

2016 Annual Drinking Water Quality Report

Consumer Confidence Report (CCR) for the period of January 1 through December 31, 2016

North Rural WSC – PWS ID No. 1820009

YOUR DRINKING WATER IS REGULATED AND MEETS OR EXCEEDS ALL FEDERAL (EPA) DRINKING WATER REQUIREMENTS: This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented on the enclosed attachment. We hope this information helps you become more knowledgeable about what's in your drinking water. For more information regarding this report contact our office at (940)327-0700. Our regular monthly Board Meetings are held at 6:30pm on the first Monday of each month at our office: 3810 N Highway 281, Mineral Wells, TX 76067.

Your drinking water is obtained from SURFACE water sources. It comes from Lake Palo Pinto, Palo Pinto Creek, and Hilltop Reservoir. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts on 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 at (800) 426-4791.

EN ESPAÑOL: Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo o hable con alguien que lo entienda bien.

SPECIAL NOTE: Immunocompromised 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/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 at (800) 426-4791.

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. We 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>.

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 include:

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.

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.

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

Radioactive Contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

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, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

SOURCE WATER ASSESSMENT

The TCEQ has completed a Source Water Assessment for all drinking water systems that own their sources. The report describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The system from which we purchase our water (The City of Mineral Wells) received the assessment report. For more information on source water assessments and protection efforts at our system, contact The City of Mineral Wells at (940)328-7777.

Source water assessment link: <http://www.tceq.texas.gov/gis/swaview>

Drinking Water Watch link: <http://www.dww.tceq.state.tx.us/DWWW/>

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 risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL) - 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.

Maximum Residual Disinfectant Level Goal (MRDLG) - The level of drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectant to control microbial contaminants.

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

MFL million fibers per liter (a measure of asbestos)

mrem/yr - millirems per year (a measure of radiation absorbed by the body)

n/a not applicable

NTU nephelometric turbidity units

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

ppb micrograms per liter (µg/L), or parts per billion, or one ounce in 7,350,000 gallons of water

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

ppt parts per trillion, or nanograms per liter

ppq parts per quadrillion, or pictograms

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2016 Regulated Contaminants / Lab Results from North Rural WSC

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90 th Percentile	No. Site Over AL	Units	Violation	Likely Source of Contamination
Copper	2016	1.3	1.3	0.1619	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
Lead	2016	0	15	2.3	1	ppb	N	Corrosion of household plumbing; Erosion of natural deposits.

Disinfectant Residual	Date Sample	Average Level	Minimum Level	Maximum Level	MRDL	MRDLF	Units	Likely Source of Contamination
Chloramine	2016	2.40	0.90	3.20	4.0	<4.0	ppm	Disinfectant used to control microbes

Systems must complete and submit disinfectant date on the Disinfectant Level Quarterly Operating Report (DLQOR). On the report, the system must provide disinfectant type, minimum, maximum and average levels.

Disinfectant and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2016	38.4	19.0-38.4	N/A	60	ppb	N	By-product of drinking water disinfection
Total Trihalomethanes (TTHm)	2016	104	40.3-104	N/A	80	ppb	N	By-product of drinking water disinfection
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Nitrate (Measured as Nitrogen)	2016	0.104	0.048 – 0.104	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

TOTAL COLIFORM REPORTED MONTHLY TESTS FOUND NO COLIFORM BACTERIA. FECAL COLIFORM REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA.

Water Loss Estimate

In the Water Loss Audit submitted to the Texas Water Development Board for the time period of January-December 2016, our system lost an estimated 8,289,400 gallons. This calculates to 12.2298% loss of total purchased water. The TCEQ's acceptable percentage of water loss is 10%. If you have any questions about the Water Loss Audit, please call our office at (940)327-0700.

