ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2020

VALLEY MUNICIPAL UTILITY DISTRICT NO.2

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2020 Annual Drinking Water Quality Report

VALLEY MUNICIPAL UTILTY 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).

Public Participation Opportunities

Date: July 20, 2021
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.

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 run off, 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 desalinization 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.

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
2020	Arsenic (ppb)	4.5	4.5	10.0	0	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
2020	Barium (ppm)	0.0802	0.0802	2.0	2.0	N	Discharge of drilling wastes; Discharge from metal refineries; erosion of natural deposits.
2020	Fluoride (ppm)	0.52	0.52	4	4	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2020	Nitrate {measured as Nitrogen} (ppm)	0.28	0.05-0.28	10	10	N	Runoff from fertilizer use; Leaching from septic tank sewage; Erosion of natural deposits.
2020	Cyanide (ppb)	170	170	200	200	N	Discharge from plastic and fertilizer factories; Discharge from steel / metal factories.
2020	Selenium (ppb)	3.1	3.1-3.1	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
2020	Xylenes (ppb)	0.5	0.5	10	10	N	Discharge from petroleum factories, Discharge from Chemical factories

MAXIMUM RESIDUAL DISINFECTANT LEVEL

Chlorine / Chloramine Residual

Disinfection Byproducts

2020	Average Level of Quarterly data	Maximum Detected	Minimum Detected	MRDL	MRDLG	
Chloramine	2.22	2.35	2.04	4.0	<4.0	Disinfectant used to control microbes

	Contaminant	Highest Level	Range of Level	MCLG	MCL	Unit of Measure	Violation	Source of Contaminant
2020	Haloacetic Acids (HAA5)	10.4	1.9 - 10.4		60	ppb	N	Byproduct of Drinking Water Disinfection
2020	Total Trihalomethanes	21.0	11.0 - 21.0		80	ppb	N	Byproduct of Drinking Water Disinfection

Year	Constituent	Average Level	Minimum Level	Maximum Level	MCL	Units of Measure	Reason for Monitoring
2020	Chloroform	3.10	1.0	7.8	100	ppb	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants
2020	Bromoform	7.1	1.0	14.1	100	ppb	
2020	Bromodichloromethane	7.1	1.0	20.0	100	ppb	
2020	Dibromochloromethane	13	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
2017	Copper	1.3	1.3	0.0268	0	Ppm	N	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives.
2017	Lead	0	15	0.763	0	Ppb	N	Corrosion of household plumbing systems, erosion of natural deposits

Violation

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the monitoring period of 2020 we did not monitor or test for lead and copper, therefore cannot be sure of the quality of your drinking water during the period indicated. Current regulations for our water district requires testing for Lead and Copper every 3 years with the next recurrence scheduled for the summer of 2023.

If present, elevated levels of lead can cause serious health problems, especially for pregnant woman and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high quality drinking water and for regulating the materials used in plumbing components. If you believe to have lead material in your private plumbing, 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 Hotline at (800) 420-4791 or at http://www.epa.gov/safewater/lead.

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	.8 NTU	Soil runoff
Lowest monthly % meeting Limit	0 . 3 NTU	99%	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 2020.

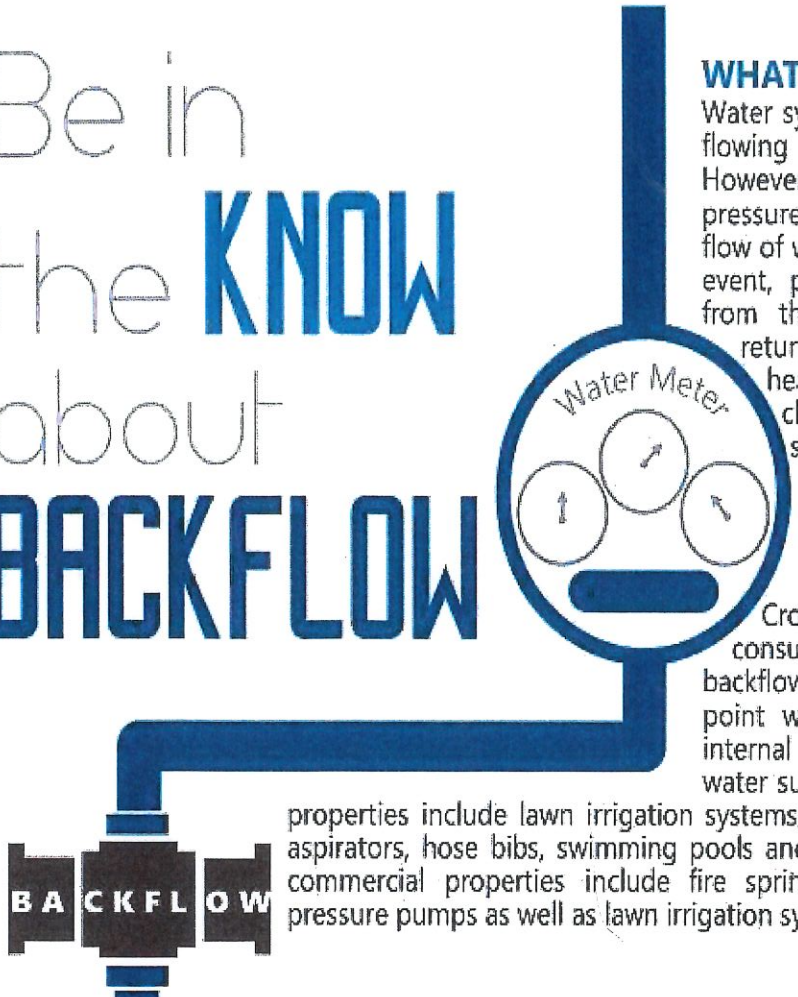
Secondary and Other Constituents - Not Regulated

