

2020 Consumer Confidence Report for Public Water System RICE WSC

This is your water quality report for January 1 to December 31, 2020

RICE WSC provides surface water from [insert source name of aquifer, reservoir, and/or river] located in [insert name of County or City]

For more information regarding this report contact:

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

Definitions and Abbreviations

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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.

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)

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>.

Information about Source Water

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

In the Water Loss Audit submitted to the Texas Water Development board for the period of Jan-Dec 2020, our system lost an estimated 6,564,432 gallons of water or 2.7 %.

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 [\[insert water system contact\]](#)[\[insert phone number\]](#).

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2020	1.3	1.3	0.15	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

2020 Water Quality Test Results

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2020	31	2 - 37.9	No goal for the total	50	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)	2020	53	37.2 - 56.9	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 Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Nitrate [measured as Nitrogen]	2020	1	0.694 - 0.948	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
DLQR	2020	2.02	.65-3.6	4	4	mg/l	N	Water additive used to control microbes.

Regulated Substances

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

Year	Substance	Units	Average	Minimum	Maximum	MCL	MCLG	Possible Source
2020	Barium	ppm	0.059	0.059	0.059	2	2	Erosion of natural deposits, discharge from drilling and metal refineries
2020	Metolachlor	ppm	0.0001	0.0001	0.0001	0.04	0.04	Runoff from herbicide used on row crops
2020	Azinphos	ppm	0.0002	0.0002	0.0002	0.003	0.003	Runoff from herbicide used on row crops
2020	Cyanide	ppm	0.148	0.148	0.148	0.2	0.2	Discharge from steel/metal factories, plastic factories and runoff from fertilizer
2020	Sinazine	ppm	0.00006	0.00006	0.00006	0.004	0.004	Runoff from herbicide used on row crops
2020	Fluoride	ppm	0.242	0.242	0.242	4	4	Erosion of natural deposits, water additive which promotes strong teeth, discharge from fertilizer and aluminum factories
2020	Nitrate (measured as Nitrogen) *1	ppm	1.09	1.09	1.09	10	10	Runoff from fertilizer, septic tanks, sewage, natural deposits
2017	Beta/phenol esters *2	µC/L	6.3	6.3	6.3	50	0	Decay of natural and man-made deposits
2017	Controlled Radionuclides 226/228	µCi/L	1.5	1.5	1.5	5	0	Erosion of natural deposits
2020	Chloramines *3	ppm	3.09	2.81	3.41	MROCL=4	MROCLG=4	Disinfectant used to control microbes
2020	Total Halogenic Acids (THAA) *4	ppb	12.3	9.0	30.4	60	No goal for the total	Byproduct of drinking water disinfection
2020	Total Trihalomethanes (TTHM) *4	ppb	32.5	29.6	38.5	80	No goal for the total	Byproduct of drinking water disinfection

Total Organic Carbon (TOC) *5

Year	Substance	Units	Average	Minimum	Maximum	MCL	MCLG	Possible Source
2020	Source Water	ppm	3.98	3.55	4.46			Naturally present in the environment
2020	Drinking Water	ppm	2.25	2.25	2.46			Naturally present in the environment
2020	Removal Ratio	%	1.5	1.17	2.50	*Removal**		NA

Turbidity *6

Year	Substance	Units	Highest Single Measurement	Minimum	Lowest Monthly % of Sample Meeting Limit	MCL	Turbidity Limits	Possible Source
2020	Turbidity	NTU	0.08	0.03	100	0.3	0.3	Soil runoff

Lead and Copper *7

Year	Substance	Units	Action Level (AL)	Number of Sites AL	MCLG	90th Percentile	Violations	Possible Source
2019	Lead	ppb	1.5	0	0	1.2	N	Corrosion of household plumbing systems, erosion of natural deposits
2019	Copper	ppb	1.3	0	1.3	0.17	N	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives

