Annual Drinking Water Quality Report

TX2200078 **TOWN OF WESTOVER HILLS**

Annual Water Quality Report for the period of January 1 to December 31, 2014

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 (817)737-8442.

TOWN OF WESTOVER HILLS 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 pickup 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

The TCEQ has completed a Source Water Assessment for all drinking water systems that own their sources. The report 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 system(s) from which we purchase our water received the assessment report. For more information on source water assessments and protection efforts at our system, contact Tim Chambers at (817)737-8442.

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
SW FROM FORT WORTH	CC FROM TX2200012 CITY OF	SW	________	Lake Worth, Eagle Mountain Lake, Lake Bridgeport, Richland Chambers Reservoir, Cedar Creek Reservoir, Lake Benbrook, Clear Fork Trinity River
SW FROM FORT WORTH	CC FROM TX2200012 CITY OF	SW	________	Lake Worth, Eagle Mountain Lake, Lake Bridgeport, Richland Chambers Reservoir, Cedar Creek Reservoir, Lake Benbrook, Clear Fork Trinity River
SW FROM FORT WORTH	CC FROM TX2200012 CITY OF	SW	________	Lake Worth, Eagle Mountain Lake, Lake Bridgeport, Richland Chambers Reservoir, Cedar Creek Reservoir, Lake Benbrook, Clear Fork Trinity River

Water Production Test Result for Water Purchased from Fort Worth

Drinking Water Quality Test Results

Contaminant	Measure	MCL	2014 Highest single result	Lowest monthly % of samples ≤ 0.3 NTU	MCLG	Common Sources of Substance
Turbidity[1]	NTU	TT	0.29	100%	N/A	Soil runoff (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	Measure	MCL	2014 Level	Range	MCLG	Common Sources of Substance
Total Coliforms (including fecal coliform & E. coli)	% positive samples	Presence in 5% or less of monthly samples	Presence in 1.4% of monthly samples	0 to 1.4%	0	Coliforms are naturally present in the environment as well as feces; fecal coliforms and E. coli only come from human and animal fecal waste.

Contaminant	Measure	MCL	2014 Level	Range	MCLG	Common Sources of Substance
Gross Beta particles & photon emitters[2]	pCi/L	50	5.6	4 to 5.6	N/A	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[2]	pCi/L	5	1	1 to 1	0	Erosion of natural deposits
Arsenic	ppb	10	1.28	0.97 to 1.28	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Atrazine	ppb	3	0.09	0 to 0.10	3	Runoff from herbicide used on row crops
Antimony	ppb	6	0.22	0 to 0.22	6	Discharge from petroleum refineries, fire retardants, ceramics, electronics, solder, test addition
Barium	ppm	2	0.07	0.05 to 0.07	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (Total)	ppb	100	0.55	0.00 to 0.55	100	Discharge from steel and pulp mills, erosion of natural deposits
Cyanide	ppb	200	113	0 to 113	200	Discharge from plastic and fertilizer factories; discharge from steel and metal factories
Fluoride	ppm	4	0.62	0.27 to 0.62	4	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen)	ppm	10	0.82	0.28 to 0.82	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite[3] (measured as Nitrogen)	ppm	1	0.03	0 to 0.03	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Bromate	ppb	10	8.92	0 to 8.92	0	By-product of drinking water disinfection.
Haloacetic Acids	ppb	60	11.5	0 to 11.5	N/A	By-product of drinking water disinfection
Total Trihalomethanes	ppb	80	26	0 to 26	N/A	By-product of drinking water disinfection

Contaminant	Measure	MRDL	2014 Level	Range	MRDLG	Common Sources of Substance
Chloramines	ppm	4	insert your system's results		4	Water additive used to control microbes

Contaminant	High	Low	Average	MCL	MCLG	Common Sources of Substance
Total Organic Carbon[4]	1	1	1	TT = % removal	N/A	Naturally occurring

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

[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.

[2] Because of historically low levels of radionuclides in its water, TCEQ has Fort Worth on a reduced monitoring schedule. The test results shown are from 2011 (Radium) or 2014 (Gross Beta).

[3] The state last sampled for Nitrite in 2013.

[4] Total Organic Carbon is used to determine disinfection by-product precursors. Fort Worth was in compliance with all monitoring and treatment technique requirements for disinfection by-product precursors.

2014 water quality data for wholesale customers provided by the City of Fort Worth

Abbreviations used In tables

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 - 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.

MRL: Mimimum Report Level - The lowest concentration of a contaminant that can be measured by a laboratory

NTU - Nepholometric Turbidity Unit; a measure of water turbidity or clarity

pCi/L - Picocuries per liter; a measure of radioactivity

ppb - Parts per billion or micrograms per liter (µg/L)

ppm - Parts per million or milligrams per liter (mg/L)

TT: Treatment Technique - a required process intended to reduce the level of a contaminant in drinking water

Microorganism testing shows no detections

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

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

TCEQ accesses raw water supplies

Fort Worth uses surface water from Lake Worth, Eagle Mountain Lake, Lake Bridgeport, Richland Chambers Reservoir, Cedar Creek Reservoir, Lake Benbrook and the Clear Fork Trinity River.

