

City of Fort Worth Drinking Water Quality Test Results

Contaminant	Measure	MCL	2013 Highest single result	Lowest monthly % of samples ≤ 0.3 NTU	MCLG	Common Sources of Substance
Turbidity ¹	NTU	TT	0.38	99.4%	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	2013 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 2.2% of monthly samples	0 to 2.2%	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	2013 Level	Range	MCLG	Common Sources of Substance
Alpha particles ²	pCi/L	15	2.8	0 to 2.8	N/A	Erosion of natural deposits
Gross Beta emitters ²	pCi/L	50	7.5	0 to 7.5	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 228 ²	pCi/L	5	1.1	0 to 1.1	0	Erosion of natural deposits
Arsenic	ppb	10	4.48	1.33 to 4.48	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Atrazine	ppb	3	0.087	0.04 to 0.22	3	Runoff from herbicide used on row crops
Barium	ppm	2	0.06	0.05 to 0.06	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (Total)	ppb	100	2.12	1.28 to 2.12	100	Discharge from steel and pulp mills, erosion of natural deposits
Fluoride	ppm	4	0.65	0.23 to 0.65	4	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen)	ppm	10	0.78	0.46 to 0.78	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (measured as Nitrogen)	ppm	1	0.03	0.01 to 0.03	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	ppb	50	3.98	2.92 to 3.98	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Bromate	ppb	10	0.08	0 to 0.08	0	By-product of drinking water disinfection
Haloacetic Acids	ppb	60	12.5	6.5 to 12.5	N/A	By-product of drinking water disinfection
Total Trihalomethanes	ppb	80	22.1	5.8 to 22.1	N/A	By-product of drinking water disinfection
Contaminant	Measure	MRDL	2013 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	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 through 2013.

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

NTU - Nephelometric 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 (mg/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 low 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.

No viruses were detected, but *Cryptosporidium* and *Giardia Lambia*, microbial parasites common in surface water, were detected at very low levels.

The *Cryptosporidium* testing methods cannot

determine if the parasite is dead and inactive or alive and capable of causing cryptosporidiosis. This is an abdominal infection that causes nausea, diarrhea and abdominal cramps after indigestion.

The drinking water treatment process is designed to remove *Cryptosporidium* and *Giardia Lambia* through filtration.

TCEQ accesses raw water supplies

TCEQ completed an assessment of our source water and the results indicate some of our sources are susceptible to certain contaminants. The sampling requirements for our water system are based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this water quality report.

For more information on source water assessments and protection efforts at our system, contact our laboratory at 817-392-5900.

Some of this source water assessment information is available on Texas Drinking Water Watch at www.tceq.texas.gov/gis/swaview.

Secondary Constituents		
Item	Measure	2012 Range
Bicarbonate	ppm	88 to 114
Calcium	ppm	31 to 42
Chloride	ppm	10 to 26
Conductivity	µmhos/cm	264 to 360
pH	units	7.7 to 8.3
Magnesium	ppm	3 to 6
Sodium	ppm	17 to 27
Sulfate	ppm	22 to 36
Total Alkalinity as CaCO ₃	ppm	88 to 114
Total Dissolved Solids	ppm	150 to 244
Total Hardness as CaCO ₃	ppm	92 to 122
Total Hardness in Grains	grains/gallon	5 to 7

Fort Worth relies on surface water

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.

2013 Annual Drinking Water Quality Report



CITY OF KENNEDALE

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Special Notice for the ELDERLY, INFANTS, CANCER PATIENTS, people with HIV/AIDS or other immune problems:

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; those 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 provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline at (800) 426-4791.

Annual Water Quality Report for the period of January 1 to December 31, 2013

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.

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.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

For more information regarding this report contact:

Name: Mary Goza

Phone: 817-985-2170

WATER SOURCES: 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. Contaminants that may be present in source water before treatment include: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants, and organic chemical contaminants.

En Español

Este reporte incluye informacion importante sobre el agua potable. Para asistencia en espanol, favor de llamar al telefono 817-985-2163 Ext 2227 y pregunte por Dianna Garcia.

Public Participation Opportunities

Check the City website for dates and times of council and board meetings <http://www.cityofkennedale.com>. Public participation is welcomed and encouraged. The City council normally meets the second Thursday of each month at 7 pm in the Council Chambers at City Hall.

Where do we get our drinking water?

Kennedale drinking water during 2013 consisted of 65 percent GROUND and 35 percent SURFACE water. Kennedale has six wells that pull GROUND water from the Trinity aquifer (TWIN MTS, TRAVIS PEAK and PALUXY). We also purchase treated SURFACE water from the City of Fort Worth.

