

## OPPORTUNITIES FOR PUBLIC PARTICIPATION

The public is always welcome to attend Commission Meetings scheduled on the second and fourth Thursday of each month at 6:00 PM at City Hall. For more information about these meetings, call 903-935-4421.



## HOW TO CONTACT US

For Questions or Concerns Regarding Water Quality or About This Report, please Contact the Water Treatment Plant at:

**903-935-4485**

Monday–Friday  
8:00 AM–5:00 PM

**Water Billing Questions:**

**903-935-4435**

**Water and Sewer Emergencies:**

**903-935-4485**

**Source Water Assessment Questions:**

**903-935-4485**

**TCEQ:**

**903-535-5100**

**or Visit Our Website at:**

**[www.marshalltexas.net](http://www.marshalltexas.net)**

**EN ESPAÑOL:**

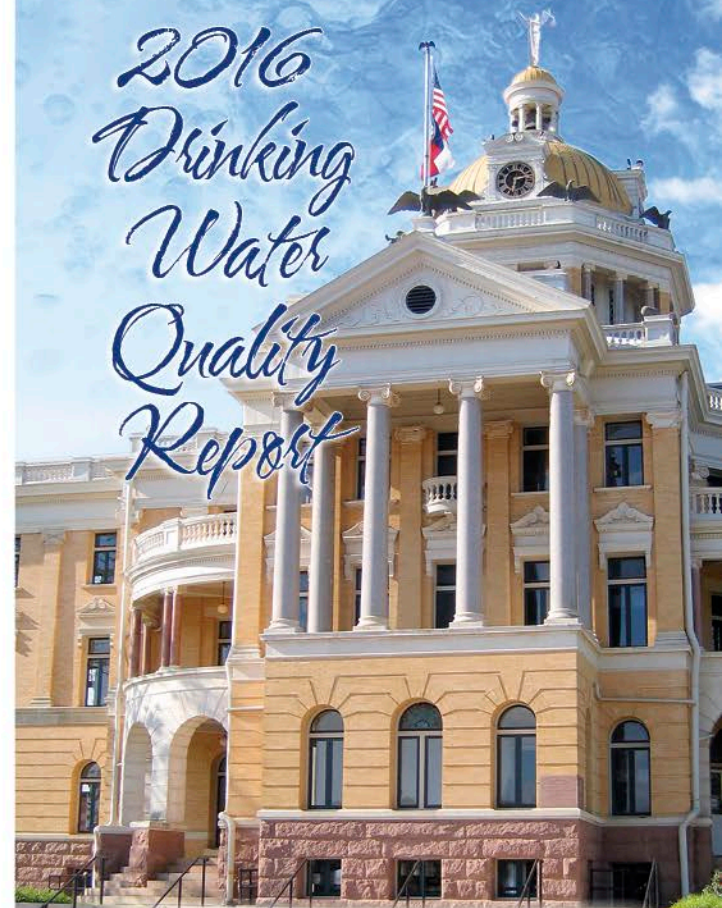
Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre éste informe en español, favor de llamar al Tel. 903-935-4485 para hablar con una persona bilingüe en español.

CITY OF MARSHALL WATER UTILITY DIVISION

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MARSHALL TX 75671

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# 2016 Drinking Water Quality Report



**Public Water System ID #1020002**

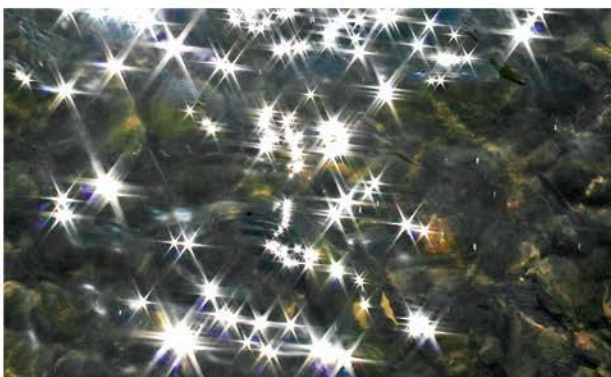
Annual Water Quality Report for the period of January 1 to December 31, 2016. This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

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.



## SPECIAL NOTICE

**Required language for ALL community public water supplies:** 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; 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.



## WATER SOURCES

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.

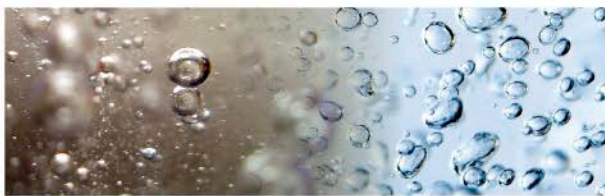
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, 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.

### En Español

Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre éste informe en español, favor de llamar al tel.: 903-935-4485 para hablar con una persona bilingüe en español.

## WHERE DO WE GET OUR DRINKING WATER?

Our drinking water is obtained from SURFACE water sources. It comes from the following River: BIG CYPRESS BAYOU. The TCEQ completed an assessment of your source water and results indicate that some of your sources are susceptible to certain contaminants. 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 the City of Marshall Water Treatment



Plant at 903-935-4492.

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://dww2.tceq.texas.gov/DWW/>



## SECONDARY CONSTITUENTS

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 the EPA. These constituents are not causes for health concern. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

## ABOUT THE FOLLOWING PAGES

The pages that follow list all of the federally regulated or monitored contaminants which have been found in your drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants.





# WATER

## Definitions

**Action Level (AL)**—The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Average (Avg.)**—Regulatory compliance with some MCLs are based on running annual average of monthly samples.