Violations

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Inorganic Contaminants	Collection Date	Highest Level Detecte	Range of Levels Detecte	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	6/08/16	1	.71-.71	0	10	ppb	N	Erosion of natural deposits; Runoff of orchards; Runoff from glass and electronics production waste.
Barium	6/08/16	0.071	0.071-0.071	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural
Cyanide	6/08/16	40.6	40.6-40.6	200.0	200.0	ppb	N	Discharge from plastic and fertilizer factories; Discharge from stell/metal factories.
Fluoride	6/08/16	0.218	0.218-0.218	4.0	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen)	6/08/16	0.031	0.031	10	10	ppm	N	Runoff from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	3-09-2011	5.8	5.8-5.8	0	50	pCi/L	N	Decay of natural and man-made deposits
EPA considers 5- pCi/L to be the level of concern for beta particles.								
Combined Radium 226/226	3-09-2011	1	1-1	0	5	pCi/L	N	Erosion of natural deposits

Synthetic Organic Contaminants Including Pesticides & Herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Di (2-ethylhexyl) phthalate	6/08/16	0.5	0.5-0.5	0	6	ppb	N	Likely source of contamination discharge from rubber and chemical factories

Turbidity	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.17 NTU	N	Soil runoff
Lowest monthly % meeting limit	0.3 NTU	100%	N	Soil runoff

*Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration

Total Organic Carbon	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Source Water	2016	5.82	5.00-7.40	N/A	N/A	ppm	N	Naturally present in the environment
Drinking Water	2016	3.06	2.70-3.40	N/A	N/A	ppm	N	Naturally present in the environment
Removal Ratio	2016	1.42	1.18-1.64	N/A	N/A	% removal*	N	N/A

*Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.

Total Organic Carbon (TOC) has no health effects. The disinfectant can combine with TOC to form disinfection by-products.

Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. By-products of disinfection include Trihalomethanes (THMs) and Haloacetic acids (HAA) which are reported elsewhere in this report.

Cryptosporidium Monitoring Information: In 2016 the City of Mineral Wells tested our raw water monthly for Cryptosporidium, a microbial parasite found in surface water. Cryptosporidium may come from animal and human feces in the watershed. The results of our monitoring found no Cryptosporidium present.

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Total Coliform: Reported monthly tests found no coliform bacteria
Fecal Coliform: Reported monthly tests found no fecal coliform bacteria

2016 UNREGULATED CONTAMINANTS DETECTED

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chloroform	2016	10.7	1.28-10.7	N/A	N/A	ppb	N	By-product of drinking water disinfection
Bromoform	2016	61.40	1.58-61.4	N/A	N/A	ppb	N	By-product of drinking water disinfection
Bromodichloromethane	2016	15.30	4.6-15.3	N/A	N/A	ppb	N	By-product of drinking water disinfection
Dibromochloromethane	2016	37.8	9.8-37.8	N/A	N/A	ppb	N	By-product of drinking water disinfection

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of the unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulations are warranted.

Secondary and Other Constituents Not Regulated	Collection Date	Highest Level Detected	Range of Levels Detected	Secondary Limit	Units	Violation	Likely Source of Contamination
Bicarbonate	6/08/16	75.5	75.5-75.5	N/A	ppm	N	Corrosion of carbonate rocks such as limestone
Chloride	6/08/16	33.9	33.9-33.9	300	ppm	N	Abundant naturally occurring element; used in water purification; by-product of oil field activity
Hardness as Ca/Mg	6/18/16	107	107-107	N/A	ppm	N	Naturally occurring calcium and magnesium
pH	3/09/11	7.9	7.9-7.9	8.5	pH unit	N	Measure of corrosivity of water
Sodium	6/08/16	30.9	30.9-30.9	N/A	ppm	N	Erosion of natural deposits; by-product of oil field activity
Sulfate	6/08/16	50.8	50.8-50.8	300	ppm	N	Naturally occurring; common industrial by-product; by-product of
Total Alkalinity as CaCO ₃	6/08/16	20	20-20	N/A	ppm	N	Naturally occurring soluble mineral salts
Total Dissolved Solids	6/08/16	224	224-224	1000	ppm	N	Total dissolved mineral constituents in water

No associated health risks.