

2017 Annual Drinking Water Quality Report for Marilee Special Utility District

2017 Consumer Confidence Report

May 8, 2018

Phone No. 972-382-3222

SPECIAL NOTICE

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; those 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 provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline at (800) 426-4791

PUBLIC PARTICIPATION OPPORTUNITIES

Board of Directors Meeting:

Date: 1st Monday of every month

Time: 6:00 pm

Location: 230 W. Pecan St., Celina, TX 75009

Phone Number: 972-382-3222

Website: Marileewater.com

To learn about future public meetings or questions concerning your drinking water please contact Donna Loiselle, General Manager.

En Espanol

Este informe incluye informacion importante sobre el agua potable. Si tiene preguntas o comentarios sobre este informe ex espanol, favor de llamar al tel. (973-)382-3222—para hablar con una persona bilingue en espanol

Our Drinking Water is Regulated

Annual Water Quality Report for the period of January 1 to December 31, 2017. 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.

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.

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 productions, 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

Sources of Drinking Water

The TCEQ completed an assessment of our source water and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for our water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confident Report. For more information on source water assessments and protection efforts at our system, contact the general manager, Donna Loiselle at 972-382-3222.

<u>Source Water Name</u>	<u>Address</u>	<u>Water Type</u>	<u>Report Status</u>	<u>Location</u>
3—CR# 103	10445 CR# 103	Groundwater	Y	Trinity Aquifer
4—FM 121	20600 FM 121	Groundwater	Y	Trinity Aquifer
5—CR#128/Lake Dr	4600 Lake Dr	Groundwater	Y	Trinity Aquifer
6—10215 CR# 134	10215 CR# 134	Groundwater	pending	Trinity Aquifer
GW from Sherman	350 Strawn Rd	Groundwater	pending	Trinity Aquifer

ALL Drinking Water May Contain Contaminants

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. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water, can cause taste, color, and 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 Marilee SUD's business office.

Required Additional Health Information for Lead

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 or at [http:// www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

Abbreviations

- *NTU - Nephelometric Turbidity Units
- *MFL - million fibers per liter (a measure of asbestos)
- *pCi/L - picocuries per liter (a measure of radioactivity)
- *Treatment Technique or TT - A required process intended to reduce the level of a contaminant in drinking water
- *mrem - millirems per year (a measure of radiation absorbed by the body)
- *ppt - parts per trillion, or nanograms per liter
- *ppq - parts per quadrillion, or picograms per liter

Definitions:

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 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 bacterial have been found in our water system on multiple occasions.
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 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 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.
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.
Avg. ppm:	Regulatory compliance with some MCLs are based on running annual average of monthly samples
ppb:	milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.
na:	micrograms per liter or parts per billion 0 or one ounce in 7,350,000 gallons of water. not applicable.

On the following pages the tables contain scientific terms and measures, some of which may require explanation

Regulated Contaminants

Disinfectants & Disinfection By-Products	Collection Date	Highest level detected	Range of level detected	MCLG	MCL	Units	Violation	Likely source of contamination
Haloacetic Acids (HAA5)	2016	3	2.5-2.5	No goal	60	ppb	N	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	2016	6	5.71-5.71	No goal	80	ppb	N	By-product of drinking water disinfection

Inorganic Contaminants	Collection Date	Highest level detected	Range of level detected	MCLG	MCL	Units	Violation	Likely source of contamination
Barium	2016	0.026	0.01- 0.026	2	2	ppb	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	2016	2.8	0-2.8	100	100	ppb	N	Discharge from steel & pulp mills; Erosion of natural deposits;
Cyanide	8/18/2014	5.47	5.44-5.47	200	200	ppb	N	Discharge from Plastic & fertilizer Factories; Discharge From steel/metal factories
Fluoride	2016	1.1	0.351-0.067	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer & aluminum factories
Nitrate (measured as Nitrogen)	2016	0.067	0.0305 –0.067	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Radioactive Contaminants								
Combine Radium 226/228	2016	1.5	1.5-1.5	0	5	pCi/L	N	Erosion of natural deposits

Synthetic organic contaminants Including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Level Detected	MCLG	MCL	Units	Violation	Likely Contaminant Source
Di (2-ethylhexyl) phthalate	2016	1	0.5-0.6	0	6	ppb	N	Discharge from rubber And chemical factories

Annual Water Loss Audit

In the water loss audit submitted to the Texas Water Development Board for the time period of Jan-Dec 2017, our system lost an estimated 41.1 million gallons or 14% of the total water pumped for the year 2017. If you have any questions about the water loss audit please call 972-382-3222.

