

2019 Annual Drinking Water Report

Consumer Confidence Report (CCR)

City of Cut and Shoot Texas

We are pleased to present this year's Annual Water Quality Report as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

Sources of Drinking Water

The City of Cut and Shoot water system provides groundwater from the Evangeline and Upper Jasper Aquifers in Montgomery County.

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>.

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (281) 367-0935.

For more information regarding this report contact the water operations office at (281) 367-0935 weekdays 8:00 AM to 4:00 PM.

Information about Source Water Assessments

The TCEQ 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 our system, contact Darcy Tramm at (281) 367-0935.

Public Participation Opportunities

The City of Cut and Shoot City Council meets on the 2nd Thursday of every month at City Hall (14391 Highway 105) at 7:00PM. The public is welcome to attend all City meetings.

2019 Water Quality Test Results:

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Lead and Copper

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90 th Percentile	#Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2017	1.3	1.3	0.034	0	ppm	No	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems
Lead	2017	0	15	0	0	ppb	No	Corrosion of household plumbing systems; erosion of natural deposits

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Sources of Contamination
Arsenic	04/24/2018	3.8	0 – 3.8	0	10	ppb	No	Erosion of natural deposits; runoff from orchards; runoff from glass & electronics production wastes.
Barium	04/24/2018	0.237	0.213 – 0.237	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride	04/24/2018	0.23	0.17 – 0.23	4	4.0	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum.
Nitrate (measured as Nitrogen)	04/24/2018	0.04	0 – 0.04	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Maximum Residual Disinfectant Level

Your water is treated by disinfection. Disinfection involves the addition of chlorine to kill dangerous bacteria and microorganisms that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century.

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Chemical
2019	Chlorine	1.2774	0.40	1.87	4.0	<4.0	ppm	Disinfectant used to control microbes

2019 Water Quality Test Results (continued)

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Sources of Contamination
Beta/pton emitters	04/24/2018	7.9**	5.3 – 7.9	0	50	pCi/L*	No	Decay of natural and man-made deposits
Combined Radium 226/228	04/24/2018	1.13	0 – 1.13	0	5	pCi/L	No	Erosion of natural deposits
Gross alpha excluding radon and uranium	04/24/2018	4.6	4.4 – 4.6	0	15	pCi/L	No	Erosion of natural deposits

*The MCL for beta particles is 4 mrem/yr. EPA considers 50 pCi/L to be the level of concern for beta particles

**Because the beta particle results were below 50 pCi/L, no testing for individual beta particle constituents was required.

Measures of water hardness

Hardness is caused by compounds of calcium and magnesium, and by a variety of other metals. General guidelines for classification of waters are: 0 to 60 mg/L (milligrams per liter) as calcium carbonate is classified as soft; 61 to 120 mg/L as moderately hard; 121 to 180 mg/L as hard; and more than 180 mg/L as very hard.

04/24/2018 – Hardness, Total (as CaCO₃) was 225.00 mg/L at WP #1 on FM 1484 (classified as very hard)

04/24/2018 – Hardness, Total (as CaCO₃) was 105.00 mg/L at WP #2 on Willis Waukegan (classified as moderately hard)

Definitions: The above tables contain scientific terms and measures, some of which may require explanation

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.

Action Level (AL): 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)

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 pictograms 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 Annual Drinking Water Report
Consumer Confidence Report (CCR)
City of Cut and Shoot**

Interconnection Information:

The City of Cut and Shoot has an emergency interconnection with the City of Conroe water system. In 2019 the City of Cut and Shoot received water from the City of Conroe from 08/12/2019 to 08/15/2019 and 09/06/2019 to 09/08/2019. The water received from City of Conroe mixed with water from the City of Cut and Shoot during these periods of interconnection and, as a result, we are also notifying our customers of results of water samples collected in the City of Conroe during 2019. This does not mean that any of water received by City of Cut and Shoot contained these compounds but want to fully inform our customers of these results.

The full report is available online at:

<https://www.cityofconroe.org/departments/public-works-home-page/public-works-administration-maintenance/drinking-water-reports>

City of Conroe – PWS ID #TX1700001

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	5% of monthly samples are positive.	1	0	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	11/08/2017	1.3	1.3	0.43	1	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	11/08/2017	0	15	4.7	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2019	1	0 - 1	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)	2019	10	9.4 - 10.2	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
------------------------------	------	----	------------	-----------------------	----	-----	---	--

* 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
Barium	2019	0.17	0.0537 - 0.17	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2019	0.2	0 - 0.23	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.

**2019 Annual Drinking Water Report
Consumer Confidence Report (CCR)
City of Cut and Shoot**

City of Conroe – PWS ID #TX1700001

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Nitrate [measured as Nitrogen]	2019	0.26	0 - 0.26	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrite [measured as Nitrogen]	03/08/2018	0.01	0 - 0.01	1	1	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	2019	5.1	5 - 5.1	0	50	pCi/L*	N	Decay of natural and man-made deposits.

*EPA considers 50 pCi/L to be the level of concern for beta particles.

Combined Radium 226/228	05/18/2017	1.07	0 - 1.07	0	5	pCi/L	N	Erosion of natural deposits.
-------------------------	------------	------	----------	---	---	-------	---	------------------------------

Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Di (2-ethylhexyl) phthalate	2019	1	0 - 0	0	6	ppb	N	Discharge from rubber and chemical factories.

Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Xylenes	2019	0.0013	0 - 0.0013	10	10	ppm	N	Discharge from petroleum factories; Discharge from chemical factories.

Disinfectant Residual

Disinfectant Residual	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
Chlorine	2019	0.92	.60 – 1.30	4	4	ppm	N	Water additive used to control microbes.