

2019 Annual Drinking Water Quality report



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>

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 IN YOUR SOURCE WATER INCLUDE:

- **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.
- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **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.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production and mining activities.

HEALTH RISKS IN DRINKING WATER

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 at (903)662-5116.

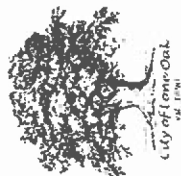
You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly or immunocompromised persons such as those undergoing chemotherapy for cancer; persons who have undergone organ

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>

REGULATED CONTAMINANTS IN YOUR DRINKING WATER AND THEIR HEALTH RISKS.

- **Chloramines**. Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the maximum residual disinfectant level (MRDL) could experience stomach discomfort or anemia.
- **Chlorine**. Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
- **Copper**. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
- **Fecal coliform/E.coli**. Fecal coliforms and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.
- **Haloacetic acids (HAAs)**. Some people who drink water containing HAAs in excess of the MCL over many years may have an increased risk of getting cancer.
- **Lead**. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
- **Nitrate**. Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.
- **THMs (Total Trihalomethanes)**. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
- **Total coliform**. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

City of Lone Oak
P.O. Box 127
Lone Oak, Texas 75453



Annual Drinking Water Quality Report
TX1160006 CITY OF LONE OAK
Annual Water Quality Report for the period of
January 1 to December 31, 2019

For more information regarding this report contact:
Corey Miller, Public Works Director at (903)662-5116 Ext 206

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.

Este reporte incluye información importante sobre el agua para tomar.
Para asistencia en español, favor de llamar al telefono (903)662-5116

CITY OF LONE OAK is a Purchased Surface Water System

| 2019 WATER SOURCES FOR CITY OF LONE OAK | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------|---------------|---------------|
| SOURCE WATER | | TYPE OF WATER | REPORT STATUS | LOCATION |
| SW from Cash SPECIA UTILITY DISTRICT | | CCI from TX 1160018 CASH | Surface water | Active |
| CASH SUD DRINKING WATER QUALITY REPORT IS AVAILABLE AT https://cashwater.org/documents/402/Cash_SUD_2019_CCR_WEB.pdf , http://cityofloneoak.com/pdf/utilities/2019_CCR.pdf , OR CAN BE PICKED UP AT CITY HALL LOCATED AT 115 TOWN SQUARE IN LONE OAK TEXAS DURING BUINESS HOURS. | | | | Lake Tawakoni |

| 2019 REGULATED CONTAMINATES FOR CITY OF LONE OAK | | | | | |
|---------------------------------------------------|------|-----|----------------|-----------|-------------------------------------|
| COLIFORM BACTERIA | | | | | |
| BACTERIA | MCLG | MCL | LEVEL DETECTED | VIOLATION | SOURCE OF CONTAMINATION |
| TOTAL COLIFORM (# OF POSSITIVE SAMPLES PER MONTH) | 0 | 1 | 0 | NO | NATURALLY PRESENT IN THE ENVIORMENT |
| FECAL/ E-COLI (# OF POSSITIVE SAMPLES PER MONTH) | 0 | 0 | 0 | NO | HUMAN AND ANIMAL FECAL WASTE |

| LEAD AND COPPER | | | | | | | |
|-----------------|-------------------|--------------|-----------------------------|---------------|-----------|-------|--------------------------------------------------------------|
| 2019 RESULTS | ACTION LEVEL GOAL | ACTION LEVEL | 90 TH PERCENTILE | SITES OVER AL | VIOLATION | UNITS | SOURCE OF CONTAMINATION |
| COPPER | 1.3 | 1.3 | 0.156 | 0 | NO | PPM | CORROSION OF HOUSEHOLD PLUMBING; EROSION OF NATURAL DEPOSITS |
| LEAD | 0 | 0.015 | 0.005 | 0 | NO | PPM | |

| DISINFECTION BY PRODUCTS | | | | | | | | | |
|--------------------------------|-----------------|---------------|---------------|---------------|------|-------|-----------|----------------------------------------------------------------------------------------------|------------------------------------------|
| Disinfection By-Products | Collection Date | Highest | Range | MCLG | MCL | Units | Violation | Source of Contamination | |
| Haloacetic Acids (HAAS)* | 2019 | 42.4 | 12.8-42.4 | N/A | 60 | ppb | NO | By-product of drinking water disinfection. | |
| Total Trihalomethanes (TTHM) | 2019 | 46.0 | 26.5-46.0 | N/A | 80 | ppb | NO | | |
| INORGANIC COMTAMINANTS | | | | | | | | | |
| INORGANIC CONTAMINANT | Collection Date | Highest | Range | MCLG | MCL | Units | Violation | Source of Contamination | |
| Nitrate [measured as Nitrogen] | 2019 | 0.506 | 0.298-0.506 | 10 | 10 | ppm | NO | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits. | |
| DISINFECTION | | | | | | | | | |
| Disinfectant | Year | Average Level | Minimum Level | Maximum Level | MRDL | MRDLG | Units | Violation | Source of Contamination |
| Chloramine | 2019 | 3.13 | 0.51 | 4.4 | 4.0 | 4.0 | ppm | NO | Water additive used to control microbes. |
| Chlorine | 2019 | 1.84 | 0.60 | 3.6 | 4.0 | 4.0 | Ppm | NO | |

