

CITY OF MANSFIELD, TX

FROM THE BUD ERVIN
WATER TREATMENT PLANT

HYDRATE



QUENCHED



N•O•U•R•I•S•H

TO YOUR TABLE

2016
Annual Water Quality Report

PRESORTED STANDARD
PAID
U.S. POSTAGE
PERMIT NO. 10
MANSFIELD, TX



See online version:
www.mansfieldwaterquality.com

menu



A solid meal plan will help keep you on track. Mansfield Water Utilities has their own set of parameters in place per the State and the Environmental Protection Agency to ensure water quality standards are met. See p. 5.

SOURCE

P. 3

Healthy food comes from healthy sources. The best water comes from the best lakes. Learn more about your drinking supply source here.

MEASURE

P. 4

In the kitchen you use measuring cups and teaspoons. In water treatment, we have our own means of measure.

INGREDIENTS

P. 6

When cooking, we get to choose our ingredients. That isn't always the case when it comes to our water source. There are minerals, organisms, and even some potential pollutants in our raw water source. Some are naturally-occurring and some man-made.

JUST BEAT IT

P. 7

Water loss is one challenge in the system we are always striving to beat. Other challenges like lead and copper are things we can work on together.

ABOUT US

We hope you enjoyed GoSip Magazine, last year's water quality report. This year we decided to cook up something a little different. Did you know that this year marks 100 years of water service in Mansfield? Food delivery services are the hot new trend, but delivering clean, safe drinking water has been our mission for the past 100 years.

We value your input and feedback so please reach out to us first if you have any questions or concerns about your water quality, water bill, irrigation system, etc. You are why we are here and why we strive to be #SecondToNone. We hope you will join us as we celebrate 100 years of Mansfield Water Utilities this year.

This water quality report we are serving you up is 365 days of water testing data. The head chef aka the Texas Commission on Environmental Quality has a certain way they like things said for consistency sake. We know it can get confusing. If you have any questions, please give us a call. It is our priority that you understand the information we provide you.

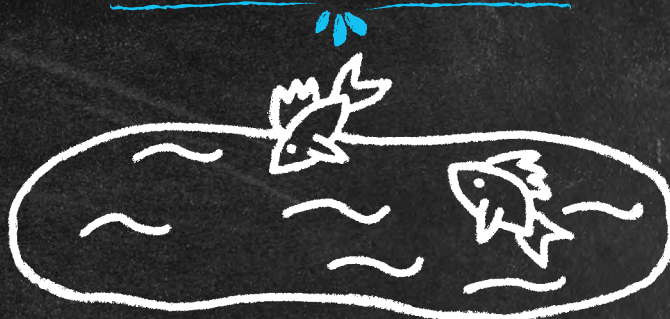
Sincerely,

Jeff Price
Director of Water Utilities

SPECIAL POPULATIONS

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).

source



The sources of drinking water (both tap 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. The City of Mansfield purchases lake water (surface water) from the Tarrant Regional Water District (TRWD). TRWD pumps water primarily from Cedar Creek and Richland Chambers Reservoirs in the east and Lake Benbrook in the west. The best water comes from the best lakes. The best recipes use the best water!

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 Water Quality Report. For more information on source water assessments and protection efforts of our system, contact Robby Isbell, 817-723-3661.

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](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/](http://dww2.tceq.texas.gov/dww/)



measure



In a cookbook, you have measurements like tsp, Tbsp, oz, and F. In water treatment, we have measurements like parts per million, parts per billion, plus weird sounding ones like NTU. Knowing these definitions can help you better understand the water quality report. Not all of these terms will be found in the report, but the State requires that we include all of the definitions. Please contact us if you have any questions.



AVG

Regulatory compliance with some MCLs are based on running annual average of monthly samples.



Level 1 Assessment

A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in the water system



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.



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 bacteria have been found in the water system on multiple occasions.



Maximum Residual Disinfectant Level (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.



