ADAIR COUNTY PWSD 1

Public Water System ID Number: MO2024000

2020 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 COUNTY PWSD 1	KIRKSVILLE PWS
ADAIR COUNTY PWSD 1	SCHUYLER COUNTY CONSOLIDATED PWSD 1
SCHUYLER COUNTY 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://drinkingwater.missouri.edu/swip/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.
90th percentile: For Lead and Copper testing. 10% of test results are above this level and 90% are below this level.
AL: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
HAA5: Haloacetic Acids (mono-, di- and tri-chloracetic acid, and mono- and di-bromoacetic acid) as a group.
LRAA: Locational Running Annual Average, or the locational average of sample analytical results for samples taken during the previous four calendar quarters.
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.
n/a: not applicable.
nd: not detectable at testing limits.
NTU: Nephelometric Turbidity Unit, used to measure cloudiness in drinking water.
ppb: parts per billion or micrograms per liter.
ppm: parts per million or milligrams per liter.
RAA: Running Annual Average, or the average of sample analytical results for samples taken during the previous four calendar quarters.
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 Test Result or Highest Value.
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
TT: Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.
TTHM: Total Trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) as a group.

MISSOURI DEPARTMENT OF NATURAL RESOURCES

April 27, 2021

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Contaminants Report

ADAIR COUNTY 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. No data older than 5 years need be included. If more than one sample is collected during the monitoring period, the Range of Sampled Results will show the lowest and highest tested results. The Highest Test Result, Highest LRAA, or Highest Value must be below the maximum contaminant level (MCL) or the contaminant has exceeded the level of health based standards and a violation is issued to the water system.

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	2020	21	21.3 - 21.3	ppb	60	0	Byproduct of drinking water disinfection
(HAA5)	DBPDUAL-02	2020	21	21.4 - 21.4	ppb	60	0	Byproduct of drinking water disinfection
TTHM	DBPDUAL-01	2020	62	61.7 - 61.7	ppb	80	0	Byproduct of drinking water disinfection
TTHM	DBPDUAL-02	2020	62	61.5 - 61.5	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	2017 - 2019	0.0817	0.00617 - 0.167	ppm	1.3	0	Corrosion of household plumbing systems
LEAD	2017 - 2019	1.14	0 - 1.6	ppb	15	0	Corrosion of household plumbing systems

Unregulated Contaminant Monitoring Rule (UCMR)	Collection Date of HV	Highest Value (HV)	Range of Sampled Result(s)	Unit
HAA5	06/04/19	47	25 - 47	ppb
HAA6Br	09/04/19	5.67	4.7 - 5.67	ppb
HAA9	06/04/19	52.2	29.8 - 52.2	ppb
Manganese	12/03/19	4.541	0.413 - 4.541	ppb

Violations and Health Effects Information

During the 2020 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 2020		

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 COUNTY 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.

All contaminant sample results from past and present compliance monitoring are available online at the Missouri DNR Drinking Water Watch website at www.dnr.mo.gov/DWW/. To see the Lead and Copper results, enter your water system's name in the box titled Water System Name, then select Find Water Systems at the bottom of the page. On the next screen, click on the Water System Number. At the top of the next page, under the Help column, click on Other Chemical Results by Analyte. Scroll down to Lead and click the blue Analyte Code (1030). A Sample Collection Date range may need to be entered. 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 results. If you assisted the water system in taking a Lead and Copper sample but cannot find your location on the list, please contact ADAIR COUNTY PWSD 1 for your results.

