

# Annual Drinking Water Quality Report

TX1100002

CITY OF LEVELLAND

Annual Water Quality Report for the period of January 1 to December 31, 2016

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:

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Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (806)894-0113.

CITY OF LEVELLAND is Purchased Surface Water

## 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 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
11 - 212 HICKORY ST	212 HICKORY ST	_____	_____
12 - 3RD ST / AVE K	3RD ST / AVE K	Y	_____
13 - 109 PINE ST	109 PINE ST	Y	_____
14 - 1ST / AVE C	1ST / AVE C	Y	_____
17 - 200 BLK MAGNOLIA ST	200 BLK MAGNOLIA ST	Y	_____
20 - 3RD / AVE D	3RD / AVE D	Y	_____
24 - HOLLY CIRCLE	HOLLY CIRCLE	_____	_____
25 - BROOKHOLLOW	BROOKHOLLOW	_____	_____
26 - BEECHWOOD DR / PARKWOOD LN		_____	_____
27 - HILL CIRCLE	HILL CIRCLE	_____	_____
8 - ALLEY / 1ST - RR	ALLEY / 1ST-RR	_____	_____
SW FROM CITY OF LUBBOCK	CC FROM TX1520002 LUBBOCK	_____	_____

**2016 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)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
<b>Copper</b>	2016	1.3	1.3	0.1	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
<b>Lead</b>	2016	0	15	2.4	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

**Water Quality Test Results**

Definitions:	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.
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.
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.
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.
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.
MFL	million fibers per liter (a measure of asbestos)
na:	not applicable.

## Water Quality Test Results

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.
Treatment Technique or TT:	A required process intended to reduce the level of a contaminant in drinking water.
ppt	parts per trillion, or nanograms per liter (ng/L)
ppq	parts per quadrillion, or picograms per liter (pg/L)

## Regulated Contaminants

<b>Disinfectants and Disinfection By-Products</b>	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Haloacetic Acids (HAA5)</b>	2016	13	5.8 - 13	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
<b>Total Trihalomethanes (TTHM)</b>	2016	20	8.26 - 22.1	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
<b>Inorganic Contaminants</b>	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Arsenic</b>	2016	5	1.4 - 5	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
<b>Barium</b>	2016	0.1	0.031 - 0.1	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
<b>Chromium</b>	2016	3.2	2 - 3.2	100	100	ppb	N	Discharge from steel and pulp mills; Erosion of natural deposits.
<b>Cyanide</b>	07/02/2014	41.9	0 - 41.9	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
<b>Fluoride</b>	2016	0.812	0.138 - 0.812	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>	2016	1	0.42 - 0.942	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
<b>Selenium</b>	2016	5.6	1.1 - 5.6	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
<b>Radioactive Contaminants</b>	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Beta/photom emitters</b>	2016	14.4	5.9 - 14.4	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.

<b>Gross alpha excluding radon and uranium</b>	2016	9.6	1 - 9.6	0	15	pCi/L	N	Erosion of natural deposits.
<b>Uranium</b>	2016	10.5	6.7 - 10.5	0	30	ug/l	N	Erosion of natural deposits.
<b>Volatile Organic Contaminants</b>	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
<b>Ethylbenzene</b>	2016	4.52	0 - 4.52	700	700	ppb	N	Discharge from petroleum refineries.
<b>Xylenes</b>	2016	0.0328	0 - 0.0328	10	10	ppm	N	Discharge from petroleum factories; Discharge from chemical factories.

## Violations Table

<b>Lead and Copper Rule</b>			
The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.			
<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
FOLLOW-UP OR ROUTINE TAP M/R (LCR)	10/01/2016	2016	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.
LEAD CONSUMER NOTICE (LCR)	12/30/2016	01/24/2017	We failed to provide the results of lead tap water monitoring to the consumers at the location water was tested. These were supposed to be provided no later than 30 days after learning the results.

