

# Lake Cities Municipal Utility Authority

## 2019 Annual Water Quality Report

Enclosed is the Annual Water Quality Report for the period of 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.

### LCMUA'S Source Water Supply & Protection

The source of drinking water provided by Lake Cities Municipal Utility Authority is purchased surface water and well water. Drinking water, both tap and bottled, can come from a variety of sources including rivers, lakes, streams, reservoirs, and springs. As water travels over the land's surface or through the ground, it dissolves naturally occurring minerals and radioactive material and can be polluted by animal or human activity. LCMUA's ground water and surface water come from Lewisville and Jim Chapman Lakes.

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, agriculture 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.

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. Contaminants that may be found in drinking water can cause changes in taste, odor, or the color of drinking water. Water, whether tap or bottled, is regulated for safety. The EPA regulates water provided by public water systems while the Food and Drug Administration establishes regulations for bottled water. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

It is more responsible, cheaper and easier, to keep contaminants out of our lakes than it is to remove them once they get in. Excessive or improper use of pesticides/herbicides, improper disposal of used oil and antifreeze, and littering are just a few activities that can lead to pollution in our drinking water supply. Please do your part to stop pollution.

The Texas Commission on Environmental Quality completed an assessment of your water source and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detection of these contaminants may be found in this Water Quality Report. For more information about source water assessments and protection efforts of our system, contact Mike Fairfield, General Manager at (940) 497-2999.

### Important Special Notice

You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly and 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 EPA's Safe Drinking Water Hotline at (800) 426-4791.

### Lead/Copper Information

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 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, testing methods, and steps you can take to minimize exposure is available from the EPA's Safe Drinking Water Hotline (800) 426-4791 or at <http://www.epa.gov/safewater/lead>.

### Contact Us – Your Views are Welcome

There are a number of options available to learn more about the Water Utilities or to participate in decision making processes. For questions about this report or the quality of our drinking water, call Mike Fairfield, General Manager, at (940) 497-2999. For participation opportunities call Customer Service at (940) 497-2999 for the Lake Cities Municipal Utility Authority Board meetings date and times. You can also visit our website at [www.lcmua.org](http://www.lcmua.org).

**En Español** – Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo o hable con alguien que lo entienda bien.

2019 WATER QUALITY REPORT						
WATER FROM UPPER TRINITY REGIONAL WATER DISTRICT						
CONSTITUENTS DETECTED FOR 2019						
	UTRWD Source Water	Name: Lewisville/Chapman Lakes	Type: Surface Water	Location: Denton/Delta and Hopkins Counties		
Date	Substance	Maximum Amount in UTRWD Water	Range in UTRWD Water	MCL	MCLG	Possible Source
<b>Regulated at the Treatment Plant</b>						
10/2/2019	Barium (ppm)	0.039	0.036 - 0.039	2 ppm	2 ppm	Discharge of drilling wastes; discharge from metal refineries; erosions of natural deposits
Q3 - 2019	Bromate (ppb)	9.13	2.23 - 9.13	10 ppb	0	By product of drinking water disinfection
Apr-19	Chloramines (ppm)	3.80	2.7 - 3.8	4.0*	4.0^	Water additive used to control microbes
3/7/2019	Cyanide (ppm)	0.0474	ND - 0.0474	0.2 ppm	0.2 ppm	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
3/7/2019	Fluoride (ppm)	0.198	0.149 - 0.198	4 ppm	4 ppm	Water additive, erosion of natural deposits, discharge from fertilizer and aluminum factories
3/7/2019	Nitrate (ppm)	0.738	0.254 - 0.738	10 ppm	10 ppm	Fertilizer runoff, septic tanks, wastewater plant effluent, animal waste runoff.
Sep - 2019	TOC (ppm)	3.10	1.1 - 3.1	TT	N/A	Naturally present in the environment
8/27/2019	Turbidity	0.14	0.05 - 0.14	TT	N/A	Soil runoff.
<b>*=MRDL ^=MRDLG</b>						
<b>Radioactive Contaminants</b>						
2/2/2017	Gross Beta Emitters (pCi/L)	ND	N/A	50	0	Decay of natural and man-made deposits.
9/16/2015	Combined Radium (pCi/L)	1.5	N/A	5	0	Erosion of natural deposits
<b>Synthetic Organic Chemicals Including Pesticides and Herbicides</b>						
10/2/2019	Atrazine (ppb)	0.2	0.1 - 0.2	3 ppb	3 ppb	Herbicide runoff.
3/7/2019	Simazine (ppb)	0.18	ND - 0.18	4 ppb	4 ppb	Herbicide runoff.
<p>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 infections by Cryptosporidium are available from the Safe Drinking Water Hotline at (800) 426-4791. Upper Trinity continues to analyze our source water for the presence of Cryptosporidium. <b>Cryptosporidium has never been detected in any of the samples tested for Upper Trinity water.</b></p>						
<b>Definitions:</b>						
<p><b>MCL</b>-Maximum Contaminant Level: The highest level of a contamination that is allowed in drinking water.</p> <p><b>MCLG</b>-Maximum Contaminant Level Goal: The level of a contamination in drinking water below which there is no known or expected risk to health.</p> <p><b>MRDL</b>-Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of disinfectant is necessary for control of microbial contaminations.</p> <p><b>MRDLG</b>-Maximum Residual Disinfectant Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of disinfectants use to control microbes.</p> <p><b>NTU</b>: Nephelometric turbidity units. A measure of turbidity in water.</p> <p><b>pCi/L</b>: Picouries per liter, A measure of radioactivity in water equal to 10<sup>-12</sup> curies. Quantity of radioactive material producing 2.22 nuclear transformations per minute.</p> <p><b>Ppb</b>: Parts per billion. One part per billion is roughly equal to one packet of artificial sweetener sprinkled into an Olympic-size swimming pool.</p>			<p><b>ppm</b>: Parts per million. One part per million approximates one packet of artificial sweetener sprinkled into 250 gallons of iced tea.</p> <p><b>TT</b>: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.</p> <p><b>Turbidity</b>: A measure of the clarity of water. While turbidity has no known health effects, it can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing symptoms such as nausea, cramps, diarrhea, and associated headaches.</p> <p><b>TOC</b>-Total Organic Carbon: Has no known health effects. However, TOC provides a medium for the formation of disinfection by-products. These include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these by-products in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.</p>			
<b>THIS REPORT CONTAINS THE MOST RECENT DATA AVAILABLE IN ACCORDANCE WITH REGULATIONS.</b>						
<b>Este reporte incluye informacion importante sobre el agua para tomar. Para asistencia en espanol, favor de llamar al telefono (972-219-1228)</b>						
<p>For opportunities to participate in decisions that may affect water quality, UTRWD Board Meetings are held on the first Thursday of the month, starting at 1pm. Additional resources can be found at <a href="http://www.utrwd.com">www.utrwd.com</a> or by calling 972-219-1228</p>						