Reseller Contaminants

Regulated Contaminants	Collection Date	Water System	Highest Sample Result	Range of Sampled Result(s) (low – high)	Unit	MCL	MCLG	Typical Source
BARIUM	5/20/2020	KIRKSVILLE PWS	0.057	0.057	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE	5/20/2020	KIRKSVILLE PWS	0.8	0.8	ppm	4	4	Natural deposits; Water additive which promotes strong teeth
NITRATE-NITRITE	5/20/2020	KIRKSVILLE PWS	0.318	0.318	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

April 27, 2021

ADAIR COUNTY PWSD 1

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Disinfection Byproducts	Monitoring Period	Water System	Highest LRAA	Range of Sampled Result(s) (low – high)	Unit	MCL	MCLG	Typical Source
(HAA5)	2020	SCHUYLER COUNTY CONSOLIDATED PWSD 1	36	13.9 - 48	ppb	60	0	Byproduct of drinking water disinfection
(HAA5)	2020	KIRKSVILLE PWS	43	20.5 - 56.2	ppb	60	0	Byproduct of drinking water disinfection
TTHM	2020	KIRKSVILLE PWS	43	30 - 51	ppb	80	0	Byproduct of drinking water disinfection
TTHM	2020	SCHUYLER COUNTY CONSOLIDATED PWSD 1	45	32 - 47.6	ppb	80	0	Byproduct of drinking water disinfection

Reseller Violations and Health Effects Information

During the 2020 calendar year, the water system(s) that we purchase water from had the below noted violation(s) of drinking water regulations.

Water System	Type	Category	Analyte	Compliance Period
No Violations Occurred in the Calendar Year of 2020				

There are no additional required health effects notices.

Optional Monitoring (not required by EPA)

Optional Contaminants

Monitoring is not required for optional contaminants.

Secondary Contaminants	Collection Date	Your Water System Highest Sampled Result	Range of Sampled Result(s) (low - high)	Unit	SMCL
MANGANESE	12/3/2019	0.00454	0.00041 - 0.00454	MG/L	0.05

Reseller Secondary Contaminants	Collection Date	Water System Name	Highest Sampled Result	Range of Sampled Result(s) (low - high)	Unit	SMCL
ALKALINITY, CACO3 STABILITY	5/20/2020	KIRKSVILLE PWS	99	99	MG/L	
ALKALINITY, TOTAL	11/5/2020	KIRKSVILLE PWS	112	87 - 112	MG/L	
ALUMINUM	5/20/2020	KIRKSVILLE PWS	0.132	0.132	MG/L	0.05
BROMIDE	12/17/2019	KIRKSVILLE PWS	0.0218	0 - 0.0218	MG/L	0.05
CALCIUM	5/20/2020	KIRKSVILLE PWS	34	34	MG/L	
CARBON, DISSOLVED ORGANIC (DOC)	11/16/2020	KIRKSVILLE PWS	3.61	3.61	MG/L	
CHLORIDE	5/20/2020	KIRKSVILLE PWS	10.5	10.5	MG/L	250
HARDNESS, CARBONATE	5/20/2020	KIRKSVILLE PWS	112	112	MG/L	
MAGNESIUM	5/20/2020	KIRKSVILLE PWS	6.64	6.64	MG/L	
MANGANESE	5/20/2020	KIRKSVILLE PWS	0.00117	0.00117	MG/L	0.05
PH	5/20/2020	KIRKSVILLE PWS	7.83	7.83	PH	8.5
POTASSIUM	5/20/2020	KIRKSVILLE PWS	3.65	3.65	MG/L	
SODIUM	5/20/2020	KIRKSVILLE PWS	4.32	4.32	MG/L	
SULFATE	5/20/2020	KIRKSVILLE PWS	18.1	18.1	MG/L	250
SUVA (SPECFIC ULTRAVIOLET ABSORBANCE)	10/7/2020	KIRKSVILLE PWS	1.7	1.3 - 1.7	L/MG-M	
TDS	5/20/2020	KIRKSVILLE PWS	148	148	MG/L	500
UV ABSORBANCE @254 NM	11/16/2020	KIRKSVILLE PWS	0.048	0.048	CM-1	

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.

