In 2018, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. The Texas Commission on Environmental Quality (TCEQ) has established public water system ratings, and Richland Hills's water supply system received the highest achievable rating. Superior.

Where Do We Get Our Drinking Water?

Our drinking water is obtained from **GROUND AND SURFACE** water sources.

The surface water is purchased from The City of Fort Worth. Fort Worth uses 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 Corp of Engineers is responsible for Benbrook Lake. The other four lakes are owned and operated by Tarrant Regional Water District. The groundwater supply is from the Trinity and Paluxy aquifers and operated by Richland Hills. The average daily water consumption for Richland Hills is approximately one million gallons.

Information For Immuno-compromised People

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly or immuno-compromised 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 for 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 EPA's Safe Drinking Water Hotline 1-800-426-4791.

How Can I Get Involved?

By attending a Richland Hills City Council meeting on the 2nd or 4th Monday of each month at 7:00 p.m. in the council chambers at 3200 Diana Drive. If you have a question about Richland Hills' drinking water quality, or would like to schedule a meeting for your group or organization please call (817)616-3830.

En Español

Éste reporte incluye importante información sobre el agüa potable. Si tiene preguntas ó comentarios sóbre éste reporte, puede comunicarse con una representate bilinqüe al teléfono 817- 616-3830.

About The Following Information

The following information lists all the federally regulated or monitored contaminants which have been found in Richland Hills' drinking water in 2018. The U.S. EPA requires water systems to test for contaminants and must meet all regulations for water safety and quality. The data included is from calendar year 2018 unless otherwise indicated. In addition, because Richland Hills purchases much of its water from the City of Fort Worth, the levels are a compilation of both entities annual sampling results with the highest detected levels shown.

TCEQ Accesses Raw Water Supplies

The Texas Commission on Environmental Quality (TCEQ) completed an assessment of our source waters. TCEQ classified the risk to Fort Worth and Richland Hills source waters as high for most contaminants. High susceptibility means there are activities near the source water or watershed making 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. Tarrant Regional Water District, from which Fort Worth purchases its water, received the assessment reports. For more information on Fort Worth source water assessments and protection efforts, contact Stacy Walters at 817-392-8203 or email Stacy.Walters@FortWorthTexas.gov . The sampling requirements for our water system are based on this susceptibility and previous sample data. Detection of these contaminants will be found in this report. For more information on source water protection efforts at our system, contact Cathy Riegel at 817-616-3830 or email criegel@richlandhills.com . Further details about the source water assessments are available at the following URL: https://dww2.tceq.texas.gov/DWW/JSP/SWAP.jsp?tinwsys_is_number=5809&tinwsys_st_code=TX&wsnumber=TX2200022%20%20%20&DWWState=TX

Microorganism Testing Show Low Detections In Fort Worth Water Sources

Tarrant Regional Water District monitors the raw water at all Fort Worth water intake sites for *Cryptosporidium, Giardia Lamblia* and viruses. The source is human and animal fecal waste in the watershed. The 2018 sampling showed low levels of *Cryptosporidium, Giardia Lamblia* and viruses in some but not all of the water supply sources. Viruses are treated through disinfection processes. *Cryptosporidium* and *Giardia Lamblia* are removed through a combination of disinfection and/or filtration.

