

City of Andrews

2019 Consumer Confidence Report

(Annual Drinking Water Quality Report)
(432) 523-4820

This water quality report is for January 1 to December 31, 2019 and is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water. This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

For more information regarding this report contact:

Name: Mike Aguero, Assistant Director of Public Works – Water & Wastewater

Phone: (432) 523-4820

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al tel. (432) 523-4820.

Definitions and Abbreviations

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.

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.

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 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>.

Water Loss

The City’s 2019 water loss audit submitted to the Texas Water Development Board indicates that our system lost an estimated 44,089,863 gallons of water out of the 771,935,052 gallons that were delivered. This loss represents 5.71% of our total water used and a reduction of usage. If you have any questions about the water loss audit, please call Mike Agüero, Assistant Director of Public Works – Water & Wastewater, at 432-523-4820

Information about Source Water

The source of drinking water used by CITY OF ANDREWS is Ground Water from the Ogallala and Dockum aquifers. 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 is based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system contact Mike Agüero at (432) 523-4820.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	08/25/2017	1.3	1.3	0.032	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems

2019 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)	2019	9	0 - 11.9	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	9	1.83 - 8.43	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
Arsenic	2019	20	5.11 - 25.2	0	10	ppb	Y	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	01/30/2017	0.035	0.035 - 0.035	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium	01/30/2017	2.6	2.6 - 2.6	100	100	ppb	N	Discharge from steel and pulp mills; Erosion of natural deposits.
Fluoride	2019	4.2	1.5 - 4.82	4	4.0	ppm	Y	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen]	2019	2	1.9 - 1.9	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	01/30/2017	12	12 - 12	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	02/10/2016	4.6	4.6 - 4.6	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	02/10/2016	1.5	1.5 - 1.5	0	5	pCi/L	N	Erosion of natural deposits.
Uranium	02/10/2016	2.3	2.3 - 2.3	0	30	ug/l	N	Erosion of natural deposits.

Disinfectant Residual	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
Chlorine	2019	0.86	0.30-1.68	1.68	<4.0	ppm	N	Disinfectant used to control microbes.

Violations

Arsenic			
Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.			
Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, AVERAGE	01/01/2019	03/31/2019	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.
MCL, AVERAGE	04/01/2019	06/30/2019	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.
MCL, AVERAGE	07/01/2019	09/30/2019	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.
MCL, AVERAGE	10/01/2019	12/31/2019	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.

Fluoride			
Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of teeth, and occurs only in developing			
Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, AVERAGE	01/01/2019	03/31/2019	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.

Public Notification Rule			
The Public Notification Rule helps to ensure that consumers will always know if there is a problem with their drinking water. These notices immediately alert consumers if there is a serious problem with their drinking water (e.g., a boil water emergency).			
Violation Type	Violation Begin	Violation End	Violation Explanation
PUBLIC NOTICE RULE LINKED TO VIOLATION	08/03/2012	03/26/2019	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.
PUBLIC NOTICE RULE LINKED TO VIOLATION	03/03/2019	03/26/2019	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.

Revised Total Coliform Rule (RTCR)			
The Revised Total Coliform Rule (RTCR) seeks to prevent waterborne diseases caused by E. coli. E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children,			
Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE, MINOR (RTCR)	12/01/2019	12/31/2019	We are required to submit 11 samples but only submitted 10 samples to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be 100% sure of the quality of our drinking water during the period indicated.

Important Information about Your Drinking Water

Violations – Arsenic and Fluoride Levels

The Texas Commission on Environmental Quality (TECQ) has notified the City of Andrews water system that the drinking water being supplied to customers had exceeded the Maximum Contaminant Level (MCL) for arsenic and fluoride at some period of time in 2019.

The U.S. Environmental Protection Agency (U.S. EPA) has established the MCL for arsenic at 10 ppb based on a running annual average (RAA), and has determined that it is a health concern at levels above the MCL. Analysis of drinking water in your community for arsenic indicated a running annual average of 18.18 ppb in the 1st Quarter of 2019, 16.43 ppb in the 2nd Quarter, 13.91 ppb in the 3rd Quarter, and 11.62 ppb in the 4th Quarter. This is not an emergency. However, some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

Fluoride levels were above the EPA standard of 4.0 ppm running annual average during one of the four quarters of 2019. The running annual average in the 1st Quarter of 2019 was 4.17 ppm, the 2nd Quarter was 3.71 ppm, the 3rd Quarter was 3.20, and the 4th quarter was 2.59 ppm.

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 by your community water system City of Andrews has a fluoride concentration of 2.6 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.

You do not need to use an alternative water supply. The City of Andrews completed a new Water Treatment Plant which became operational in December, 2015. Since its startup, the Plant has consistently generated drinking water that exceeds US EPA and TCEQ standards. During much of 2018, however, the City was unable to fully utilize the Plant's filtering system while routine maintenance was being conducted. The original protocols established for maintaining/cleaning the filtering media were based upon the manufacturer's experience with smaller systems and different water quality; therefore, the protocols incorrectly called for the filtering media to be replaced after 2 years. When performing the scheduled 2 year vessel media clean-out, the City found that the filtering media had solidified in the lower half of the vessels. For much of 2018, the filtering system did not fully function as designed as vessels were cleaned out and improved protocols were developed. In early 2019, vessel clean-out protocol calling for more frequent media change-outs was implemented to ensure the Plant operates as designed at all times. The filtering system is now fully operational and 2019 and 2020 lab tests confirm that the City of Andrews is now delivering water which is fully compliant with the primary standards of the Safe Drinking Water Act, with fluoride and arsenic levels well below the federal standard. In an abundance of caution, the City will be required to continue these public notices until the running annual average (RAA) meets or exceeds these standards.

Monitoring Requirements Not Met

Our system failed to collect every required coliform sample. Although this incident was not an emergency, as our customers, you have the right to know what happened and what we did to correct this situation.

We are required to monitor our drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During January – December 2019, we were required to submit 11 sample tests for coliform bacteria but only submitted 10. We therefore cannot be 100% sure of the quality of your drinking water during that time.

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, we are required to notify you within 24 hours.

We collected every required coliform sample in January 2020 and are no longer in violation.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

For further information contact Mike Aguero, Assistant Director of Public Works – Water & Wastewater, at 432-523-4820. Public Water System ID #0020001.