

Annual Drinking Water Quality Report

TX0670002

CITY OF EASTLAND

Annual Water Quality Report for the period of January 1 to December 31, 2016

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:

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Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al teléfono (254) 629-8321.

CITY OF EASTLAND is Purchased Surface Water

Sources of 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 Assessments

The TCEQ has completed a Source Water Assessment for all drinking water systems that own their sources. The report describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The system from which we purchased our water received the assessment report. For more information on source water assessments and protection efforts at our system, contact the Eastland County Water Supply District 254-647-1320.

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: <http://www.tceq.texas.gov/gis/swaview>

Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL: <http://dww2.tceq.texas.gov/DWW>

Source Water Name	Type of Water	Report Status	Location
SW FROM EASTLAND CO WSD	SW	_____	_____

Regulated Contaminants detected in samples from the Eastland County Water Supply District

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorite	2016	0.709	0 - 0.709	0.8	1	ppm	N	By-product of drinking water disinfection.
Halooacetic Acids (HAA5)	2016	51	21.2 - 102	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2016	62	6.28 - 144	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	2016	1	0.95 - 0.95	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2016	0.089	0.089 - 0.089	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Cyanide	2016	96	96 - 96	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
Fluoride	2016	0.1	0.0715 - 0.0715	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen]	2016	0.174	0.174 - 0.174	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	2016	4.9	4.9 - 4.9	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.

Turbidity detected in samples from the Eastland County Water Supply District

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	2.89 NTU	Y	Soil runoff.
Lowest monthly % meeting limit	0.3 NTU	76%	Y	Soil runoff.

Information Statement: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

Total Organic Carbon

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

Violations for the Eastland County Water Supply District

Chlorite

Some infants and young children who drink water containing chlorine in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine in excess of the MCL. Some people may experience anemia.

Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE (DBP), MAJOR	11/01/2016	11/30/2016	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.
MONITORING, ROUTINE (DBP), MAJOR	12/01/2016	12/31/2016	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

Filter Backwash Rule

The Filter Backwash Recycling Rule requires public water systems to review their backwash water recycling practices to ensure that they do not compromise microbial control.

Violation Type	Violation Begin	Violation End	Violation Explanation
FAILURE TO SUBMIT PLANT SCHEMATIC (FBR)	07/06/2011	12/06/2016	We failed to submit to our regulator a plant schematic showing the origin of all flows which are recycled, the hydraulic conveyance used to transport them, and the location where they are re-introduced back into the treatment plant.

Interim Enhanced SWTR

The Interim Enhanced Surface Water Treatment Rule improves control of microbial contaminants, particularly Cryptosporidium, in systems using surface water, or ground water under the direct influence of surface water. The rule builds upon the treatment technique requirements of the Surface Water Treatment Rule.

Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE (IESWTR/LT1), MAJOR	12/01/2016	12/31/2016	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.
MONTHLY COMB FLTR EFFLUENT (IESWTR/LT1)	11/01/2016	11/30/2016	Turbidity levels, though relatively low, exceeded a standard for the month indicated. Turbidity (cloudiness) levels are used to measure effective filtration of drinking water.
MONTHLY COMB FLTR EFFLUENT (IESWTR/LT1)	12/01/2016	12/31/2016	Turbidity levels, though relatively low, exceeded a standard for the month indicated. Turbidity (cloudiness) levels are used to measure effective filtration of drinking water.
SINGLE COMB FLTR EFFLUENT (IESWTR/LT1)	12/01/2016	12/31/2016	One turbidity measurement exceeded a standard for the month indicated. Turbidity (cloudiness) levels are used to measure effective filtration of drinking water.

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

Violations for the Eastland County Water Supply District

PUBLIC NOTICE RULE LINKED TO VIOLATION	09/10/2014	2016	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.
PUBLIC NOTICE RULE LINKED TO VIOLATION	04/14/2016	2016	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.
PUBLIC NOTICE RULE LINKED TO VIOLATION	11/01/2016	11/30/2016	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.
PUBLIC NOTICE RULE LINKED TO VIOLATION	12/01/2016	12/31/2016	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.

Revised Total Coliform Rule (RTCR)

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, the elderly, and people with severely-compromised immune systems.			
Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE, MAJOR (RTCR)	06/01/2016	06/30/2016	We failed to collect all required routine samples of our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

Lead and Copper

Definitions:

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: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2016	1.3	1.3	0.72	1	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2016	0	15	4.7	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Water Quality Test Results

Definitions:

The following tables contain scientific terms and measures, some of which may require explanation.
 Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Avg: 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 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.

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.

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.

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 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)

na: not applicable.

Water Quality Test Results

muem:	millirems per year (a measure of radiation absorbed by the body)
NTU	nephelometric turbidity units (a measure of turbidity)
pc/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
Treatment Technique or TT:	A required process intended to reduce the level of a contaminant in drinking water.
ppt	parts per trillion, or nanograms per liter (ng/L)
ppq	parts per quadrillion, or picograms per liter (pg/L)

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2016	58	7.3 - 97.6	No goal for the total	60	ppb	Y	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2016	87	6.6 - 129	No goal for the total	80	ppb	Y	By-product of drinking water disinfection.
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Nitrate (measured as Nitrogen)	2016	0.252	0.252 - 0.252	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Disinfectant Residual Table

Disinfectant	Year	Average	Minimum	Maximum	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Likely Source of Contamination
		Level	Level	Level					
Chloramines	2016	1.18	0.7	2.2	4	4	ppm	N	

Violations Table

Consumer Confidence Rule

The Consumer Confidence Rule requires community water systems to prepare and provide to their customers annual consumer confidence reports on the quality of the water delivered by the systems.

Violation Type	Violation Begin	Violation End	Violation Explanation
CCR ADEQUACY/AVAILABILITY/CONTENT	07/01/2015	10/31/2016	We failed to provide to you, our drinking water customers, an annual report that adequately informed you about the quality of our drinking water and the risks from exposure to contaminants detected in our drinking water.

Halocetic Acids (HAAS)

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, LRAA	01/01/2016	03/31/2016	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, LRAA	04/01/2016	06/30/2016	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, LRAA	07/01/2016	09/30/2016	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.

Lead and Copper Rule

The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.

Violation Type	Violation Begin	Violation End	Violation Explanation
INITIAL TAP SAMPLING (LCR)	07/01/2010	2016	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.
INITIAL TAP SAMPLING (LCR)	01/01/2011	2016	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.
INITIAL TAP SAMPLING (LCR)	07/01/2011	2016	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.
INITIAL TAP SAMPLING (LCR)	01/01/2012	2016	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

Violations Table

Revised Total Coliform Rule (RTCRR)

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, the elderly, and people with severely-compromised immune systems.

Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE, MAJOR (RTCRR)	06/01/2016	06/30/2016	We failed to collect all required routine samples of our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

Total Trihalomethanes (TTHM)

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.

Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, LRAA	01/01/2016	03/31/2016	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, LRAA	04/01/2016	06/30/2016	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.