

2017 Annual Drinking Water Quality Report

for the period of January 1 to December 31, 2017



CITY OF LIVE OAK

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(210) 653-9140

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.

For more information regarding this report, contact James Neeley at (210) 653-9140, ext. 2220.

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: www.tceq.texas.gov/gis/swaview

Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL: <http://dwww.tceq.texas.gov/DWW>

Public Participation Opportunities

City Council Meetings are held on the second and last Tuesday evening of each month at 7:00 p.m. at Live Oak City Hall, 8001 Shin Oak Drive. Live Oak residents are more than welcome to call the Public Works Department at (210) 653-9140, ext. 2220 with any questions regarding the quality of their water.

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)* | 2017 | 2 | 0 - 1.6 | No goal for the total | 60 | 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 | | | | | | | | |
| Total Trihalomethanes (TTHM)* | Collection Date | Highest Level Detected | Range of Levels Detected | MCLG | MCL | Units | Violation | Likely Source of Contamination |
| Total Trihalomethanes (TTHM)* | 2017 | 13 | 5.1 - 12.5 | 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 TTHM sample results collected at a location over a year | | | | | | | | |
| Inorganic Contaminants | Collection Date | Highest Level Detected | Range of Levels Detected | MCLG | MCL | Units | Violation | Likely Source of Contamination |
| Asbestos | 02/09/2012 | 0.1952 | 0.1952 - 0.1952 | 7 | 7 | MFL | N | Decay of asbestos cement water mains; Erosion of natural deposits. |
| Barium | 2017 | 0.125 | 0.0528 - 0.125 | 2 | 2 | ppm | N | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits. |
| Chromium | 01/19/2011 | 0.8 | 0.268 - 0.8 | 100 | 100 | ppb | N | Discharge from steel and pulp mills; Erosion of natural deposits. |
| Fluoride | 2017 | 0.3 | 0.21 - 0.3 | 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] | 2017 | 2 | 1.93 - 2.19 | 10 | 10 | ppm | N | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits. |
| Selenium | 2017 | 3.3 | 0 - 3.3 | 50 | 50 | ppb | N | Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines |
| Thallium | 01/19/2011 | 0.111 | 0.041 - 0.111 | 0.5 | 2 | ppb | N | Discharge from electronics, glass, and Leaching from ore-processing sites; drug factories. |
| Radioactive Contaminants | Collection Date | Highest Level Detected | Range of Levels Detected | MCLG | MCL | Units | Violation | Likely Source of Contamination |
| Gross alpha excluding radon and uranium | 05/05/2010 | 2 | 2 - 2 | 0 | 15 | pCi/L | N | Erosion of natural deposits. |

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 your water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system, contact James Neeley at (210) 653-9140, ext. 2220

Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL: <http://dww2.tceq.texas.gov/DWW/>

| Source Water Name | Location | Type of Water | Report Status | Location |
|------------------------|--------------------|---------------|---------------|-----------------|
| 1 - 403 CHERRYWOOD | 403 CHERRYWOOD | GW | _____ | Edwards Aquifer |
| 2 - 12739 SANDPIPER | 12739 SANDPIPER | GW | Y | Edwards Aquifer |
| 3 - 3300 MARIGOLD TRAC | 3300 MARIGOLD TRAC | GW | Y | Edwards Aquifer |
| 4 - IH-35 / FM 1604 | IH-35 / FM 1604 | GW | Y | Edwards Aquifer |

Disinfection Byproducts

| Substance | Year | Highest Level Detected | Range of Levels Detected | MCLG | MCL | Units | Violation | Source of Contaminant |
|-------------------------|--------|------------------------|--------------------------|-------------------|-----|-------|-----------|---|
| Haloacetic Acids (HAA5) | 5/5/10 | 1 | 0 – 1 | No goal for total | 60 | ppb | N | Byproduct of drinking water disinfection. |

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

| Substance | Year | Highest Level Detected | Range of Levels Detected | MCLG | MCL | Units | Violation | Source of Contaminant |
|-------------------------------|--------|------------------------|--------------------------|-------------------|-----|-------|-----------|---|
| Total Trihalomethanes (TThm)* | 5/5/10 | 5.5 | 0 – 5.5 | No goal for total | 80 | ppb | N | Byproduct of drinking water disinfection. |

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

Lead and Copper

| Lead and Copper | Date Sampled | MCLG | Action Level (AL) | 90th Percentile | # Sites Over AL | Units | Violation | Likely Source of Contamination |
|-----------------|--------------|------|-------------------|-----------------|-----------------|-------|-----------|---|
| Copper | 8/21/2016 | 1.3 | 1.3 | 0.18 | 0 | ppm | N | Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems. |
| Lead | 8/21/2016 | 0 | 15 | 2.9 | 1 | ppb | N | Corrosion of household plumbing systems; Erosion of natural deposits. |

| | |
|-----------------------|--|
| Total Coliform | REPORTED MONTHLY TESTS FOUND NO COLIFORM BACTERIA. |
| Fecal Coliform | REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA. |

DEFINITIONS

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

Action Level: 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 are based on running annual average of monthly samples.

Level 1 Assessment: 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 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.

ABBREVIATIONS

MFL: million fibers per liter (a measure of asbestos)

mrem: millirems 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 parts per million - or one ounce in 7,350 gallons of water

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

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

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



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Water Saving Tips For Your Home

- *Repair leaking faucets, nozzles, pipes and toilets.*
- *Water your lawn and garden in the evening or early morning.*
- *Use mulch around plants and shrubs to help retain moisture.*
- *Sweep clippings and leaves instead of using the hose.*
- *Obey all water bans and regulations.*