Year (Range)	Inorganic Contaminants	Highest Level Detected	Range of levels detected	MCLG	MCL	Unit of measure	Likely Source of Constituent
2020	Aluminum	0.438	0.438		0.2	ppm	Abundant naturally Occurring Element
2020	Alkalinity Bicarbonate	131	131		NA	ppm	Corrosion of carbonated rocks such as limestone
2020	Calcium	62.4	62.4		NA	ppm	Abundant Naturally Occurring Element
2020	Chloride	177	177		300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2017	Copper	0.0038	0.0038		NA	ppm	Corrosion of household plumbing systems; erosion of natural deposits, leaching from wood preservatives
2020	Silver	0.01	0.01	0.01	0.01	ppm	Erosion of natural deposits
2020	Iron	0.01	0.01	0.01	.3	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
2020	Magnesium	22.2	22.2		NA	ppm	Abundant naturally occurring element
2020	Manganese	0.001	0.001	0.001	0.05	ppm	Abundant naturally occurring element
2020	Nickel	0.0016	0.0016		NA	ppm	Erosion of Natural Deposits
2020	pH average	7.54	7.37-7.86	7.86	>6 : 9<	Positive Hidrogn Ions	Corrosive measurement of water
2020	Sodium	168	168		NA	ppm	Erosion of natural deposits, byproduct of oil field activity.
2019-2020	Sulfate	273	231-261	300	300	ppm	Naturally Occurring;, common industrial byproduct, byproduct of oil field activity
2019-2020	Total Alkalinity	89	89-109		NA	ppm	Naturally occurring soluble mineral salts.
2020	Total Dissolved Solids	805	805	1000	1000	ppm	Total dissolved mineral constituents in water.
2018	Total Hardness as CaCO3	184	184		NA	ppm	Naturally occurring calcium
2020	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 2020, our system lost an estimated 13,915,655 (7.7 %) 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.

Be in the KNOW about BACKFLOW



WHAT IS BACKFLOW?

Water systems depend on water pressure to keep water flowing in the proper direction through the pipes. However, a sudden or unexpected change in water pressure can cause an undesirable reversal in the normal flow of water. This is called backflow. During a backflow event, potentially non-potable water flows backwards from the consumer's internal plumbing system and returns to the public water supply, creating a possible health risk. For example, soapy water or other cleaning compounds can backflow through a hose submerged in a laundry basin.

WHAT IS A CROSS CONNECTION?

Cross connections are locations within the consumer's internal plumbing system where possible backflow can occur if a pressure differential exists. It is a point where non-potable water from the consumer's internal plumbing system can potentially enter the public water supply. Common cross connections for residential properties include lawn irrigation systems, garden hose connections to chemical solution aspirators, hose bibs, swimming pools and private wells. Common cross connections for commercial properties include fire sprinklers, boilers, chillers, chemical mixing tanks, pressure pumps as well as lawn irrigation systems.

WHAT IS A BACKFLOW PREVENTION DEVICE?

A backflow prevention device is a mechanical assembly installed in the water line to prevent backflow from occurring at cross connections. It ensures that a one-way system of flow is maintained and thus protects the public water supply. Backflow prevention devices are installed between the consumer's water meter and the first branch line in their private plumbing.

DOs

- Keep the end of hoses off the ground and clear of all possible contaminants
- Install hose bib vacuum breakers on all spigots (both indoor and outdoor)
- Hire a licensed plumber or contractor to install an approved backflow device on an underground lawn irrigation system
- Have each backflow device tested annually by a certified backflow tester
- Make sure toilets have anti-siphon ballcock assemblies
- Have your plumbing system surveyed for cross connections
- Contact the City if you see any suspicious or unauthorized use of a fire hydrant

DON'Ts

- Submerge hoses in buckets, sinks, tubs, swimming pools, ponds or standing water
- Use spray attachments (such as chemical solution aspirators to fertilize lawn and shrubs) without a backflow prevention device such as a hose bib vacuum breaker
- Create a cross connection between an auxiliary water system (well, cistern, body of water, etc) and your water system
- Use a hose to unplug blocked toilets or sewer pipes