

2015 ANNUAL DRINKING WATER QUALITY REPORT

(Consumer Confidence Report)

City of Lake Worth, TX

Phone No: 817-237-1211 EXT 200

Special Notes

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 regulation establish limits for contaminants in bottle water which must provide the same protection for public health.

You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly, or immunocompromised person 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).

Water Sources: The Source of drinking (both tap water and bottle water) includes rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals, and in some cases, radioactive material and can pick up substance resulting from the presence of Contaminants that may be present in source.

>Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and

> 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

>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.

Annual Water Quality Report for the period of January 1 to December 31, 2015.

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.

PUBLIC PARTICIPATION OPPORTUNITIES

Days	Monday - Friday
Time	8:00 a.m. – 5:00 p.m.
Location	Lake Worth City Hall, 3805 Adam Grubb
Phone No.	(817) 237-1211 EXT 200
Web Site	www.lakeworthtx.org

All drinking water may contain contaminants
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.

En español Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre este informe en español, favor de llamar al tel. (817) 237-1211 EXT 110. Par hablar con una persona bilingüe en español.

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.

About The Following Pages

The pages that follow list all of the federally regulated or monitored constituents, which have been found in your drinking water. U.S. EPA requires water systems to test up to 97 constituents.

Secondary Constituents

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not EPA. These constituents are not cause for health concerns. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

DEFINITIONS / Abbreviations:

Maximum Residual Disinfectant Level (MRDL) - The highest level of 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 (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 contamination.

Maximum Contaminant Level (MCL) – The highest permissible level of a contaminant in drinking water. MCL’s are set as close to the MCLG’s as feasible using the best available technology.

Maximum Contaminant Level Goal (MCLG) – The level of a contaminant in drinking water below which there is no known or expected health risk. MCLG’s allow for a margin of safety.

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

Action Level (AL) – The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

mrem: millirems per year (a measure of radiation absorbed by the body)

NTU – Nephelometric Turbidity Units

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

pCi/l – picocuries per liter (measurement of radioactivity)

ppm – parts per million, or milligrams per liter (mg/l)- milligrams per liter or parts per million- or one ounce in 7350 gallons of water

ppb – parts per billion, or micrograms per liter (ug/l)- Micrograms per liter or parts per billion- or one ounce in 7,350,000 gallons of water

na- not applicable

Avg.- Regulatory compliance with some MCLs are based on running annual average of monthly samples.

ppt – parts per trillion, or nanograms per liter

ppq- parts per quadrillion, or picograms per liter

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
3 - AZLE AVE / HWY 820 - PS 2	AZLE AVE / HWY 820 - PS 2 GW	Y
5 - STADIUM WALL / BOAT CLUB - PS 4	PS 4 GW	
SW FROM FORT WORTH	CC FROM TX220012 CITY OF SW	

Inorganic Contaminants-

Nitrate Advisory - Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Collection Date	Contaminant	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation (Y/N)	Likely Source of Contaminant
1/21/2013	Barium	0.0106	0.0106-0.0106	2	2	ppm	N	Discharge of drilling waste: Discharge from metal refineries: Erosion of natural deposits
1/21/2013	Chromium	6.43	6.43-6.43	100	100	ppb	N	Discharge from steel and pulp mills: Erosion of natural deposits
2/19/2014	Fluoride	0.342	0.342-0.342	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2015	Nitrate (measured as Nitrogen)	0.358	0.0255-0.358	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
2015	Nitrite (Measured as Nitrogen)	0.043	0-0.043	1	1	ppm	n	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
1/21/2013	Selenium	1.49	1.49-1.49	50	50	ppb	N	Discharge from petroleum refineries; Erosion of natural deposits: Discharge from mines

Radioactive Contaminants

Collection Date	Contaminant	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
3/17/2010	Gross alpha excluding radon and uranium	2.7	2.4-2.7	0	15	pCi / L	N	Erosion of natural deposits

Regulated Contaminants

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

Year	Disinfectants and Disinfection By-Products	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation (Y/N)	Source of Contaminant
2015	Total Trihalomethanes (TThm)	9	4.51-18.6	No goal for the total	80	ppb	N	Byproduct of drinking water disinfection.
2015	Haloacetic Acids (HAA5)	9	5.9-11.8	No goal for the total	60	ppb	N	Byproduct of drinking water disinfection.

Lead and Copper

Definitions:

Action Level Goals (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for margin of safety.

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Data Sampled	Constituent	The 90 th Percentile	MCLG	Number of Sites Exceeding Action Level	Action Levels (AL)	Unit	Violation (Y/N)	Source of Constituent
7/18/13	Lead	1.94	0	0	15	ppb	N	Corrosion of household plumbing systems, Erosion of natural deposits.
7/18/13	Copper	0.355	1.3	0	1.3	ppm	N	Corrosion of household plumbing systems, Erosion of natural deposits, Leaching from wood preservatives.

Health Information for Lead

“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. This water supply is responsible for providing high quality drinking water, but 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 you 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>.”

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest no. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or fecal Coliform Samples	Violation (Y/N)	Likely Source of Contaminant
0	0 positive monthly sample	There were no TCR detections for this system in this CCR period		0	N	Naturally present in the environment

Disinfectant Residual Level

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source of Contaminant
2015	Chlorine Residual, Total	2.23	0.5	3.5	4	4	ppm	No	Disinfectant used to control microbes.

