG/L	
CHLORIDE	5/13/2010	5.37	5.18 - 5.37	MG/L	250
HARDNESS, CARBONATE	5/13/2010	1.65	1.65	MG/L	
IRON	5/13/2010	0.0146	0.013 - 0.0146	MG/L	0.3
MAGNESIUM	5/13/2010	35.7	35.6 - 35.7	MG/L	
MANGANESE	5/13/2010	0.00374	0.00356 - 0.00374	MG/L	0.05
NICKEL	5/13/2010	0.0016	0.0016	MG/L	0.1
PH	5/13/2010	7.82	7.76 - 7.82	PH	8.5
POTASSIUM	5/13/2010	1.05	1.05	MG/L	
SODIUM	5/13/2010	4.73	4.71 - 4.73	MG/L	
SULFATE	5/13/2010	8.9	8.5 - 8.9	MG/L	250
TDS	5/13/2010	309	306 - 309	MG/L	500
ZINC	5/13/2010	0.0456	0.044 - 0.0456	MG/L	5

Secondary standards are non-enforceable guidelines for contaminants that 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.

OSAGE BEACH EAST

MO3011367

2012 Annual Water Quality Report

(Consumer Confidence Report)

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

Attencion!

Este informe contiene información muy importante. Tradúscalo o prequntele 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
BLUFF DRIVE WELL # 1	GROUND WATER
COLUMBIA COLLEGE WELL #1	GROUND WATER
COLUMBIA COLLEGE WELL #2	GROUND WATER
MACE ROAD-EAST WELL	GROUND WATER
MACE ROAD-WEST WELL - OUT OF SERVICE	GROUND WATER
PASSOVER WELL #1	GROUND 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 MO3011367 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 **573-302-2020** 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).

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. OSAGE BEACH EAST 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.

OSAGE BEACH EAST

MO3011367

2012 Annual Water Quality Report

(Consumer Confidence Report)

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.
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.
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 testing period, if only one sample was taken, then 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 to health.
MRDL: Maximum Residual Disinfectant Level, or the highest level of a disinfectant allowed in drinking water.
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.

Abbreviations:

TTHM: Total Trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) as a group.
HAA5: Haloacetic Acids (mono-, di- and tri-chloracetic acid, and mono- and di-bormoacetic 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.
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 Contaminants

Regulated Contaminants	Collection Date	Highest Value	Range (low – high)	Unit	MCL	MCLG	Typical Source
BARIUM	2/6/2012	0.263	0.165 - 0.263	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
ETHYLBENZENE	2/6/2012	3.46	0 - 3.46	ppb	700	700	Discharge from petroleum refineries
FLUORIDE	2/6/2012	0.96	0.85 - 0.96	ppm	4	4	Natural deposits; Water additive which promotes strong teeth
NITRATE-NITRITE	2/2/2012	0.21	0 - 0.21	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
XYLENES, TOTAL	2/6/2012	0.0213	0 - 0.0213	ppm	10	10	Discharge from petroleum factories; Discharge from chemical factories

Disinfection Byproducts	Monitoring Period	RAA	Range (low – high)	Unit	MCL	MCLG	Typical Source
No Detected Results were Found in the Calendar Year of 2012							

Lead and Copper	Date	90th Percentile	Range (low – high)	Unit	AL	Sites Over AL	Typical Source
COPPER	2010 - 2012	0.129	0.00964 - 0.146	ppm	1.3	0	Corrosion of household plumbing systems
LEAD	2010 - 2012	2.22	1.74 - 4	ppb	15	0	Corrosion of household plumbing systems

Radionuclides	Collection Date	Highest Value	Range	Unit	MCL	MCLG	Typical Source
GROSS ALPHA PARTICLE ACTIVITY	1/12/2009	4	4	pCi/l			Erosion of natural deposits

Microbiological	Result	MCL	MCLG	Typical Source
COLIFORM (TCR)	In the month of August, 1 sample(s) returned as positive	MCL: Systems that Collect Less Than 40 Samples per Month - No more than 1 positive monthly sample	0	Naturally present in the environment

Violations and Health Effects Information

During the 2012 calendar year, we had the below noted violation(s) of drinking water regulations.

Compliance Period	Analyte	Type
09/01/2012 - 09/30/2012	COLIFORM (TCR)	MONITORING (TCR), ROUTINE MINOR

OSAGE BEACH EAST

MO3011367

2012 Annual Water Quality Report

(Consumer Confidence Report)

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	2/6/2012	331	296 - 331	MG/L	
CALCIUM	2/6/2012	58.8	55.5 - 58.8	MG/L	
CHLORIDE	2/6/2012	34.9	6.75 - 34.9	MG/L	250
HARDNESS, CARBONATE	2/6/2012	290	268 - 290	MG/L	
IRON	2/6/2012	0.081	0 - 0.081	MG/L	0.3
MAGNESIUM	2/6/2012	34.8	31.4 - 34.8	MG/L	
MANGANESE	2/6/2012	0.00306	0 - 0.00306	MG/L	0.05
O-XYLENE	2/6/2012	0.00665	0 - 0.00665	MG/L	10
PH	2/6/2012	7.5	7.38 - 7.5	PH	8.5
POTASSIUM	2/6/2012	1.45	1.07 - 1.45	MG/L	
SODIUM	2/6/2012	17.7	5 - 17.7	MG/L	
SULFATE	2/6/2012	12.6	8.33 - 12.6	MG/L	250
TDS	2/6/2012	336	300 - 336	MG/L	500
XYLENE, META AND PARA	2/6/2012	14.6	0 - 14.6	UG/L	
ZINC	2/6/2012	0.00669	0.00238 - 0.00669	MG/L	5

Secondary standards are non-enforceable guidelines for contaminants that 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.