**Secondary and Other Constituents Not Regulated
(No associated adverse health effects)**

Year or Range	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Source of Constituent
2013	Aluminum	0.004	0	0.00479	.05	ppm	Abundant naturally occurring element.
2013	Bicarbonate	305	289	321	NA	ppm	Corrosion of carbonate rocks such as limestone.
2013	Calcium	1.35	1.3	25.5	NA	ppm	Abundant naturally occurring element.
2013	Carbonate	5	<2	7	NA	ppm	Corrosion of carbonate rocks such as limestone.
2013	Chloride	52.6	22.6	300	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2013	Copper	0.07	0.003	0.0103	1	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
2013	Hardness as Ca/Mg	10.24	4.98	15.5	NA	ppm	Naturally occurring calcium and magnesium.
2013	Iron	0.06	<0.0200	0.0769	.3	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
2013	Magnesium	0.83	0.394	1.25	NA	ppm	Abundant naturally occurring element.
2013	Manganese	0.0014	0.000930	0.00196	.05	ppm	Abundant naturally occurring element.
2013	P. Alkalinity as CaCO ₃	2	<2	4	NA	ppm	Naturally occurring soluble mineral salts
2013	pH	8.5	8.3	8.8	>7.0	units	Measure of corrositivity of water.
2013	Sodium	217	214	220	NA	ppm	Erosion of natural deposits; byproduct of oil field activity.
2013	Sulfate	145	99.2	145	300	ppm	Naturally occurring common industrial byproduct; byproduct of oil field activity.
2013	Total Alkalinity as CaCO ₃	321	86	321	NA	ppm	Naturally occurring soluble mineral salts.
2013	Total Dissolved Solids	604	590	618	1000	ppm	Total dissolved mineral constituents in water.
2013	Total Hardness as CaCO ₃	19	3	104	NA	ppm	Naturally occurring calcium.
2013	Zinc	0.002	0	0-00792	5	ppm	Moderately abundant naturally occurring element; used in the metal industry.

Total Coliform REPORTED MONTHLY TESTS FOUND NO COLIFORM BACTERIA.
Fecal Coliform REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA.

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	Source of Contaminant
2009	Turbidity	0.60	98.00	0.3	NTU	Soil runoff.

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No of Positive	Fecal Coliform or E. Coli Maximum Contaminant	Total No. of Positive E. Coli or Fecal Coliform	Violation	Likely Source of Contamination
0	1 positive monthly	1		0	N	Naturally present in the environment

Violations

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
Lead and Copper	12/30/2017	02/22/2018	We failed to provide the results of lead tap water monitoring to TCEQ at the location water was tested. These were to be provided no later than 30 days after learning the results.

Disinfection Data:

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source of Chemical
2017	Chlorine	1.75	1.19	2.	4.0	<4.0	ppm	N	Disinfectant used to control microbes.

Lead and Copper

Date	Contaminant	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level	MCLG	Unit of Measure	Violation	Source of Contaminant
2017	Copper	0.089	0	1.3	1.3	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing Systems.
2017	Lead	2.2	0	15	0	ppb	N	Corrosion of household plumbing systems Erosion of natural deposits.

Definitions: Action Level Goal (ALG): The level of a contaminant in drinking water below which 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.

The City of Sherman provides groundwater to your water system on a contractual basis each month. The following regulated contaminant information is from their consumer confidence report and is required to be listed in your water system report as a provider of groundwater.

Inorganic Contaminants	Collection	Concentration	Range	Current MCL	Violation
Aluminum	2017	0.007 mg/l		2 mg/l	No
Barium	2017	0.011 mg/l	na—0.011	2 mg/l	No
Calcium	2016	1.33 mg/l		no MCL	No
Chromium	2017	6 ppb	na—6	100 MCL	No
Copper, free	2017	0.004 mg/l	na—4	no MCL	No
Hardness, Calcium Magnesium	2016	4.81 mg/l		no MCL	No
Magnesium	2016	0.363 mg/l		no MCL	No
Manganese	2017	0.0016 mg/l		no MCL	No
Potassium	2016	0.784 mg/l		no MCL	No
Sodium	2016	247.000 mg/l		no MCL	No
Fluoride	2017	1.29 mg/l	na—1.29	4 MCL	No
Chloride	2017	243 mg/l		no MCL	No
Sulfate	2017	125 mg/l		no MCL	No

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Level Detected	MCLG	MCL	Units	Violations	Likely Source of Contamination
Combined Radium 226/228	08/08/2011	1	1—1	0	5	pCi/L	N	Erosion of natural deposits

Synthetic organic Contaminants Including pesticides & herbicides	Collection Date	Highest Level	Range of Levels	MCLG	MCL	Units	Violation	Contamination Source
Atrazine	2014	0.08	0—0.08	3	3	ppb	N	Runoff from herbicide Used on row crops
Di (2-ethylhexyl) adipate	2014	0.7	0—0.7	400	400	ppb	N	Discharge from Chemical factories.

Turbidity	Limit	Level detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.12 NTU	N	Soil runoff
Lowest monthly % meeting Limit	0.3 NTU	100%	N	Soil runoff