Year	Substance	Units	Average	Minimum	Maximum	MCL	MCLG	Possible Source
2020	Chloroform	ppb	10.2	9.63	11.1	Not Regulated	Not Regulated	By-product of drinking water disinfection. Not regulated individually, included in Total Trihalomethanes
2020	Bromoform	ppb	1.8	1.36	13.3	100	100	
2020	Bromo-chloromethane	ppb	13.98	10.9	13.4	Not Regulated	Not Regulated	
2020	Dibromo-chloromethane	ppb	8.47	7.64	9.73	Not Regulated	Not Regulated	
2020	Aluminum	ppm	0.020	0.020	0.020	0.05	0.05	Abundant naturally occurring element
2020	Nickel	ppm	0.0014	0.0014	0.0014	0.100	0.100	Corrosion of household plumbing systems, erosion of natural deposits
2020	Arsenic	ppm	0.00563	0.00563	0.00563	0	0	Naturally occurring, common industrial by-product
2020	Conductivity at 25°C (1 MmD/C/M)	µMHO/CM	380,000	380,000	380,000	NA	Not Regulated	Conductivity of water is its ability to conduct electric current. Salts or other chemicals that dissolve break down into positive and negative ions
2020	Chloride	ppm	24.2	24.2	24.2	300	Not Regulated	Chloride may get into surface water from several sources including: rocks contain chlorides, agricultural run-off, waste water from industries, oil well wastes, and effluent waste water from waste water treatment plants
2020	Hardness as Ca/Mg	ppm	131	131	131	NA	NA	Naturally occurring calcium and magnesium
2020	pH	ppm	7.44	7.26	7.61	-7.0	-7.0	Measure of corrosiveness of water
2020	Sodium	ppm	21.5	21.5	21.5	NA	NA	Erosion of natural deposits, by-product of oil field activity
2020	Calcium	ppm	48.4	48.4	48.4	NA	NA	Abundant naturally occurring element
2020	Magnesium	ppm	2.93	2.93	2.93	NA	NA	Abundant naturally occurring element
2020	Potassium	ppm	5.92	5.92	5.92	Not Regulated	Not Regulated	Abundant naturally occurring element
2020	Sulfate	ppm	39.2	39.2	39.2	300	300	Naturally occurring, common industrial by-product, by-product of oil field activity
2020	Total Alkalinity as CaCO3	ppm	106	90	156	NA	NA	Naturally occurring soluble mineral salts
2020	Total Dissolved Solids	ppm	222	222	222	1000	1000	Total dissolved mineral constituents in water

Detected Regulated Contaminates for 2020

EP 1 Navarro Mills

SOC Pesticide	Detected Quantity	MCL	Date Collected	Analytical Method
Atrazine	0.2 ug/l	N/A	1/30/2020	E525.2 GC/MS
Metolachlor	0.1 ug/l	N/A	1/30/2020	E525.2 GC/MS

VOC's

Acetone	5.43 ug/l	N/A	9/24/2020	E524.2 GC/MS
Chloroform	29.2 ug/l	N/A	9/24/2020	E524.2 GC/MS
Bromodichloromethane	17.4 ug/l	N/A	9/24/2020	E524.2 GC/MS
Dibromochloromethane	4.61 ug/l	N/A	9/24/2020	E524.2 GC/MS

Inorganics

Chloride	12.8 mg/l	300.0 mg/l	1/24/2020	E300.0 Anions
Fluoride	0.620 mg/l	4.0 mg/l	1/24/2020	E300.0 Anions
Nitrate (as N)	0.0962 mg/l	10.0 mg/l	1/24/2020	E300.0 Anions
Sulfate	44.3 mg/l	300.0 mg/l	1/24/2020	E300.0 Anions
Total Dissolved Solids	186 mg/l	1000.0 mg/l	1/24/2020	SM2540C

Inorganics

Metals Trace Elements

Calcium	42.4 mg/l	20,000.0 mg/l	1/24/2020	E200.7 Metals, Trace
Magnesium	2.72 mg/l	20,000.0 mg/l	1/24/2020	E200.7 Metals, Trace
Potassium	3.65 mg/l	20,000.0 mg/l	1/24/2020	E200.7 Metals, Trace
Sodium Total	19.8 mg/l	20,000.0 mg/l	1/24/2020	E200.7 Metals, Trace

E200.8 ICP-MS

Aluminum Total	0.029 mg/l	0.2 mg/l	1/24/2020	E200.8 IC-MS
Barium Total	0.044 mg/l	2.0 mg/l	1/24/2020	E200.8 IC-MS
Chromium	0.0011 mg/l	1.3 mg/l AL	1/23/2020	E200.8 IC-MS
Copper Total	0.0010 mg/l	1.3 mg/l AL	1/24/2020	E200.8 IC-MS
Manganese Total	0.0024 mg/l	0.05 mg/l	1/24/2020	E200.8 IC-MS
Nickel Total	0.0011 mg/l	.1 mg/l	1/24/2020	E200.8 IC-MS

DEFINITIONS

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

Detected Regulated Contaminates for 2020

EP2 Lake Halbert

SOC Pesticide	Detected Quantity	MCL	Date Collected	Analytical Method
Atrazine	0.1 ug/l	N/A	1/23/2020	E525.2 GC/MS

VOC's	Detected Quantity	MC/L	Date Collected	Analytical Method
Acetone	5.90 ug/l	N/A	9/24/2020	E524.2 GC/MS
Chloroform	31.5 ug/l	N/A	9/24/2020	E524.2 GC/MS
Bromodichloromethane	19.3 ug/l	N/A	9/24/2020	E524.2 GC/MS
Dibromochloromethane	4.91 ug/l	N/A	9/24/2020	E524.2 GC/MS

