



CITY OF ROANOKE 2018

DRINKING WATER QUALITY REPORT

265 Marshall Creek Rd.

817-491-6099



Special Notice for the ELDERLY, INFANTS, CANCER PATIENTS, people with HIV/AIDS or other immune problems: Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Our Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

Where do we get our drinking water?

Our drinking water is obtained from surface water from Eagle Mountain lake and purchased from the City of Fort Worth. TCEQ completed an assessment of our source water and results indicate that 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 report. The City of Fort Worth susceptibility is not included in this assessment. For more information on source water assessments and protection efforts at our system, please contact Shawn Wilkinson, Assistant Director of Public Works, Roanoke 817-491-6099.

En Español

Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre este informe en español, favor de llamar al tel. 817-491-6099—para hablar con una persona bilingüe en español.

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.

ALL drinking water may contain contaminants.

When drinking water meets federal standards there may not be any health based benefits to purchasing bottled water or point of use devices. 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 (800-426-4791).



Public Participation Opportunities

The City Council meets on the second and fourth Tuesday of every month at 7:00 P.M. at City Hall. Call 817-491-2411 if you need additional information

Definitions

MCLG - Maximum Contaminant Level Goal - 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.

MCL - Maximum Contaminant Level - 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.

MRDL - Maximum Residual Disinfectant Level - 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.

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 contamination.

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

AL - Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Action Level Goal (ALG)-The level of a contaminant in drinking water below which there is no known or expected risk to health. ALG's allow for a margin of safety.

Level 1 Assessment: 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: Very detailed study of the water system to identify potential problems and to 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.

Abbreviations

MFL - Million Fibers Per Liter - a measure of asbestos

ppm - Parts Per Million or milligrams per Liter (mg/L)

ppb - Parts Per Billion or micrograms per liter (ug/L)

ppt - Parts Per Trillion or nanograms per Liter

ppq - Parts per quadrillion or picograms per Liter

pCi/l - picocuries per liter - a measure of radioactivity.

NA-Not Applicable

NTU - Nephelometric Turbidity Units

TCEQ assesses raw water supplies for susceptibility

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. TCEQ classified the risk to our source waters as high for most contaminants.

High susceptibility means there are activities near the source water 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.

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

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

Further details about the source-water assessments are available in the Texas Commission on Environmental Quality's Drinking Water Watch database at http://dww8.tceq.texas.gov/DWW/JSP/SWAP.jsp?tinwsys'is'^number*1468&tinwsys'^st'^code*TX&wsnumber*TX8866678/ 86/ 86/ 20&DWWState=TX.

Microorganism testing shows low detections in raw water

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. The 2018 sampling showed low level detections 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

Did you know?

A safe water supply is critical to protecting public health and is the first obligation of all water suppliers. Before our modern water systems, disease such as cholera and dysentery were part of everyday life.

About the following data

The pages that follows lists all of the federally regulated or monitored compounds which have been found in your drinking water. The

Inorganic Contaminants

Compound	Units of Measurement	MCL	Your Water	Range of Levels Detected	MCLG	Violation	Common Source of Substance
Arsenic	ppb	10	1.10	0-1.1	0	No	Erosion of natural deposits; runoff from orchards, runoff from glass and electronics production wastes
Barium	ppm	2	0.07	0.05-0.07	2	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Combined Radium ¹	pCi/L	5	2.5	NA	0	No	Erosion of natural deposits.
Uranium ¹	ppb	30	1.1	0 to 1.1	0	No	Erosion of natural deposits.
Atrazine	ppb	3	0.1	0.0-0.1	3	No	Runoff from herbicide used on row crops.
Beta particles & Photon emitters ¹	pCi/L	50	5.6	4.4-5.6	0	No	Decay of natural and man-made deposits
Fluoride	ppm	4	0.61	0.17-0.61	4	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen)	ppm	10	0.314	0.314-0.314	10	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (measured as Nitrogen)	ppm	1	0.02	0 to 0.02	1	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Cyanide	ppb	200	84.3	0-84.3	200	No	Discharge from plastic and fertilizer factories; discharge from steel and metal factories
Bromate	ppb	10	4.83	0-10.7	0	No	By-product of drinking water disinfection
Haloacetic Acids	ppb	60	9	6-11	N/A	No	By-product of drinking water disinfection
Total Trihalomethanes	ppb	80	8	4.33-7.23	N/A	No	By-product of drinking water disinfection
Total Coliforms (including fecal coliform & E.coli)	% of positive samples	TT	Presence in 0% of monthly samples	0%	0	No	Coliforms are naturally present in the environment as well as feces; fecal coliforms and E.coli only come from human and animal fecal waste

¹Because Ft. Worth historically has had low levels of radionuclides in its water, TCEQ requires this monitoring occur only once every six years. The test results shown above are from 2017. The next monitoring will occur in 2023.

