

## City of Lawn 2017 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, 2017

City of Lawn treats water from Coleman Lake.

*For more information regarding this report contact: Roger Cox, Public Works Director at (325) 583-2510*

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

#### **PUBLIC PARTICIPATION OPPORTUNITIES**

**Date:** Second Tuesday after 9<sup>th</sup> each month. **Time:** 7:00 pm

**Location:** City Hall – 150 Main St., Lawn, Texas 79530

#### **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 EPA's 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 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 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**

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 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: <http://gis3.tceq.state.tx.us/swav/Controller/index.jsp?wtrsrc=>

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

<http://dww.tceq.texas.gov/DWW>

| Source Water | Name | Type of Water | Report Status | Location     |
|--------------|------|---------------|---------------|--------------|
| Intake 1     |      | SW            | Complete      | Coleman Lake |

**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.

**Avg:** Regulatory compliance with some MCLs 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 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)

**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)

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

**Disinfectant (Chloramine) levels Testing Results in the City of Lawn Distribution System**

| Disinfectant | Year of Range | Average Level | Minimum Level | Maximum Level | MRDL | MRDLG | Unit of Measurement | Violation | Source of Chemical                    |
|--------------|---------------|---------------|---------------|---------------|------|-------|---------------------|-----------|---------------------------------------|
| Chloramines  | 2017          | 2.4           | 0.5           | 3.6           | 4.0  | 4.0   | ppm                 | N         | Disinfectant used to control microbes |

**2017 Water Loss Audit Information**

| Time Period Covered by Audit | Estimated Gallons of Water Lost During 2017 | Comments and/or Explanations  |
|------------------------------|---|---|
| January to December 2017     | 8,500,000                                   | Most of the water lost during 2017 was the result of flushing to maintain water quality or leaks in the distribution system |

**Regulated Contaminants Detected**

**Lead and 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) | 90 <sup>th</sup> Percentile | #Sites Over AL | Units | Violation | Likely Source of Contamination  |
|-----------------|--------------|------|------------------|-----------------------------|----------------|-------|-----------|---|
| Copper          | 2016         | 1.3  | 1.3              | 0.118                       | 0              | ppm   | N         | Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems. |
| Lead            | 2016         | 0    | 15               | 2.76                        | 0              | ppb   | N         | Corrosion of household plumbing systems; Erosions of natural deposits.                                  |

**Regulated Contaminants in the City of Lawn Distribution System**

| 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)                    | 2017            | 16                     | 4.7 - 28.6               | No Goal for the Total | 60  | ppb   | N         | By-product of drinking water disinfection.   |
| TotalTrihalomethanes (TTHM)                | 2017            | 20                     | 13 – 22.2                | No Goal for the Total | 80  | ppb   | Y         | By-product of drinking water disinfection.   |
| Inorganic Contaminants                     | Collection Date | Highest Level Detected | Range of Levels Detected | MCLG                  | MCL | Units | Violation | Likely Source of Contamination   |
| Barium                                     | 2017            | 0.11                   | 0.11-0.11                | 2                     | 2   | ppm   | N         | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.                                |
| Chromium                                   | 2017            | 1.2                    | 1.2 – 1.2                | 100                   | 100 | ppb   | N         | Discharges from steel and pulp Mills. Erosion of natural deposits.   |
| Cyanide                                    | 2017            | 160                    | 160 - 160                | 200                   | 200 | ppb   | N         | Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.                                     |
| Fluoride                                   | 2017            | 0.1                    | 0.126 – 0.126            | 4                     | 4   | ppm   | N         | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories. |

