

# CITY OF LAWN 2022 Annual Drinking Water Report

(Also known as the Consumer Confidence Report)

Water System Identification Number — TX2210005

Annual Water Quality Report for the period of January 1 to December 31, 2022

City of Lawn Water Dept. treated surface water from Lake Coleman, and purchases water from the City of Abilene which obtains water from Lake Fort Phantom, Lake Ivie, Hubbard Creek Lake, & Lake Abilene.

For more information regarding this report contact: Roger Coxe, Director at (325) 583-2510

Este reporte incluye informacion sobre el agua para tomar. Para asistencia en espanol, favor de llamar at telephono (325) 583-2510

## PUBLIC PARTICIPATION OPPORTUNITIES AT COUNCIL MEETINGS

Date: Second Double digit Tuesday each month. Time: 7:00 pm

Note — The meeting time and date may change due to conflicting community events

Location: City Hall office — 150 Main St. Lawn, Texas

## Sources of Drinking Water

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.

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 EPAs Safe Drinking Water Hotline at (800) 426-4791.

### 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.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amounts 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 the system's business office.

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).

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>.

## Information about Source Water Assessments

TCEQ completed an assessment of your source water, and results indicated that some of our sources are susceptible to certain contaminants. The sampling requirements for your 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 the source water assessments and protection efforts at our system, please contact Roger Coxe, Director at (325) 583-2510.

Avg: Regulatory compliance with some MCL-s are based on running annual average of monthly samples.

**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 **Water Quality Test Results Explanation of Acronyms Used in this Report**: The following tables contain scientific terms and measures, some of which may require explanation.

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.

**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.

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

**MFL:** million fibers per liter (a measure of asbestos) **na:** not applicable **mrem:** millirems per year (a measure of radiation absorbed by the body) **NTU:** nephelometric turbidity units (a measure of turbidity) **ppb:** micrograms per liter or parts per billion-or one ounce in 7,350,000 gallons of water. **ppt:** parts per trillion. or nanograms per liter (ng/L) **ppm:** milligrams per liter or parts per million-or one ounce in 7,350 gallons of water. **ppq:** parts per quadrillion, or picograms per liter (pg/L)

### Disinfectant Chloramine levels Testing | Results in the Lawn Water System

Disinfectant	Year of Range	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measurement	Violation	Source of Chemical
Chloramines	2022	2.33	0.2	4.9	4.0	4.0	ppm	N	Disinfectant used to control microbes

### Total Organic Carbon for Lawn

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.

### Turbidity

	Level Detected	Limit (Treatment Technique)	Violation	Likely Source of Contamination
Highest single measurement	0.83 NTU	1 NTU	N	Soil runoff.
Lowest monthly % meeting limit	91%	0.3 NTU	Y	Soil runoff.

Information Statement: 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 system and disinfectants.

### 2022 Water Loss Audit Information

Time Period Covered by Audit	Estimated Gallons of Water Lost During 2022	Comments and/or Explanations
January to December 2022	20,651,220	Most of the water lost during 2022 was the result of flushing to maintain water quality or leaks in the distribution s stem

### Regulated Contaminants Detected Copper Definitions:

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. Action Level: The concentration Of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Lead and Copper	Date Sampled	MCLG	Action Level AL	90th Percentile	#Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	08/18/2020	1.3	1.3	0.106	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

### Regulated Contaminants Lawn Treatment

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAAS)	2022	16	12-20.5	No goal for the total	60	ppb	N	By-product of drinking water disinfection,
Total Trihalomethanes (TTHM)	2022	58	39.7 – 82.3	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

\*The value in the Highest Level or Average Detected column is the highest average of all HAA5 sample results collected at a location over a year

\*The value in the Highest Level or Average Detected column is the highest average of all TTHM sample results collected at a location over a year

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2022	0.11	0.11 – 0.11	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Cyanide	2022	86	71.7 - 71.7	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.

<b>Fluoride</b>	11/30/2021	0.156	0.156 - 0.156	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
<b>Nitrate [measured as Nitrogen]</b>	11/30/2021	0.141	0.141 - 0.141	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
<b>Radioactive Contaminants</b>	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Beta/photon emitters</b>	08/07/2018	8.5	8.5 – 8.5		50	pCi/L*	N	Decay of natural and man-made deposits.

**CITY OF LAWN purchases water from CITY OF Abilene. Abilene treat surface water from Lake Fort Phantom, Lake Ivie, Hubbard Creek Lake, & Lake Abilene as a reserve.**

**Disinfectant Chloramine levels Testing Results City of Abilene**

Disinfectant	Year of Range	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measurement	Violation	Source of Chemical
Chloramines	2022	3.7	0	4.4	4.0	4.0	ppm	N	Disinfectant used to control microbes

**Turbidity**

	Level Detected	Limit (Treatment Technique)	Violation	Likely Source of Contamination
Highest single measurement	0.28 NTU	1 NTU	N	Soil runoff.
Lowest monthly % meeting limit	100%	0.3 NTU	N	Soil runoff.

