

2015 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).

Public Participation Opportunities

Date: July 21, 2015

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. To request an agenda or to be placed on the 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 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 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 similar in operation to our own Reverse Osmosis plant.

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 these 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, Texas 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 ($\mu\text{g/L}$)

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.

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

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>.

Current regulations for our water district have us testing for Lead and Copper every 3 years and the next set of In house sampling for Lead and Copper tests is scheduled for the summer of 2017.

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.

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	0.72 NTU	Soil runoff
Lowest monthly % meeting Limit	0.3 NTU	96.8%	Soil runoff

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 one positive test for total coliform with follow up tests that came back negative for fecal coliform bacteria in 2015.

Inorganic Contaminants

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Unit of Measure	Violation	Source of Constituent
2015	Arsenic	3.2	3.2	10.0	0	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
2015	Barium	0.0929	0.0929	2.0	2.0	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; erosion of natural deposits.
2015	Fluoride	0.34	0.34	4	4	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2015	Nitrate	0.1	0.02 - 0.1	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tank sewage; Erosion of natural deposits.
2015	Nitrite	Less than 0.01	0.01	1	1	ppm	N	Runoff from fertilizer use; Leaching from septic tank sewage; Erosion of natural deposits.
2015	Cyanide	140	140	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel / metal factories.
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Unit of Measure	Violation	Source of Constituent
2012	Combined Radium 226 & 228	1	1-1	5	5	pCi/L	N	Erosion of Natural Deposits
2015	Xylenes	0.5	0.5	10	10	ppm	N	Discharge from petroleum factories, Discharge from Chemical factories

MAXIMUM RESIDUAL DISINFECTANT LEVEL

Chlorine / Chloramine Residual
Disinfection Byproducts

2015	Average Level of Quaterly data	Maximum Detected	Minimum Detected	MRDL	MRDLG		
Chloramine	2.19	3.10	1.50	4.0	<4.0	Disinfectant used to control microbes	
Contaminant	Highest Level	Range of Level	MCLG	MCL	Unit of Measure	Violation	Source of Contaminant
2015 Haloacetic Acids (HAA5)	10	1.1 - 10.0		60	ppb	N	Byproduct of Drinking Water Disinfection
2015 Total Trihalomethanes	32.2	10.0 - 21.2		80	ppb	N	Byproduct of Drinking Water Disinfection
Year	Constituent	Average Level	Minimum Level	Maximum Level	MCL	Units of Measure	Reason for Monitoring
2015	Chloroform	3.86	1.5	7.8	100	ppb	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants
2015	Bromoform	5.46	2.0	10.0	100	ppb	
2015	Bromodichloromethane	7.32	3.1	16.0	100	ppb	
2015	Dibromochloromethane	8.58	3.1	17.0	100	ppb	

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

Year (Range)	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of measure	Source of Constituent
2015	Chloroform	0.00386	0.002	0.00786	.05	ppm	Abundant naturally Occurring Element
2014-2015	Alkalinity Bicarbonate	98	86	110	NA	ppm	Corrosion of carbonated rocks such as limestone
2014-2015	Calcium	49.45	41.9	57	NA	ppm	Abundant Naturally Occurring Element
2014-2015	Chloride	143	129	157	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2015	Copper	0.0023	0.0023	0.0023	NA	ppm	Corrosion of household plumbing systems; erosion of natural deposits, leaching from wood preservatives
2014-2015	Silver	0.01	0.01	0.01	0.01	ppm	Erosion of natural deposits
2014-2015	Iron	0.0105	0.01	0.011	.3	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
2014-2015	Magnesium	16.7	13.3	20.7	NA	ppm	Abundant naturally occurring element
2014-2015	Manganese	0.0038	0.0033	0.0043	0.05	ppm	Abundant naturally occurring element
2014-2015	Nickel	0.0013	0.0011	0.0015	0.1	ppm	Erosion of Natural Deposits
2015	pH average	7.40	6.9	8.0	>6 : 9<	Positive Hydrogn Ions	Corrosive measurement of water
2014-2015	Sodium	125	109	140	NA	ppm	Erosion of natural deposits, byproduct of oil field activity.
2014-2015	Sulfate	190	149	230	300	ppm	Naturally Occurring;, common industrial by-product, byproduct of oil field activity
2015	Total Alkalinity	123	90	140	NA	ppm	Naturally occurring soluble mineral salts.
2014-2015	Total Dissolved Solids	585	494	675	1000	ppm	Total dissolved mineral constituents in water.
2014-2015	Total Hardness as CaCO ₃	192	159	225	NA	ppm	Naturally occurring calcium
2014-2015	Zinc	0.005	0.005	0.005	5	ppm	Moderately abundant naturally occurring element used in the metal industry.