

2019 Water Quality Report - City of Mansfield TX2200018

Annual Water Quality Report for the period January 1 to December 31, 2019. 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.

The TCEQ completed an assessment of your source water and results indicate that our sources have a potentially high susceptibility to contaminants. A high susceptibility means there are activities near the source water and the natural conditions of the aquifer or watershed make it very likely that chemical constituents may come into contact with the source water. It does not mean that there are any health risks present. 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 David Hinshaw, Treatment Plant Manager, at 817-728-3674 or david.hinshaw@mansfieldtexas.gov.

INORGANIC CONTAMINANTS

Year	Contaminant	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Unit of Measure	Violation	Likely Source of Contaminant
2019	Cyanide	103	103 - 103	200	200	ppb	No	Discharge from plastic and fertilizer; discharge from steel/metal factories.
2019	Chromium	< 0.0010	< 0.0010 - < 0.0010	100	100	ppb	No	Discharge from steel and pulp mills; erosion of natural deposits.
2019	Barium	0.045	0.045 - 0.045	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
2019	Fluoride	1.04	0.426 - 1.04	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; runoff from fertilizer and aluminum factories.
2019	Nitrate (measured as Nitrogen)	1	0.708 - 0.708	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2019	Thalium	< 0.001	< 0.001 - < 0.001	0.5	2	ppb	No	Discharge from electronics, glass and leaching from ore-producing sites; drug factories.

SYNTHETIC ORGANIC CONTAMINANTS INCLUDING PESTICIDES & HERBICIDES

Year	Contaminant	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Unit of Measure	Violation	Likely Source of Contaminant
2019	Atrazine	0.2	0.2 - 0.2	3	3	ppb	No	Runoff from herbicide used on row crops.

DISINFECTION RESIDUAL

Year	Contaminant	Average Level Detected	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Source of Contaminant
2019	Chloramines	2.92	0.52 - 4.00	4	< 4	ppm	Water additive used to control microbes.

DISINFECTION BYPRODUCTS

Year	Contaminant	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Unit of Measure	Violation	Likely Source of Contaminant
2019	Haloacetic Acids (HAA5)*	21.0	12.0 - 24.0	No goal for this total	60	ppb	No	Byproduct of drinking water disinfection.
2019	Total Trihalomethanes (TTHM)*	42.0	28.4 - 49.5	No goal for this total	80	ppb	No	Byproduct of drinking water disinfection.
2019	Chlorite	0.668	0.149 - 0.668	0.8	1.0	ppm	No	Byproduct of drinking water disinfection.

*The value in the Highest Level or Average Detected column is the highest average of all HAA5/TTHM sample results collected at a location over a year.

UNREGULATED CONTAMINANTS

Year	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Violation	Likely Source of Contaminant
2019	Chloroform*	17.69	12.20	23.60	ppb	No	Byproduct of drinking water disinfection.
2019	Bromoform*	< 1.00	< 1.00	< 1.00	ppb	No	Byproduct of drinking water disinfection.
2019	Bromodichloromethane*	14.01	10.30	17.50	ppb	No	Byproduct of drinking water disinfection.
2019	Dibromodichloromethane*	7.69	4.86	9.69	ppb	No	Byproduct of drinking water disinfection.

Unregulated contaminants are those for which EPA has no established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

*Individual compound of the Total Trihalomethanes (TTHM).

LEAD & COPPER (1)

Year	Contaminant	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level (AL)	MCLG	Unit of Measure	Violation	Likely Source of Contaminant
2018	Lead	1.29	0	15	0	ppb	No	Corrosion of household plumbing systems, erosion of natural deposit.
2018	Copper	0.336	0	1.3	1.3	ppm	No	Corrosion of household plumbing systems, erosion of natural deposit; leaching from wood preservatives.

To meet federal compliance rules, Mansfield samples 30 homes every three years for lead and copper. Compliance sampling was last performed in 2018 and will be performed in 2021. Mansfield achieves corrosion control through pH adjustment.