Compound	Units of Measure	MCL	Your Water	MCLG	Violation	Common Source of Substance
Turbidity	NTU	TT=1 TT=Lowest Monthly % of Samples ≤0.3 NTU	0.5 99.9%	N/A	No	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.

Maximum Residual Disinfectant Level

Disinfectant Residual	Range	2018 Level	MRDL	MRDLG	Units of Measure	Violation (Y/N)	Common Source of Substance
Chloramines ²	1.7-4.0	2.88	4.0	4.0	ppm	N	Water additive used to control microbes

Compound	High	Low	Average	MCL	MCLG	Violation	Common source of substance
Total Organic Carbon ³	1	1	1	TT=% Removal	N/A	N	Naturally occurring

It is used to determine disinfection by-product precursors. Our provider, The City of Ft. 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.

Lead and Copper

Year	Contaminant	MCLG	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Violation	Likely Source of Contamination
2018	Lead	0	1.5	0	15	ppb	No	Corrosion of household plumbing systems; erosion of natural deposits
2018	Copper	1.3	0.18	0	1.3	ppm	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from

Public Notification Rule

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).

Violation Type	Violation Began	Violation End	Violation Explanation
Public Notice Rule Linked to violation	02/13/2015	2018	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.

Unregulated Contaminates

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.

Compound	Unit of Measure	Range of Level Detected	Your Water	MRDL	MRDLG	Source of Substance
Dibromochloromethane	ppb	1.31 to 6.94	6.94	Not Regulated	60	By-products of drinking water disinfection; not regulated individually; included in Total Trihalomethanes.
Bromoform	ppb	0-5.15	5.15	Not Regulated	0	
Bromodichloromethane	ppb	1.99 to 7.08	7.08	Not Regulated	0	
Chloroform	ppb	2.43 to 8.40	8.4	Not Regulated	70	
Chloral Hydrate	ppb	0.12 to 0.34	0.34	Not Regulated	N/A	By-product of drinking water disinfection
Monochloroacetic Acid	ppb	1.5 to 3.9	3.9	Not Regulated	70	By-product of drinking water disinfection; not regulated individually; included in Haloacetic Acids.
Dichloroacetic Acid	ppb	3.9 to 8.5	8.5	Not Regulated	0	
Trichloroacetic Acid	ppb	0 to 2.2	2.2	Not Regulated	20	
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. Not Regulated
(Do not relate to public health but rather aesthetic effects)**

Compound	Your Water	Unit of Measure
Bicarbonate	108-144	ppm
Calcium	42 to 52.1	ppm
Chloride	11.8-40	ppm
Conductivity	302 to 471	µmhos/cm
Ph	8.6 to 8.7	units
Magnesium	3.20 to 8.64	ppm
Sodium	14.8 to 30.3	ppm
Sulfate	26.3 to 36.5	ppm
Total Alkalinity as CaCO ₃	98.2 to 136	ppm
Total Dissolved Solids	156 to 251	ppm
Total Hardness as CaCO ₃	118 to 162	ppm
Total Hardness in Grains	7 to 9	grains/gallons

Corrosion Control
To meet the requirements of the Lead and Copper Rule, our supplier, The City of Fort Worth achieves corrosion control through pH adjustment.

Mandatory Language for Lead and Copper

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.

The City of Roanoke 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 drinking 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/

Did you know?
Community water supplies are tested every day. Tap water undergoes far more frequent testing than bottled water

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. Should other contaminants be regulated? The 199 Safe Drinking Water Act amendments require that once every five years EPA issue a new list of up to 30 unregulated contaminants to be monitored by public water system. 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 regulations warranted. The fourth Unregulated Contaminant 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. Our provider, the City of Fort Worth, tested from August through November 2018. As required by the rule, testing for the other compounds is done over four consecutive quarters. Our provider, The City of Fort Worth, testing period is from June 2018 through March 2019. The results shown are for the first three quarters of sampling. The final quarter's result will appear in next year's annual water quality report.