Type of Contaminant	Year or Range	Contamination Source	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
<b>Total Organic Carbon</b>	2022	Source Water	7.25	4.43	9.86	ppm	Naturally present in environment.
<b>Total Organic Carbon</b>	2022	Drinking Water	4.13	2.73	5.51	ppm	Naturally present in environment.
<b>Asbestos</b>	2012	Asbestos	ND	ND	ND	7	Construction Materials

**Coliform Bacteria Testing Results for the City of Abilene.**

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 Contaminant
0	5% of monthly samples are positive.	1.7		0	N	Naturally present in the environment.

**Regulated Contaminants Detected Copper Definitions: City of Abilene**

Acton 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. Action Level: The concentration Of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Lead and Copper	Date Sampled	MCLG	Action Level AL	90th Percentile	#Sites Over AL	Units	Violation	Likely Source of Contamination
<b>Copper</b>	07/30/2020	1.3	1.3	0.36	0		N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

Lead (ppb)	2020	0	15	0	0		N	Corrosion of household plumbing systems; erosion of natural deposits.
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**Regulated Contaminants in the Source Water — City of Abilene**

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorite	2022	0.755	0.- 0.755	0.8	1	ppm	N	By-product of drinking water disinfection.
Haloacetic Acids (HAAS)	2022	20	6.8 – 22.1	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2022	51	16.9 -88.9	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	2022	1	0 – 1.3	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2022	0.17	0.15-0.17	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium	2022	2.4	0 - 24	100	100	ppb	N	Discharge from steel and pulp mills; Erosion of natural deposits.
Cyanide	2022	145	37.4 - 145	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
Fluoride	2022	0.8	0.657 -0.768	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]	2022	0.222	0.158-222	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	2022	<5.0	<5.0	0	50	ppm	N	Erosion from natural deposits; discharge from petroleum refineries
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	2022	6.6	6.6-6.6	0	50	pCi/L*	N	Decay of natural and man-made deposits.

•EPA considers SO pCi L to be the level Of concern for beta particles.

Uranium	2020	1.9	1.9 - 1.9		30	ug/l		Erosion of natural deposits.
Gross Alpha	2020	<3.0	<3.0	0	15		N	Erosion of natural deposits Decay of natural and man made deposits.
Gross Beta	2020	6.6	6.6	na	na		N	Erosion of natural deposits Decay of natural and man made deposits
Radium 228 (pCi/L)	2020	2.3	0-2.3	0	5		N	Erosion of natural deposits Decay of natural and man made deposits
Uranium (ug/L)	2017	2.3	0-2.3	0	30		N	Erosion of natural deposits Decay of natural and man made deposits

Unregulated Contaminants	Collection Date	Contaminate (unit of measure)	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Type	2022	Chloroform (ppb)	1.65	<1.0 - 1.65	na	na	na	Byproduct of drinking water disinfection
	2022	Bromoform (ppb)	27.5	8.83-27.5	na	na	na	Byproduct of drinking water disinfection
	2022	Bromodichloromethane (ppb)	4.91	2.32-4.91	na	na	na	Byproduct of drinking water disinfection
	2022	Dibromochloromethane (ppb)	8.95	6.39-8.95	na	na	na	Byproduct of drinking water disinfection
Type	Year or Range	Contaminate (unit of measure)	Average Level	Minimum Level	Max Level	Secondary Limit	Source of Contaminant	
Secondary and other Constituents not Regulated	2022	Aluminum (ppm)	0.028	<0.005	0.058	0.05	Naturally present in environment.	
	2022	Bicarbonate (ppm)	110	108	112	na	Corrosion of carbonate rocks such as limestone.	
	2022	Calcium (ppm)	67.1	51.3	96.7	na	Naturally present in environment.	
	2022	Chloride (ppm)	204	111	237	300	Naturally present in environment.	
	2022	Copper (ppm)	<0.001	<0.001	0.0022	1.0	Corrosion of household plumbing, erosion from natural deposits; leaching from wood preservatives.	
	2022	Magnesium (ppm)	31.2	14.4	64.9	na	Naturally present in environment.	
	2022	Manganese (ppm)	0.003	<0.001	0.008	0.05	Naturally present in environment.	
	2022	Nickel (ppm)	0.0017	0.0011	0.0029	na	Erosion of natural deposits.	
	2022	Zinc (ppm)	<0.005	<0.005	<0.005	na	Erosion of natural deposits.	
	2022	Sodium (ppm)	111	66.4	198	na	Erosion of natural deposits; byproduct of oil field activity.	
	2022	Sulfate (ppm)	169	78.6	348	300	Naturally occurring; common industrial byproduct; byproduct of oil field activity.	
	2022	Total Alkalinity as CaCO <sub>3</sub> (ppm)	111	111	112	na	Naturally occurring soluble mineral salts.	
	2022	Total Dissolved Solids (ppm)	640	412	1080	1000	Total dissolved mineral constituents in water.	
	2022	Total Hardness as CaCO <sub>3</sub> (ppm)	296	186	509	na	Naturally occurring calcium.	
	2022	Conductivity (uhmos/cm)	1132	742	1910	na	Naturally present in environment.	
	2022	Potassium (mg/L)	9.19	7.93	11.4	na	Naturally present in environment.	
	2022	Lead (mg/L)	<0.001	<0.001	<0.001	15	Corrosion of household plumbing, erosion from natural deposits; leaching from wood preservatives.	
	2022	Chromium (mg/L)	<1.0	<0.001	0.002	0.1	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.	

