

CITY OF RED OAK ANNUAL WATER QUALITY REPORT

Reporting Period: January 1st, 2021 to December 31st, 2021

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Information about your Drinking Water

The United States has one of the safest and most reliable drinking water systems in the world. Every year, millions of people living in the United States get their tap water from a public community water system.

The sources of drinking water (both tap water and bottled water) includes 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 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

Meter Reading Improvements

The City of Red Oak has started a meter change-out program, phasing out old equipment for the new Allegro Registers. This is the first step towards migrating from a “drive-by” meter” to a “fixed network” meter reading system.

Currently, City of Red Oak Water Department employees read water meters once a month. Employees spend over one hundred and twenty hours driving every city street to obtain current readings, regularly conducting timely manual readings due to the failing electronics of the previously installed 2009 meters.

The new Allegro Registers, once paired with a base-station, will be automatically read once per day. Thus, significantly reducing the number of hours dedicated to meter readings each month. The newer registers are also more accurate, allowing residents to see the gallons per minute flowing through the meter, allowing for greater water conservation and easier leak detection.

New meters will be phased-in each year based on age and functionality. Once a significant number of meters are replaced, a base-station can be installed, and meter readings can then be read each month remotely.



For more information regarding this report contact:

Kyle Sugg
(972) 576-3414

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (972) 576-3414.

All Drinking Water May Contain Contaminants

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.
- 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.

Special notice for the elderly, infants, cancer patients, people with HIV/AIDS and 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 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).

Lead Notice

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 www.epa.gov/safewater/lead.



Top 10 Ways to Save Water in Summer

- #1 Check your automatic Sprinkler system** — According to a recent American Water Works Association study, homes with automated sprinkler systems use 37% more water than those who do not. Homeowners who utilize an automatic timer on their systems use 47% more water than those that do not. Be sure to check your systems for leaks and misdirected or broken sprinkler heads. If you have a timer, only use it when you are out of town.
- #2 Water your lawn only when needed** — Many people make the mistake of watering their lawn or landscape just because it is hot outside. Plants can be stressed by heat, but they may not need water. Check the soil an inch or so below the surface to see if it is dry. If you walk across your grass and leave footprints, your lawn needs water.
- #3 Use mulch in your landscape** — Two to four inches of mulch under trees, shrubs and the garden shades the soil, reduces evaporation and prevents weeds.
- #4 Use less water for a healthier lawn** — Turf grasses need one inch of water every 5 to ten days. Watering every other day wastes water and encourages a shallow root system, making lawns more susceptible to pests, freezing, and drought.
- #5 Water with efficient sprinklers** — Sprinklers that throw big drops of water close to the ground deliver more water where you need it. Avoid using sprinklers that mist or throw small drops of water high in the air.
- #6 Don't water too much at once** — Depending on your soil and landscape, you may not be able to apply all the water you need at one time. Water that runs off to the sidewalk or street is wasted. Give your soil a chance to absorb the water, move the sprinkler to a new location and come back after the water has soaked in, about 30 minutes or more.
- #7 Use native and adapted plants** — Many beautiful plants flourish in North Texas with very little water or care. Grow plants that belong in this area instead of varieties that are not well suited for this region.
- #8 Aerate your lawn** — When soil becomes compacted, it is difficult for water to get into the roots of your grass. Use a device that removes a plug of soil instead of just poking a hole in the ground, which will compact it even more.
- #9 Use a sprayer with a shut off valve on your hose** — Don't let the water run when you're not using it. Use the water you need, but don't waste it.
- #10 Learn about water-wise landscaping** — Go to www.savedallaswater.com or www.texas-smartscape.com to learn more about saving water on your landscape. Dallas Water Utilities offers free classes on water-wise gardening in the spring and fall.



Source Water Information

CITY OF RED OAK purchases water from DALLAS WATER UTILITY. DALLAS WATER UTILITY provides purchase surface water from seven sources: The Elm Fork of the Trinity River and lakes Ray Roberts, Lewisville, Grapevine, Ray Hubbard, Tawakoni, and Fork located in Cooke, Denton, Collin, Dallas, Tarrant, Hunt, Rockwall, Rains, Van Zandt, and Wood County.

