

2022 Consumer Confidence Report for Public Water System RICE WSC

This is your water quality report for January 1 to December 31, 2022

RICE WSC provides surface water from City of Corsicana at Lake Halbert and Navarro Mills Lake and the City of Ennis from Lake Bardwell.

Phone _____

Name Ada Garza

Phone 903-326-5551

Este reporte incluye información importante sobre el agua para tomar.
Para asistencia en español, favor de llamar al teléfono 903-326-5551.

Definitions and Abbreviations

Definitions and Abbreviations

Action Level:

Avg:

Level 1 Assessment:

Level 2 Assessment:

Maximum Contaminant Level or MCL:

Maximum Contaminant Level Goal or MCL-G:

Maximum residual disinfectant level or MRDL:

Maximum residual disinfectant level goal or MRDL-G:

MFL

mrem: millirem per year (a measure of radiation absorbed by the body)

na: not applicable.

NTU: nephelometric turbidity units (a measure of turbidity)

picocuries per liter (a measure of radioactivity)

For more information regarding this report contact:

Definitions and Abbreviations

ppb:	micrograms per liter or parts per billion
ppm:	milligrams per liter or parts per million
ppq	parts per quadrillion, or picograms per liter (pg/L)
ppt	parts per trillion, or nanograms per liter (ng/L)
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 the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

In the water loss audit submitted to the Texas Water Development Board for the period of Jan-Dec 2022, our system lost an estimated 3,1356,690 gallons or 1 %.

Information about Source Water

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

RICE WSC purchases water from CITY OF CORSICANA. CITY OF CORSICANA provides purchase surface water from **Lake Halbert and Navarro Mills** located in **Navarro 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 samples	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli samples	Violation	Likely Source of Contamination
0	1 positive monthly sample.	0	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	2022	1.3	1.3	0.52	0	ppm	N	Erosion of natural deposits; Leaching from food preservatives; Corrosion of household plumbing systems.

Average Chlorine Residual

2022

Month	Average Residual (mg/L)	2022 Yearly Average
January	2.40	
February	2.07	
March	1.98	
April	1.91	
May	2.06	
June	1.91	
July	1.89	
August	1.85	
September	1.91	
October	2.30	
November	2.12	
December	2.40	
		2.07 mg/L

Min reading 0.5 mg/L
Max reading 3.8 mg/L

Detected Regulated Contaminants for 2022

EP2 Lake Habicht	SOC Pesticide	Detected Quantity	MCL	Date Collected	Analytical Method
Atrazine	0.2 ug/L	3 ug/L	6/21/2022	E525.2 GC/MS	
VOC's	Detected Quantity	MC/L	Date Collected	Analytical Method	
Acetone	11.6 ug/L	N/A	8/23/2022	E524.2 GC/MS	
Chloroform	22.8 ug/L	N/A	8/23/2022	E524.2 GC/MS	
Bromodichloromethane	21.5 ug/L	N/A	8/23/2022	E524.2 GC/MS	
Dibromochloromethane	9.69 ug/L	N/A	8/23/2022	E524.2 GC/MS	
Inorganics	17.7 mg/L	300.0 mg/L	4/14/2022	E300.0 Anions	
Chloride	0.498 mg/L	4.0 mg/L	4/14/2022	E300.0 Anions	
Fluoride	0.181 mg/L	10.0 mg/L	4/14/2022	E300.0 Anions	
Nitrate (as N)	0.181 mg/L	10.0 mg/L	4/14/2022	E300.0 Anions	
Sulfate	63.9 mg/L	300.0 mg/L	4/14/2022	E300.0 Anions	
Total Dissolved Solids	221 mg/L	1000.0 mg/L	4/14/2022	SM2540C	
Inorganics	43.4 mg/L	N/A	4/14/2022	E200.7 Metals, Trace	
Potassium Total	4.76 mg/L	N/A	4/14/2022	E200.7 Metals, Trace	
Magnesium Total	3.47 mg/L	N/A	4/14/2022	E200.7 Metals, Trace	
Sodium Total	24.4 mg/L	N/A	4/14/2022	E200.7 Metals, Trace	
Metals Trace Elements	0.022 mg/L	0.2 mg/L	4/14/2022	E200.8 ICP-MS	
Aluminum Total	0.059 mg/L	2.0 mg/L	4/14/2022	E200.8 IC-MS	
Barium Total	0.001100	0.10 mg/L	4/14/2022	E200.8 IC-MS	
Copper Total	0.0015 mg/L	1.0 mg/L	4/14/2022	E200.8 IC-MS	
Only contaminants at detectable level reported					