MFL

million fibers per liter (a measure of asbestos)



Treatment Technique (TT)

A required process intended to reduce the level of a contaminant in drinking water.



ppq

parts per quadrillion, or picograms per liter (pg/L)



Maximum Contaminant Level (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 Disinfection 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 contaminants.



na

not applicable



mrem

millirems per year (a measure of radiation absorbed by the body)



NTU

nephelometric turbidity units (a measure of turbidity)



pCi/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.



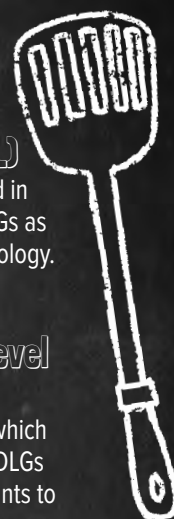
ppm

milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.



ppt

parts per trillion, or nanograms per liter (ng/L)



water quality report

City of Mansfield TX2200018

2016 Drinking Water Quality Report

Annual Water Quality Report for the period 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.

En Español: Este reporte incluye informacion importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono 817-477-2248.

Using Data Collected in 2016 Unless Noted

Inorganic Contaminants	Contaminant	Units	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination
	Arsenic	ppb	1.00	0.87 - 0.87	0.00	10.00	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
	Barium	ppm	0.021	0.021 - 0.021	2.00	2.00	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
	Fluoride	ppm	0.100	0.117 - 0.117	4.00	4.00	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and
	Nitrate [measured as Nitrogen]	ppm	0.436	0.436 - 0.436	10.00	10.00	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
	Thallium	ppb	0.270	0.27 - 0.27	0.50	2.00	No	Discharge from electronics, glass, and leaching from ore-processing sites; drug factories.
Radioactive Contaminants (collected 1/06/2011)								
Combined Radium 226/228	pCi/L	1.00	1.00 - 1.00	0.00	5.00	No	Erosion of natural deposits.	
Lead and Copper ⁽³⁾		Units	The 90th Percentile	# Sites Over AL	Action Level (AL) ⁽⁴⁾	MCLG	Violation	Likely Source of Contamination
Lead (09/15/2015)	ppb	1.70	0.00	15.00	0.00	No	Corrosion of household plumbing systems; Erosion of natural deposit.	
Copper (09/15/2015)	ppm	0.21	0.00	1.30	1.30	No	Corrosion of household plumbing systems; Erosion of natural deposit; Leaching from wood preservatives.	
Turbidity ⁽¹⁾		Limit (Treatment Technique)		Level Detected		Violation	Likely Source of Contamination	
Highest single measurement		1.00 NTU		0.38 NTU		No	Soil runoff.	
Lowest monthly % meeting limit		0.30 NTU		100%		No	Soil runoff.	
Secondary Constituents	Contaminant	Units	Average Level	Minimum Level	Maximum Level	Secondary Limit	Likely Source of Contamination	
	Bicarbonate	ppm	47.00	47.00	47.00	NA	Corrosion of carbonate rocks such as limestone.	
	Chloride	ppm	13.00	13.00	13.00	300.00	Abundant naturally occurring element; Used in water purification.	
	Hardness as Ca/Mg	ppm	98.80	98.80	98.80	NA	Naturally occurring in calcium and magnesium.	
	pH	units	8.20	8.10	8.30	> 7.00	Measure of corrosivity of water.	
	Sodium	ppm	22.00	22.00	22.00	NA	Erosion of natural deposits; Byproducts of oil field activity.	
	Sulfate	ppm	11.10	11.10	11.10	300.00	Naturally occurring; Common industrial byproduct; Byproducts of oil field activity.	
Total Dissolved Solids		ppm	114.00	114.00	114.00	1000.00	Total dissolved mineral constituents in water.	
Total Organic Compound ⁽²⁾								
Raw Water		6.91		5.65		8.76		
Treated Water		3.92		3.19		4.68		
Removal Ratio		1.13		0.98		1.43		
Byproducts								
Disinfection	Contaminant	Units	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Likely Source of Contamination
	Chlorite	ppm	0.71	0.00 - 0.71	0.80	1.00	No	Byproduct of drinking water disinfection.
	Haloacetic Acids (HAA5)*	ppb	33.00	16.6 - 59	No goal for that total	60.00	No	Byproduct of drinking water disinfection.
	Total Trihalomethanes (TTHM)	ppb	71.00	48.4 - 102	No goal for that total	80.00	No	Byproduct of drinking water disinfection.
Residual								
Disinfection		Units	Average Level	Range of Levels Detected	MRDL	MRDLG	Violation	Likely Source of Contamination
Chloramine		ppm	3.35	1.8 - 4.0	4.00	4.00	No	Water additive used to control microbes.
(1) 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. (2) 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. (3) 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. (4) Action level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system much follow.								

