

2017 Consumer Confidence Report for Public Water System RICE WSC

This is your water quality report for January 1 to December 31, 2017

RICE WSC provides surface water from Navarro Mills, Lake Halbert, and Lake Bardwell located in City of Corsicana and City of Ennis.

Definitions and Abbreviations

Definitions and Abbreviations	The following tables contain scientific terms and measures, some of which may require explanation.
Action Level:	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Action Level Goal (ALG):	The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.
Avg:	Regulatory compliance with some MCLs are based on running annual average of monthly samples.
Level 1 Assessment:	A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.
Level 2 Assessment:	A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.
Maximum Contaminant Level or MCL:	The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
Maximum Contaminant Level Goal or 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 or 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 or 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 contaminants.
MFL	million fibers per liter (a measure of asbestos)
mrem:	millirems per year (a measure of radiation absorbed by the body)
na:	not applicable.
NTU	nephelometric turbidity units (a measure of turbidity)
pCi/L	picocuries per liter (a measure of radioactivity)
ppb:	micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.
ppm:	milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.
ppq	parts per quadrillion, or picograms per liter (pg/L)
ppt	parts per trillion, or nanograms per liter (ng/L)

Definitions and Abbreviations

Treatment Technique or TT:

A required process intended to reduce the level of a contaminant in drinking water.

Information about your 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.

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 at (800) 426-4791.

Contaminants that may be present in source water 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.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the system's business office.

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; persons who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders, can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care providers. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (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 are responsible for providing high quality drinking water, but 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

In the water loss audit submitted to the Texas Water Development Board for the time period of Jan.-Dec. 2017, our system lost an estimated 10,183,101 gallons of water.

the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Information about Source Water

RICE WSC purchases water from CITY OF CORSICANA. CITY OF CORSICANA provides purchase surface water from Navarro Mills and Lake Halbert located in Navarro County. .

RICE WSC purchases water from CITY OF ENNIS. CITY OF ENNIS provides purchase surface water from Lake Bardwell located in Ellis County.

TCEQ completed a Source Water Susceptibility for all drinking water systems that own their sources. This report describes the susceptibility and types of constituents that may come into contact with the drinking water source based on human activities and natural conditions. The system(s) from which we purchase our water received the assessment report. For more information on source water assessments and protection efforts at our system contact Ada Garza at (903) 326-5551.

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	1 positive monthly sample.	1		0	N	Naturally present in the environment.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	08/09/2016	1.3	1.3	0.176	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	08/09/2016	0	15	2.43	1	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

2017 Water Quality Test Results

Disinfection By-Products	Collection Date	Highest Level or Average Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2017	28	3.4 - 32.3	No goal for the total	60	ppb	N	By-product of drinking water disinfection.

* The value in the Highest Level or Average Detected column is the highest average of all HAA5 sample results collected at a location over a year'

Total Trihalomethanes (TTHM)	2017	48	36.6 - 53.6	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
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* The value in the Highest Level or Average Detected column is the highest average of all TTHM sample results collected at a location over a year'

Inorganic Contaminants	Collection Date	Highest Level or Average Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Nitrate [measured as Nitrogen]	2017	0.0835	0.0575 - 0.0835	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Disinfectant Residual

Disinfectant Residual	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
Disinfectant Residual quarterly	2017	1.98	.52 - 3.4	4	4	ppm	N	Water additive used to control microbes.

Average Chlorine Residual
2017

Month	Average Residual (mg/L)
January	2.29
February	2.22
March	2.09
April	1.82
May	1.93
June	2.06
July	1.94
August	2.02
September	2.13
October	2.34
November	2.03
December	2.21
2017 Yearly Average	2.09 mg/L

Min reading 0.5 mg/l
 Max Reading 3.4 mg/l

TTHM's 2017

Date of Samples	1/17/2017	4/19/2017	7/26/2017	11/16/2017	
Address of Sample	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Average of Quarters
4501 E HWY 31	29.4	46.0	61.5	50.6	46.9
2103 W 15th Ave	31.4	46.2	54.5	44.6	44.2
3500 Northpark	30.7	47.0	55.9	43.2	44.2
700 E 16th Ave	29.0	42.0	58.4	41.7	42.8
Average for each quarter	30.1	45.3	57.6	45.0	44.5

Haa5's 2017

Date of Samples	1/17/2017	4/19/2017	7/26/2017	11/16/2017	
Address of Sample	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Average of Quarters
4501 E HWY 31	20.6	25.0	36.8	20.9	25.8
2103 W 15th Ave	21.0	23.7	32.9	14.4	23.0
3500 Northpark	22.1	24.7	32.9	15.1	23.7
700 E 16th Ave	16.2	13.0	21.1	9.9	15.1
Average for each quarter	20.0	21.6	30.9	15.1	21.9

Regulated Substances

These substances are regulated or are required to be monitored and were detected in Ennis tap water. None of the detected substances exceeded the regulated limits.