Fort Worth owns Lake Worth. The U.S. Army Corps of Engineers is responsible for Benbrook Lake. The other four lakes are owned and operated by Tarrant Regional Water District.

The Texas Commission on Environmental Quality completed an assessment of Fort Worth's source waters. Results indicate that some of the sources are susceptible to certain contaminants based on human activities and natural conditions.

The sampling requirements for the water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this report.

Tarrant Regional Water District, from which Fort Worth purchases its water, received the assessment reports.

For more information on source water assesments and protection efforts at our system, contact Stacy Walters at 817-392-8203.

For more information about Fort Worth's sources of water, please refer to the Source Water Assessment Viewer available at the following URL: *http://www.tceq.texas.gov/gis/swaview.*

Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL:

http://dww.tceq.state.tx.us/DWW.

Unregulated Disinfection By-products

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	2014 Level	MCL	MCLG	Common Sources of Substance
Chloral Hydrate	ppb	0.26 to 0.49	0.49	Not regulated	None	By-product of drinking water disinfection
Bromoform	ppb	1 to 3.6	3.6	Not regulated	None	By-products of drinking water disinfection; not regulated individually; included in Total Trihalomethanes
Bromodichloromethane	ppb	2.6 to 7.6	7.6	Not regulated	None	
Chloroform	ppb	2.8 to 9	9	Not regulated	70	
Dibromochloromethane	ppb	2.2 to 6.8	6.8	Not regulated	60	
Monochloroacetic Acid	ppb	0 to 3.5	3.5	Not regulated	70	By-products of drinking water disinfection; not regulated individually; included in Haloacetic Acids
Dichloroacetic Acid	ppb	3 to 5.7	5.7	Not regulated	None	
Trichloroacetic Acid	ppb	0 to 1.8	1.8	Not regulated	20	
Monobromoacetic Acid	ppb	1 to 2	2	Not regulated	None	
Dibromoacetic Acid	ppb	0 to 3.3	3.3	Not regulated	None	

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	2014 Range
Bicarbonate	ppm	81.8 to 126
Calcium	ppm	31.3 to 47.9
Chloride	ppm	19.9 to 27.1
Conductivity	µmhos/cm	306 to 433
pH	units	7.9 to 8.1
Magnesium	ppm	4 to 6.9
Sodium	ppm	18 to 28.1
Sulfate	ppm	23.5 to 36.4
Total Alkalinity as $CaCO_3$	ppm	81.8 to 126
Total Dissolved Solids	ppm	171 to 267
Total Hardness as $CaCO_3$	ppm	104 to 125
Total Hardness in Grains	grains/gallon	6 to 7

2014 water quality data for wholesale customers

Data gathering to detemine 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 annual report of the 2013 water quality.

Additional Information:
water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr3/index.cfm

UCMR 3

Fort Worth's testing detected only four 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	0.56 to 1.6	1.6	0.2	Naturally-occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst
Molybdenum	ppb	1.6 to 2.5	2.5	1	Naturally-occurring element found in ores and present in plants, animals and bacterial; commonly used form molybdenum trioxide used as a chemical reagent
Strontium	ppb	290 to 330	330	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[1]	ppb	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 to 0.14	0.14	0.03	
Chlorate	ppb	0 to 720	720	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 UCMR 3, EPA requires testing for Total Chromium in the same samples used to test for Chromium 6, which is on the UCMR 3 list. The value differs from what is listed in the other table because of different sampling periods. 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
1,3-butadiene
chloromethane (methyl chloride)
1,1-dichloroethane
bromomethane
chlorodifluoromethane (HCFC-22)
Bromochloromethane (Halon 1011)
1,4-dioxane
cobalt
perfluorooctanesulfonic acid (PFOS)
perfluorooctanoic acid (PFOA)
perfluorononanoic acid (PFNA)
perfluorohexanesulfonic acid (PFHxS)
perfluoroheptanoic acid (PFHpA)
perfluorobutanesulfonic acid (PFBS)

Hormones

17-ß-estradiol
17-α-ethynylestradiol
estriol
equilin
estrone
testosterone
4-androstene-3,17-dione

2014 Regulated Contaminants Detected by Westover Hills

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 Contamination
0	1 positive monthly sample.	1	A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive.	0	N	Naturally present in the environment.

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
Copper	08/27/2013	1.3	1.3	0.645	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	08/27/2013	0	15	2.9	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfectant Residuals

Disinfectant	Year	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Likely Source of Contamination
Chloramines	2014	2.7	1.0	3.2	4	4	ppm	Y	Clerical Error. Quarterly Report Reached TCEQ After Deadline.

Westover Hills Distribution System 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.
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.
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.
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)

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)*	2014	9	7.2 - 11.4	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2014	10	6.1 - 15.9	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Nitrate [measured as Nitrogen]	2014	0.442	0.391 - 0.442	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Violations Table

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.

Violation Type	Violation Begin	Violation End	Violation Explanation
Disinfectant Level Quarterly Operating Report (DLQOR).	07/01/2014	09/30/2014	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. (Clerical Error – All testing was performed per TCEQ Regulations)

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 corrosivity. 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	02/25/2014	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 the results. (One of the ten samples taken were sent in after the 30 day limit. All ten samples were resubmitted, tested, and were within approved limits prescribed by TCEQ)