Since Fort Worth and Kennedale water sources are different, the treatment/disinfection process is different. The City of Kennedale began mixing the different water sources in May 2008. Historically Kennedale utilized free chlorine as a disinfectant whereas Fort Worth utilized chloramines. Chloramines are a combination of chlorine and ammonia and are used as a disinfectant in most surface waters. Kennedale converted from free chlorine to chloramines in the spring of 2011 so the two waters would blend better.

Source Water Assessment Protection

The TCEQ completed an assessment of your source water and results indicate that some of our sources are high in minerals and fluoride. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detection of these minerals may be found in this Consumer Confidence Report as Total Dissolved Solids and Sulfates. For more information on source water assessments and protection efforts at our system, contact Larry Ledbetter at 817-985-2171.

Be Water Wise

Please remember to conserve water. Go to <http://www.twd.state.tx.us/publications/brochures/conservation/> for useful water saving tips.

We are still in under Stage 1 Drought Restrictions. Know your watering days! <http://www.savetarrantwater.com/default.aspx>.

Abbreviations and Definitions

Maximum Contaminant Level (MCL)

The highest permissible level of a contaminant in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG)

The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

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.

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.

ABBREVIATIONS

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

pCi/L - picocuries per liter (a measure of radioactivity)

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

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

Maximum Residual Disinfectant Level

Year (Range)	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Chemical
2013	Chloramine	2.4	0.4	3.4	4	4	ppm	Disinfectant used to control microbes.

Disinfection Byproducts

Year	Contaminant	Minimum Level	Maximum Level	MCL	Unit of Measure	Violation	Source of Contaminant
2013	Total Haloacetic Acids	Less than detection limit	6.1	60	ppb	N	Byproduct of drinking water disinfection.
2013	Total Trihalomethanes	Less than detection limit	14.5	80	ppb	N	Byproduct of drinking water disinfection.

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive Samples	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No of Positive E. Coli or Fecal Coliform Samples	Violation	Source of Contamination
0	1 positive monthly sample.	0	0	0	N	Coliforms are bacteria that are naturally present in the environment. They are used as an indicator that other, potentially harmful, bacteria may be present.

Lead and Copper

Date Sampled	Contaminant	The 90th Percentile	Number of Sites Over AL	Action Level (AL)	Unit of Measure	Violation	Source of Contaminant
2013	Lead	1.28	0	15	ppb	N	Corrosion of household plumbing systems; erosion of natural deposits.
2013	Copper	0.0732	0	1.3	ppm	N	Corrosion of household plumbing systems; erosion of natural deposits.

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 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. The City of Kennedale is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. 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>.

City of Kennedale Groundwater Analysis Results

Inorganic Contaminants

Year (Range)	Contaminant	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Violation	Source of Contaminant
2011	Fluoride	1.22	2.06	4	4	ppm	N	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2010	Arsenic	0.441	0.843	10	0	ppb	N	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
2010	Barium	.00973	.0219	2	2	ppm	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
2010	Chromium	4.9	6.75	100	100	ppb	N	Discharge from steel and pulp mills; erosion of natural deposits.
2011	Cyanide	Less than detection limit	43	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
2010	Selenium	Less than detection limit	.781	50	50	ppb	N	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
2010	Thallium	Less than detection limit	.111	2	0.5	ppb	N	Discharge from electronics, glass, and drug factories; leaching from ore processing sites
2013	Nitrate (measured as Nitrogen)	0.03	0.753	10	10	ppm	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

Radioactive Contaminants NONE DETECTED

Organic Contaminants NONE DETECTED

Secondary and Other Constituents Not Regulated

(No associated adverse health effects)

Year or Range	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Source of Constituent
2011	Bicarbonate Alkalinity	340	217	391	NA	ppm	Corrosion of carbonate rocks such as limestone.
2011	Chloride	57	37	75	300	ppm	Abundant naturally occurring element
2010	Hardness as Ca & Mg	11	6	24	NA	ppm	Naturally occurring calcium and magnesium.
2011	pH	8.5	8.3	8.7	8.5	units	Measure of corrosivity of water.
2010	Sodium	274	264	299	NA	ppm	Erosion of natural deposits
2011	Sulfate	155	94	276	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2011	Total Alkalinity	352	225	406	NA	ppm	Naturally occurring soluble mineral salts.
2011	Total Dissolved Solids	704	450	891	1000	ppm	Total dissolved mineral constituents in water.

Secondary constituents are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

The data presented in this report is from the most recent testing done in accordance with the regulations.