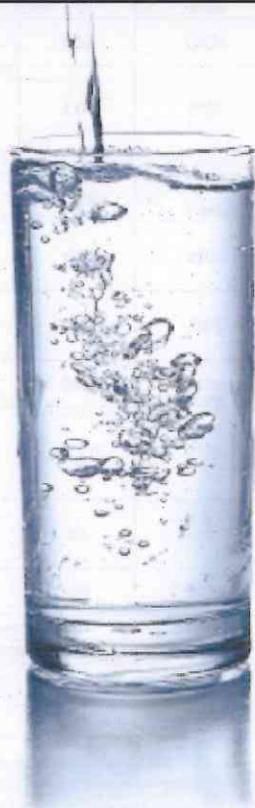


2015 Annual Drinking water Quality report



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, 2015

Report also available at

<http://www.loneoaktx.gov/Public-Works-Department.html>

For more information regarding this report contact:
Joshua Casey, Public Works (903)662-5116

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

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?wtsrc=>

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.
- **TTHMs (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.

2015 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
			Lake Tawakoni

CASH SUD DRINKING WATER QUALITY REPORT IS AVAILIABLE AT http://cashwater.org/documents/402/2015_CCR.pdf, http://www.loneoaktx.gov/WATERDEPT/2015_CCR.pdf, OR CAN BE PICKED UP AT CITY HALL LOCATED AT 115 TOWN SQUARE IN LONE OAK TEXAS DURING BUINESS HOURS.

2015 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							
2013 RESULTS	ACTION LEVEL GOAL	ACTION LEVEL	90 TH PERCENTILE	SITES OVER AL	VIOLATION	UNITS	SOURCE OF CONTAMINATION
COPPER	1.3	1.3	.218	0	NO	PPM	CORROSION OF HOUSE HOLD PLUMBING; EROSION OF NATURAL DEPOSITS
LEAD	0	15	2.54	0	NO	PPB	

DISINFECTION BY PRODUCTS									
Disinfection By-Products	Collection Date	Highest	Range	MCLG	MCL	Units	Violation	Source of Contamination	
Haloacetic Acids (HAAS)*	2015	53.6	22.4-53.6	N/A	60	ppb	NO	By-product of drinking water disinfection.	
Total Trihalomethanes (TTHM)	2015	65.9	37.8-65.9	N/A	100	ppb	NO		

INORGANIC CONTAMINANTS								
INORGANIC CONTAMINANT	Collection Date	Highest	Range	MCLG	MCL	Units	Violation	Source of Contamination
Nitrate [measured as Nitrogen]	2015	0.606	0.004 - 0.606	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	2015	2.09	0.50	4.0	4.0	4.0	ppm	NO	Water additive used to control microbes.
Chlorine	2015	1.52	0.23	4.0	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)

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.

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

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

2015 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	2015	2.17	1.6-2.4	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 (HAAS)*	2015	50.1	17.4-50.1	N/A	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2015	70.1	21.1-70.1	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	2015	N/A	N/A	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2015	0.045	N/A	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium	2015	0.46	N/A	100	100	ppb	N	Discharge from steel and pulp mills; Erosion of natural deposits.
Fluoride	2015	0.116	.68-.78	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]	2015	.63	.08-.038	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Beta/Photon emitters	2010	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	2015	0.23	N/A	3	3	ppb	N	Runoff from herbicide used on row crops.
Simazine	2015	ND	NA	4	4	ppb	N	

LEAD AND COPPER						
2013 RESULTS	ACTION LEVEL GOAL	ACTION LEVEL	90 TH PERCENTILE	SITES OVER AL	UNITS	SOURCE OF CONTAMINATION
COPPER	1.3	1.3	.309	0	PPM	CORROSION OF HOUSE HOLD PLUMBING; EROSION OF NATURAL DEPOSITS
LEAD	0	15	5.19	1	PPB	

TURBIDITY					
	Collection Date	Highest single Measurement	Lowest monthly % Of samples meeting limits		Likely Source of Contamination
Turbidity (NTU)	2015	0.31	100%		0.3 Soil runoff

Total Organic Carbon						
	Collection Date	Highest	Range	MCL	MLG	Source of Contaminate
Source Water	2015	10.4	6.04-10.4	N/A	N/A	Naturally present in environment
Drinking Water	2015	3.98	3.56-3.58	N/A	N/A	
Removal Ratio	2015	66.2%	39.2-66.2%	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)	2015	0	1 Positive sample/month	0	Naturally present in the environment