Organic Contaminants - none detected	Fecal Coliform - not detected
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**2022 Water Loss Audit Information City of Abilene**

Time Period Covered by Audit	Water Loss	Comments and/or Explanations
January to December 2022	5.63%	Most of the water lost during 2022 was the result of flushing to maintain water quality or leaks in the distribution s stem

## Violations Lawn

<b>Consumer Confidence Rule</b>			
The Public Notification Rule helps to ensure that consumers will always know if there is a problem with their drinking water. These notices immediately alert consumers if there is a serious problem with their drinking water (e.g., a boil water emergency).			
<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
<b>PUBLIC NOTICE RULE LINKED TO VIOLATION</b>	08/31/2022	09/30/2022	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.
<b>PUBLIC NOTICE RULE NOT LINKED VIOLATION</b>	08/19/2022	09/30/2022	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.

<b>Interim Enhanced SWTR</b>			
The Interim Enhanced Surface Water Treatment Rule improves control of microbial contaminants, particularly Cryptosporidium, in systems using surface water, or ground water under the direct influence of surface water. The rule builds upon the treatment technique requirements of the Surface Water Treatment Rule.			
<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
<b>MONTHLY COMB FLTR EFFLUENT (ESWTR/LT1)</b>	07/01/2022	07/31/2022	Turbidity levels, though relatively low, exceeded a standard for the month indicated. Turbidity (cloudiness) levels are

**MONITORING, ROUTINE MAJOR, Violations:** We failed to test our drinking water for some contaminants. We did not complete all monitoring and/or reporting for chemical constituents, and therefore TCEQ cannot be sure of the safety of your drinking water during that time. Because of this failure, we cannot be sure of the quality of our drinking water during the monitoring period January to December 2022 for the following contaminants; **1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1-Dichloroethylene, 1,2,4-Trichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, 2,4,5-TP (Silvex), 2,4-D, Alachlor, Arsenic, Atrazine, Barium, Benzene, Benzo(a)pyrene, Beryllium, Cadmium, Carbofuran, Carbon Tetrachloride, Chlordane, Chlorobenzene, Chromium, Dalapon, Di (2-ethylhexyl) adipate, Di (2-ethylhexyl) phthalate, Dibromochloropropane (DBCP), Dichloromethane, Dinoseb, Endrin, Ethylbenzene, Ethylene dibromide, Fluoride, Heptachlor, Heptachlor epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Mercury, Methoxychlor, Nitrate [measured as Nitrogen], Oxamyl [Vydate], Pentachlorophenol, Picloram, Selenium, Simazine, Styrene, Tetrachloroethylene, Thallium, Toluene, Toxaphene, Trichloroethylene, Vinyl Chloride, Xylenes, cis-1,2-Dichloroethylene, o-Dichlorobenzene, p-Dichlorobenzene, and trans-1,2-Dichloroethylene.**

## Violations Abilene

The City of Abilene water system PWS ID TX2210001 has violated the monitoring and reporting requirements set by Texas Commission on Environmental Quality (TCEQ) in Chapter 30, Section 290, Subchapter F. Public water systems are required to collect and submit chemical samples of water provided to their customers, and report the results of those samples to the TCEQ on a regular basis. We failed to monitor and/or report the following constituent: **Chlorite**. This violation occurred in the monitoring period January 2023. Results of regular monitoring are an indicator of whether or not your drinking water is safe from chemical contamination. We did not complete all monitoring and/or reporting for chemical constituents, and therefore TCEQ cannot be sure of the safety of your drinking water during that time. The City of Abilene has taken actions to improve Standard Operating Procedures and provide additional staff training to address this matter. The Abilene Environmental Laboratory did in fact collect and analyze the three-sample set for Chlorite in the water distribution system for January 2023. The results of the analysis were below the regulatory maximum contaminant level for Chlorite. However, laboratory staff failed to coordinate the collection of the sample set with the normal operational status of the Hargesheimer Water Treatment Plant. The Treatment Plant was not operating on the day that the distribution sample set was collected. There is no effect on public health and safety related to the City's actions which resulted in this violation.