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ingredients



When cooking, we get to choose our ingredients. That isn't always the case when it comes to our water source. There are minerals, organisms, and even some potential pollutants in our raw surface water source. Some are naturally-occurring and some man-made. Drinking water, even 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:



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 817-477-2248.

SURFACE

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.

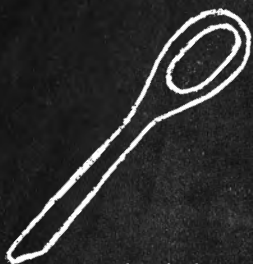


Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

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.





just beat it



We don't know what Chef Ramsey's biggest challenges in the kitchen are, but here are a few of ours.



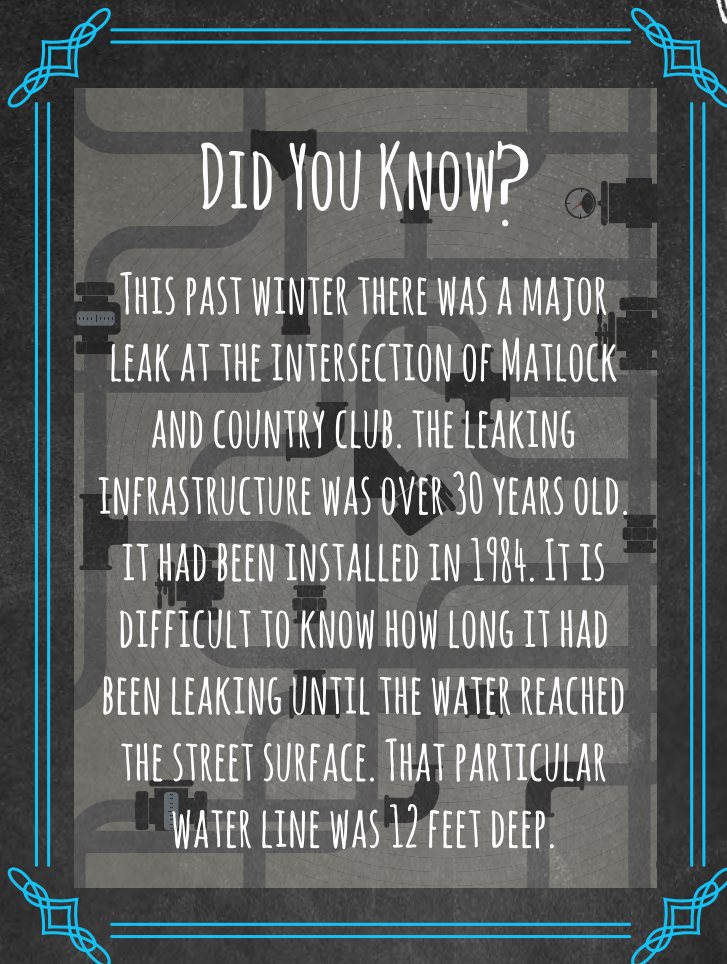
Did you know there are roughly 300 miles of water main lines in Mansfield? We have the best crews out in the field conducting routine maintenance which includes finding and repairing leaks. We do our best but some still sneak by. Did we mention these lines are all underground? This also adds an element of complexity to finding said leaks.

