

2014 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.

Our Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S Environmental Agency (EPA) required test and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your 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 EPA's 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	Violations	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
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.
2014	Nitrate (measured as Nitrogen)	1	0.049-0.514	10	10	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

Maximum Residual Disinfectant Level

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2014	Chlorine Residual, Total/Free	2.33	0.5	3.8	4	4	ppm	Disinfectant used to control microbes.

Radioactive Contaminants

Collection Date	Contaminant	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violations	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	Violations	Source of Contaminant
2014	Total Trihalomethanes (TThm)	7	3.4-26.58	No goal for the total	80	ppb	N	Byproduct of drinking water disinfection.
2014	Haloacetic Acids (HAA5)	5	2.8-6.1	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	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 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>.”

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	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

City of Lake Worth Water Loss for 2014

For the calendar year 2014, our system lost an estimated 50,964,256 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.

Violations Table

Lead and Copper Rule			
The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosively. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.			
Violation Type	Violation Begin	Violation End	Violation Explanation
LEAD CONSUMER NOTICE (LCR)	12/30/2013	6/04/2014	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

Consumers at the tested locations were provided with the lead tap monitoring results.

TCEQ received certification and this violation was resolved and returned to compliance as of 6/4/14

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

2014 Regulated Contaminants Detected

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	2014 Highest Single Sample	Lowest Monthly % of samples < 0.3 NTU	MCLG	MCL	Measure	Likely Source of Contamination
Turbidity	0.29	100%	N/A	TT	NTU	Soil runoff (Turbidity is a measure of the cloudiness of water).

Contaminant	Range	2014 Level	MCLG	MCL	Measure	Likely Source of Contamination
Total Coliforms Including fecal coliform & E. coli	0 - 1.4%	Presence in 1.4% of monthly samples	0	Presence in 5% or less monthly samples	% positive sample	Coliform are naturally present in the environment as well as feces.

Contaminant	Range	2014 Level	MCLG	MCL	Measure	Likely Source of Contamination
Gross Beta particles & photon emitters ²	4 -5.6	5.6	N/A	50	pCi/L	Erosion of natural deposits.
Radium 0226/228 ²	1 - 1	1	0	5	pCi/L	Erosion of natural deposits.
Arsenic	0.97-1.28	1.28	0	10	ppb	Erosion of natural deposits.
Atrazine	0-0.10	0.09	3	3	ppb	Run from herbicide used on row crops.
Antimony	0-0.22	0.22	6	6	ppb	Discharge from petroleum refineries, fire retardant, ceramics, electronics, solder and test addition
Barium	2	0.05-0.07	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits.
Chromium (total)	0.00-0.55	0.55	100	100	ppb	Discharge from steel and pulp mills, erosion of natural deposits.

Cyanide	0-113	113	200	200	ppb	Discharge from plastic and fertilizer; discharge from steel and metal factories
Fluoride	0.27-0.62	0.62	4	4	ppm	Water additive which promotes strong teeth; erosion of natural deposits. Discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen)	0.28-0.82	0.82	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Nitrite (measured as Nitrogen)	0-0.03	0.03	1	1	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Bromate	0-8.92	8.29	0	10	ppb	By-product of drinking water disinfection.
Haloacetic Acids	0-11.5	11.5	N/A	60	ppb	By-product of drinking water disinfection.
Total Trihalomethanes	0-26	26	N/A	80	ppb	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.

Data gathering to determine if more regulation needed

Water utilities in the United States monitor for more than 100 contaminants and must meet 91 regulations for water safety and quality. But should other contaminants be regulated? The 1996 Safe Drinking Water Act amendments require that once every five years EPA issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems. This monitoring provides a basis for future regulatory actions to protect public health.

The first Unregulated Contaminant Monitoring Rule (UCMR 1) was published on Sept. 17, 1999, the second (UCMR 2) was published on Jan. 4, 2007 and the third (UCMR 3) was published on May 2, 2012. Fort Worth did not detect any of the contaminants in the UCMR 1 and UCMR 2 testing.

The third Unregulated Contaminant Monitoring Rule includes assessment for 21 chemical contaminants, 7 hormones and two viruses. The virus testing did not impact Fort Worth. This testing was limited to small groundwater systems that do not disinfect.

UCMR benefits the environment and public health by providing EPA and other interested parties with scientifically valid data on the occurrence of these contaminants in drinking water. Health information is necessary to know whether these contaminants pose a health risk.

Public water systems will sample for these contaminants for four consecutive quarters from 2013 to 2015. Fort Worth's sampling occurred from June 2013 through March 2014. The results shown are for the final quarter of sampling. The first three quarter's results appeared in last year's 2013 annual water quality report.

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

Additional Information:

www.water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/index.cfm

Microorganisms not detected

Tarrant Regional Water District monitors the raw water at all intake sites for Cryptosporidium, Giardia Lamblia and viruses. The source is human and animal fecal waste in the watershed.

Viruses, Cryptosporidium and Giardia Lamblia, microbial parasites common in surface water, were not detected in any of the 2014 sampling.

UMCR 3

Fort Worth's testing detected only six of the 21 chemical contaminants and none of the seven hormones.

Contaminant	Measure	Range of Detects	2014 Level	MRL	Common Sources Of Substance
Vanadium	ppb	0.62-0.86	0.86	0.2	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst
Molybdenum	ppb	1.4-2.1	2.1	1	Naturally-occurring element found in ores and present in plants, animals and bacteria; commonly used from molybdenum trioxide used as a chemical reagent
Strontium	ppb	260-290	290	0.3	Naturally-occurring element; historically, commercial use of strontium has been in the faceplate class of cathode-ray tube televisions to block x-ray emissions
Chromium	ppb	Not detected	Not detected	0.2	Naturally-occurring element; used in making steel and other alloys; chromium -3 or -6 forms are used for chrome plating, dyes and pigments, leather tanning, and wood preservation
Chromium-6	ppb	0 -0.068	0.068	0.03	
Chlorate	ppb	0 -170	170	20	Agricultural defoliant or desiccant; disinfection byproduct; and used in production of chlorine dioxide

1 Total Chromium, the sum of chromium in all its valence states, is already regulated in drinking water. As part of UCMR3, EPA requires testing for Total Chromium in the same samples used to test for Chromium 6, which is on the UCMR3 list. The MCL for EPA's current total chromium regulation was determined based upon the health effects of Chromium 6.

UCMR 3 contaminants not detected

Chemicals

1, 2, 3-trichloropropane	Perfluorohexanesulfonic acid (PFHxS)
1, 3-butadiene	perfluoroheptanoic acid (PFHpA)
Chloromethane (methyl chloride)	perfluorobutanesulfonic acid (PFBS)
1, 1-dichloroethane	
Bromomethane	<u>Hormones</u>
Chlorodifluoromethane (HCFC-22)	17-β-estradiol
1, 4-dioxane	17-α-ethynylestradiol
Cobalt	estriol
Perfluorooctanesulfonic acid (PFOS)	equilin
Perfluorooctanoic acid (PFOA)	estrone
Perfluorononanoic acid (PFNA)	testosterone
	4-androstene-3, 17-dione

2014 water quality data for wholesale customers