Inorganics

Chloride	10.5 mg/l	300.0 mg/l	1/23/2020	E300.0 Anions
Fluoride	0.520 mg/l	4.0 mg/l	1/23/2020	E300.0 Anions
Nitrate (as N)	0.189 mg/l	10.0 mg/l	1/23/2020	E300.0 Anions
Sulfate	69.7 mg/l	300.0 mg/l	1/23/2020	E300.0 Anions
Total Dissolved Solids	228 mg/l	1000.0 mg/l	1/23/2020	SM2540C

Inorganics

Metals Trace Elements

Calcium Total	41.2 mg/l	N/A	1/23/2020	E200.7 Metals, Trace
Potassium Total	4.59 mg/l	N/A	1/23/2020	E200.7 Metals, Trace
Magnesium Total	5.49 mg/l	N/A	1/23/2020	E200.7 Metals, Trace
Sodium Total	21.8 mg/l	N/A	1/23/2020	E200.7 Metals, Trace

E200.8 ICP-MS

Aluminum Total	0.022 mg/l	0.2 mg/l	1/23/2020	E200.8 IC-MS
Barium Total	0.048 mg/l	2.0 mg/l	1/23/2020	E200.8 IC-MS
Chromium Total	.0015 mg/l	1.3 mg/l	1/23/2020	E200.8 IC-MS
Copper Total	.0019 mg/l	1.3 mg/l	1/23/2020	E200.8 IC-MS

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

Turbidity and TOC 2020

Navarro Mills								Lake Halbert							
NTU				TOC				NTU				TOC			
Month	Average	Highest	% Compliance	Raw TOC	Tap TOC	% Removal	% Compliance	Month	Average	Highest	% Compliance	Raw TOC	Tap TOC	% Removal	% Compliance
Jan	0.08	0.14	100	3.6	2.9	19.4	88	Jan	0.05	0.11	100	4.67	3.22	31.0	100
Feb	0.08	0.14	100	3.84	2.58	32.8	131	Feb	0.06	0.13	100	4.39	2.70	38.5	110
Mar	0.07	0.15	100	4.03	2.55	36.7	105	Mar	0.05	0.13	100	4.63	2.73	41.0	117
Apr	0.06	0.11	100	3.93	2.58	34.4	137	Apr	0.06	0.17	100	4.5	2.90	35.6	102
May	0.09	0.18	100	3.86	2.74	29.0	193	May	0.06	0.13	100	4.44	3.00	32.4	214
Jun	0.07	0.12	100	4.03	2.6	35.5	101	Jun	0.05	0.11	100	3.87	2.48	35.9	144
Jul	0.07	0.16	100	3.4	2.41	29.1	116	Jul	0.05	0.22	100	3.36	2.24	33.3	133
Aug	0.09	0.15	100	3.67	2.57	30.0	120	Aug	0.04	0.08	100	3.63	2.25	38.0	152
Sep	0.08	0.14	100	3.88	2.79	28.1	112	Sep	0.04	0.15	100	3.73	2.30	38.3	153
Oct	0.08	0.26	100	3.86	2.9	24.9	99	Oct	0.04	0.07	100	3.84	2.38	38.0	152
Nov	0.08	0.14	100	3.81	2.99	21.5	100	Nov	0.04	0.08	100	3.95	2.46	37.7	151
Dec	0.06	0.14	100	3.94	3.14	20.3	100	Dec	0.05	0.15	100	3.98	2.58	35.2	141
Average	0.08			3.82	2.73	28.5	116.8		0.05			4.08	2.60	36.3	139.1
			NTU	Raw TOC	Tap TOC	% Removal		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.							
Average Both Plants			0.06	3.95	2.67	32.4									

TTHM's 2020

Date of Samples	1/23/2020	4/9/2020	7/21/2020	10/20/2020	
Address of Sample	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Average of Quarters
4501 E HWY 31	35.0	52.4	55.6	38.4	45.4
2117 W 15th Ave	46.6	53.3	70.2	47.6	54.4
3500 Northpark	46.2	50.8	64.2	49.1	52.6
700 E 16th Ave	44.0	50.2	59.8	45.9	50.0
Average for each quarter	43.0	51.7	62.5	45.3	50.6

Haa5's 2020

Date of Samples	1/23/2020	4/9/2020	7/21/2020	10/20/2020	
Address of Sample	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Average of Quarters
4501 E HWY 31	19.2	31.1	23.3	14.0	21.9
2117 W 15th Ave	18.8	29.6	31.0	20.0	24.9
3500 Northpark	18.5	29.4	30.6	19.0	24.4
700 E 16th Ave	14.6	27.5	17.4	13.0	18.1
Average for each quarter	17.8	29.4	25.6	16.5	22.3

**Average Chlorine Residual
2020**

Month	Average Residual (mg/L)
January	2.2
February	2.16
March	2.04
April	2.03
May	1.84
June	1.81
July	1.86
August	1.80
September	2.05
October	1.99
November	2.14
December	2.32
2020 Yearly Average	2.02 mg/L

Min reading 0.6 mg/l
Max Reading 3.6 mg/l