The City of Mansfield failed to certify back to the TCEQ that we provided the results of lead tap water monitoring to the consumers at the locations water was tested within the 30 days after learning the results. We provided documentation of those notifications to the TCEQ, thus becoming fully compliant.

SECONDARY CONSTITUENTS (2)

Year	Contaminant	Average Level Detected	Minimum Level Detected	Maximum Level Detected	Secondary Limit	Unit of Measure	Likely Source of Contaminant
2019	Bicarbonate	100	100	100	N/A	ppm	Corrosion of carbonate rocks such as limestone.
2019	Chloride	19.4	19.4	19.4	300	ppm	Abundant naturally occurring element; used in water purification.
2019	Hardness as Ca/Mg	111	111	111	N/A	ppm	Naturally occurring calcium and magnesium.
2019	pH	8.0	7.8	8.3	> 7.0	units	Measure of corrosivity of water.
2019	Sodium	18.8	18.8	18.8	N/A	ppm	Erosion of natural deposits; byproduct of field activity.
2019	Sulfate	28.7	28.7	28.7	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2019	Total Alkalinity as CaCO ₃	100	100	100	N/A	ppm	Naturally occurring soluble mineral salts.
2019	Total Dissolved Solids	189	189	189	1,000	ppm	Total dissolved mineral constituents in water.

COLIFORM BACTERIA (3)

Year	Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest Number of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contaminant
2019	0	5% of monthly samples are positive	2%	0	0	No	Naturally present in the environment.

RADIOACTIVE CONTAMINANTS

Year	Contaminant	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Unit of Measure	Violation	Likely Source of Contaminant
2017+	Beta/Photon Emitters	4.6	4.6 - 4.6	0	50	pCi/L*	No	Erosion of Natural Deposits.

*Because Mansfield historically has had low levels of radionuclides in its water, TCEQ requires this monitoring occur only once every six years. The test results shown above are from 2017. The next monitoring will occur in 2023.

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

TURBIDITY (4)

Year	Contaminant	Limit (Treatment Technique)	Level Detected	Unit of Measure	Violation	Likely Source of Contaminant
2019	Highest Single Measurement	1 NTU	0.35 NTU	NTU	No	Soil runoff.
2019	Lowest Monthly % Meeting Limit	0.3 NTU	100%	NTU	No	Soil runoff.

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 (5)

Year	Contaminant	Average Level Detected	Minimum Level Detected	Maximum Level Detected	TT*	Violation	Unit of Measure	Likely Source of Contaminant
2019	Removal Ratio	1.21	1.03	1.33	≥ 1	No	%	Naturally occurring.

Mansfield was in compliance with all monitoring and treatment technique requirements for disinfection by product precursors. A removal ratio of ≥ 1 in TOC calculations is considered passing.

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

(1) 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 two 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, test methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead. **(2)** 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 EPA. These constituents are not causes for health concerns. Therefore, secondary's are not required to be reported in this document but they may greatly affect the appearance and taste of your water. **(3)** Total coliform bacteria are used as indicators of microbial contamination of drinking water because they are easily detected in water samples and they are found in the digestive tract of warm-blooded animals. While coliforms are not disease producers, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are hardier than many disease-causing organisms; therefore their absence from water is a good indication that the water is bacteriologically safe for human consumption. Fecal coliform bacteria, in particular E-coli, are a portion of the coliform bacteria group originating in the intestinal tract of warm-blooded animals and are passed into the environment through feces. The presence of fecal coliform in drinking water may indicate recent contamination of the drinking water supply with fecal material. The following table indicates whether total coliform or fecal coliform bacteria were found in the monthly drinking water samples submitted for testing by your water supplier last year. **(4)** Turbidity is a measurement of the cloudiness of the water caused by suspended solids. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration. 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. **(5)** Total Organic Carbon (TOC) has no health effects. It is used to determine disinfection by-product precursors. A removal ratio of ≥ 1 in TOC calculations is considered passing. 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.