



2016 Annual Drinking Water Quality Report

Where do we get our drinking water?

The City of Kennedale's water during 2016 consisted of 85 percent GROUND and 15 percent SURFACE water. Kennedale has five 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 that they obtain from Lake Bridgeport, Eagle Mountain Lake, Lake Worth, Benbrook Lake, Cedar Creek Reservoir and Richland-Chambers Reservoir. In the water loss audit submitted to the Texas Water Development Board for the time period of Jan-Dec 2016, our system water loss was 10%. Water losses for utilities across the USA average 16%. Water loss below 10% is considered excellent.

Source Water Assessment Protection

The TCEQ completed an assessment of your source water and results indicate that two of our well water sources are high in minerals. 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. In addition 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. These are raw water sources for the Fort Worth surface water. To see more detail about microorganism testing view the Fort Worth water quality report by visiting the website www.fortworthtexas.gov/tapwater or call Mary Gugliuzza at 817-392-8253 to request a paper copy of the report. More information about the source-water assessments is available online in TCEQ's Drinking Water Watch at <http://dww2.tceq.texas.gov/DWW/>.

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; 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 provider. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the **Environmental Protection Agency (EPA) Safe Drinking Water Hotline at 1-800-426-4791 or www.epa.gov/safewater.**

405 Municipal Drive Kennedale, TX 76060 817-985-2170
View this report online at www.cityofkennedale.com/water

Annual Water Quality Report for the period from January 1 to December 2016

Chloramines: The addition of chloramines may cause problems to persons dependent on dialysis machines. A condition known as hemolytic anemia can occur if the disinfectant is not completely removed from the water that is used for the dialysate. Consequently, the pretreatment scheme used for the dialysis units must include some means, such as charcoal filtering, for the removal of chloramines. If you are utilizing a dialysis machine, please contact the manufacturer for information concerning this matter. In addition, **chloramines in certain concentrations may be toxic to fish.** If you have a fish tank, please make sure that the chemicals or filters you are using are designed for use in water that has been treated with chloramines. Your local pet store is a good source of information on this topic along with the appropriate reagents for neutralizing chloramines.

Fluoride: This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine (9) years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by one of the four wells in the City of Kennedale has a fluoride concentration of 2.42 mg/L. The other three wells have fluoride concentrations below 2 mg/L and the treated surface water purchased from Fort Worth has a fluoride concentration well below 2 mg/L. The average fluoride concentration of the City of Kennedale drinking water is normally below 2.0 mg/L but the concentration in one well before it is blended with the other water in the distribution system is slightly above 2 mg/L, and we are therefore required to alert our customers of this fact.

Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water. Drinking water containing more than 4 mg/L of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water **does not** contain more than 4 mg/L of fluoride, but we're required to notify you when the fluoride level in any of the wells exceeds 2 mg/L because of this cosmetic dental problem.

For more information, please call the City of Kennedale at 817-985-2170. If you have children under the age of 9 and would like your water tested, we will set up a time to meet with you and test the fluoride concentration in your house. Some home water treatment units are available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP or visit www.nsf.org/consumer-resources.



CITY OF KENNEDALE

Groundwater Analysis Results

Regulated Contaminants

Collection Date	Contaminant	Highest Level Detected	Range of Levels Detected	MCL	MCLG	Unit of Measure	Violation	Common Sources of Substance
2016	Haloacetic Acids (HAA5)	2.9	0 to 2.9	60	NA	ppb	NO	Byproduct of drinking water disinfection
2016	Total Trihalomethanes (TTHM)	2.6	0 to 2.6	80	NA	ppb	NO	Byproduct of drinking water disinfection
2014	Fluoride	2.42	0.96 to 2.42	4	4	ppm	NO	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
2016	Arsenic	1.1	0 to 1.1	10	0	ppb	NO	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
2016	Barium	0.042	0.012 to 0.042	2	2	ppm	NO	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
2016	Chromium	1.9	0 to 1.9	100	100	ppb	NO	Discharge from steel and pulp mills; erosion of natural deposits
2014	Cyanide	89.3	89.3 to 89.3	200	200	ppb	NO	Discharge from plastic and fertilizer factories; discharge from steel/metal factories
2016	Alpha Particles	3.8	0 to 3.8	15	0	pCi/L	NO	Erosion of natural deposits
2016	Nitrate (measured as Nitrogen)	0.0775	0 to 0.0775	10	10	ppm	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Distribution Residual Disinfectant Levels

Year (Range)	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Chemical
2016	Chloramine	2.49	0.5	3.5	4	4	ppm	Disinfectant used to control microbes

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	Common Sources of Substance
0	1 positive monthly sample	0	0	0	NO	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	MCLG	The 90 th Percentile	Number of Sites Over AL	Action Level (AL)	Unit of Measure	Violation	Common Sources of Substance
2016	Lead	0	3	0	15	ppb	NO	Corrosion of household plumbing systems; erosion of natural deposits
2016	Copper	1.3	0.109	0	1.3	ppm	NO	Corrosion of household plumbing systems; erosion of natural deposits

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. 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 www.epa.gov/safewater/lead.



Secondary and Other Constituents Not Regulated

As there are no associated adverse health effects, secondary constituents are not required to be reported in this document, but they may greatly affect the appearance and taste of water.