Year	Substance	Units	Average	Minimum	Maximum	MCL	MCLG	Possible Source
2017	Barium	ppm	0.059	0.059	0.059	2	2	Erosion of natural deposits, discharge from drilling and metal refineries
2017	Chromium	ppm	0.0011	0.0011	0.0011	0.1	0.1	Naturally present in the environment
2017	Fluoride	ppm	0.592	0.592	0.592	4	4	Erosion of natural deposits, water additive which promotes strong teeth, discharge from fertilizer and aluminum factories
2017	Nitrate *1	ppm	0.694	0.694	0.694	10	10	Runoff from fertilizer, septic tanks, sewage, natural deposits
2011	Beta/Photon emitters*2	pCi/L	4.5	4.5	4.5	50	0	Decay of natural and man – made deposits
2011	Combined Radium 226&228	pCi/L	1	1	1	5	0	Decay of natural and man – made deposits
2017	Chloramines *3	ppm	3.5	2.2	4	MRDL=4	MRDLG=4	Disinfectant used to control microbes
2017	Total Haloacetic Acids *4	ppb	14.24	11.8	20.2	60	NA	Byproduct of drinking water disinfection
2017	Total Trihalomethanes *4	ppb	33.08	31.5	44.7	80	NA	Byproduct of drinking water disinfection
2017	Total Organic Carbon (TOC) *5	Measured in Source Water and Drinking Water as listed below.						
2017	Source Water	ppm	4.39	3.98	5.32			Naturally present in the environment
2017	Drinking Water	ppm	2.7	2	3.2			Naturally present in the environment
2017	Removal Ratio	%	1.26	1	1.99	%Removal*		NA
Year	Substance	Units	Highest Single Measurement		Lowest Monthly % of Samples Meeting Limit		Turbidity Limits	Possible Source
2017	Turbidity *6	NTU	0.08		100		0.3	Soil runoff
Year	Substance *7	Units	Action Level	Number of Sites > Action Level		90th Percentile		Possible Source
2016	Lead	ppm	0.015	0	NA	NA		Corrosion of household plumbing systems; erosion of natural deposits
2016	Copper	ppm	1.3	0	NA	NA		Corrosion of household plumbing systems, corrosion of natural deposits, leaching from wood preservatives.

Unregulated and Substances of Interest

Year	Substance	Units	Average	Minimum	Maximum	MCL	MCLG	Possible Source
2017	Chloroform	ppb	11.17	7.09	13.2	Not Regulated	Not Regulated	By-product of drinking water disinfection; not regulated individually; included in Total Trihalomethanes
2017	Bromoform	ppb	2.34	1.25	2.73	100	100	
2017	Bromochloromethane	ppb	14.11	12.2	16.3	Not Regulated	Not Regulated	
2017	Dibromochloromethane	ppb	10.46	7.98	12.6	Not Regulated	Not Regulated	
2017	Acetone	ppb	7.27	7.27	7.27	Not Regulated	Not Regulated	plants, animals, volcanoes, and forest fires
2017	Aluminum	ppm	0.0099	0.0099	0.0099	0.05	0.05	Abundant naturally occurring element
2017	Hardness as Ca/Mg	ppm	114	114	114	NA	NA	Naturally occurring calcium and magnesium
2017	pH	ppm	7.5	7.1	7.7	>7.0	>7.0	Measure of corrosiveness of water

2017	Sodium	ppm	25.8	25.8	25.8	NA	NA	Erosion of natural deposits, by-product of oil field activity
2017	Calcium	ppm	42.00	42.00	42.00	NA	NA	Abundant naturally occurring element
2017	Magnesium	ppm	2.34	2.34	2.34	NA	NA	Abundant naturally occurring element
2017	Sulfate	ppm	46.8	46.8	46.8	300	300	Naturally occurring; common industrial by-product; by-product of oil field activity
2016	Total Alkalinity as CaCO3	ppm	101	101	101	NA	NA	Naturally occurring soluble mineral salts
2017	Total Dissolved Solids	ppm	219	219	219	1000	1000	Total dissolved mineral constituents in water