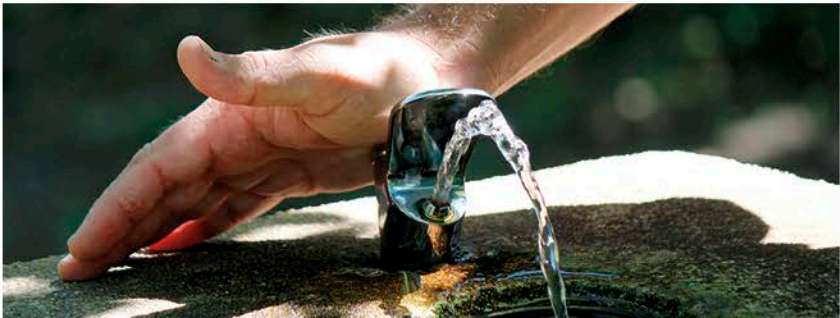
**Maximum Contaminant Level (MCL)**—The highest permissible level of a contaminant in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**Maximum Contaminant Level Goal (MCLG)**—The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

**Maximum Residual Disinfectant Level (MRDL)**—The highest level of 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 (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 contamination.

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



### WATER LOSS AUDIT 2016

In the water loss audit submitted to the Texas Water Development Board for the time period of January–December 2016, our system lost an estimated 222,544,386 gallons of water. If you have any questions about the water loss audit, please call 903-935-4492.

### COLIFORM BACTERIA

Coliform bacteria are naturally present in the environment.

Year	Max. Contaminant Level Goal	Ttl. Coliform Max. Contaminant Level	Highest No. of Positive	Ttl. No. of Positive E. Coli or Fecal Coliform Samples
2016	0	1	1	0
Likely Source: Naturally present in the environment.				

### SECONDARY AND OTHER CONSTITUENTS NOT REGULATED (No associated adverse health effects)

Year	Constituent	Avg. Level	Min.–Max. Level	Secondary Limit
2016	Chloride (ppm)	16.2	16.2	300
Abundant naturally occurring element; used in water purification; by-product of oil field activity.				
2016	Sulfate (ppm)	11.9	11.9	300
Naturally occurring; common industrial by-product; by-product of oil field activity.				
2016	Total Dissolved Solids (ppm)	87	87	1000
Total dissolved mineral constituents in water.				

### RADIOACTIVE CONTAMINANTS

Year	Contaminant	Highest Level Detected	Min.–Max. Level	MCL	MCLG
2011	Combined Radium (pCi/L)	1	1–1	5	0
Likely Source: Erosion of natural deposits.					

### INORGANIC CONTAMINANTS

Year	Contaminant	Highest Level Detected	Min.–Max. Level	MCL	MCLG
2016	Fluoride (ppm)	0.1	0.07–0.07	2.4	2.4
Likely Source: Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.					
2016	Nitrate (ppm)	0.224	0.224–0.224	10	10
Likely Source: Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.					
2016	Nitrite (ppm)	0.022	0.022–0.022	1	1
Likely Source: Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.					
2016	Barium (ppm)	0.041	0.041–0.041	2	2
Likely Source: Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.					

### TOTAL ORGANIC CARBON

Total organic carbon (TOC) no health effects. The disinfectant can combine with TOC to form disinfection by-products. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. By-products of disinfection include trihalomethanes (THMs) and haloacetic acids (HAA) which are reported elsewhere in this report.

Year	Contaminant	Avg. Level	Min.–Max. Level
2016	Source Water (ppm)	7.36	5.88–8.67
Naturally present in the environment.			
2016	Drinking Water (ppm)	3.44	2.83–3.81
Naturally present in the environment.			
2016	Removal Ratio (% removal*)	1.11	.84–1.43
NA			

\*Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.

### MAXIMUM RESIDUAL DISINFECTANT LEVEL

Systems must complete and submit disinfection data on the Surface Water Monthly Operations Report (SWMOR). On the CCR report, the system must provide disinfectant type, minimum, maximum and average levels.

Year	Disinfectant	Avg. Level	Min.–Max. Level	MRDL	MRDLG
2016	Chloramines (ppm)	1.94	0.5–3.8	4	<4
Source: Disinfectant used to control microbes.					



## Abbreviations

- MFL—million fibers per liter (measure of asbestos)  
NA—not applicable  
NTU—nephelometric turbidity units (measure of turbidity)  
pCi/L—picocuries per liter (measure of radioactivity)  
ppb—parts per billion, or micrograms per liter (µg/L)  
ppm—parts per million, or milligrams per liter (mg/L)



### DISINFECTION BY-PRODUCTS

Year	Contaminant	Highest Level Detected	Min.–Max. Level	MCL
2016	Total Haloacetic Acids (ppb)	40	27.5–49.7	60
Likely Source: By-product of drinking water chlorination.				
2016	Total Trihalomethanes (ppb)	60	41–68.1	80
Likely Source: By-product of drinking water chlorination.				

### LEAD AND COPPER

Year	Contaminant	The 90 <sup>th</sup> Percentile	Number of Sites Exceeding Action Level	Action Level
2016	Lead (ppb)	5.2	1	15
Likely Source: Corrosion of household plumbing systems; erosion of natural deposits.				
2016	Copper (ppm)	0.075	0	1.3
Likely Source: Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.				

### 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>."

### TURBIDITY

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.

Year	Limit	Level	Violation
2016	(Treatment Technique)	Detected	
Highest Single Measurement (NTU)		1	0.24
Lowest Monthly % Meeting Limit (NTU)		0.3	% 100
Likely Source: Soil runoff.			

