



ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2020



Presented By
Town of Little Elm



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

Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their website at <https://goo.gl/Jxb6xG>.

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. 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.



Where Does My Water Come From?

The Town of Little Elm purchases its water from North Texas Municipal Water District (NTMWD) located in Wylie, TX. The water is drawn from surface water sources, including Lake Lavon (Collin County, TX) Lake Texoma (Grayson County, TX and Bryan County, OK), and Jim Chapman Lake (Delta and Hopkins County, TX)

Water Loss Audit

In the water loss audit submitted to the Texas Water Development Board during the year covered by this report, our system lost an estimated 111,582,797 gallons of water. If you have any questions about the water loss audit, please call PWS phone number.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations 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 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 which may also come from gas stations, urban storm-water runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

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 our business office. For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Source Water Assessment

The TCEQ has completed a Source Water Assessment for all drinking water systems that own their sources. The report 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 system(s) from which we purchase out water received the assessment report. For more information on source water assessments and protection efforts at our system, contact Tim Walker at (972) 377-5554.

NORTH TEXAS MUNICIPAL WATER DISTRICT	
SOURCE NAME	SUSCEPTIBILITY RATING
Lake Lavon	Low
Lake Texoma	Low
Jim Chapman Lake	Low

If you would like a copy of our assessment, please feel free to contact our office during regular business hours at the number provided in this report.

Lead in Home Plumbing

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 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.

“ We remain vigilant in delivering the best-quality drinking water ”

QUESTIONS? For more information about this report, or for any questions related to your drinking water, please call Tim Walker, Utilities Manager, at (972) 377-5554.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. The water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The State recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

The percentage of Total Organic Carbon (TOC) removal was measured each month, and the system met all TOC removal requirements set.

We participated in the 4th stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the U.S. EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if U.S. EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Atrazine (ppb)	2020	3	3	0.2	0.2–0.2	No	Runoff from herbicide used on row crops
Barium (ppm)	2020	2	2	0.061	0.058–0.061	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beta/Photon Emitters¹ (pCi/L)	2018	50	0	8.0	8.0–8.0	No	Decay of natural and man-made deposits
Bromate (ppb)	2020	10	0	8.91	8.91–8.91	No	By-product of drinking water disinfection
Chloramines (ppm)	2020	[4]	[4]	2.18	0.53–3.84	No	Water additive used to control microbes
Chlorite (ppm)	2020	1	0.8	0.0475	0–0.483	No	By-product of drinking water disinfection
Fluoride (ppm)	2020	4	4	0.225	0.218–0.225	No	Erosion of natural deposits; Water additive, which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs] (ppb)	2020	60	NA	32.2	14.7–32.2	No	By-product of drinking water disinfection
Nitrate (ppm)	2020	10	10	0.827	0.266–0.827	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Simazine (ppb)	2020	4	4	0.08	0.07–0.08	No	Herbicide runoff
TTHMs [Total Trihalomethanes] (ppb)	2020	80	NA	35	24.5–35.0	No	By-product of drinking water disinfection
Total Organic Carbon [TOC]² (ppm)	2020	TT	NA	3.14	2.13–3.14	No	Naturally present in the environment

Tap Water Samples Collected for Copper and Lead Analyses from Sample Sites throughout the Community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2019	1.3	1.3	0.3153	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2019	15	0	1.44	0/30	No	Lead services lines; Corrosion of household plumbing systems, including fittings and fixtures; Erosion of natural deposits

¹The MCL for beta particles is 4 mrem/year. The U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.

²The value reported under Amount Detected for TOC is the lowest ratio between the percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than one indicates that the water system is in compliance with TOC removal requirements. A value of less than one indicates a violation of the TOC removal requirements.

³Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2020	300	NA	78.9	23.2–78.9	No	Runoff/leaching from natural deposits
Manganese (ppb)	2020	50	NA	17	12–17	No	Leaching from natural deposits
pH (Units)	2020	>7.0	NA	8.60	8.04–8.60	No	Naturally occurring
Total Dissolved Solids [TDS] (ppm)	2020	1,000	NA	504	265–504	No	Runoff/leaching from natural deposits

UNREGULATED AND OTHER SUBSTANCES ³

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2020	12.3	8.83–12.3	By-product of drinking water disinfection
Bromoform (ppb)	2020	2.98	1.19–2.98	By-product of drinking water disinfection
Calcium (ppm)	2020	60.7	60.6–60.7	Abundant naturally occurring element
Chloroform (ppb)	2020	12.2	5.86–12.2	By-product of drinking water disinfection
Dibromochloromethane (ppb)	2020	9.55	6.07–9.55	By-product of drinking water disinfection
Magnesium (ppm)	2020	9.40	8.83–9.40	Abundant naturally occurring element
Nickel (ppb)	2020	0.0068	0.0066–0.0068	Nickel is a natural element of the earth's crust; therefore, small amounts are found in food, water, soil, and air
Sodium (ppm)	2020	68.5	62.7–68.5	Erosion of natural deposits; By-product of oilfield activity
Sulfate (ppm)	2020	158	42.0–158	Naturally occurring; Common industrial by-product; By-product of oilfield activity
Total Alkalinity as CaCO ₃ (ppm)	2020	107	72.0–107	Naturally occurring soluble mineral salts
Total Hardness as CaCO ₃ (ppm)	2020	207	106–207	Naturally occurring calcium

Table Talk

Get the most out of the Testing Results data table with this simple suggestion. In less than a minute, you will know all there is to know about your water:

For each substance listed, compare the value in the Amount Detected column against the value in the MCL (or AL, SCL) column. If the Amount Detected value is smaller, your water meets the health and safety standards set for the substance.

Other Table Information Worth Noting

Verify that there were no violations of the state and/or federal standards in the Violation column. If there was a violation, you will see a detailed description of the event in this report.

If there is an ND or a less-than symbol (<), that means that the substance was not detected (i.e., below the detectable limits of the testing equipment).

The Range column displays the lowest and highest sample readings. If there is an NA showing, that means that only a single sample was taken to test for the substance (assuming there is a reported value in the Amount Detected column).

If there is sufficient evidence to indicate from where the substance originates, it will be listed under Typical Source.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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.

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 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.

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

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).

SCL (Secondary Contaminant Level): These standards are developed to protect aesthetic qualities of drinking water and are not health based.

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