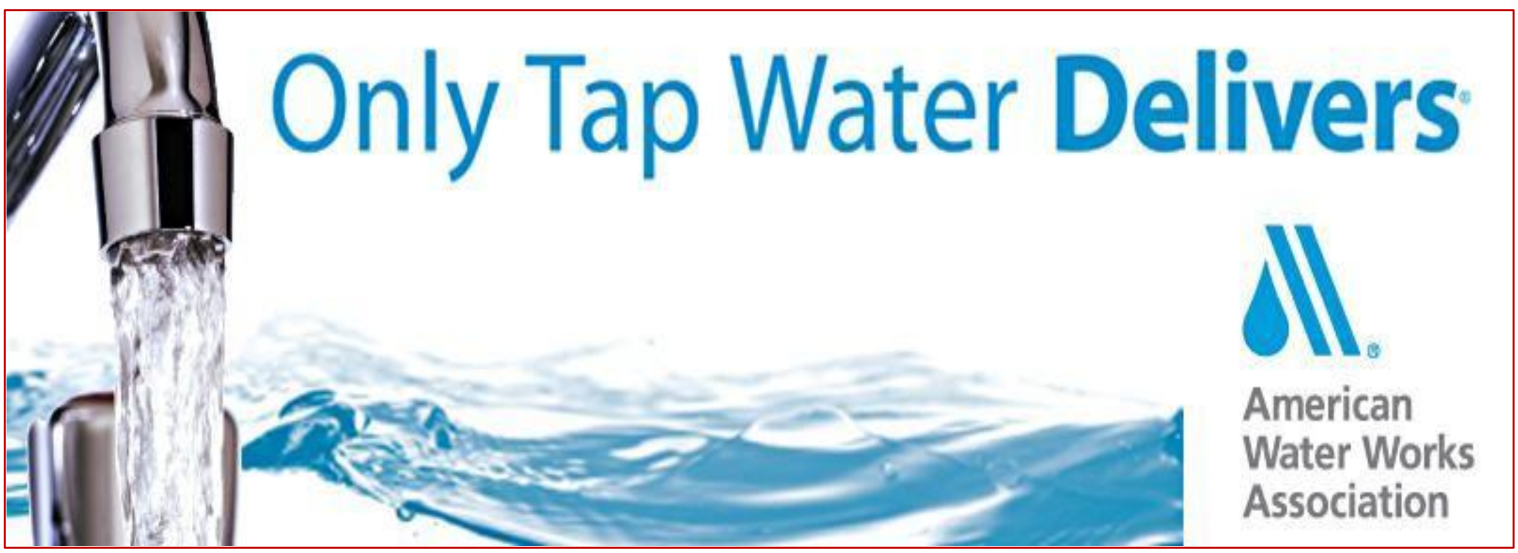
All Water May Contain Contaminants

The sources of drinking water, for both tap 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 radioactive material. Water can also pick up substances resulting from animal waste or human activity. Contaminants that may be present in source water before treatment include microbes, inorganic contaminants, pesticides, herbicides, radioactive materials and organic chemical contaminants. In addition, contaminants found in drinking water may cause taste, color or odor issues. These types of issues are not necessarily cause for health concern. For more information on taste, odor or the color of your drinking water please contact a water representative at 817-616-3830.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency and the Texas Commission on Environmental Quality regulate limit the amount of certain contaminants in water provided by the public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide protection for public health.

Abbreviations Used In Tables:

- **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.
- **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 Le vel 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 contaminants.
- **Maximum Residual Disinfectant Level (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.
- **Treatment Technique (TT)** – a required process intended to reduce the level of contaminants 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.
- **N/A** – not applicable
- **AVG** – Regulatory compliance with some MCLs are based on running annual average of monthly samples.
- **NTU** – Nephelometric Turbidity Units
- **MFL** – million fibers per liter (a measure of asbestos)
- **ppb** – parts per billion, or micrograms per liter (µg/L)
- **pCi/L** – picocuries per liter (a measure of radioactivity)
- **ppt** – parts per trillion, or nanograms per liter
- **ppm** – parts per million, or milligrams per liter (mg/L)
- **ppq** – parts per quadrillion, or picograms per liter



2018 Drinking Water Quality Test Results

Lead and Copper

Year	Contaminant	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Contaminant
2016	Lead	0	0	0.015	mg/L	Corrosion of household plumbing systems, erosion of natural deposits
2016	Copper	0.3	0	1.3	mg/L	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives.

If present, elevated levels of lead can lead to 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 private 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 two 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://water.epa.gov/drink/info/lead/index.cfm

Contaminant	Measure	MCL	2018 Highest single result	Lowest monthly % of samples ≤0.3 NTU	Violation	Common Sources of Substance
Turbidity	NTU	TT	0.5	99.9%	No	Soil

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 in Fort Worth's water.

Contaminant	Measure	MCL	2018 Level	Range	MCLG	Common Sources of Substance
Total Coliforms (including fecal coliform & E. coli)	% of positive samples	Presence in 5% or less of monthly samples	No monthly samples tested positive	0	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

Richland Hills' monthly tests found no total coliform bacteria in 2018

Maximum Residual Disinfectant Level

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Contaminant
2018	Chloramines	2.35	0.60	4.0	4.0	4.0	ppm	Water additive used to control microbes