**CITY OF LUBBOCK PUBLIC WATER  
SYSTEM WATER QUALITY REPORT DATA  
2016**

SOURCE:	Roberts Co. Well field	RANGE	Bailey Co. Well field	RANGE	Lake Alan Henry	RANGE	MCL	MGLG	VIOLATION	SOURCES OF CONTAMINATION
<b>SUBSTANCES REGULATED AT THE TREATMENT PLANT</b>										
BETA/PHOTON EMITTERS	8.4 pCi/L (2011)	na	6.2 pCi/L (2011)	na	none detected (2014)	na	50 pCi/L*	0	NO	Decay of natural and man-made deposits
ALPHA EMITTERS	4.7 pCi/L (2011)	na	4.0 pCi/L (2011)	na	4.1 pCi/L	3.0 - 11.5 pCi/L	15 pCi/L	0	NO	Erosion of natural deposits
URANIUM	na	na	na	na	2.7 ppb (2014)	na	30 ppb	0	NO	Erosion of natural deposits
ANTIMONY	none detected	na	none detected	na	0.29 ppb	na	6 ppb	6ppb	NO	Discharge from petroleum refineries; tire retardants; ceramics; electronics; solder
ARSENIC	1.6 ppb	na	4 ppb	na	2.5 ppb	na	10 ppb**	0	NO	Erosion of natural deposits; runoff from orchards
BARIUM	0.13 ppm	na	0.098 ppm	na	0.19ppm	na	2 ppm	2 ppm	NO	Erosion of natural deposits
CHROMIUM	2.2 ppb	na	2 ppb	na	1.9 ppb	na	100 ppb	100 ppb	NO	Erosion of natural deposits
CYANIDE	110 ppb (2015)	na	84.4 ppb (2014)	na	41.1 ppb	na	200 ppb	200 ppb	NO	Discharge from steel/metal, plastic and fertilizer factories
FLUORIDE	0.656 ppm	na	1.23 ppm (2014)	na	0.845 ppm	na	4 ppm	4 ppm	NO	Erosion of natural deposits
NITRATE	0.966 ppm	na	1.63 ppm	na	0.053 ppm	na	10 ppm	10 ppm	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion
SELENIUM	none detected	na	2.7 ppb	na	none detected	na	50 ppb	50 ppb	NO	Erosion of natural deposits
TURBIDITY	0.22 NTU	0.04 - 0.22 NTU	na	na	0.08 NTU	0.02 - 0.08 NTU	TT = 5 NTU	0	NO	Soil runoff. Turbidity is a measurement of the cloudiness of water. It is a good indicator of the effectiveness of the filtration system.
	100% less than 0.3 NTU		na	na	100% less than 0.3 NTU		TT = % of samples <0.3 NTU			
<b>ADDITIONAL MONITORING</b>										
SOURCE:	Roberts Co. Wellfield	RANGE	Bailey Co. Wellfield	RANGE	Lake Alan Henry	RANGE	MCL	MGLG	VIOLATION	SOURCES OF CONTAMINATION
ALUMINUM	0.083 ppm	na	none detected	na	0.026 ppm	na	0.05-0.2ppm^	na	na	Water Treatment Chemical
CHLORIDE	284 ppm	na	12 ppm (2014)	na	258 ppm	na	300 ppm^	na	na	Naturally occurring
TOTAL DISSOLVED SOLIDS	869 ppm	na	317 ppm (2014)	na	695 ppm	na	1000 ppm^	na	na	Naturally occurring
AMMONIA	0.23 ppm	na	0.23 ppm	na	0.20 ppm	na	Not Regulated	na	na	Water Treatment Chemical
CALCIUM	61.2 ppm	na	53.4 ppm	na	29.3 ppm	na	Not Regulated	na	na	Naturally occurring
MAGNESIUM	30.8 ppm	na	17.9 ppm	na	10.3 ppm	na	Not Regulated	na	na	Naturally occurring
SODIUM	207 ppm	na	32.9 ppm	na	211 ppm	na	Not Regulated	na	na	Naturally occurring
POTASSIUM	6.22 ppm	na	4.7 ppm	na	4.73 ppm	na	Not Regulated	na	na	Naturally occurring
MANGANESE	0.00074 ppm	na	none detected	na	none detected	na	0.05 ppm^	na	na	Naturally occurring
NICKEL	0.00049 ppm	na	none detected	na	0.00043 ppm	na	Not Regulated	na	na	Erosion of natural deposits
pH	7.4	na	7.6	na	8.2	na	Greater than 7.0^	na	na	Naturally occurring
ZINC	none detected	na	0.0033 ppm	na	0.0062 ppm	na	5 ppm^	na	na	Naturally occurring
HARDNESS	280 ppm	na	207 ppm	na	116 ppm	na	Not Regulated	na	na	Naturally occurring
CONDUCTANCE	1530 micromhos/cm	na	524 micromhos/cm (2014)	na	1310 micromhos/cm	na	Not Regulated	na	na	Naturally occurring
TOTAL ALKALINITY	183 ppm	na	214 ppm (2014)	na	162 ppm	na	Not Regulated	na	na	Naturally occurring
SULFATE	135 ppm	na	29.2 ppm (2014)	na	106 ppm	na	300 ppm^	na	na	Minerals and Nutrient
<b>ALL DATA IN THIS TABLE WERE COLLECTED IN 2016 UNLESS OTHERWISE DESIGNATED IN PARENTHESES.</b>										