| DEFINITIONS | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| The following tables contain scientific terms and measures, some of which may require explanation. | |
| 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. | |
| (AL) Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which water system must follow | |
| Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples | |
| (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 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. | |
| (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 | |
| MFL million fibers per liter (a measure of asbestos) | |
| N/A: not applicable | |
| ND: Non detected | |
| 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) | |

| 2019 REGULATED CONTAMINATES FOR CASH SPECIAL UTILITY DISTRICT | | | | | | | | |
|------------------------------------------------------------------------|-------------------|----------------------------|--------------------------------------------|---------------|--------------------------------------|--------------------------------------------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------|
| DISINFECTANTS AND DISINFECTION BY PRODUCTS | | | | | | | | |
| Disinfectants | Collection Date | Average | Range | MRDL | MRDLG | Units | Violation | Likely Source of Contamination |
| Chlorine residual | 2019 | 2.63 | 2.1-2.8 | 4 | <4 | PPM | N | Disinfectant used to control microbes |
| Disinfection By-Products | Collection Date | Highest | Range | MCLG | MCL | Units | Violation | Likely Source of Contamination |
| Haloacetic Acids (HAA5)* | 2019 | 42.9 | 15.5-42.9 | N/A | 60 | ppb | N | By-product of drinking water disinfection. |
| Total Trihalomethanes (TTHM) | 2019 | 50.2 | 30.9-50.2 | N/A | 80 | ppb | N | By-product of drinking water disinfection. |
| Inorganic Contaminants | | | | | | | | |
| Inorganic Contaminants | Collection Date | Highest | Range | MCLG | MCL | Units | Violation | Likely Source of Contamination |
| Arsenic | 2019 | N/A | N/A | 0 | 10 | ppb | N | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes. |
| Barium | 2019 | 0.045 | N/A | 2 | 2 | ppm | N | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits. |
| Chromium | 2019 | ND | N/A | 100 | 100 | ppb | N | Discharge from steel and pulp mills; Erosion of natural deposits. |
| Fluoride | 2019 | 0.118 | N/A | 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] | 2019 | 0.360 | 0.0945-0.360 | 10 | 10 | ppm | N | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits. |
| Beta/photon emitters | 2019 | ND | N/A | 0 | 50 | pCi/L* | N | Decay of natural and man-made deposits. |
| *EPA considers 50 pCi/L to be the level of concern for beta particles. | | | | | | | | |
| organic contaminants including pesticides and herbicides | | | | | | | | |
| | Collection Date | Highest | Range | MCLG | MCL | Units | Violation | Likely Source of Contamination |
| Atrazine | 2019 | ND | N/A | 3 | 3 | ppb | N | Runoff from herbicide used on row crops. |
| Simazine | 2019 | ND | N/A | 4 | 4 | ppb | N | |
| LEAD AND COPPER | | | | | | | | |
| 2016 RESULTS | ACTION LEVEL GOAL | ACTION LEVEL | 90 TH PERCENTILE | SITES OVER AL | UNITS | SOURCE OF CONTAMINATION | | |
| COPPER | 1.3 | 1.3 | 0.5309 | 0 | PPM | CORROSION OF HOUSEHOLD PLUMBING; EROSION OF NATURAL DEPOSITS | | |
| LEAD | 0 | 15 | 6.12 | 0 | PPB | | | |
| TURBIDITY | | | | | | | | |
| | Collection Date | Highest single Measurement | Lowest monthly % Of samples meeting limits | | | | Turbidity limits | Likely Source of Contamination |
| Turbidity (NTU) | 2019 | 0.29 | 100% | | | | 0.3 | Soil runoff |
| Total Organic Carbon | | | | | | | | |
| | Collection Date | Highest | Range | MCL | MLG | Source of Contaminate | | |
| Source Water | 2019 | 6.6 | 4.34-6.6 | N/A | N/A | Naturally present in environment | | |
| Drinking Water | 2019 | 2.76 | 2.15-2.76 | N/A | N/A | | | |
| Removal Ratio | 2019 | 1.424 | 1.014-1.424 | N/A | N/A | N/A | | |
| Microbiological Contaminates | | | | | | | | |
| | Collection Date | Level Detected | MCL | MCLG | Source of contamination | | | |
| Total Coliform Bacteria (# of positive samples per month) | 2019 | 0 | 1 Positive sample/month | 0 | Naturally present in the environment | | | |