DEFINITIONS

ug/L parts per billion or micrograms per liter
mg/L parts per million or milligrams per liter

Only contaminants at detectable level reported

Detected Regulated Contaminates for 2022

EP 1 Navarro Mills

VOC's	Acetone	10.4 ug/L	N/A	8/23/2022	E524.2 GC/MS
Inorganics	Chloroform	16.0 ug/L	N/A	8/23/2022	E524.2 GC/MS
	Bromodichloromethane	18.7 ug/L	N/A	8/23/2022	E524.2 GC/MS
	Dibromochloromethane	12.7 ug/L	N/A	8/23/2022	E524.2 GC/MS
	Sulfate	49.3 mg/L	300.0 mg/L	4/14/2022	E300.0 Anions
	Nitrate (as N)	0.0882 mg/L	10.0 mg/L	4/14/2022	E300.0 Anions
	Fluoride	0.554 mg/L	4.0 mg/L	4/14/2022	E300.0 Anions
	Chloride	14.1 mg/L	300.0 mg/L	4/14/2022	E300.0 Anions
	Total Dissolved Solids	222 mg/L	1000.0 mg/L	4/14/2022	SM2540C
Inorganics					
Metals Trace Elements	Calcium	44.9 mg/L	N/A	4/14/2022	E200.7 Metals, Trace
	Magnesium	3.12 mg/L	N/A	4/14/2022	E200.7 Metals, Trace
	Potassium	3.93 mg/L	N/A	4/14/2022	E200.7 Metals, Trace
	Sodium Total	20.4 mg/L	N/A	4/14/2022	E200.7 Metals, Trace
Metals Trace Elements	Aluminum Total	0.048 mg/L	0.2 mg/L	4/14/2022	E200.8 ICP-MS
	Barium Total	0.047 mg/L	2.0 mg/L	4/14/2022	E200.8 ICP-MS
	Chromium	<0.00100 mg/L	0.10 mg/L AL	4/14/2022	E200.8 ICP-MS
	Copper Total	0.0022 mg/L	1.0 mg/L AL	4/14/2022	E200.8 ICP-MS
	Manganese Total	0.0019 mg/L	0.05 mg/L	4/14/2022	E200.8 ICP-MS
	Nickel Total	0.0012 mg/L	.1 mg/L	4/14/2022	E200.8 ICP-MS

DEFINITIONS

ug/l parts per billion or micrograms per liter
mg/l parts per million or milligrams per liter

CITY OF CORSICANA

Turbidity and TOC 2022											
Lake Halibert											
Navarro Mills											
NTU						TOC					
Month	Average	Highest	% Compliance	Raw TOC	Tap TOC	% Removal	% Compliance	Month	Average	Highest	% Compliance
Jan	0.03	0.14	100	3.78	2.89	23.5	207	Jan	0.04	0.14	100
Feb	0.04	0.16	100	3.95	2.95	25.3	101	Feb	0.03	0.11	100
Mar	0.05	0.15	100	4.39	3.36	23.5	207	Mar	0.03	0.17	100
Apr	0.05	0.13	100	4.12	3.30	19.9	100	Apr	0.02	0.14	100
May	0.04	0.11	100	3.99	3.43	14.0	100	May	0.03	0.12	100
Jun	0.03	0.10	100	4.14	3.17	23.4	100	Jun	0.03	0.12	100
Jul	0.04	0.12	100	4.23	3.34	21.0	100	Jul	0.03	0.14	100
Aug	0.03	0.10	100	5.02	3.90	22.3	100	Aug	0.03	0.08	100
Sep	0.04	0.11	100	4.71	3.63	22.9	100	Sep	0.03	0.08	100
Oct	0.07	0.14	100	4.77	3.66	23.3	100	Oct	0.06	0.09	100
Nov	0.08	0.14	100	5.3	4.36	17.7	100	Nov	0.05	0.12	100
Dec	0.08	0.14	100	5.29	3.55	32.9	100	Dec	0.05	0.13	100
Average	0.05			4.47	3.46	22.5	117.9		0.04		
				NTU	Raw TOC	Tap TOC	% Removal				
Average Both Plants				0.04	4.48	3.27	26.8				

TOC % compliance is based on compliance with the TCEQ rules on TOC removal. Plants must meet or exceed 100% compliance based on a running quarterly average.

