ADAIR CO PWSD 1

Public Water System ID Number: MO2024000

2016 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):

Our drinking water is supplied from another water system through a Consecutive Connection (CC). To find out more about our drinking water sources and additional chemical sampling results, please contact our office at the number provided below.

Buyer Name	Seller Name
ADAIR CO PWSD 1	KIRKSVILLE
ADAIR CO PWSD 1	SCHUYLER CO CONSOLIDATED PWSD 1
SCHUYLER CO CONSOLIDATED PWSD 1	RATHBUN REGIONAL WATER ASSOCIATION

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 MO2024000 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 **660-665-4280** 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: 7500. 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-chloracetic 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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Contaminants Report

ADAIR CO PWSD 1 will provide a printed hard copy of the CCR upon request. To request a copy of this report to be mailed, please call us at **660-665-4280**. The CCR can also be found on the internet at www.dnr.mo.gov/ccr/MO2024000.pdf.

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

Disinfection Byproducts	Sample Point	Monitoring Period	Highest LRAA	Range of Sampled Result(s) (low – high)	Unit	MCL	MCLG	Typical Source
(HAA5)	DBPDUAL-01	2016	32	22.4 - 32.9	ppb	60	0	Byproduct of drinking water disinfection
(HAA5)	DBPDUAL-02	2016	32	21.2 - 32.8	ppb	60	0	Byproduct of drinking water disinfection
TTHM	DBPDUAL-01	2016	50	34.3 - 55.9	ppb	80	0	Byproduct of drinking water disinfection
TTHM	DBPDUAL-02	2016	47	27.9 - 54.8	ppb	80	0	Byproduct of drinking water disinfection

Lead and Copper	Date	90th Percentile: 90% of your water utility levels were less than	Range of Sampled Results (low – high)	Unit	AL	Sites Over AL	Typical Source
COPPER	2014 - 2016	0.155	0.00407 - 0.166	ppm	1.3	0	Corrosion of household plumbing systems

Microbiological	Result	MCL	MCLG	Typical Source
No Detected Results were Found in the Calendar Year of 2016				

Violations and Health Effects Information

During the 2016 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 2016		

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. ADAIR CO PWSD 1 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/DWW/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 ADAIR CO PWSD 1 for your results.

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Reseller Contaminants

Regulated Contaminants	Collection Date	Water System	Highest Sample Result	Range of Sampled Result(s) (low – high)	Unit	MCL	MCLG	Typical Source
BARIUM	5/13/2016	KIRKSVILLE	0.0537	0.0537	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE	5/13/2016	KIRKSVILLE	0.67	0.67	ppm	4	4	Natural deposits; Water additive which promotes strong teeth
NITRATE-NITRITE	5/13/2016	KIRKSVILLE	0.24	0.24	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Disinfection Byproducts	Monitoring Period	Water System	Highest LRAA	Range of Sampled Result(s) (low – high)	Unit	MCL	MCLG	Typical Source
(HAA5)	2016	KIRKSVILLE	32	15.6 - 37.6	ppb	60	0	Byproduct of drinking water disinfection
(HAA5)	2016	SCHUYLER CO CONSOLIDATED PWSD 1	28	16.9 - 30.5	ppb	60	0	Byproduct of drinking water disinfection
TTHM	2016	KIRKSVILLE	49	25.5 - 57.2	ppb	80	0	Byproduct of drinking water disinfection
TTHM	2016	SCHUYLER CO CONSOLIDATED PWSD 1	64	30.9 - 45.3	ppb	80	0	Byproduct of drinking water disinfection

Reseller Violations and Health Effects Information

During the 2016 calendar year, the water system(s) that we purchase water from had the below noted violation(s) of drinking water regulations.

Compliance Period	Analyte	Type
No Violations Occurred in the Calendar Year of 2016		

Optional Monitoring (not required by EPA)

Optional Contaminants

Monitoring is not required for optional contaminants.

Reseller Secondary Contaminants	Collection Date	Water System Name	Highest Sampled Result	Range of Sampled Result(s) (low - high)	Unit	SMCL
ALKALINITY, CACO3 STABILITY	5/13/2016	KIRKSVILLE	83	83	MG/L	
ALKALINITY, TOTAL	7/18/2016	KIRKSVILLE	117	81 - 117	MG/L	
ALUMINUM	5/13/2016	KIRKSVILLE	0.0918	0.0918	MG/L	0.05
CALCIUM	5/13/2016	KIRKSVILLE	33.5	33.5	MG/L	
CHLORATE	6/24/2014	KIRKSVILLE	116	88.5 - 116	UG/L	
CHLORIDE	5/13/2016	KIRKSVILLE	9.18	9.18	MG/L	250
CHROMIUM, HEX	5/30/2013	KIRKSVILLE	0.14	0.11 - 0.14	UG/L	
HARDNESS, CARBONATE	5/13/2016	KIRKSVILLE	107	107	MG/L	
MAGNESIUM	5/13/2016	KIRKSVILLE	5.64	5.64	MG/L	
MANGANESE	5/13/2016	KIRKSVILLE	0.00408	0.00408	MG/L	0.05
MOLYBDENUM, TOTAL	2/27/2014	KIRKSVILLE	2.19	2.19	UG/L	
PH	5/13/2016	KIRKSVILLE	7.5	7.5	PH	8.5
POTASSIUM	5/13/2016	KIRKSVILLE	3.04	3.04	MG/L	
SODIUM	5/13/2016	KIRKSVILLE	6.59	6.59	MG/L	
STRONTIUM	2/27/2014	KIRKSVILLE	132	132	UG/L	
SULFATE	5/13/2016	KIRKSVILLE	54.3	54.3	MG/L	250
TDS	5/13/2016	KIRKSVILLE	173	173	MG/L	500
VANADIUM, TOTAL	2/27/2014	KIRKSVILLE	0.3	0.3	UG/L	
ZINC	5/13/2016	KIRKSVILLE	0.00377	0.00377	MG/L	5

