



## 2015 Annual Drinking Water Quality Report

**TX0730002**

CITY OF MARLIN

Annual Water Quality Report for the period of January 1 to December 31, 2015

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.

CITY OF MARLIN is Surface Water, obtained from the New Marlin Lake.

For more information regarding this report contact:

Name SCOTT FORNASH

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Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (254)883-1450.

### 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 EPAs 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

A Source Water Susceptibility Assessment for your drinking water source(s) is currently being updated by the Texas Commission on Environmental Quality. This information 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 information contained in the assessment allows us to focus source water protection strategies.

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: <http://gis3.tceq.state.tx.us/swav/Controller/index.jsp?wtrsrc=>

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

Source Water Name	Type of Water	Report Status	Location
1 -3 (NEW) BASE OF MARLIN LAKE DAM AT (NEW) BASE OF MARLIN LAKE	SW	ACTIVE	FALLS COUNTY, TEXAS

**2015 Regulated Contaminants Detected**

**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
<b>Copper</b>	9-30-15	1.3	1.3	0.482	1	ppm	Y	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
<b>Lead</b>	9-30-15	0	15	.00347	0	ppb	Y	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.
Avg:	Regulatory compliance with some MCLs are based on running annual average of monthly samples.
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)
na:	not applicable.
NTU	nephelometric turbidity units (a measure of turbidity)
pCi/L	picouries per liter (a measure of radioactivity)

## Water Quality Test Results

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.
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)*	2015	40	1.9 - 92.7	No goal for the total	60	ppb	Y	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2015	62	14.5 - 136	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
Barium	2015	0.0675	0.0675 - 0.0675	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Cyanide	2015	70	70 - 70	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
Fluoride	2015	0.6	0.58 - 0.58	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]	2015	1	0.93 - 0.93	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	01/14/2010	4	4 - 4	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.

Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
2,4-D	2015	0.2	0.2 - 0.2	70	70	ppb	N	Runoff from herbicide used on row crops.
Atrazine	2015	0.24	0.24 - 0.24	3	3	ppb	N	Runoff from herbicide used on row crops.

**Turbidity**

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
<b>Highest single measurement</b>	1 NTU	1.4 NTU	Y	Soil runoff.
<b>Lowest monthly % meeting limit</b>	0.3 NTU	85%	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

**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.

**Disinfectant Residual Table**

Disinfectant	Year	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Likely Source of Contamination
CHLORAMINES	2015	1.73	.11	4.5	4.0	4.0	ppm	Y	Water additive used to control microbes.

**Violations Table**

<b>Haloacetic Acids (HAA5)*</b>			
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	07/01/2015	09/30/2015	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	10/01/2015	12/31/2015	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.

**Violations Table**

SINGLE COMB FLTR EFFLUENT (IESWTR/LT1)	12/01/2015	12/31/2015	One turbidity measurement exceeded a standard for the month indicated. Turbidity (cloudiness) levels are used to measure effective filtration of drinking water.
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## 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	04/01/2015	04/30/2015	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 (IESWTR/LT1), MAJOR	07/01/2015	07/31/2015	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 (IESWTR/LT1), MAJOR	08/01/2015	08/31/2015	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 (IESWTR/LT1), MAJOR	09/01/2015	09/30/2015	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 (IESWTR/LT1), MAJOR	10/01/2015	10/31/2015	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 (IESWTR/LT1), MAJOR	11/01/2015	11/30/2015	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 (IESWTR/LT1), MAJOR	12/01/2015	12/31/2015	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 (IESWTR/LT1), MINOR	05/01/2015	05/31/2015	We failed to complete all the required tests of our drinking water for the contaminant and period indicated.
MONTHLY COMB FLTR EFFLUENT (IESWTR/LT1)	06/01/2015	06/30/2015	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)	09/01/2015	09/30/2015	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)	11/01/2015	11/30/2015	One turbidity measurement exceeded a standard for the month indicated. Turbidity (cloudiness) levels are used to measure effective filtration of drinking water.

## 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 CONSUMER NOTICE (LCR)	12/30/2014	03/12/2015	We failed to provide the results of lead tap water monitoring to the consumers at the location water was tested. These were supposed to be provided no later than 30 days after learning the results.

## Long Term Enhanced SWTR

The Long Term Enhanced Surface Water Treatment Rule supplements existing regulations by targeting additional Cryptosporidium treatment to higher risk systems. It also contains provisions to reduce risks from uncovered finished water reservoirs and to ensure that systems maintain microbial protection when reducing the formation of disinfection byproducts.

Violation Type	Violation Begin	Violation End	Violation Explanation
FAILURE TO PROVIDE LT2 TREATMENT	07/01/2015	07/31/2015	We failed to implement one or more treatment processes or control strategies for cryptosporidium (these are necessary based on results from source water monitoring).
FAILURE TO PROVIDE LT2 TREATMENT	08/01/2015	08/31/2015	We failed to implement one or more treatment processes or control strategies for cryptosporidium (these are necessary based on results from source water monitoring).
FAILURE TO PROVIDE LT2 TREATMENT	09/01/2015	09/30/2015	We failed to implement one or more treatment processes or control strategies for cryptosporidium (these are necessary based on results from source water monitoring).
FAILURE TO PROVIDE LT2 TREATMENT	10/01/2015	10/31/2015	We failed to implement one or more treatment processes or control strategies for cryptosporidium (these are necessary based on results from source water monitoring).
FAILURE TO PROVIDE LT2 TREATMENT	11/01/2015	11/30/2015	We failed to implement one or more treatment processes or control strategies for cryptosporidium (these are necessary based on results from source water monitoring).
FAILURE TO PROVIDE LT2 TREATMENT	12/01/2015	12/31/2015	We failed to implement one or more treatment processes or control strategies for cryptosporidium (these are necessary based on results from source water monitoring).

### 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	06/01/2015	06/30/2015	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.

### Violations Table

PUBLIC NOTICE RULE LINKED TO VIOLATION	07/01/2015	07/31/2015	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.
PUBLIC NOTICE RULE LINKED TO VIOLATION	08/06/2015	02/29/2016	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.
PUBLIC NOTICE RULE LINKED TO VIOLATION	09/01/2015	09/30/2015	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.
PUBLIC NOTICE RULE LINKED TO VIOLATION	11/01/2015	11/30/2015	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.

### Surface Water Treatment Rule (SWTR)

The Surface Water Treatment Rule seeks to prevent waterborne diseases caused by viruses, Legionella, and Giardia lamblia. The rule requires that water systems filter and disinfect water from surface water sources to reduce the occurrence of unsafe levels of these microbes.

Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, RTN/RPT MAJOR (SWTR-FILTER)	04/01/2015	04/30/2015	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, RTN/RPT MAJOR (SWTR-FILTER)	06/01/2015	06/30/2015	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, RTN/RPT MAJOR (SWTR-FILTER)	11/01/2015	11/30/2015	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, RTN/RPT MAJOR (SWTR-FILTER)	12/01/2015	12/31/2015	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, RTN/RPT MINOR (SWTR-FILTER)	02/01/2015	02/28/2015	We failed to complete all the required tests of our drinking water for the contaminant and period indicated.











