

# Town of Little Elm

## 2017

## 5011

# Water Quality Report

Water testing performed in 2017

Reported 2018





## A Message from the Town Manager:

The Town of Little Elm takes pride in the water we provide and strives for uninterrupted service.

Throughout the year, The Town of Little Elm takes samples of the water supply from various locations in Town. These samples are sent in for analysis and the results are compiled into the Annual Water Quality Report for our water customers.

We are pleased to announce that The Town of Little Elm's water supply has met or exceeded all regulations and mandates established by the Environmental Protection Agency and the Texas Commission on Environmental Quality.

Please take the opportunity to read through this report to learn about the quality of Little Elm's water and Water Conservation.

If you have any questions regarding the Town's drinking water, or the information contained in this report, please contact Public Works at 972-377-5556.

Sincerely,  


Matt Mueller  
Town Manager

### For More Information...

- Or to report service problems or leaks contact the Public Works Department at 972-377-5556.
- Or for questions about your utility bill contact Utility Billing at 214-975-0480.

### Get Involved...

- Town Council Meetings are held on the first and third Tuesdays of each month beginning at 6:00 PM. For more information please contact the Town Secretary at 214-975-0404.



## IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

### Availability of Monitoring Data for Unregulated Contaminants (UCMR3 / UCMR4) for Town of Little Elm System #0610035

Our water system has sampled for a series of unregulated contaminants (UCMR3) / UCMR4. Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA the decide whether the contaminants should have a standard. As our customers, you have a right to know that these data are available. If you are interested in examining the results, please contact Andrew Figueroa at 972-377-5557 or 1600 Mark Tree Lane, Little Elm, Texas 75068.

This notice is being sent to you by Town of Little Elm .  
State Water System ID#: 0610035.

Date Distributed: (2015-2016), (2018)  
Sampling Years: (2014-2015), (2018)





## Important Health Information

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. Additionally guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## Naturally Occurring Bacteria

The simple fact is, bacteria and other microorganisms inhabit our world. They can be found all around us, in our food; on our skin; in our bodies; and, in our air, soil, and water. Some are harmful to us and some are not. Coliform bacteria are common in the environment and are generally not harmful themselves. The presence of this bacterial form in drinking water is a concern because it indicates that the water may be contaminated with other organisms that can cause disease. Throughout the year, we tested many water samples for coliform bacteria. In that time, none of the samples came back positive for the bacteria. Federal regulations now require that public water that tests positive for coliform bacteria must be further analyzed for fecal coliform bacteria. Fecal coliform are present only in human and animal waste. Because these bacteria can cause illness, it is unacceptable for fecal coliform to be present in water at any concentration. Our tests indicate no fecal coliform is present in our water.

## Lead and Drinking Water

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. The Town of Little Elm 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Questions?

For more information about this report, or for any questions relating to your drinking water please call Public Works at the Public Works Service Center, (972) 377-5556.

## Sampling Results

During the past year we have taken numerous water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants, and chlorine residuals levels. The table below shows only those contaminants that were detected in the water.

## Definitions

**Level 1 Assessment:** Is a study of the water system to identify potential problems & determine if possible why total coliform bacteria were found.

**Level 2 Assessment:** Is a very detailed study of the water system to identify potential problems & determine (if possible) why an Escherichia coli (E-coli) maximum contaminant level violation has occurred and /or why total coliform bacteria were found on multiple occasions.

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

**MCL (Maximum Contaminant Level):** 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. Secondary MCLs (SMCL) are set for the control of taste and odor.

**MCLG (Maximum Contaminant Level Goal):** 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.

**MRDL (Maximum Residual Disinfectant Level):** 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.

**MRDLG (Maximum Residual Disinfectant Level Goal):** The level of 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.

**ND (Not Detected):** Indicates that the substance was not found by laboratory analysis.

**NTU: (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**ppt (parts per trillion):** One part substance per trillion parts water (or nanograms per liter).

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



## Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulation limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration 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 these contaminants does not necessarily indicate that the water poses a health risk.