|   |                        |                               |                                 |             |            |              |                  |  |
|---|------------------------|-------------------------------|---------------------------------|-------------|------------|--------------|------------------|--|
| Nitrate<br>[measured as Nitrogen]   | 2017                   | 0.233                         | 0.233 –<br>0.233                | 10          | 10         | ppm          | N                | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits. |
| <b>Radioactive Contaminants</b>   | <b>Collection Date</b> | <b>Highest Level Detected</b> | <b>Range of Levels Detected</b> | <b>MCLG</b> | <b>MCL</b> | <b>Units</b> | <b>Violation</b> | <b>Likely Source of Contamination</b>  |
| Beta/photon emitters  | 2012                   | 7.2                           | 7.2-7.2                         | 0           | 50         | pCi/L        | N                | Decay of natural and man-made deposits.  |
| Combined Radium 226/228   | 2012                   | 1                             | 1-1                             | 0           | 5          | pCi/L        | N                |  |
| <b>Synthetic organic contaminants including pesticides and herbicides</b> | <b>Collection Date</b> | <b>Highest Level Detected</b> | <b>Range of Levels Detected</b> | <b>MCLG</b> | <b>MCL</b> | <b>Units</b> | <b>Violation</b> | <b>Likely Source of Contamination</b>  |
| Picloram  | 2017                   | <0.1                          | <0.1 - <0.1                     | 500         | 500        | ppb          | N                | Runoff from herbicide use.   |

#### Turbidity

|                                       | Limit (Treatment Technique) | Level Detected | Violation | Likely Source of Contamination |
|---------------------------------------|-----------------------------|----------------|-----------|--------------------------------|
| <b>Highest single measurement</b>     | 1 NTU                       | 0.97 NTU       | N         | Soil runoff                    |
| <b>Lowest monthly % meeting limit</b> | 0.3 NTU                     | 90%            | 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.

#### 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.

#### Violations Table

| <b>Consumer Confidence Rule</b>   |                 |               |  |
|---|-----------------|---------------|--|
| The Consumer Confidence Rule requires community water systems to prepare and provide to their customers annual consumer confidence reports on the quality of the water delivered by the system.   |                 |               |  |
| Violation Type  | Violation Begin | Violation End | Violation Explanation  |
| CCR ADEQUACY/ AVAILABILITY/CONTENT  | 07/01/2015      | 07/18/2017    | We failed to provide to you, our drinking water customers, an annual report that adequately informed you about the quality of our drinking water and the risks from exposure to contaminants detected in our drinking water. |
| CCR REPORT  | 07/01/2014      | 07/18/2017    | We failed to provide to you, our drinking water customers, an annual report that adequately informed you about the quality of our drinking water and the risks from exposure to contaminants detected in our drinking water. |
| CCR REPORT  | 07/01/2016      | 07/18/2017    | We failed to provide to you, our drinking water customers, an annual report that adequately informed you about the quality of our drinking water and the risks from exposure to contaminants detected in our drinking water. |
| <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. |                 |               |  |
| Violation Type  | Violation Begin | Violation End | Violation Explanation  |
| MONTHLY COMB FLTR EFFLUENT (IESWTR/LT1)   | 03/01/2017      | 03/31/2017    | Turbidity levels, though relatively low, exceeded a standard for the month indicated. Turbidity (cloudiness) levels are used to measure effective filtration of drinking water.  |
|   |                 |               |  |
|   |                 |               |  |
|   |                 |               |  |

|  |                        |                      |   |
|--|------------------------|----------------------|---|
| <b>Public Notification 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>  |
| PUBLIC NOTICE RULE LINKED TO VIOLATION   | 05/01/2017             | 06/02/2017           | We failed to adequately notify you, our drinking water consumer, about a violation of the drinking water regulations. |

**Violation Explanations—**

1. **Consumer Confidence Rule Reports**- Policies and procedures have been updated and employees have been properly trained concerning the proper technique to follow in order to assure that the public is properly notified concerning quality of the drinking water.
2. **Surface Water Treatment Rule** – Policy and procedures have been updated and employees have been properly trained concerning the proper operation of the surface water treatment plant.
3. **Public Notification Rule** – Policy and procedure have been updated and employees have been properly trained concerning the proper technique to follow in order to assure that the public is properly notified concerning violations of the drinking water regulations.