2016 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 18, 2017
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. Gerardo Saenz 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
2016	**Arsenic (ppb)**	5	5.1-5.1	10.0	0	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
2016	**Barium (ppm)**	0.09	0.09-0.09	2.0	2.0	N	Discharge of drilling wastes; Discharge from metal refineries; erosion of natural deposits.
2016	**Fluoride (ppm)**	0.4	0.37-0.37	4	4	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2016	**Nitrate{measured as Nitrogen} (ppm)**	0.07	0.0-0.07	10	10	N	Runoff from fertilizer use; Leaching from septic tank sewage; Erosion of natural deposits.
2016	**Nitrite (ppm)**	0.128	0.086-0.128	1	1	N	Runoff from fertilizer use; Leaching from septic tank sewage; Erosion of natural deposits.
2016	**Cyanide (ppb)**	180	180	200	200	N	Discharge from plastic and fertilizer factories; Discharge from steel / metal factories.
	Radioactive Contaminants (Unit of Measure)	**Highest Level Detected**	**Range of Levels Detected**	**MCL**	**MCLG**	**Violation**	**Source of Constituent**
2012	**Combined Radium 226 & 228 (pCi/L)**	1	1-1	5	5	N	Erosion of Natural Deposits
2016	**Xylenes (ppb)**	1.2	1.2	10	10	N	Discharge from petroleum factories, Discharge from Chemical factories

MAXIMUM RESIDUAL DISINFECTANT LEVEL

2016	Average Level of Quaterly data	Maximum Detected	Minimum Detected	MRDL	MRDLG	
Chloramine	2.59	3.01	2.21	4.0	<4.0	Disinfectant used to control microbes

	Contaminant	Highest Level	Range of Level	MCLG	MCL	Unit of Measure	Violation	Source of Contaminant
2016	Haloacetic Acids (HAA5)	13.0	6.0 - 13.0		60	ppb	N	Byproduct of Drinking Water Disinfection
2016	Total Trihalomethanes	38.0	20.0 - 38.0		80	ppb	N	Byproduct of Drinking Water Disinfection

Year	Constituent	Average Level	Minimum Level	Maximum Level	MCL	Units of Measure	Reason for Monitoring
2016	**Chloroform**	4.64	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
2016	**Bromoform**	11.62	1.0	14.1	100	ppb	
2016	**Bromodichloromethane**	10.76	1.0	20.0	100	ppb	
2016	**Dibromochloromethane**	17.6	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
2014	Copper	1.3	1.3	0.18	0	Ppm	N	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives.
2014	Lead	0	15	1.2	0	Ppb	N	Corrosion of household plumbing systems, erosion of natural deposits

Violation

We failed to test our drinking water for Lead and Copper in the year of 2011. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

Valley Mud #2 has since tested For Lead and Copper and complied with regulations as required meeting standards as indicated in the above table. Current regulations for our water district requires testing for Lead and Copper every 3 years with the next recurrence scheduled for the summer of 2017.

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. This water supply 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.

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	0.36 NTU	Soil runoff
Lowest monthly % meeting Limit	0 . 3 NTU	100%	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 2016.

Secondary and Other Constituents - Not Regulated
(No associated adverse health effects)

Year (Range)	Inorganic Contaminants	Highest Level Detected	Range of levels detected	MCLG	MCL	Unit of measure	Likely Source of Constituent
2016	Selenium	10	7.2-10	50	50	ppb	Abundant naturally Occurring Element
2016	Alkalinity Bicarbonate	132	132		NA	ppm	Corrosion of carbonated rocks such as limestone
2016	Calcium	67.5	67.5		NA	ppm	Abundant Naturally Occurring Element
2016	Chloride	256	256		300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2016	Copper	0.0038	0.0038		NA	ppm	Corrosion of household plumbing systems; erosion of natural deposits, leaching from wood preservatives
2016	Silver	0.01	0.01	0.1	0.1	ppm	Erosion of natural deposits
2016	Iron	0.036	0.036	0.036	.3	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
2016	Magnesium	26.2	26.2		NA	ppm	Abundant naturally occurring element
2016	Manganese	0.0076	0.0076	0.0076	0.05	ppm	Abundant naturally occurring element
2016	Nickel	0.0019	0.0019		NA	ppm	Erosion of Natural Deposits
2016	pH average	7.61	7.20	8.1	>6 : 9<	Positive Hidrogn Ions	Corrosive measurement of water
2016	Sodium	219	219		NA	ppm	Erosion of natural deposits, byproduct of oil field activity.
2015-2016	Sulfate	302	230-302	300	300	ppm	Naturally Occurring;, common industrial byproduct, byproduct of oil field activity
2016	Total Alkalinity	127	84-152		NA	ppm	Naturally occurring soluble mineral salts.
2016	Total Dissolved Solids	956	956	1000	1000	ppm	Total dissolved mineral constituents in water.
2016	Total Hardness as CaCO3	276	276		NA	ppm	Naturally occurring calcium
2016	Zinc	0.005	0.005	0.005	5	ppm	Moderately abundant naturally occurring element used in the metal industry.

CROSSCONNECTION AWARENESS

The month of June is Cross Connection Awareness Month, and Valley Municipal Utility District No. 2 (Valley MUD #2) encourages you to take the necessary precautions to help protect our drinking water from accidental contamination.

A cross-connection is the point at which a connection, such as a water substance can come into contact with drinking water. Seemingly innocent as a sprinkler system, hot tub or ornamental pond can easily enable contaminants to enter potable (drinking) water lines via backflow. Customers install potential cross connections like these and other water-using equipment every day, but they are often unaware of the potential dangers that lurk in the pipes as a result.

Backflow, caused by back siphonage and/or backpressure, is another concern for public water users. This is the unwanted reverse flow of non-potable water back into a water system which can cause accidental contamination of your drinking water. This sometimes happens when there's a sudden change in water pressure like when a fire hydrant is activated or when Valley MUD #2 crews repair a broken water main. This backflow or back siphonage becomes dangerous when any water outlet or garden hose along the water supply line is connected to harmful substances like a pesticide sprayer attachment or when a hose is submerged in polluted or contaminated water – even an animal water trough.

Backflow can allow bacteria, chemicals or physical contaminants to enter the water system if cross connections are uncontrolled, and this is harmful to public health.

The Valley MUD #2 Water Department takes every precaution possible to prevent cross connections and backflows from entering the distribution system. The cross connection control program ensures that customers eliminate cross connections whenever possible and control connections that can't be eliminated by installing Department of Health approved backflow preventers.

The Valley MUD #2 urges the proper installation of vacuum breakers (available at local hardware stores under $10.00) on all threaded faucets. These protection devices can be one of the best safeguards against water contamination. It is also necessary to install backflow prevention devices on sprinkler and irrigation systems.

Backflow and back siphonage prevention devices are inexpensive and can be found at most hardware and building supply stores.

If you have questions or concerns about backflow contamination, please call our Office at (956) 350-4136 .