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 can acquire naturally occurring minerals, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may present in source water include:

**Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

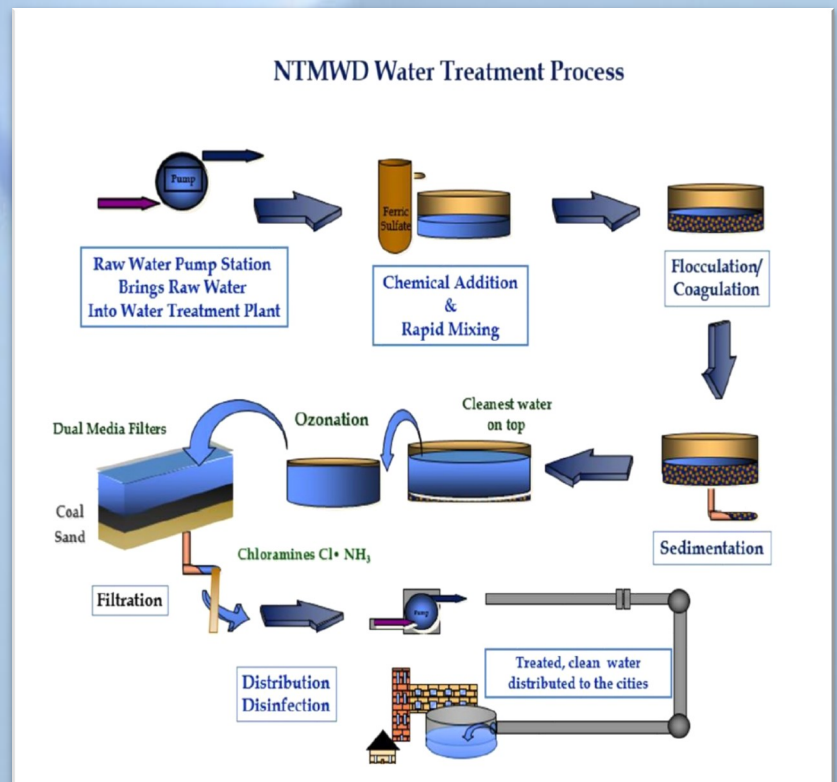
**Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

**Pesticides and Herbicides**, which may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses;

**Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-

## Where does our water come from?

The Town of Little Elm purchases water from North Texas Municipal Water District. The water is drawn from surface water sources including Lake Lavon, Texas, and Cooper.







FOR INFORMATION REGARDING THE CURRENT WATER STAGE, PLEASE VISIT  
[WWW.LITTLEELM.ORG/WATERCONSERVATIONGUIDELINES](http://WWW.LITTLEELM.ORG/WATERCONSERVATIONGUIDELINES).

[www.WaterMyYard.org](http://www.WaterMyYard.org)

# lakefront



The **cycle and soak method** of applying water to the landscape drastically reduces and in some cases eliminates runoff. This method of applying water to the landscape is made up of multiple cycles for each station with 30 to 60 minutes for the water to soak into the soil between cycles.

1. The first cycle will break the surface tension of the soil and saturate the top layer of soil.
2. The second cycle infiltrates the soil more efficiently and deeply after the first cycle.
3. A third, and sometimes a fourth cycle, is beneficial if a slope is involved or if runoff occurs after the sprinklers run for just a few minutes.

*For example: if you have determined you need to run a sprinkler station 12 minutes, schedule your controller to run the station 2 times for 6 minutes or 3 cycles for 4 minute. If a slope or runoff is involved, run the station 4 cycles for 3 minutes.*

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 143, 855,604 gallons of water. If you have any questions about the water loss audit please call (972) 377-5556.



# Town of Little Elm Water Quality Data - 2017

## 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	Violation	Likely Source of Contamination
0	1 positive monthly sample	0	0	0	No	Naturally present in the environment.

**NOTE:** Reported monthly tests found no fecal coliform bacteria. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

## Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Total Haloacetic Acids (HAA5)	2017	30	19.7- 38.2	No goal for the total	60	ppb	No	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2017	37	21.1 - 47.3	No goal for the total	80	ppb	No	By-product of drinking water disinfection.
Bromate	2017	Levels lower than detect level	0.0 - 0.0	5	10	ppb	No	By-product of drinking water ozonation.

**NOTE:** Not all sample results may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2017	0.060	0.059 - 0.060	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride	2017	0.38	0.26- 0.38	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen)	2017	0.97	0.09 - 0.97	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.

