



ANNUAL WATER QUALITY REPORT 2019

Consumer Confidence Report

<https://bit.ly/CORWaterQualityReport19>

City of Robinson

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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

This report is a summary of the quality of the water provided to Robinson customers. The analysis uses the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented on the attached pages. This information is to help residents be more knowledgeable about their water supply.

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 uses the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented on the attached pages. This information is to help residents be more knowledgeable about their water supply.



WATER SOURCES

This report is a summary of the quality of the water provided to Robinson customers. The analysis uses the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented on the attached pages. This information is to help residents be more knowledgeable about their water supply.

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.

Information About 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.

Information About Robinson Drinking Water

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 0.16-2.38 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 reasons 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, along with definitions and abbreviations for each, which have been found in Robinson drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants.

Definitions

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.

Abbreviations

| | |
|-----------------------------------|---|
| 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) |
| Treatment Technique or TT: | A required process intended to reduce the level of a contaminant in drinking water. |

2019 WATER QUALITY TEST RESULTS

Inorganic Contaminants

| Collection Date | Contaminant | Highest Single Sample | Range of Levels Detected | MCLG | MCL | Unit of Measure | Violation | Likely Source of Contaminant |
|-----------------|-------------|-----------------------|--------------------------|------|-----|-----------------|-----------|--|
| 2019 | Arsenic | .002 | .002 -.002 | 0 | 10 | ppb | N | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes. |
| 2019 | Barium | 0.0782 | 0.0282 - 0.0782 | 2 | 2 | ppm | N | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits. |
| 2019 | Fluoride | 2.38 | 2.38 -2.38 | 4 | 4 | ppm | N | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories. |
| 2019 | Nitrate | 0.91 | .08 -.91 | 10 | 10 | ppm | N | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits. |
| 2019 | Selenium | .0051 | .0051 -.0051 | 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 |
|-----------------|-------------|-----------------------|--------------------------|------|-----|-----------------|-----------|--|
| 2019 | Atrazine | 0.18 | 0.18 - 0.18 | 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 |
|------|--------------|---------------|---------------|---------------|------|-------|-----------------|--|
| 2019 | Chlorine | 2.1 | 1.2 | 3.9 | 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 |
|---------------|------------------------|------------------------|--------------------------|-----------------------|-----|-----------------|-----------|---|
| 2019 | Total Haloacetic Acids | .044 | .01 - .044 | No goal for the total | 60 | ppb | N | Byproduct of drinking water disinfection. |
| 2019 | Total Trihalomethanes | 76.1 | 1.0 - 76.1 | 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 |
|---------------|----------------------|-----------------------|--------------------------|-----------------|---|
| 2019 | Chloroform | 7.6 | 1.2 - 7.6 | ppb | Byproduct of drinking water disinfection. |
| 2019 | Bromodichloromethane | 23.0 | 1.0 - 23.0 | ppb | Byproduct of drinking water disinfection. |
| 2019 | Bromoform | 54.0 | 2.3 - 54.0 | ppb | Byproduct of drinking water disinfection. |
| 2019 | Dibromochloromethane | 48.8 | 1.0 - 48.0 | ppb | Byproduct of drinking water disinfection. |

Violations

| Violation Type | Violation Begin | Violation End | Violation Explanation |
|----------------|-----------------|---------------|-----------------------|
| NA | | | |

Lead and Copper

| Date | Contaminant | The 90th Percentile | Number of Sites Exceeding Action Level | Action Level | Unit of Measure | Violation | Source of Contaminant |
|------|-------------|---------------------|--|--------------|-----------------|-----------|---|
| 2019 | Lead | 1.4 | 0 | 15 | ppb | N | Corrosion of household plumbing systems; erosion of natural deposits. |
| 2019 | Copper | .0179 | 0 | 1.3 | ppb | N | Corrosion of household plumbing systems; erosion of natural deposits. |

"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 |
|------|-------------|----------------------------|--|------------------|-----------------|-----------|-----------------------|
| 2019 | Turbidity | .13 | 100.00 | .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 Chemical |
|------|----------------|---------------|---------------|---------------|-----------------|------|---------------------------------------|
| 2019 | Source Water | 4.63 | 3.85 | 5.14 | ppm | | Naturally present in the environment. |
| 2019 | Drinking Water | 1.91 | 1.53 | 2.25 | ppm | | Naturally present in the environment |
| 2019 | Removal Ratio | 1.70 | 1.58 | 1.88 | % 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 | Contaminant | Average Level | Minimum Level | Maximum Level | Secondary Level | Unit of Measure | Source of Chemical |
|------|---------------------------------------|---------------|---------------|---------------|-----------------|-----------------|---|
| 2019 | Bicarbonate | 74 | 74 | 74 | NA | ppm | Corrosion of carbonate rocks such as limestone. |
| 2019 | Calcium | 9.14 | 2.75 | 32.2 | NA | ppm | Abundant naturally occurring element. |
| 2019 | Chloride | 144 | 144 | 144 | 300 | ppm | Abundant naturally occurring element; used in water purification; byproduct of oil field activity |
| 2019 | Copper | 0.125 | 0.055 | 0.222 | 1 | ppm | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood |
| 2019 | Iron | 0.034 | 0.031 | 0.051 | .3 | ppm | Erosion of natural deposits; iron or steel water delivery equipment or facilities. |
| 2019 | Magnesium | 3.44 | 3.18 | 3.69 | NA | ppm | Abundant naturally occurring element. |
| 2019 | Manganese | .0015 | .0014 | .0016 | .05 | ppm | Abundant naturally occurring element. |
| 2019 | pH | 7.8 | 7.7 | 8.1 | | | Measure of corrosivity of water. |
| 2019 | Sodium | 261 | 99.4 | 360 | NA | ppm | Erosion of natural deposits; byproduct of oil field activity. |
| 2019 | Sulfate | 61 | 61 | 61 | 300 | ppm | Naturally occurring; common industrial byproduct; byproduct of oil field activity. |
| 2019 | Total Alkalinity as CaCO ₃ | 89 | 61 | 103 | NA | ppm | Naturally occurring soluble mineral salts. |
| 2019 | Total Dissolved Solids | 414 | 414 | 414 | 1000 | ppm | Total dissolved mineral constituents in water. |
| 2019 | Total Hardness as CaCO ₃ | 33.7 | 6.87 | 118 | 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 January to December 2019, our system lost an estimated 27,606,782 gallons of water. If you have any questions about the water loss audit please call (254) 662-1415 Ext. 2600.