We are required to share our water loss information in the water quality report. The water loss report is done annually and submitted to the Texas Water Development Board. In the water loss audit submitted for the time period of Jan-Dec 2016, our system lost an estimated 220 million gallons of water. This represents 5.23% of the total gallons we purchase. In 2013, the national water loss average was 16% according to a study conducted by the Environmental Protection Agency. While we are well below the national average, we continually strive to beat water loss. If you have any questions about the water loss audit please call David Moulton at 817-728-3616.

Let's Beat Lead Together

Out of the 300 miles of water pipeline in Mansfield, no more than two miles are cast iron or galvanized steel which greatly limits exposure from the city's supply side to lead and copper. Every year water is tested for lead at the Bud Ervin Water Treatment Plant before it enters the distribution system to ensure that our source water (from the lakes) does not contain lead. These source water test results have always shown no detectable levels of lead. Because lead is primarily present in drinking water due to the leaching from pipes, Mansfield Water Utilities adjusts the treatment process to make the water more stable and therefore less corrosive. This reduces the risk of lead being leached from any potential problem areas. Targeted sampling sites are homes built between 1983 and 1989, as the national lead ban went into effect in 1986. If you have questions or concerns about lead, please contact Robby Isbell or John Woodworth at 817-477-2248.

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>.



notice of violation



The State, via the Texas Commission on Environmental Quality provides much of the standardized verbiage for this report. We pride ourselves in trying to present our water quality report in a manner that is engaging and easy to understand. That being said, we are still legally required to include certain language.

On July 8, 2016 we missed one sample. This single sample measures the amount of chlorite and chlorine dioxide in the water leaving the Bud Ervin Water Treatment Plant. Chlorite is a byproduct of the use of Chlorine Dioxide. Chlorine Dioxide is added to the water when it enters the plant in order to reduce the levels of iron and manganese. Iron and manganese are secondary constituents that we treat in order to improve the taste, odor, and color of our drinking water. On July 8, 2016, an oversight led to our treatment plant missing the daily chlorite test requirement.

In the history of our use of Chlorine Dioxide we have NEVER exceeded the maximum contaminant level (MCL) mandated by the State. The chlorite levels were significantly below the maximum contaminant level on July 7 and July 9, the days immediately prior to and following the missed sample, as well. Therefore, we are certain that at no point were the citizens of Mansfield at any adverse health risk.

We are required by the TCEQ to give public notice of this incident which we did through a utility bill insert in December 2016 and through this water quality report.

We want to make it clear that this was solely a violation of the monitoring requirements and was NOT a violation of water quality standards. Further checks and balances were immediately put in place to ensure that this lapse in monitoring does not occur in the future. We take great pride in providing safe, reliable drinking water and take these issues very seriously.

AS PART OF OUR WATER QUALITY REPORT WE ARE ALSO REQUIRED TO REPORT THIS VIOLATION WHICH INCLUDES THE LANGUAGE BELOW FROM THE STATE CODE RELATED TO POTENTIAL ADVERSE HEALTH EFFECTS.

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

Again, at no point were the citizens of Mansfield at any adverse health risk. Your water is our water and a responsibility we don't take lightly. We don't only work here, we also live here with our families. We treat your water like our water because, frankly, it is. If you have any questions or concerns, please contact us. If you would like an opportunity to participate in decisions that may effect the quality of water, we invite you to attend a city council meeting. City Council meetings occur the second and fourth Monday of every month at 7 pm in council chambers at City Hall, 1200 E. Broad St.

Jeff Price, Director of Water Utilities 817-723-3602
Robby Isbell, Water Treatment Plant Superintendent, 817-723-3661
After Hours Emergency Calls, 817-473-3411

Hungry for more? Sign up for newsletter and never miss out on our fun events.
Sign up by emailing water@mansfieldtexas.gov