

ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2021



VALLEY MUNICIPAL UTILITY DISTRICT NO.2

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2021 Annual Drinking Water Quality Report

VALLEY MUNICIPAL UTILITY DISTRICT NO. 2
100 Hidalgo Avenue, Rancho Viejo, Texas
(956) 350-4136

Special Notice for the ELDERLY, INFANTS, CANCER PATIENTS, people with HIV/AIDS or other immune problems:

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. The EPA/Centers for Disease Control and Prevention (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 (1-800-426-4791).

Our Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

SOURCES OF DRINKING WATER: 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. Contaminants that may be present in source water before treatment include:

- Microbial contaminants, such as viruses and bacteria, which 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 storm water 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 storm water 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 storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Where do we get our drinking water? Valley MUD # 2 has 3 sources of drinking water. Approximately 50% of our drinking water comes from the Resaca del Rancho Viejo which is fed by the Rio Grande river. Another 30% comes from a well on District property drilled into the gulf coast aquifer. This water is treated with a reverse osmosis system before it is blended with water from the surface water plant and pumped into the distribution system. The remaining water comes from the Southmost Regional Water Authority, a regional groundwater desalination plant.

En Español

Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre éste informe en español, favor de llamar al tel. (956) 350-4136 para hablar con una persona bilingüe en español.

Public Participation Opportunities

Date: July 19, 2022
Time: 9:00 AM
Location: 100 Hidalgo
Phone No: (956) 350-4136

Valley MUD #2 has regular board meetings on the third Tuesday of every month. These meetings are open to the public. To request an agenda, please call us.

The TCEQ completed an assessment of your water and results indicate that some of your sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sampling data. Any detections of this contaminants may be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system, contact Mr. Javier Ramos at (956) 350-4136 or write us at 100 Hidalgo Avenue, Rancho Viejo, Tx. 78575

ALL drinking water may contain contaminants.

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 EPA's Safe Drinking Water Hotline (1-800-426-4791).

Secondary Constituents

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water, can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not causes for health concern. Therefore, secondary constituents are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

DEFINITIONS

Maximum Contaminant Level (MCL)

The highest permissible level of a contaminant 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 health risk. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL)

The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

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 contamination.

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.

ABBREVIATIONS

NTU -Nephelometric Turbidity Units

MFL -million fibers per liter (a measure of asbestos)

pCi/L -picocuries per liter (a measure of radioactivity)

ppm - parts per million, or milligrams per liter (mg/L)

ppb -parts per billion, or micrograms per liter (µg/L)

ppt -parts per trillion, or nanograms per liter

ppq -parts per quadrillion, or picograms per liter

About The Following Pages

The pages that follow list all of the federally regulated or monitored contaminants which have been found in your drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants.

Inorganic Contaminants

Collection Date	Substance (UNIT OF MEASURE)	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Violation	Source of Constituent
2021	Arsenic* (ppb)	11	2.5-11	10.0	0	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
2021	Barium (ppm)	0.0604	0.0604	2.0	2.0	N	Discharge of drilling wastes; Discharge from metal refineries; erosion of natural deposits.
2021	Fluoride (ppm)	0.41	0.41	4	4	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2021	Nitrate {measured as Nitrogen} (ppm)	0.13	0.08-0.13	10	10	N	Runoff from fertilizer use; Leaching from septic tank sewage; Erosion of natural deposits.
2021	Cyanide (ppb)	10	10	200	200	N	Discharge from plastic and fertilizer factories; Discharge from steel / metal factories.
2021	Selenium (ppb)	3.3	3.3	50	50	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharges from mines.
	Radioactive Contaminants (Unit of Measure)	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Violation	Source of Constituent
2018	Combined Radium 226 & 228 (pCi/L)	1.5	1.5-1.5	5	5	N	Erosion of Natural Deposits
2021	Xylenes (ppb)	0.5	0.5	10	10	N	Discharge from petroleum factories, Discharge from Chemical factories

**Although we had a single sample of Arsenic that exceeded the MCL, violations are based on the average of all samples taken during the reporting period*

Disinfection Byproducts

2021	Average Level of Quarterly data	Maximum Detected	Minimum Detected	MRDL	MRDLG			
Chloramine	2.29	3.17	1.80	4.0	<4.0	Disinfectant used to control microbes		
Contaminant	Highest Level	Range of Level	MCLG	MCL	Unit of Measure	Violation	Source of Contaminant	
2021	Haloacetic Acids (HAA5)	18.1	12.1 - 18.1		60	ppb	N	Byproduct of Drinking Water Disinfection
2021	Total Trihalomethanes	51.3	30.2 - 51.3		80	ppb	N	Byproduct of Drinking Water Disinfection

Year	Constituent	Average Level	Minimum Level	Maximum Level	MCL	Units of Measure	Reason for Monitoring
2021	Chloroform	4.7	2.4	7.7	100	ppb	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants
2021	Bromoform	6.93	1.0	14.1	100	ppb	
2021	Bromodichloromethane	11.2	1.0	20.0	100	ppb	
2021	Dibromochloromethane	15.38	1.0	35.0	100	ppb	

Lead and Copper

Year	Constituent	MCLG	Action Level (AL)	90th Percentile	#Sites Over AL	Units	Violation	Source of Constituent
2021	Copper	1.3	1.3	0.0505	0	Ppm	N	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives.
2021	Lead	0	15	0	0	Ppb	N	Corrosion of household plumbing systems, erosion of natural deposits

Turbidity

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

	Limit (Treatment Technique)	Level Detected	Likely Source of Contamination
Highest Single Measurement	1 NTU	.96 NTU	Soil runoff
Lowest monthly % meeting Limit	0.3 NTU	96 %	Soil runoff

Total Organic Carbon

The Percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted on this report.