April 27, 2021

2020 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	46 (39 - 46)	4th Quarter 2020	No	By-products of drinking water chlorination
Total Trihalomethanes (ppb) [TTHM] DB02	80 (N/A)	LRAA	47 (38 – 49)	4th Quarter 2020	No	By-products of drinking water chlorination
Total Trihalomethanes (ppb) [TTHM] DB03	80 (N/A)	LRAA	44 (33 – 48)	3rd Quarter 2020	No	By-products of drinking water chlorination
Total Trihalomethanes (ppb) [TTHM] DB04	80 (N/A)	LRAA	47 (41 – 50)	4th Quarter 2020	No	By-products of drinking water chlorination
Total Haloacetic Acids (ppb) [HAA5] DB01	60 (N/A)	LRAA	24 (10 - 25)	2nd Quarter 2020	No	By-products of drinking water disinfection
Total Haloacetic Acids (ppb) [HAA5] DB02	60 (N/A)	LRAA	25 (16 – 24)	2nd Quarter 2020	No	By-products of drinking water chlorination
Total Haloacetic Acids (ppb) [HAA5] DB03	60 (N/A)	LRAA	23 (16 – 24)	2nd Quarter 2020	No	By-products of drinking water chlorination
Total Haloacetic Acids (ppb) [HAA5] DB04	60 (N/A)	LRAA	27 (18 – 26)	1st Quarter 2020	No	By-products of drinking water chlorination
Lead (ppb)	AL=15 (0)	90th	1.00 (ND - 3)	2020	No	Corrosion of household plumbing systems; erosion of natural deposits
Copper (ppm)	AL=1.3 (1.3)	90th	0.25 (0.05 - 0.49)	2020	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	3.01 (2.66 - 3.24)	09/2020	No	Water additive used to control microbes
Fluoride	4 (4)	SGL	0.83 (0.62 – 0.83)	10/2020	No	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
01 - EAST PLANT @ AFTER TREATMENT						
Sodium (ppm)	N/A (N/A)	SGL	26	01/08/2020	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	1	7/14/2020	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Atrazine (ppb)	3 (3)	SGL	0.20	04/07/2020	No	Runoff from herbicide used on row crops
Metolachlor (ppm)	N/A (N/A)	SGL	0.0005	04/07/2020	No	Runoff from herbicide used on row crops
Turbidity (NTU)	N/A (N/A)	TT	0.060 (100%)	01/2020	No	Soil runoff
Total Organic Carbon	30%	TT	(33.9 – 56.8)	11/2020	No	Naturally Present in the Environment

03 - WEST PLANT @ AFTER TREATMENT						
Sodium (ppm)	N/A (N/A)	SGL	26	01/08/2020	No	Erosion of natural deposits; Added to water during treatment process
Nitrate [as N] (ppm)	10 (10)	SGL	1	7/14/2020	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Atrazine (ppb)	3 (3)	SGL	0.50	03/15/2017	No	Runoff from herbicide used on row crops
Turbidity (NTU)	N/A (N/A)	TT	0.068 (100%)	08/2020	No	Soil runoff
Total Organic Carbon	30%	TT	(40.3 – 63.0)	11/2020	No	Naturally Present in the Environment

UCMR4

Dichloracetic Acid	N/A (N/A)	ppb	14 (9 – 14)	2018	No	Unregulated Contaminants Monitoring Rule, 4th Edition
Trichloroacetic Acid	N/A (N/A)	ppb	9.6 (3.3 – 9.6)	2018	No	Unregulated Contaminants Monitoring Rule, 4th Edition
Bromochloroacetic Acid	N/A (N/A)	ppb	3.6 (2.0 – 3.6)	2018	No	Unregulated Contaminants Monitoring Rule, 4th Edition
Dibromoacetic Acid	N/A (N/A)	ppb	0.77 (<0.30 - 0.77)	2018	No	Unregulated Contaminants Monitoring Rule, 4th Edition
Bromodichloroacetic Acid	N/A (N/A)	ppb	2.6 (1.7 – 2.6)	2018	No	Unregulated Contaminants Monitoring Rule, 4th Edition
Chlorodibromoacetic Acid	N/A (N/A)	ppb	0.72 (0.44 – 0.72)	2018	No	Unregulated Contaminants Monitoring Rule, 4th Edition
Manganese	N/A (N/A)	ppb	20 (3 – 20)	2018	No	Unregulated Contaminants Monitoring Rule, 4th Edition

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

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).

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. RATHBUN REGIONAL WATER ASSN (RATHBUN) 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 or at http://www.epa.gov/safewater/lead.

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.