Additional Information: www.epa.gov/dwucmr

UCMR 4 Compounds not detected

<u>Cyanotoxins</u>	<u>Alcohols</u>
Total microcystin	1-butanol
microcystin-LA	2-methoxyethanol
microcystin-LF	2-propen-1-ol
microcystin-LR	
microcystin-LY	<u>Pesticides and Pesticide Manufacturing</u>
microcystin-RR	<u>Byproduct</u>
microcystin-YR	alpha-hexachlorocyclohexane
nodularin	chlorpyrifos
anatoxin-a	dimethipin
cylindrospermopsin	ethopropoxyfluorfen
	profenofos
<u>Metals</u>	tebuconazole
Germanium	Total permethrin(cis-&trans-)
<u>Semi-volatile Chemicals</u>	
Butylated hydroxyanisole	

UCMR 4

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

Compound	Measure	Range of Detects	Average	Common Source of Substance
Manganese	ppb	0.00 to 1.29	0.27	Naturally occurring; used in drinking water and wastewater treatment; steel production, fertilizer, batteries and fireworks
HAA5	ppb	2.6 to 18.62	6.42	Byproducts of drinking water disinfection
HAA6Br	ppb	0 to 8.88	4.44	Byproducts of drinking water disinfection
HAA9	ppb	0 to 22.98	9.3	Byproduct of drinking water disinfection

Haloacetic Acid Groups

This table includes all of the compounds that 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 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-Products of drinking water disinfection
Monochloroacetic Acid	ppb	0.24	0 to 6.22	HAA5		HAA9	By-Products of drinking water disinfection
Trichloroacetic Acid	ppb	0	0 to 0	HAA5		HAA9	By-Products of drinking water disinfection
Monobromoacetic Acid	ppb	0	0 to 0	HAA5	HAA6Br	HAA9	By-Products of drinking water disinfection
Dibromoacetic Acid	ppb	1.56	0 to 4.52	HAA5	HAA6Br	HAA9	By-Products of drinking water disinfection
Bromchloroacetic acid	ppb	2.88	0 to 4.36		HAA6Br	HAA9	By-Products of drinking water disinfection
Bromodichloroacetic acid	ppb	0	0 to 0		HAA6Br	HAA9	By-Products of drinking water disinfection
Chlorodibromoacetic acid	ppb	0	0 to 0		HAA6Br	HAA9	By-Products of drinking water disinfection
Tribromoacetic acid	ppb	0	0 to 0		HAA6Br	HAA9	By-Products of drinking water disinfection

Cleaner Curbs & Cleaner Creeks for a Healthier Yard



Prevent storm water pollution in your yard:



- SmartScape your lawn.
- Apply lawn and garden chemicals sparingly; use non-toxic alternatives.
- Always follow label instructions; don't over apply chemicals.
- Minimize the use of pesticides; learn about Integrated Pest Management.
- Vegetate bare spots in your yard to prevent soil erosion.
- Use compost and mulch.
- Recycle yard waste in a compost pile; leave grass clippings on the lawn.
- Direct downspouts away from paved surfaces.
- Check your sprinkler settings; avoid over watering.

www.roanoketexas.com



Water Conservation Starts at Home

Water conservation is a topic that comes up every summer, as water bills tend to increase. As a City, we provide you with some helpful tips and ideas to conserve water, both inside and outside your home, on our website.

Visit <http://bit.ly/2Y9lz2p> or search "water conservation" on our website.

Lawn and landscape irrigation questions become more prevalent in the summer months. The City of Roanoke website offers all you need to know about your home's watering schedule, time of day to water, exceptions and more.

Visit <http://bit.ly/2VTmwzq> or search "watering restrictions" on our website.



EVENINGS ON OAK STREET

★ Concert Series ★

Join us for an evening of free entertainment from 7-8 P.M. at Austin Street Plaza, 221 N. Oak Street.

MAY 23

Fin City

Jimmy Buffet Tribute

AUGUST 15

Shades of Gray

Variety

JUNE 6

Empty Pockets

Country

SEPTEMBER 5

Vocal Trash

Stomp

JULY 11

Rock Flight

Classic Rock

SEPTEMBER 19

Johnny D &

the Doo Wopps

Old Time Rock & Roll

AUGUST 8

Little Skynyrd

Lynard Skynard Tribute



Visit www.roanoketexas.com for more information!

Roanoke

Farmers Market

Every Saturday

8AM - Noon

Austin Street Plaza

221 N. Oak Street

Fresh fruit, vegetables & more!