COLIFORMS

What are coliforms?

Coliform bacteria are used as indicators of microbial contamination of drinking water because they are easily detected and found in the digestive tract of warm blooded animals. While not themselves disease producers, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms; therefore their absence from water is a good indication that the water is bacteriologically safe for human consumption.

The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio.

Fecal coliform (mostly E-coli), is a portion of the coliform bacteria group originating in the intestinal tract of warm-blooded animals that passes into the environment as feces. Fecal coliform is often used as an indicator of the fecal contamination of domestic water supply.

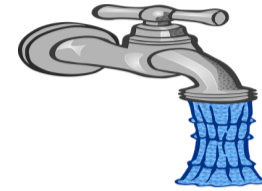
Valley MUD #2 had zero positive test for total coliform in the year of 2021.

Secondary and Other Constituents - Not Regulated

Year (Range)	Inorganic Con-taminants	Highest Level Detected	Range of levels detected	MCLG	MCL	Unit of measure	Likely Source of Constituent
2021	Aluminum	0.776	0.776		0.2	ppm	Abundant naturally Occurring Element
2021	Alkalinity Bicarbonate	144	144		NA	ppm	Corrosion of carbonated rocks such as limestone
2021	Calcium	62.7	62.7		NA	ppm	Abundant Naturally Occurring Element
2021	Chloride	187	187		300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2021	Copper	0.207	0.05-0.207		NA	ppm	Corrosion of household plumbing systems; erosion of natural deposits, leaching from wood preservatives
2021	Silver	0.01	0.01	0.01	0.01	ppm	Erosion of natural deposits
2021	Iron	0.01	0.01	0.01	.3	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
2021	Magnesium	20.7	20.7		NA	ppm	Abundant naturally occurring element
2021	Manganese	0.001	0.001	0.001	0.05	ppm	Abundant naturally occurring element
2021	Nickel	0.0016	0.0016		NA	ppm	Erosion of Natural Deposits
2021	pH average	7.76	7.55-8.18	8.18	>6 : 9<	Positive Hydrogn Ions	Corrosive measurement of water
2021	Sodium	163	163		NA	ppm	Erosion of natural deposits, byproduct of oil field activity.
2020-2021	Sulfate	273	250-273	300	300	ppm	Naturally Occurring;, common industrial byproduct, byproduct of oil field activity
2020-2021	Total Alkalinity	118	107-118		NA	ppm	Naturally occurring soluble mineral salts.
2021	Total Dissolved Solids	809	809	1000	1000	ppm	Total dissolved mineral constituents in water.
2021	Total Hardness as CaCO3	242	242		NA	ppm	Naturally occurring calcium
2021	Zinc	0.005	0.005	0.005	5	ppm	Moderately abundant naturally occurring element used in the metal industry.

State Water Loss Audit

In the water loss audit submitted to Texas Water Development Board for the time period of January through December 2021, our system lost an estimated 24,764,909 (14.24 %) gallons of water through main breaks, leaks and other causes. If you have any questions about the water loss audit please call (956)350-4136.



Help us keep the water safe!!

Valley Municipal Utility District is enforcing the state's **Cross-connection** and **Backflow** regulations. The **Texas Commission on Environmental Quality (TCEQ)** requires that any actual or potential cross-connections be protected from backflow. Residents are required to install a **backflow preventer assembly** to prevent contaminants from entering the public drinking water system. This will protect your water against any contamination.

Outdoor Faucets:

The ordinary garden hose is the most common way to contaminate the water supply! This can happen when one end of the garden hose is attached to an outdoor faucet (sill cock), and the other end of the hose connects to an aspirator type bottle. Insecticides or other chemicals in the aspirator bottle can be siphoned back into the drinking water supply. Or when filling a livestock watering trough and letting the garden hose just lay in the trough unattended. You can easily prevent the possibility of this type of contamination by ensuring there is an "air gap" between the watering trough and the garden hose, or by installing a **hose bib vacuum breaker**. This is a small, inexpensive device you can get at most hardware stores and simply attaches to a threaded water faucet.

Lawn Irrigation System:

You may have a lawn irrigation system. You will need a vacuum breaker backflow preventer to protect against lawn and pesticide chemicals from being drawn in from your lawn and back into the water supply. On a large number of lawn sprinkler installations the sprinkler head is below the ground level. Water which may have been in contact with fertilizers and weed killers can then be back siphoned through a leaky valve in to the potable water system. The two types of acceptable backflow preventers are the pressure vacuum breaker (pvb) or the reduced pressure zone (rpz).

Your Toilet:

When water leaves the drinking water supply system and flows into your toilet tank the water should be prevented from being drawn back into the water supply. The water in the toilet tank is often treated with cleansing chemicals that are not safe to drink. There is something you can do! Make sure an anti-siphon ballcock assembly is installed correctly in your toilet tank. This will protect against any back-siphonage.