Contaminant	Unit	Level			MCL	MCLG	Likely Source
		Avg	Minimum	Maximum			
Bromate	ppb	6	<5	12	10	0	By-product of water disinfection
Total Organic Carbons	ppm	2.89	2.18	3.67	35% Removal/SUVA ≤2*		Naturally present in the environment
Bromodichloromethane	ppb	4.58	3.29	5.83	N/A	0	By-product of water disinfection
Dibromochloromethane	ppb	3.23	2.39	3.87	N/A	60	By-product of water disinfection
HAA6Br	ppb	6.65	3.36	8.59	N/A	N/A	By-product of water disinfection
HAA9	ppb	16.5 5	5.66	25.04	N/A	N/A	By-product of water disinfection
Bromide	ppb	97.2	60.3	160.0	N/A	N/A	Indicator collected with HAA samples. Associated with fossil fuel extraction.
Total Haloacetic Acid **	ppb	14.0	1.4	21.3	60	N/A	By-product of water disinfection
Nitrite (as N)	ppm	0.017	<0.004	0.032	1	1	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Chromium (Total)	ppb	1.03	<1	1.80	100	100	Discharge from steel and pulp mills; Erosion of natural deposits.
Chloroform	ppb	5.80	2.22	11.20	N/A	70	By-product of water disinfection
Bromoform	ppb	0.38	0.00	1.15	N/A	0	By-product of water disinfection
HAA5	ppb	11.45	3.22	19.56	60	N/A	By-product of water disinfection
Turbidity		Unit	Highest	Limit	Likely Source		
Highest Single Measurement		NTU	0.45	1.0	Soil runoff		
Lowest Monthly % of Sample Meeting Limit		NTU	99%	<0.3	Soil runoff		

^ The MCL for Bromate is the running annual average of monthly averages, computed quarterly (30 TAC 290.114(b)(5)(C))
 *Treatment technique requires 35% removal or SUVA ≤2. The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements.
 ** Haloacetic Acids – Five Species

2021 Water Quality Report Information

TCEQ completed an assessment of your source water, and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for your 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 Kyle Sugg at 469-218-7724.

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Samples	MCLG	MCL	Units	Violation (Y/N)	Likely Source of Contamination
Haloacetic Acids (HAA5)	2021	8	5-10.2	N/A	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2021	20	17.3-25.1	N/A	80	ppb	N	By-product of drinking water disinfection.
Inorganic Contaminants	Date	Highest Level Detected	Range of Samples	MCLG	MCL	Units	Violation (Y/N)	Likely Source of Contamination
Barium	2/12/19	0.028	0.028 - 0.028	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Cyanide	9/28/17	20.4	20.4 - 20.4	200	200	ppb	N	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
Fluoride	2020	0.661	0.661 - 0.661	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]	2021	1	0.51—0.51	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

** The value in the Highest Level or Average Detected column is the highest average of all HAA5 sample results collected at a location over a year'

** The value in the Highest Level or Average Detected column is the highest average of all TTHM sample results collected at a location over a year'

Radioactive Contaminants	Date	Highest Level Detected	Range of Samples	MCLG	MCL	Units	Violation (Y/N)	Likely Source of Contamination
Beta/Photon emitters	2/24/16	4.6	4.6 - 4.6	0	50	pCi/L*	N	Decay of natural and man-made deposits.
Combined Radium 226/228	2/24/16	1.5	1.5 - 1.5	0	5	pCi/L	N	Erosion of natural deposits.

*EPA considers 50 pCi/L to be the level of concern for beta particles.

Disinfectant Residual	Average Level	Range of Levels	MRDL	MRDLG	Unit	Violation	Source in Drinking Water
Chlorine (Total)	2.48	0.50 - 4.18	4*	4*	mg/L	N	Water additive used to control microbes.