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TTHM's 2022

Date of Samples	3/10/2022	4/14/2022	8/23/2022	8/23/2022	11/15/2022	Average of Quarters
Address of Sample	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Average for each quarter	Average for each quarter
4501 E HWY 31	32.2	36.5	62.1	43.9	43.7	43.7
2117 W 15th Ave	40.2	46.1	60.0	49.5	49.0	49.0
3500 Northpark	41.6	45.1	63.3	49.7	49.9	49.9
700 E 16th Ave	37.2	41.7	58.4	48.8	46.5	46.5
Average for each quarter	37.8	42.4	61.0	48.0	47.3	47.3

Haa5's 2022

Date of Samples	3/10/2022	4/14/2022	8/23/2022	8/23/2022	11/15/2022	Average of Quarters
Address of Sample	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Average for each quarter	Average for each quarter
4501 E HWY 31	14.6	16.7	22.5	10.9	16.2	16.2
2117 W 15th Ave	16.0	15.0	18.9	13.4	15.8	15.8
3500 Northpark	15.7	14.9	18.4	14.8	16.0	16.0
700 E 16th Ave	14.8	11.2	18.5	11.3	14.0	14.0
Average for each quarter	15.3	14.5	19.6	12.6	15.5	15.5

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.

Regulated Substances

Notes: *1 Nitrate Advisory - Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider. *2 EPA considers 50 µg/L to be the level of concern for beta particles. *3 Systems must complete and submit disinfection data on the Surface Water Monthly Operators Report (SWMOR). On the CCR report, the system must provide disinfection type, minimum, maximum and average level. *4 All sample results have been used for calculating the Highest Level Detected. *5 Total Organic Carbon (TOC) no health effects. The disinfection can combine with TOC to form disinfection byproducts. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. Byproducts of disinfection include Trihalomethanes (THMs) and haloacetic acids (HAA). *6 Turbidity has no health effects. Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed. *7 Definitions: Action Level Goal (ALG): The level of a contaminant in drinking water which there is no known or expected risk to health. ALGs allow for a margin of safety. Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. 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.

Year	Total Bacterial Samples Collected	Maximum Contamination Level Goal	Total Coliform	Highest E. coli Positive No. of	No. of	0	0	*8	N	Naturally present in the environment
2022	240	0	0	0	0	0	0	0	N	

Coliform Bacteria *8

Year	Substance	Units	Concentration Number of Sites AL	MCL	90 th Percentile	Violation	Possible Source	Corrosion of household plumbing systems, corrosion of natural deposits, leaching from wood preservatives		
2022	Texas Copper	ppm	0.0014	0	1.0	NA	N			

Lead and Copper *7

Year	Substance	Units	Highest Single Measurement	Minimum	Lower % of Samples Meeting Limit	Turbidity Limits	Possible Source	Corrosion of household plumbing systems, corrosion of natural deposits, leaching from wood preservatives		
2022	Turbidity	NTU	0.1	0.06	100	0.3	0.3			Soil runoff

Turbidity *6

Year	Source Water	ppm	5.17	4.44	6.0	90 th Percentile	Violations	Naturally present in the environment		
2022	Drinking Water	ppm	3.05	2.69	3.54	1.48	% Removal*			NA
2022	Removal Ratio	%	1.17	1.0	1.0	1.48	% Removal*			Naturally present in the environment
2022	Trihalomethanes (THMs)*4	ppb	42.78	28.5	59.1	80	No goal for the total			Byproduct of drinking water disinfection

