

Annual Drinking Water Quality Report

Frisco Ranch & The Preserve

PWS ID: 0610253

Annual Water Quality Report for period of
January 1 to December 31, 2017
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.

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.

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.

DENTON COUNTY FWSD 8-C Is Ground Water.

Its Source is the Upper Trinity Aquifer.

Sources of Water			
Source Water Name	Type	Activity	Status: Both wells Online and Operating Normal
Well #1 11090 FM423 (Behind Some Whiloughby Way Cul-de-sac)	GW	A	The TCEQ completed an assessment of your water source and results indicate that some of your sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system, contact the Office or Operator.
Well#2 1220 Brendan Dr.	GW	A	

Please Visit The website for further Info
DENTON8C.COUNTYGGOVT.ORG

System Susceptibility Summary									
Asbestos	Granite	Metals	Microbial	Minerals	Radiochemical	Synthetic Organic Chemicals	Disinfection Byproduct	Volatile Organic Chemicals	Drinking Water Contaminant Candidate
---	---	HIGH	---	---	---	---	---	HIGH	---
Entry Point Susceptibility Summary									
Entry Point ID	Asbestos	Granite	Metals	Microbial	Minerals	Radiochemical	Synthetic Organic Chemicals	Disinfection Byproduct	Volatile Organic Chemicals
001	---	---	HIGH	---	---	---	---	---	HIGH

Question: What does “HIGH” mean?

Answer: “High” susceptibility means there are activities near the source water and the natural conditions of the aquifer or watershed make it very likely that chemical constituents may come into contact with the source water. It does not mean that there are any health risks present.

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 the report contact:

Office: (972) 987-4250
Operator: (214)773-6013

Meetings are held once a month. Please call or see posting at office for changes to time or location. The usual time is 9am-10am at the following location.

La Quinta Inn & Suites, 14925 Landmark Blvd, Dallas, TX 75254

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al teléfono (214)773-6013.

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.

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>

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	2016	1.3	1.3	0.1	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

Regulated Contaminants

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.							
Level 1 Assessment:	A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why an E. coli bacteria have been found in our water system.							
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.							
Level 2 Assessment:	A Level 2 assessment is 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.							
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.							
meq:	milliequivalents per year (a measure of radiation absorbed by the body)							
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.							
Treatment Technique or TT:	A required process intended to reduce the level of a contaminant in drinking water.							
ppt	parts per trillion, or nanograms per liter (ng/L)							
ppq	parts per quadrillion, or picograms per liter (pg/L)							

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Halacetic Acids (HAA5)	2016	1	1.4 - 1.4	No goal for the total	60	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
Barium	08/05/2015	0.0068	0.0068 - 0.0068	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium	08/05/2015	2.9	2.9 - 2.9	100	100	ppb	N	Discharge from steel and pulp mills; Erosion of natural deposits.
Fluoride	08/05/2015	1.45	1.45 - 1.45	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen]	2016	0.0715	0.0715 - 0.0715	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks; sewage; Erosion of natural deposits.
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Combined Radium 226/228	04/03/2012	3.1	3.1 - 3.1	0	5	pCi/L	N	Erosion of natural deposits.

<p>CHLORINE</p> <p>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.</p> <p>DCTWSD 8-C Has violated the monitoring and reporting Requirements set by Texas Commission on Environmental Quality (TCEQ) in Title 30 Texas Administrative Code (30 TAC), Section 259, Subchapter T.</p>									
<p>Public Notification Rule</p> <p>The Public Notification Rule helps to ensure that consumers will always know if there is a problem with their drinking water. These notices immediately alert consumers if there is a serious problem with their drinking water (e.g., a boil water emergency). VIOLATIONS TABLE</p>									
Violation Type	Violation Begin	Violation End	Violation Explanation						
Disinfectant Level Quarterly Operating Report (DLQOR).	04/01/2017	06/30/2017	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.						
PUBLIC NOTICE RULE LINKED TO VIOLATION	08/31/2017	2017	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.						
Year	Disinfectant	Average level	Minimum Level	Maximum Level	MRDLG	MRDL	Unit of measure	Source of chemical	
2017	Chlorine	.90	.50	1.7	4.00	4.00	Mg/L	Chlorine Gas	

Disinfectant Residual report
Chlorine

Town of Little Elm Water Quality Data - 2017

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	0	0	0	No	Naturally present in the environment.

NOTE: Reported monthly tests found no fecal coliform bacteria. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present.

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Total Haloacetic Acids (HAA5)	2017	30	19.7- 38.2	No goal for the total	60	ppb	No	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2017	37	21.1 - 47.3	No goal for the total	80	ppb	No	By-product of drinking water disinfection.
Bromate	2017	Levels lower than detect level	0.0 - 0.0	5	10	ppb	No	By-product of drinking water ozonation.