City of Lake Worth Water Loss for 2015

For the calendar year 2015, our system lost an estimated 39,061,470 gallons of water per the audit submitted to the Texas Water Development Board. If you have any question about the water loss audit please call (817) 237-7210.

Purchased Surface Water - City of Fort Worth Interconnect Purchased Surface Water - City of Fort Worth Interconnect

The following information is provided by the City of Fort Worth since Lake Worth purchases treated water from Fort Worth

2015 Regulated Contaminants Detected

Contaminant	Measure	Range	2015 Level	MCLG	MCL	Likely Source of Contamination
Gross Beta particles & photon emitters ²	pCi/L	4 -5.6	5.6	N/A	50	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation.
Radium 226/228	pCi/L	1 - 1	1	0	5	Erosion of natural deposits.
Arsenic	ppb	0.96-1.70	1.70	0	10	Erosion of natural deposits.
Antimony	ppb	0 to 0.21	0.21	6	6	Discharge from petroleum refineries, fire retardant, ceramics, electronics, solder and test addition
Barium	ppm	0.05 to 0.07	0.07	2	2	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits.
Chromium (total)	ppb	0.87 to 1	1	100	100	Discharge from steel and pulp mills, erosion of natural deposits.
Cyanide	ppb	13.4 to 145	145	200	200	Discharge from plastic and fertilizer; discharge from steel and metal factories
Fluoride	ppm	0.12 to 0.56	0.56	4	4	Water additive which promotes strong teeth; erosion of natural deposits. Discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen)	ppm	0.2 to 0.67	0.67	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Nitrite (measured as Nitrogen)	ppm	0 to 0.04	0.04	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Bromate	ppb	0 to 6.22	6.22	0	10	By-product of drinking water disinfection.
Haloacetic Acids	ppb	8.8 to 15.6	15.6	N/A	60	By-product of drinking water disinfection.
Total Trihalomethanes	ppb	12.4 to 27.8	27.8	N/A	80	By-product of drinking water disinfection.

Contaminant	High	Low	MCLG	MCL	Average	Likely Source of Contamination
Total Organic Carbon	1	1	N/A	TT=% Removal	1	Naturally occurring.

It is used to determine disinfection by-product precursors. Fort Worth was in compliance with all monitoring and treatment requirements for disinfection by-product precursors.

Turbidity

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

1 Turbidity is a measure of the cloudiness of water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

Contaminant	2015 Highest Single Sample	Lowest Monthly % of samples < 0.3 NTU	MCLG	MCL	Measure	Likely Source of Contamination
Turbidity	0.50	98.9%	N/A	TT	NTU	Soil runoff (Turbidity is a measure of the cloudiness of water).

Contaminant	Range	2015 Level	MCLG	MCL	Measure	Likely Source of Contamination
Total Coliforms Including fecal coliform & E. coli	0 - 2%	Presence in 2% of monthly samples	0	Presence in 5% or less monthly samples	% positive sample	Coliform are naturally present in the environment as well as feces.

Unregulated Contaminants

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

Contaminant	Measure	Range of Detects	2015 Level	MCL	MCLG	Common Sources Of Substance
Chloral Hydrate	ppb	0.30-0.67	0.67	Not regulated	None	By-Product of drinking water disinfection
Bromoform	ppb	1.5-9.9	9.9	Not regulated	None	By-Product of drinking water disinfection; not regulated individually; included in Total Trihalomethanes
Bromodichloromethane	ppb	2.6-8.9	8.9	Not regulated	None	By-Product of drinking water disinfection; not regulated individually; included in Total Trihalomethanes
Chloroform	ppb	2.8-15.2	15.2	Not regulated	None	By-Product of drinking water disinfection; not regulated individually; included in Total Trihalomethanes
Dibromochloromethane	ppb	1.9-9.0	9.0	Not regulated	None	By-Product of drinking water disinfection; not regulated individually; included in Total Trihalomethanes
Monochloroacetic Acid	ppb	2.0-5.0	5.0	Not regulated	None	By-Product of drinking water disinfection; not regulated individually; included in Haloacetic Acid
Dichloroacetic Acid	ppb	7.3-9.3	9.3	Not regulated	None	By-Product of drinking water disinfection; not regulated individually; included in Haloacetic Acid

Trichloroacetic Acid	Ppb	1.2-6.8	6.8	Not regulated	None	By-Product of drinking water disinfection; not regulated individually; included in Haloacetic Acid
Monobromoacetic Acid	ppb	0-2.4	2.4	Not regulated	None	By-Product of drinking water disinfection; not regulated individually; included in Haloacetic Acid
Dibromoacetic Acid	ppb	0-3.8	3.8	Not regulated	None	By-Product of drinking water disinfection; not regulated individually; included in Haloacetic Acid

Secondary Constituents

These items do not relate to public health but rather to the aesthetic effects. These items are often important to industry.

Item	Measure	2015 Range
Bicarbonate	ppm	96.4-120
Calcium	ppm	33.3-42.1
Chloride	ppm	12.5-25.9
Conductivity	uhms/cm	333-427
pH	units	8.0-8.2
Magnesium	ppm	3.55-6.79
Sodium	ppm	12.3-28.5
Sulfate	ppm	20.2-29.0
Total Alkalinity as CaCO ₃	ppm	96.4-120
Total Dissolved Solids	ppm	163-234
Total Hardness as CaCO ₃	ppm	101-133
Total Hardness in Grains	Grains/gallon	6-8