

Rivermeadows Water System

2021 Water Quality Report

(WY5600786)

Is my water safe?

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies.

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 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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

Where does my water come from?

The Rivermeadows water system is supplied by three groundwater wells within Rivermeadows.

Source water assessment and its availability

A source water assessment has been completed. Copies of the Rivermeadows 2021 EPA Sanitary Survey and 2021 Revised Total Coliform Rule Level 2 Assessment are available upon request.

Why are there contaminants in my drinking 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 (EPA) Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and 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: microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; 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; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater

runoff, and residential uses; 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 stations, urban stormwater runoff, and septic systems; and 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, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

How can I get involved?

Actively practice water conservation!

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference - try one today and soon it will become second nature.

- Take short showers - a 5-minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense for more information.

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.

- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Significant Deficiencies

In 2021, the Rivemeadows water system corrected the following outstanding significant deficiencies identified by EPA .

1) Storage Tank Air Vent. A routine sanitary survey conducted on 9/30/2015 by EPA, Region 8 determined that the air vent on the on the water storage tank did not have sufficient height above the adjacent soil surface. EPA issued an Administrative Order on July 10, 2018. The water tank air vent was modified to provide 24" minimum height above ground surface. Work was completed on 11/10/2021.

2) Well Cap Seals. A routine sanitary survey conducted on 10/16/2018 by EPA, Region 8 questioned the integrity of the well cap seals on each of the three-water supply wells and requested inspection and follow-up documentation. EPA issued an Administrative Order on October 26, 2020. All well cap seals were inspected and replaced. Work was completed on 06/01/2021.

Results of voluntary monitoring

Source Water Testing - 2022 water samples from Rivermeadows water storage tank:

- 1) Lead - ND
- 2) Copper - 0.01 mg/L < 1.3 AL (Action Level)
- 3) Total Dissolved Solids (TDS) - 230 mg/L

Total Dissolved Solids (TDS) is the sum of all mineral, metals and salts dissolved in water; high quantities can cause gastrointestinal distress in people unaccustomed to the water. While TDS concentrations exceeding 500 mg/L may be considered objectionable, high TDS does not generally pose a serious health risk but can cause water to be colored, taste poor, stain, and cause diarrhea in people not accustomed to the water.

Additional Information for Lead

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. Rivermeadows Water District 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>.

Additional Information for Arsenic

Your drinking water meets EPA's standard for arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants & Disinfection By-Products								
(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)								
Haloacetic Acids (HAA5) (ppb)	NA	60	.49	NA	NA	2021	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	3.2	NA	NA	2021	No	By-product of drinking water disinfection.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Detect In Your Water	Range		Sample Date	Violation	Typical Source
				Low	High			
Inorganic Contaminants								
Fluoride (ppm)	4	4	.1	NA	NA	2019	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] (ppm)	10	10	.42	NA	NA	2021	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (optional) (ppm)	NA		6.5	NA	NA	2019	No	Erosion of natural deposits; Leaching
Microbiological Contaminants								
Total Coliform (RTCR)	NA	TT	NA	NA	NA	2021	No	Naturally present in the environment
Radioactive Contaminants								
Radium (combined 226/228) (pCi/L)	0	5	.6	NA	NA	2019	No	Erosion of natural deposits
Uranium (ug/L)	0	30	.5	NA	NA	2019	No	Erosion of natural deposits
Contaminants	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source	
Inorganic Contaminants								
Copper - action level at consumer taps (ppm)	1.3	1.3	2.23	January to June 2021	3	Yes	Corrosion of household plumbing systems; Erosion of natural deposits	
Copper - action level at consumer taps (ppm)	1.3	1.3	1.24	July to December 2021	0	No	Corrosion of household plumbing systems; Erosion of natural deposits	
Lead - action level at consumer taps (ppb)	0	15	2	2021	1	No	Corrosion of household plumbing systems; Erosion of natural deposits	

Violations and Exceedances

Copper - action level at consumer taps

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

During 2020 and 2021, biannual water samples were collected from five Rivermeadows houses and tested for lead and copper. In a portion of those houses, water samples held overnight in the home piping have tested higher than the 1.3 mg/L EPA action level. However, samples of flowing water through the home piping system have tested at

Violations and Exceedances

0.27 mg/L copper, or less.