Year	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Common Sources of Substance
2014	Bicarbonate Alkalinity	325	175	412	NA	ppm	Corrosion of carbonate rocks such as limestone
2014	Chloride	50	30	76.6	300	ppm	Abundant naturally occurring element
2016	Hardness as Ca & Mg	39	6.6	112	NA	ppm	Naturally occurring calcium and magnesium
2011	pH	8.5	8.3	8.7	8.5	units	Measure of corrosivity of water
2016	Sodium	244	89	314	NA	ppm	Erosion of natural deposits
2014	Sulfate	210	89	487	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity
2014	Total Alkalinity	339	175	436	NA	ppm	Naturally occurring soluble mineral salts
2014	Total Dissolved Solids	772	382	1220	1000	ppm	Total dissolved mineral constituents in water

Abbreviations and Definitions *Scientific terms and measures, some of which may require explanation.*

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 that a water system must follow.; **Level 1 Assessment:** 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.; **Level 2 Assessment:** 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.; **Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
ABBREVIATIONS: **NA:** not applicable; **NTU:** nephelometric turbidity units (a measure of turbidity); **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)

This report can be viewed online at www.cityofkennedale.com/water

CITY OF FORT WORTH

Surface Water Analysis Results

Contaminant	Measure	MCL	2015 Highest Single Result	Lowest Monthly % of Samples <0.3 NTU	MCLG	Common Sources of Substance
Turbidity ¹	NTU	TT	0.36	99.7%	NA	Soil runoff

Contaminant	Measure	MCL	2016 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 2.3% of monthly samples	0.4 to 2.3%	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	2016 Level	Range	MCL	MCLG	Measure	Common Sources of Substance
Alpha particles ²	2	2 to 2	50	NA	pCi/L	Erosion of natural deposits of certain minerals that are radioactive and may emit forms of radiation known as alpha radiation
Beta particles and photon emitters ²	5.6	4 to 5.6	50	NA	pCi/L	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
Arsenic	1.40	0 to 1.40	10	0	ppb	Erosion of natural deposits; runoff from orchards; runoff from glass and electronic production wastes
Barium	0.06	0.05 to 0.06	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (Total)	0.73	0 to 0.73	100	100	ppb	Discharge from steel and pulp mills, erosion of natural deposits
Cyanide	80.3	0 to 80.3	200	200	ppb	Discharge from plastics and fertilizer factories; discharge from steel and metal factories
Fluoride	0.5	0.23 to 0.50	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen)	0.66	0.26 to 0.66	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (measured as Nitrogen)	0.03	0.01 to 0.03	1	1	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Bromate	10.4	0 to 10.4	10	0	ppb	By-product of drinking water disinfection

Contaminant	High	Low	Average	MCL	MCLG	Common Sources of Substance
Total Organic Carbon ³	1	1	1	TT = % removal	NA	Naturally occurring

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, the Texas Commission on Environmental Quality (TCEQ) has the City of Fort Worth on a reduced monitoring schedule. The test results shown are from 2013 through 2014.

³ 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.

Interconnects or Emergency Sources

Source of the Water	Length of Time Used	Explanation of Why It Was Used	Whom to Call for Additional Water Quality Information
City of Fort Worth	All Year	To supplement water supply	Mary Gugliuzza at 817-392-8253 or visit www.fortworthtexas.gov/tapwater

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

The full 2016 Water Quality Report for the City of Fort Worth can be viewed online at www.fortworthtexas.gov/tapwater.

Request a paper copy by calling Mary Gugliuzza at 817-392-8253.

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. 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 **Environmental Protection Agency (EPA) Safe Drinking Water Hotline at 1-800-426-4791 or www.epa.gov/safewater**.

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. **For more information regarding this report, please call Mary Goza at 817-985-2170.** 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.

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.

Contaminants that may be present in source water before treatment 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.

Public Participation Opportunities

Public participation at advisory board and council meetings is welcome and encouraged. City Council typically meets the third Monday of each month at 7:00 p.m. at City Hall (405 Municipal Drive). Upcoming meeting dates are available online at www.cityofkennedale.com/cal.

Be Water Wise

Please remember to conserve water. Visit www.twdb.texas.gov/publications/brochures/conservation for useful water-saving tips. Year-round irrigation restrictions are in effect which prohibit lawn watering between the hours of 10:00 a.m. and 6:00 p.m., and require customers to irrigate twice a week on designated days only. To see the complete list of current restrictions, visit our website at www.cityofkennedale.com/lawn.

CITY OF KENNEDALE WATERING SCHEDULE

MONDAY
NO WATERING ALLOWED

TUESDAY & FRIDAY
NON RESIDENTIAL SITES
(apartments, businesses, sports fields, parks, common areas, HOA's)

WEDNESDAY & SATURDAY
RESIDENTIAL ADDRESSES ENDING
IN EVEN NUMBERS (0, 2, 4, 6, 8)

THURSDAY & SUNDAY
RESIDENTIAL ADDRESSES ENDING
IN ODD NUMBERS (1, 3, 5, 7, 9)



*Sprinklers are not allowed
from 10 a.m. to 6 p.m.
Handwatering only.*