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2016 WATER QUALITY REPORT FOR RATHBUN REGIONAL WATER ASSN (RATHBUN)

This report contains important information regarding the water quality in our water system. The source of our water is surface water. Our water quality testing shows the following results:

CONTAMINANT	MCL - (MCLG)	Compliance		Date	Violation	Source
		Type	Value & (Range)		Yes/No	
Total Trihalomethanes (ppb) [TTHM] DB01	80 (N/A)	LRAA	57.00 (36 - 51)	1st Quarter 2016	No	By-products of drinking water chlorination
Total Trihalomethanes (ppb) [TTHM] DB02	80 (N/A)	LRAA	55.00 (38 - 46)	1st Quarter 2016	No	By-products of drinking water chlorination
Total Trihalomethanes (ppb) [TTHM] DB03	80 (N/A)	LRAA	54.00 (35 - 39)	1st Quarter 2016	No	By-products of drinking water chlorination
Total Trihalomethanes (ppb) [TTHM] DB04	80 (N/A)	LRAA	57.00 (37 - 47)	1st Quarter 2016	No	By-products of drinking water chlorination
Total Haloacetic Acids (ppb) [HAA5] DB01	60 (N/A)	LRAA	27.00 (11 - 28)	1st Quarter 2016	No	By-products of drinking water disinfection
Total Haloacetic Acids (ppb) [HAA5] DB02	60 (N/A)	LRAA	27.00 (18 - 28)	1st Quarter 2016	No	By-products of drinking water disinfection
Total Haloacetic Acids (ppb) [HAA5] DB03	60 (N/A)	LRAA	25.00 (14 - 23)	1st Quarter 2016	No	By-products of drinking water disinfection
Total Haloacetic Acids (ppb) [HAA5] DB04	60 (N/A)	LRAA	28.00 (17 - 26)	1st Quarter 2016	No	By-products of drinking water disinfection
Lead (ppb)	AL=15 (0)	90th	1.00 (ND - 4)	2014	No	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	AL=1.3 (1.3)	90th	0.18 (0.04 - 0.57)	2014	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
950 - DISTRIBUTION SYSTEM						
Chlorine (ppm)	MRDL=4.0 (MRDLG=4.0)	RAA	3.09 (2.29 – 3.23)	1st Quarter 2016	No	Water additive used to control microbes
01 - EAST PLANT @ AFTER TREATMENT						
Fluoride (ppm)	4 (4)	SGL	0.67 (0.48–0.67)	June 2016	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Sodium (ppm)	N/A (N/A)	SGL	4.8	01/11/2016	No	Erosion of natural deposits; Added to water during treatment process
Total Organic Carbon	30%	TT	(32.1 – 85.2)	2016	No	Naturally Present in the Environment
Turbidity (NTU)	N/A (N/A)	TT	0.257 (100%)	2016	No	Soil runoff
Metolachlor	N/A (N/A)	SGL	0.10	04/06/2016	No	Runoff from herbicide used on row crops
Simazine (ppb)	4 (4)	SGL	0.10	04/06/2016	No	Herbicide runoff
03 - WEST PLANT @ AFTER TREATMENT						
Fluoride (ppm)	4 (4)	SGL	0.67 (0.48–0.67)	June 2016	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories

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Barium (ppm)	2 (2)	SGL	0.05	01/07/2014	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Metolachlor	N/A (N/A)	SGL	0.30	01/07/2014	No	Runoff from herbicide used on row crops
Atrazine (ppb)	3 (3)	SGL	0.50	01/07/2014	No	Runoff from herbicide used on row crops
Total Organic Carbon	30%	TT	(32.7 – 55.1)	2016	No	Naturally Present in the Environment
Turbidity (NTU)	N/A (N/A)	TT	0.093 (100%)	2016	No	Soil runoff

Note: Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

UCMR3

Analyte	MCL	Compliance	Ug/L	Date	Violation	Source
Chlorate	N/A	N/A	160.0	01/29/2014	No	EPA Study Participant

DEFINITIONS

- 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. MCLGs allow for a margin of safety.
- ppb -- parts per billion.
- ppm -- parts per million.
- pCi/L – picocuries per liter
- N/A – Not applicable
- ND -- Not detected
- RAA – Running Annual Average
- Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.
- Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- Maximum Residual Disinfectant Level Goal (MRDLG) - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- Maximum Residual Disinfectant Level (MRDL) - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- SGL – Single Sample Result
- RTCR – Revised Total Coliform Rule
- NTU – Nephelometric Turbidity Units

GENERAL INFORMATION

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 posed a health risk. More information about contaminants or potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

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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SOURCE WATER ASSESSMENT INFORMATION

This water supply obtains water from one or more surface waters. Surface water sources are susceptible to sources of contamination within the drainage basin.

Surface Water Name	Susceptibility
Chariton River	high
Rathbun Lake	high

OTHER INFORMATION

Turbidity is an indicator of treatment filter performance and is regulated as a treatment technique.

CONTACT INFORMATION

For questions regarding this information or how you can get involved in decisions regarding the water system, please contact RATHBUN REGIONAL WATER ASSN (RATHBUN) at 641-647-2416.