Total Organic Carbon (TOC)*5

Year	Substance	Units	Highest Single Measurement	Minimum	Lower % of Samples Meeting Limit	Turbidity Limits	Possible Source	Corrosion of household plumbing systems, corrosion of natural deposits, leaching from wood preservatives		
2022	Nitrate (measured as Nitrogen)*1	ppm	0.460	0.0586	1.09	10	10	Rust from fertilizer, septic tanks, sewage, natural deposits		
2022	Chloramines*3	ppm	3.18	2.86	3.39	MRLG=4	MRLG=4	Disinfectant used to control microbes		
2022	Total Haloacetic Acids (HAA5)*4	ppb	11.56	9.5	16.3	60	No goal for the total			Byproduct of drinking water disinfection
2022	Fluoride	ppm	0.368	0.368	0.368	4	4	Erosion of natural deposits, water discharge which promotes strong teeth, additives which promote strong teeth, discoloration from fertilizer and aluminum factories		
2022	Arazine	ppb	0.10	0.10	3.0	3.0	3.0	Rust from fertilizer used on row crops		
2022	Barium	ppm	0.064	0.064	2.0	2.0	2.0	Erosion of natural deposits, discharge from natural deposits, mineral refineries		

CITY OF ENNIS

Year	Substance	Unit	Average	Minimum	Maximum	MCL	MCLG	Possible Source
2022	Unregulated and Secondary Drinking Water Standards							
2022	Chlorine	ppm	0.001	0.0018	0.0018	0.1	0.1	Naturally occurring in the environment
2022	Calcium	ppm	44.1	44.1	44.1	NA	NA	Abundant naturally occurring element
2022	Conductivity @ 25 C	UMHOES/CM	403.000	403.000	403.000	NA	NA	Conductivity of water is its ability to conduct electric current. Salts or other chemicals that dissolve break down into positive and negative ions
2022	Chloride	ppm	28.1	28.1	28.1	250	NA	Chlorides may get into surface water from several sources including: rocks containing chlorides, agriculture runoff, chlorides, and effluent wastewater from industries, oil well wastes, and treatment plants
2022	Hardness as Ca/Mg	ppm	120	120	120	NA	NA	Naturally occurring calcium and magnesium

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated future regulation is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether contamination monitoring is to be conducted drinking water standards. The purpose of unregulated and secondary drinking water is warranted. Any unregulated contaminants detected are reported in the following table. For additional information and data visit [https://www.epa.gov/dwucmr/journal/unregulated-contaminant-monitoring-rule](http://www.epa.gov/dwucmr/journal/unregulated-contaminant-monitoring-rule), or call the Safe Drinking Water Hotline at (800) 426-4791.

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Collaborative, Federal Coordinating Council, or E. coli maximum contaminant level (MCL). A routine sample and a repeat sample are total coliform positive and one is also fecal coliform or E. coli positive. A violation occurs if both a routine sample and a repeat sample are total coliform positive. A violation occurs if fecal coliform or E. coli are ever positive.

Methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Helpline (800) 426-4791 or at <http://www.epa.gov/safewater/lead>. *8

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 for detecting lead in your water, and steps you can take to minimize exposure is available from the Safe Drinking Water Helpline (800) 426-4791 or at <http://www.epa.gov/safewater/lead>. *

When you 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 for detecting lead in your water, and steps you can take to minimize exposure is available from the Safe Drinking Water Helpline (800) 426-4791 or at <http://www.epa.gov/safewater/lead>. *

2022	pH	pH	7.59	7.36	7.76	6.5-8.5	6.5-8.5	Measure of corrosiveness of water
2022	Sodium	ppm	26.8	26.8	NA	NA	Erosion of natural deposits, by-product of oil field activity	
2022	Magnesium	ppm	2.53	2.53	NA	NA	Abundant naturally occurring element	
2022	Manganese	ppm	0.002	0.0022	0.0022	0.05	NA	Abundant naturally occurring element
2022	Potassium	ppm	7.56	7.56	NaI Regulated	NaI Regulated	Abundant naturally occurring element	
2022	Sulfate	ppm	46.5	46.5	250	250	Naturally occurring; common industrial by-product; by-product of oil field activity	
2022	Total Alkalinity as CaCO ₃	ppm	105	105	NA	NA	Naturally occurring soluble mineral salts	
2022	Total Dissolved Solids	ppm	196	196	500	500	Total dissolved mineral constituents in water	