NOTE: 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.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2017	0.060	0.050 - 0.060	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride	2017	0.38	0.26- 0.38	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (measured as Nitrogen)	2017	0.97	0.09 - 0.97	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.

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.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	2017	6.2	6.2 - 6.2	0	50	pCi/L	No	Decay of natural and man-made deposits.
Radium	2017	1.27	1.27 - 1.27	0	5	pCi/L	No	Erosion of natural deposits.

Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Atrazine	2017	0.20	0.20 - 0.20	3	3	ppb	No	Runoff from herbicide used on row crops.

Turbidity

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.74	No	Soil runoff.
Lowest monthly percentage (%) meeting limit	0.3 NTU	99.30%	No	Soil runoff.

NOTE: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration.

Maximum Residual Disinfectant Level

Chemical Used	Year	Average Level of Quarterly Data	Lowest Result of Single Sample	Highest Result of Single Sample	MRDL	MRDLG	Units	Source of Chemical
Chlorine Residual (Chloramines)	2017	2.07	0.5	4	4.0	<4.0	ppm	Disinfectant used to control microbes.
Chlorine Dioxide	2017	0	0	0	0.8	0.8	ppm	Disinfectant.
Chlorite	2017	0	0	0.072	1.0	N/A	ppm	Disinfectant.

Total Organic Carbon

	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Source Water	2017	4.38	3.93 - 4.38	ppm	Naturally present in the environment.
Drinking Water	2017	3.24	2.20 - 3.24	ppm	Naturally present in the environment.
Removal Ratio	2017	47.2%	22.5 - 47.2	% removal *	N/A

NOTE: Total organic carbon (TOC) has no health effects. The disinfectant can combine with TOC to form disinfection by-products. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. By-products of disinfection include trihalomethanes (THMs) and haloacetic acids (HAA) which are reported elsewhere in this report.

* Removal ratio is the percent of TOC removed by the treatment process divided by the percent of TOC required by TCEQ to be removed.

Lead and Copper

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2017	1.3	1.3	0.3425	0	ppm	No	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing systems.
Lead	2017	0	15	1.73	0	ppb	No	Corrosion of household plumbing systems; erosion of natural deposits.

ADDITIONAL 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. Town of Little Elm 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>.

Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	Units	Likely Source of Contamination
Calcium	2017	78.5	47.0 - 78.5	ppm	Abundant naturally occurring element.
Chloride	2017	108	14 - 108	ppm	Abundant naturally occurring element; used in water purification; by-product of oil field activity.
Hardness as Ca/Mg	2017	164	159 - 164	ppm	Naturally occurring calcium and magnesium.
Iron	2017	0.30	0.00 - 0.30	ppm	Erosion of natural deposits; iron or steel water delivery equipment or facilities.
Magnesium	2017	11.6	4.41 - 11.6	ppm	Abundant naturally occurring element.
Manganese	2017	0.025	0.0019 - 0.025	ppm	Abundant naturally occurring element.
Nickel	2017	0.0071	0.0047 - 0.0071	ppm	Erosion of natural deposits.
pH	2017	8.52	7.85 - 8.52	units	Measure of corrosivity of water.
Sodium	2017	123	46.1 - 123	ppm	Erosion of natural deposits; by-product of oil field activity.
Sulfate	2017	266	47.1 - 266	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity.
Total Alkalinity as CaCO3	2017	110	61 - 110	ppm	Naturally occurring soluble mineral salts.
Total Dissolved Solids	2017	562	292 - 562	ppm	Total dissolved mineral constituents in water.
Total Hardness as CaCO3	2017	236	124 - 236	ppm	Naturally occurring calcium.
Zinc	2017	0.020	0.0025 - 0.020	ppm	Moderately abundant naturally occurring element used in the metal industry.

Violations Table

Bromate			
Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer			
Violation Type	Violation Begin	Violation End	Violation Explanation
Monitoring, Routine (DBP)	April 1, 2017	April 30, 2017	NTMWD failed to collect the required monthly samples for bromate of the water entering the distribution system during April 2017. This monitoring is required by the Texas Commission on Environmental Quality's "Drinking Water Standards" and the federal "Safe Drinking Water Act," Public Law 95-523. Failure to monitor or monitoring inadequately makes it impossible to know if there is bromate in excess of the maximum contaminant level (MCL) requirement of 0.010 mg/l (ppm). Our water system is required to take one bromate sample once each month. Failure to collect all required bromate samples is a violation of the monitoring requirements and we are required to notify you of this violation.

Source Water Susceptibility Assessment

Source Water Name	Type of Water	Status	Location	
SW From North Texas MWD	CC From TX040044 North	SW	A	Lavon, Texoma, & Copper Lakes
The TCEQ completed an assessment of your source water, and results indicate that our sources have a low susceptibility to contaminants. The sampling requirements for our water system is based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system contact Andrew Figueroa (972) 377-5557				