All overnight hold samples collected in August 2021 tested less than the copper 1.3 mg action level. During this time supply Well #1 was not in use due to bacteria concerns. However, over the past several years Well #1 was operated as the primary water supply well. Once Well #1 was treated and tested suitable for use, operations were modified to equally rotate the three Rivermeadows groundwater wells to supply the system.

Rivermeadows has been working with EPA to assess and reduce copper concentrations in water at the homes. Samples from the Rivermeadows supply wells have had hardly any copper. Rivermeadows water mains are PVC pipe, which does not contain copper. The high home copper values are due to internal corrosion within the home exterior copper water service lines and interior copper piping.

On March 23, 2021, EPA accepted a source water treatment recommendation to inject orthophosphate to reduce copper corrosion. The design, permitting, and installation of an orthophosphate injection system is to be completed by March 31, 2023. Rivermeadows will be performing additional well water sampling and chemistry testing to determine optimal orthophosphate products and injection rates for the system design. Permitting and installation efforts will follow in 2022.

Level 2 Assessment and Sanitary Defects

E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We found E. coli bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

We were required to complete a Level 2 Assessment because we found E. coli in our water system. In addition, we were required to take seven corrective actions and we completed six of these actions.

We failed to correct all sanitary defects that were identified by the assessment. This is a treatment technique violation. Cleaning and inspecting the water storage tank is the only defect that was not completed in 2021. To avoid taking the storage tank out of service, scuba divers will be utilized to clean and inspect the tank while it is full of water. Tank cleaning contractors contacted had work schedules already full for 2021, and thus were not available.

Rivermeadows contracted for scuba diver services to complete the tank cleaning and inspection during spring 2022. EPA approved this time extension.

Undetected Contaminants

The following contaminants were monitored for, but not detected, in your water.

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Violation	Typical Source
Arsenic (ppb)	0	10	ND	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Selenium (ppb)	50	50	ND	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines

Unit Descriptions	
Term	Definition
ug/L	ug/L : Number of micrograms of substance in one liter of water
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
% positive samples/month	% positive samples/month: Percent of samples taken monthly that were positive
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	Definition
MCLG	MCLG: Maximum Contaminant Level Goal: 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	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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances and Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG: Maximum residual disinfection level goal. 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.
MRDL	MRDL: Maximum residual disinfectant level. 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.
MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

TT Violation	Explanation	Length	Health Effects Language	Explanation and Comment
Ground Water Rule violations	In 2021, the Rivemeadows water system violated EPA drinking water requirements. Coliform bacteria was	A boil water notice was issued on 5/27/2021 and rescinded on 6/2/2021. EPA	Inadequately treated water may contain disease-causing organisms. These organisms include	The water system chlorine pump had failed and bacteria was present in Well #1. The chlorine pump was promptly replaced. Well #1 was

TT Violation	Explanation	Length	Health Effects Language	Explanation and Comment
	<p>present in routine Rivermeadows water samples collected on 5/24/2021. Repeat water samples collected on 5/26/2021 were positive for both coliform and E. Coli bacteria. This was a violation of the Revised Total Coliform Rule (RTCR) and EPA issued an Emergency Administrative Order.</p> <p>Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps and associated headaches. E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, some of the elderly, and people with severely-compromised immune systems. These symptoms are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice</p>	<p>closed out the Emergency Administrative Order on 12/17/2021.</p>	<p>bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.</p>	<p>isolated from the water system. Well #1 was inspected and treated with multiple chlorine cycles until repeated verification samples confirmed the absence of both coliform and E coli bacteria. Well #1 is presently being used to supply the Rivermeadows water system.</p>

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