**NITRATE ADVISORY:** Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	2017	6.2	6.2 - 6.2	0	50	pCi/L	No	Decay of natural and man-made deposits.
Radium	2017	1.27	1.27 - 1.27	0	5	pCi/L	No	Erosion of natural deposits.

Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Atrazine	2017	0.20	0.20 - 0.20	3	3	ppb	No	Runoff from herbicide used on row crops.

## Turbidity

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.74	No	Soil runoff.
Lowest monthly percentage (%) meeting limit	0.3 NTU	99.30%	No	Soil runoff.

**NOTE:** 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.

## Maximum Residual Disinfectant Level

Chemical Used	Year	Average Level of Quarterly Data	Lowest Result of Single Sample	Highest Result of Single Sample	MRDL	MRDLG	Units	Source of Chemical
Chlorine Residual (Chloramines)	2017	2.07	0.5	4	4.0	<4.0	ppm	Disinfectant used to control microbes.
Chlorine Dioxide	2017	0	0	0	0.8	0.8	ppm	Disinfectant.
Chlorite	2017	0	0	0.072	1.0	N/A	ppm	Disinfectant.



Total Organic Carbon

	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Source Water	2017	4.38	3.93 - 4.38	ppm	Naturally present in the environment.
Drinking Water	2017	3.24	2.20 - 3.24	ppm	Naturally present in the environment.
Removal Ratio	2017	47.2%	22.5 - 47.2	% removal *	N/A

**NOTE:** Total organic carbon (TOC) has 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.

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

Lead and Copper

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2017	1.3	1.3	0.3425	0	ppm	No	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems.
Lead	2017	0	15	1.73	0	ppb	No	Corrosion of household plumbing systems; erosion of natural deposits.

**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. Town of Little Elm 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>.

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Calcium	2017	78.5	47.0 - 78.5	ppm	Abundant naturally occurring element.
Chloride	2017	108	14 - 108	ppm	Abundant naturally occurring element; used in water purification; by-product of oil field activity.
Hardness as Ca/Mg	2017	164	159 - 164	ppm	Naturally occurring calcium and magnesium.
Iron	2017	0.30	0.00 - 0.30	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
Magnesium	2017	11.6	4.41 - 11.6	ppm	Abundant naturally occurring element.
Manganese	2017	0.025	0.0019 - 0.025	ppm	Abundant naturally occurring element.
Nickel	2017	0.0071	0.0047 - 0.0071	ppm	Erosion of natural deposits.
pH	2017	8.52	7.85 - 8.52	units	Measure of corrosivity of water.
Sodium	2017	123	46.1 - 123	ppm	Erosion of natural deposits; by-product of oil field activity.
Sulfate	2017	266	47.1 - 266	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity.
Total Alkalinity as CaCO3	2017	110	61 - 110	ppm	Naturally occurring soluble mineral salts.
Total Dissolved Solids	2017	562	292 - 562	ppm	Total dissolved mineral constituents in water.
Total Hardness as CaCO3	2017	236	124 - 236	ppm	Naturally occurring calcium.
Zinc	2017	0.020	0.0025 - 0.020	ppm	Moderately abundant naturally occurring element used in the metal industry.

Violations Table

<b>Bromate</b>			
Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer			
Violation Type	Violation Begin	Violation End	Violation Explanation
Monitoring, Routine (DBP)	April 1, 2017	April 30, 2017	NTMWD failed to collect the required monthly samples for bromate of the water entering the distribution system during April 2017. This monitoring is required by the Texas Commission on Environmental Quality's "Drinking Water Standards" and the federal "Safe Drinking Water Act," Public Law 95-523. Failure to monitor or monitoring inadequately makes it impossible to know if there is bromate in excess of the maximum contaminant level (MCL) requirement of 0.010 mg/l (ppm). Our water system is required to take one bromate sample once each month. Failure to collect all required bromate samples is a violation of the monitoring requirements and we are required to notify you of this violation.

Source Water Susceptibility Assessment

Source Water Name	Type of Water	Status	Location	
SW From North Texas MWD	CC From TX0430044 North SW	A	Lavon, Texoma, & Copper Lakes	The TCEQ completed an assessment of your source water, and results indicate that our sources have a low susceptibility to contaminants. The sampling requirements for our water system is based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system contact Andrew Figueroa (972) 377-5557