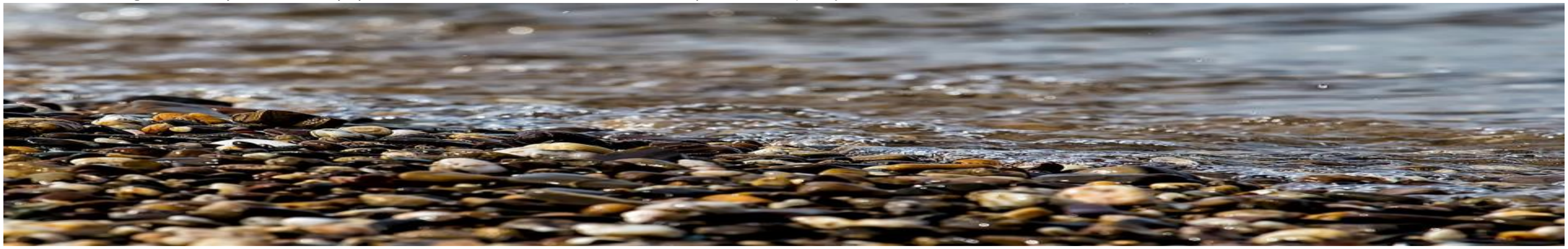
Contaminant	High	Low	Average	MCL	MCLG	Common Sources of Substance
Total Organic Carbon[1]	1	1	1	TT = % removal	N/A	Naturally occurring

[1]*Testing for 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.* **A removal ratio of 1 in SUVA calculations is considered passing.**

Contaminant	Measure	MCL	2018 Level	Range	MCLG	Common Sources of Substance
Combined Radium (-226 & -5203.1228)[1]	pCi/L	5	2.5	N/A	0	Erosion of natural deposits of certain minerals that are radioactive and may emit forms of radiation known as alpha radiation
Beta/photon emitters[1]	pCi/L	50	5.6	4.4 to 5.6	N/A	Decay of natural and man-made deposits
Uranium[1]	ppm	30	1.1	0 to 1.1	0	Erosion of natural deposits
Arsenic	ppb	10	1.10	0 to 1.1	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Atrazine	ppb	3	3	0.0 to 0.1	3	Runoff from herbicide used on row crops
Barium	ppm	2	0.07	0.023 to 0.07	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Bromate	ppb	10	1.89	0 to 1.89	0	By-product of drinking water disinfection
Chromium(Total)	ppb	100	6.1	0 to 6.1	100	Discharge from steel and pulp mills, erosion of natural deposits
Cyanide	ppb	200	84.3	0 to 84.3	200	Discharge from plastic, fertilizer, steel and metal factories
Fluoride	ppm	*4*	1.85	0.17 to 1.85	4	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen)	ppm	10	0.705	0.039 to 0.705	10	Runoff from fertilizer use/ leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (measured as Nitrogen)	ppm	*1*	0.076	0.002 to 0.076	1	Runoff from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Haloacetic Acids (HAA5)	ppb	60	4.8	0 to 4.8	N/A	By-product of drinking water disinfection
Total Trihalomethanes	ppb	80	12.7	0 to 12.7	N/A	By-product of drinking water disinfection

[1]Because of historically low levels of radionuclides in Fort Worth's water, TCEQ requires this monitoring occur only once every six years. The test results above are from 2017. The next monitoring will occur in 2023.

In the water loss audit submitted to the Texas Water Development Board for the time period of January 2018 to December 2018, our system lost an estimated 18,960,975 gallons. If you have any questions about the water loss audit, please call **(817)616-3830.**



Unregulated Contaminants

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	2018 Level	MRDL	MRDLG	Common Sources of Substance
Chloral Hydrate	ppb	0.12 to 0.34	0.34	Not regulated	0	By-product of drinking water disinfection
Bromoform	ppb	0 to 5.15	5.15	Not regulated	0	By-products of drinking water disinfection; not regulated individually; included in Total Trihalomethanes
Bromodichloromethane	ppb	1.99 to 7.08	7.08	Not regulated	0	
Chloroform	ppb	2.43 to 8.40	8.4	Not regulated	.07	
Dibromochloromethane	ppb	1.09 to 8.51	8.51	Not regulated	.06	
Bromochloroacetic Acid	ppb	0 to 2.8	2.8	Not regulated	0	By-products of drinking water disinfection; not regulated individually; included in Haloacetic Acids
Monochloroacetic Acid	ppb	1.5 to 3.9	3.9	Not regulated	.07	
Dichloroacetic Acid	ppb	3.9 to 8.5	8.5	Not regulated	0	
Trichloroacetic Acid	ppb	0 to 2.2	2.2	Not regulated	.3	
Monobromoacetic Acid	ppb	0 to 2.3	2.3	Not regulated	N/A	
Dibromoacetic Acid	ppb	1 to 4.3	4.3	Not regulated	N/A	

Secondary Constituents

These items do not relate to public health but rather to the aesthetic effects. These items are often important to industry. Results are from the most recent testing.