## 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 on 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:

<https://www.tceq.texas.gov/gis/swaview>

Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL:

<https://www.tceq.texas.gov/drinkingwater>

Source Water Name		Type of Water	Report Status	Location
4-WEST LAKE PS	WEST LAKE PS	GW	Y	WEST LAKE PS
6-WEST LAKE PS	WEST LAKE PS	GW	Y	WEST LAKE PS
8-1000' WEST LAKE PS	1000' WEST LAKE PS	GW	Y	1000' WEST LAKE PS
SW FROM UPPER TRINTIY REGIONAL WD	CC FROM TX0610213 UTRWD	SW		CC FROM TX0610213 UTRWD

## Definitions and Abbreviations

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Action Level:

The following tables contain scientific terms and measures, some of which may require explanation.

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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.

Avg:

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

Level 1 Assessment:

A 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 Level 2 assessment is 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 our water system on multiple occasions.

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)

mrem:

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

na:

not applicable

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 one ounce in 7,350 gallons of water.

ppq:

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

ppt:

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

Treatment Technique or TT:

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

## 2019 Regulated Contaminants Detected

Listed on this report are the regulated and unregulated contaminants detected in LCMUA's drinking water. All those listed are below allowable levels. Not listed here are hundreds of contaminants that were tested and not detected. This report is based up on the most recent data available to Lake Cities Municipal Utility Authority.

## LEAD AND COPPER

Lead and copper	Date sampled	MCLG	Action Level (AL)	90 <sup>th</sup> Percentile	#Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2019	1.3	1.3	0.82	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2019	0	15	2.5	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

## 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)*	2019	8	3.2 – 9.9	No goal for the total	60	ppb	N	By-Product of drinking water disinfection.
Total Trihalomethanes (TTHm)*	2019	16	12.6 - 20.4	No goal for the total	80	ppb	N	By-Product of drinking water disinfection.

## INORGANIC CONTAMINANTS

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2019	0.0066	0.0066-0.0066	2	2	ppm	N	Discharge of drilling waste; Discharge from metal Refineries; Erosion of natural deposits.
Chromium	10/19/2016	3.9	3.9-3.9	100	100	ppb	N	Discharge of steel and pulp mills; Erosion of natural deposits.
Fluoride	10/12/2017	1.65	1.65-1.65	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)	2019	1	0.201 - 0669	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

## RADIOACTIVE CONTAMINANTS

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination.
Combined Radium 226/228	10/12/2017	3.35	3.35-3.35	0	5	pCi/L	N	Erosion of natural deposits.

## COLIFORM BACTERIA

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

## DISINFECTANT RESIDUAL

Disinfectant Residual	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
Chloramines	2019	1.94 mg/l	1.60 mg/l - 3.40 mg/l	4	4	Ppm	N	Water additive used to control microbes.