*As an annual average

Synthetic organic contaminants including pesticides and herbicides								
Contaminant	Date	Highest Level Detected	Range of Samples	MCLG	MCL	Units	Violation (Y/N)	Likely Source of Contamination
Atrazine	2021	0.1	0.1 - 0.1	3	3	ppb	N	Runoff from herbicide used on row crops.
Simazine	2021	0.15	0.15 - 0.15	4	4	ppb	N	Herbicide runoff.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2020	1.3	1.3	0.2	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2020	0	15	1.1	1	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Total Coliform				
Highest Number of Positive Samples	Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Violation (Y/N)	Likely Source of Contamination
0	0	<5%	N	Naturally present in the environment

What are total coliforms?

Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are hardier than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption. Fecal coliform bacteria and, in particular, E. coli, are members of the coliform bacteria group originating in the intestinal tract of warm-blooded animals and are passed into the environment through feces. The presence of fecal coliform bacteria (E. coli) in drinking water may indicate recent contamination of the drinking water with fecal material. The previous table indicates whether total coliform or fecal coliform bacteria were found in the monthly drinking water samples submitted for testing by your water supplier last year.

Violation(s)

There were no violations for this Public Water System in the calendar year of 2021.

Definitions and Abbreviations

The following tables contain scientific terms and measures, some of which may require explanation.

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. ALGs allow a margin of safety.

Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Level 1 Assessment: A Level 1 assessment is 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 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 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.

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.

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)

mrem: millirems per year (a measure of radiation absorbed by the body)

mg/L: see ppm

N/A: not applicable.

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.

ppq: parts per quadrillion, or picograms per liter (pg/L)

ppt: parts per trillion, or nanograms per liter (ng/L)

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

Water Loss as Reported in the Water Loss Audit

In the water loss audit submitted to the Texas Water Development Board for the time period of January 2021 to December 2021, our system lost an estimated 46,468,158 gallons of water, or 8.00% of total Water Produced. If you have any questions about the water loss audit please call (972) 576-3414.

Your Participation is Welcome

Date: City Council Meetings are held on the 2nd Monday of each month

Time: 7:00 pm

Location: Council Chambers, 200 Lakeview Parkway, Red Oak, Texas 75154

Phone: 972-617-6831



RED OAK, TEXAS

Building Our Future From Our Heritage

U.S. EPA Safe Drinking Water Hotline

800-426-4791 or visit

<http://water.epa.gov/drink/hotline/index.cfm>

Other Helpful Phone Numbers:

For questions or concerns
about your water quality:
City of Red Oak Public Works
972-576-3414

For questions about your water bill:
Utility Billing 972-617-3638

City of Red Oak Water Quality Reports
from previous years may be found at:
www.redoaktx.org/About-Our-Water



TRASH IT

These items can clog pipes and cause blockages even if labeled "flushable." Throw them in the trash to prevent expensive plumbing repairs.

WIPES



Wipes don't break down when flushed down the toilet.

PAPER TOWELS



Paper towels are designed to be absorbent and strong and to not break down in water, so they will clog your plumbing.

FEMINE HYGIENE



Pads and tampons are very absorbent and don't break down like toilet paper. They commonly cause plumbing issues.

PERSONAL CARE



Everyday personal care products like cotton swabs and dental floss tangle up in your drains and can clog your plumbing.



DISPOSE RESPONSIBLY

These products can damage your pipes and negatively impact the quality of our lakes, rivers, and streams.

FATS, OILS, AND GREASE



Your drains don't love bacon as much as you do. Recycle used cooking oil at a drop-off location.

MEDICINES



The best medicine for your drains is no medicine. Return extra and expired medicines at take-back events.

CLEANING PRODUCTS



Household cleaning products may clean your home but large amounts can be dangerous going down the drain. Take leftover products to the hazardous waste.

PAINTS/PESTICIDES



Leftover paint and pesticides are considered hazardous waste and should be carefully taken to a hazardous waste collection center.