Item	Measure	2018 Range
Bicarbonate	ppm	108 to 144
Calcium	ppm	42 to 52.1
Chloride	ppm	11.8 to 40
Conductivity @ 25C	µmhos/cm	302 to 471
pH	units	8.6 to 8.7
Magnesium	ppm	3.20 to 8.64
Manganese	ppm	0 to 0
Potassium	ppm	0 to 0
Sodium	ppm	14.8 to 30.3
Sulfate	ppm	26.3 to 36.5
Total Alkalinity as $CaCO_3$	ppm	98.2 to 136
Total Dissolved Solids	ppm	156 to 251
Total Hardness as $CaCO_3$	ppm	118 to 162
Total Hardness in Grains	grains/gallon	7 to 9

Corrosion Control

To meet the requirements of the Lead and Copper Rule, Fort Worth achieves corrosion control through pH adjustment. Richland Hills monitors the pH levels on a regularly scheduled basis. To obtain more information on Richland Hills Lead and Copper Rule compliance efforts, please contact Cathy Riegel at 817-616-3830.

EPA gathers data to decide if future regulation is necessary.

Water utilities in the United States monitor for more than 100 contaminants and must meet 91 regulations for water safety and quality. The 1996 Safe Drinking Water Act amendments require that once every five years EPA issues a new list of up to 30 unregulated contaminants to be monitored by public water systems. 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. The fourth Unregulated Contaminants Monitoring Rule includes assessment for three brominated haloacetic acid groups, 10 cyanotoxins, two metals, three semi-volatile chemicals, three alcohols, eight pesticides and one pesticide manufacturing byproduct. The rule requires testing for cyanotoxins in four consecutive months. Fort Worth tested from August through November 2018. As required by the rule, testing for the other compounds is done over four consecutive quarters. Fort Worth's testing period is from June 2018 through March 2019. The results shown are for the first three quarters of sampling. The final quarter's results will appear in next year's annual water quality report. **Additional information: https://www.epa.gov/dwucmr**

Fort Worth UCMR 4 Data

Fort Worth's testing detected only four of the 30 compounds included in the fourth round of unregulated contaminant monitoring. The detection were one metal and the three haloacetic acid disinfection byproducts

Compound	Measure	Average	Range of Defects	Common Sources of Substance
Manganese	ppb	0.27	0 to 1.29	Naturally occurring; used in drinking water and wastewater treatment; used in steel production, fertilizer, battery and fireworks
HAA5	ppb	6.42	2.6 to 18.62	Byproducts of drinking water disinfection
HAA6Br	ppb	4.44	0 to 8.88	Byproducts of drinking water disinfection
HAA9	ppb	9.3	0 to 22.98	Byproducts of drinking water disinfection

Haloacetic Acid Groups

This table includes all of the compounds the comprise each of the Haloacetic acid groups. Compounds that are not detected are usually not listed in the charts in this report; however, those undetected are listed below to provide complete information on the compounds that comprise each of the three groups in the table above.

Compound	Measure	Average	Range of Detects	HAA5	HAA6Br	HAA9	Common Sources of Compound
Dichloroacetic Acid	ppb	4.62	2.60 to 7.88	HAA5		HAA9	By-Product of drinking water
Monochloroacetic Acid	ppb	0.24	0 to 6.22	HAA5		HAA9	
Trichloroacetic Acid	ppb	0	0 to 0	HAA5		HAA9	
Monobromoacetic Acid	ppb	0	0 to 0	HAA5	HAA6Br	HAA9	
Dibromoacetic Acid	ppb	1.56	0 to 4.52	HAA5	HAA6Br	HAA9	
Bromochloroacetic Acid	ppb	2.88	0 to 4.36		HAA6Br	HAA9	
Bromodichloroacetic Acid	ppb	0	0 to 0		HAA6Br	HAA9	
Chlorodibromoacetic Acid	ppb	0	0 to 0		HAA6Br	HAA9	
Tribromoacetic Acid	ppb	0	0 to 0		HAA6Br	HAA9	

UCMR 4 Compounds not detected

Cyanotoxins	Metals	Semi-volatile Chemicals	Alcohols	Pesticides and Pesticide Manufacturing Byproduct
Total Misrocystin	Germanium	Butylated Hydroxyanisole	1-Butanol	Alpha-hexachlorocyclohexane
Microcystin-LA		O-toluidine	2-Methoxyethanol	Chlorpyrifos
Microcystin-LF		Quinoline	2-Propen-1-ol	Dimethipin
Microcystin-LR				Ethoprop
Microcystin-LY				Oxyfluorfen
Microcystin-RR				Profenofos
Microcystin-YR				Tebuconazole
Nodularin				Total permethrin (cis- & trans)
Anatoxin-a				tribufos
Cylindrospermopsin				