



2018 Annual Drinking Water Quality Report

(Consumer Confidence Report)

CITY OF ROBINSON

<https://www.robinsontexas.org/345/Water-Quality-Report>
(254) 662-1415

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

To learn about future public meetings (concerning Robinson's water), or to request one to be scheduled, please call (254) 662-1415 ext. 2600.

Robinson's Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements

This report is a summary of the quality of the water provided to Robinson customers. 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 attached pages. This information is intended to help residents be more knowledgeable about the water supply.

WATER SOURCES: 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: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants, and organic chemical contaminants.

En Español

Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre éste informe en español, favor de llamar al tel 254-662-1415 para hablar con una persona bilingüe en español.

Robinson Water Sources

Robinson drinking water is obtained from both surface and ground water sources. The ground water comes from deep wells in the Second (Lower) Trinity Aquifer. Surface water is drawn from the Brazos River and stored in the Robinson Reservoir before treatment. Robinson also purchases treated water from the City of Waco which treats water from Lake Waco. The TCEQ (Texas Commission on Environmental Quality) completed an assessment of your source water and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample 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 the Robinson system contact Greg Hobbs, Utility System Director.

ALL drinking water may contain contaminants. When drinking water meets federal standards there may not be any health-based benefits to purchasing bottled water or point of use devices. 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

This is an alert about your drinking water and a cosmetic dental problem that

might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided the City of Robinson has a fluoride concentration of 0.2-2.37 mg/L.

Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/L of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/L of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/L because of this cosmetic dental problem.

For more information, please call Greg Hobbs of the City of Robinson at (254) 662-1415 Ext. 2600. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP.

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 water.

The following part of this report lists all of the federally regulated or monitored contaminants which have been found in Robinson drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants.

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 (µg/L)
- ppt** -parts per trillion, or nanograms per liter
- ppq** -parts per quadrillion, or picograms per liter

Inorganic Contaminants

Collection Date	Contaminant	Highest Single Sample	Range of Levels Detected	MCLG	MCL	Unit of Measure	Violation	Likely Source of Contaminant
1-11-2018	Arsenic	2.0	0-2.0	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
1-11-2018	Barium	0.0754	0.0754-0.0754	2	2	ppm	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
1-11-2018	Fluoride	.2	0.2-0.2	4	4	ppm	N	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
7-17-2018	Nitrate	0.14	.01-.01	10	10	ppm	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
1-11-2018	Selenium	.003	.003-.003	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion Of natural deposits; Discharge from mines

Organic Contaminants

Collection Date	Contaminant	Highest Single Sample	Range of Levels Detected	MCLG	MCL	Unit of Measure	Violation	Likely Source of Contaminant
7-17-2018	Atrazine	0.1	0.1 – 0.1	3	3	ppb	N	Runoff from herbicide used on row crops.

Maximum Residual Disinfectant Level

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Chemical
2018	Chlorine	2.0	.9	3.6	4.0	<4.0	ppm	Disinfectant used to control microbes.

Disinfection Byproducts

Year or Range	Contaminant	Highest Level Detected	Range of Levels Detected	MCGL	MCL	Unit of Measure	Violation	Source of Contaminant
2018	Total Haloacetic Acids	17.8	1.1-17.8	No goal for the total	60	ppb	N	Byproduct of drinking water disinfection.
2018	Total Trihalomethanes	132	0-132	No goal for the total	80	ppb	N	Byproduct of drinking water disinfection.

Unregulated Contaminants

Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection byproducts. There is no maximum contaminant level for these chemicals at the entry point to distribution.

Year or Range	Contaminant	Highest Single Sample	Range of Levels Detected	Unit of Measure	Source of Contaminant
2018	Chloroform	11.0	1.3-11.0	ppb	Byproduct of drinking water disinfection
2018	Bromodichloromethane	29.0	2.1-29.0	ppb	Byproduct of drinking water disinfection
2018	Bromoform	40.0	1.0-40.0	ppb	Byproduct of drinking water disinfection
2018	Dibromochloromethane	54.9	2.5-54.9	ppb	Byproduct of drinking water disinfection

Total Trihalomethanes (TTHM)

Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, LRAA	10/01/2018	12/31/2018	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Lead and Copper

Date	Contaminant	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Violation	Source of Contaminant
2016	Lead	1.4	0	15	ppb	N	Corrosion of household plumbing systems; erosion of natural deposits.
2016	Copper	0.088	0	1.3	ppm	N	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

“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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.”

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.

Year	Contaminant	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Violation	Source of Contaminant
2018	Turbidity	.13	100.00	0.3	NTU	N	Soil Runoff

Total Organic Carbon

Total organic carbon (TOC) no health effects. The disinfectant 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) which are reported elsewhere in this report.

Year	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	MCLG	Source of Contaminant
2018	Source Water	4.88	4.41	5.28	ppm		Naturally present in the environment
2018	Drinking Water	1.94	1.77	2.10	ppm		Naturally present in the environment
2018	Removal Ratio	1.72	1.61	1.84	% Removal*		NA

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

Cryptosporidium Monitoring Information: SAMPLES FOUND NONE DETECTED

Total Coliform: REPORTED MONTHLY TESTS FOUND NO COLIFORM BACTERIA.

Fecal Coliform: REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA.

Secondary and Other Constituents Not Regulated

(No associated adverse health effects)

Year or Range	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Source of Constituent
2017	Bicarbonate	389	257	431	NA	ppm	Corrosion of carbonate rocks such as limestone.
2018	Calcium	35.9	3.59	35.9	NA	ppm	Abundant naturally occurring element.
2018	Chloride	153.0	153.0	153.0	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity
2017	Copper	0.011	0.004	0.022	1	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood
2018	Iron	0.01	0.01	0.01	.3	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
2018	Magnesium	9.07	9.07	9.07	NA	ppm	Abundant naturally occurring element.
2018	Manganese	.001	.001	.001	.05	ppm	Abundant naturally occurring element.
2018	pH	7.8	7.7	8.1			Measure of corrosivity of water.
2018	Sodium	92.3	92.3	92.3	NA	ppm	Erosion of natural deposits; byproduct of oil field activity.
2018	Sulfate	65.0	65.0	65.0	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2018	Total Alkalinity as CaCO ₃	93	82	106	NA	ppm	Naturally occurring soluble mineral salts.
2018	Total Dissolved Solids	409	409	409	1000	ppm	Total dissolved mineral constituents in water.
2018	Total Hardness as CaCO ₃	129	129	129	NA	ppm	Naturally occurring calcium.

Water Loss Audit

In the water loss audit submitted to the Texas Water Development Board for the time period of Jan-Dec, 2018, our system lost an estimated 18,173,000 gallons of water. If you have any questions about the water loss audit, please call (254) 662-1415 Ext. 2600.