

Annual Drinking Water Quality Report 2023

Emerald Forest Utility District TX1010541

ABOUT THIS REPORT

Our Drinking Water meets or exceeds all Federal and State 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 testing. We hope this information helps you become more knowledgeable about what is in your drinking water.

SPECIAL NOTICE FOR THE ELDERLY, INFANTS, CANCER PATIENTS, PEOPLE WITH 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).

En Espanol

Este reporte incluye información importante sobre el Agua para tomar. Para asistencia en español, favor de llamar al telefono (281) 897-9100.

WHERE DO WE GET OUR WATER?

Emerald Forest Utility District receives water from three sources:

- **Groundwater from wells within the Evangeline aquifer located in Harris County,**
- **Surface water purchased from North Harris County Regional Water Authority (NHCRWA),**
- **Groundwater from Harris County Fresh Water Supply District (FWSD) 61 (Chicot aquifer) to some of the retail establishments within the district and**
- **A blend of ground and surface water from Mills Road MUD, as needed. However, during 2023, Mills Road MUD did not supply water to Emerald Forest UD.**

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 EPA's Safe Drinking Water Hotline at (800) 426-4791.

The Texas Commission on Environmental Quality (TCEQ) completed an assessment of your source water, and results indicate that our sources have a low susceptibility to contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this Consumer Confidence Report (CCR). For more information on source water assessments and protection efforts at our system, contact us at 281-897-9100.

DRINKING WATER CONTAMINANTS

Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, 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, 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.

ARSENIC

This District's drinking water contains low levels of arsenic, which is below the state and federal action levels. EPA's standard balances arsenic's possible health effects against the cost of removing it from the drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

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. Emerald Forest Utility District 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 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

TURBIDITY

Turbidity of surface water from has no health effects, but it is monitored because it is a good indicator of the effectiveness of the surface water plant filtration system. Turbidity can interfere with disinfection and provide a medium for microbial growth. High turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. Your water is also tested monthly for disease-causing bacteriological microbes.

SECONDARY CONSTITUENTS

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water, can cause taste, color and odor issues. Taste and color constituents, called secondary constituents, are regulated by the state of Texas, not the EPA. These constituents are not causes for health concern. Therefore, secondary constituents are not required to be reported in this document, but they may affect the appearance and taste of your water. For more information on taste, odor, or color of drinking water, please contact us (281) 897-9100.

WATER QUALITY DATA

The state of Texas allows for some contaminants to be monitored less than once per year because the concentrations do not change frequently. The year that each result was detected is indicated in the tables below. Definitions, abbreviations, and sources of detected contaminants can be found on pages 7 and 8 of this report.

EMERALD FOREST UTILITY DISTRICT

INORGANIC CONTAMINANTS

Year	Contaminant	Highest Level Detected	Range of Detected Levels	MCL	MCLG	Units	Violation
2022	Arsenic	3.3	3.3 - 3.3	10	0	ppb	No
2022	Barium	0.272	0.269 - 0.272	2	2	ppm	No
2023	Cyanide	40	0 - 40	200	200	ppb	No
2023	Fluoride	0.1	0.1 - 0.1	4	4	ppm	No
2023	Nitrate (measured as nitrogen)	0.35	0.24 - 0.35	10	10	ppm	No
2022	Selenium	5	4.9 - 5	50	50	ppb	No

RADIOACTIVE CONTAMINANTS

Year	Contaminant	Highest Level Detected	Range of Detected Levels	MCL	MCLG	Units	Violation
2023	Combined Radium 226 & 228	1.5	1.5 - 1.5	5	0	pCi/L	No

SYNTHETIC ORGANIC CONTAMINANTS

Year	Contaminant	Highest Level Detected	Range of Detected Levels	MCL	MCLG	Units	Violation
2023	Atrazine	0.33	0.28 - 0.33	3	3	ppb	No

DISINFECTANT RESIDUAL

Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Units	Violation
2023	2.3	0.6 - 3.9	4	4	ppm	No

DISINFECTION BY-PRODUCTS

Year	Contaminant	Highest Level Detected	Range of Detected Levels	MCL	MCLG	Units	Violation
2023	Trihalomethanes (TTHM)	20	17.2 - 20.4	80	No goal*	ppb	No
2023	Haloacetic Acids (HAA5)	24	10.5 - 24.1	60	No goal*	ppb	No

*No goal = No goal for the total

LEAD AND COPPER

Year	Contaminant	The 90 th Percentile	No. of Sites Exceeding AL	AL	MCLG	Units	Does Constituent Exceed AL?
2021	Lead	0	0	15	0	ppm	No
2022	Copper	0	0	1.3	1.3	ppm	No

MONITORING RESULTS FROM UPSTREAM SUPPLIES

Throughout 2023, Emerald Forest Utility District received purchased surface water from NHCRWA. The following tables contain water quality information from NHCRWA.

INORGANIC CONTAMINANTS - NHCRWA

Year	Contaminant	Highest Level Detected	Range of Detected Levels	MCL	MCLG	Units	Violation
2023	Nitrate (measured as nitrogen)	0.21	0.21 - 0.21	10	10	ppm	No

TURBIDITY - NHCRWA

Highest single measure of NTUs	0.27
Lowest monthly % samples meeting NTU limits	100%**
<i>** 95% of samples tested each month must be less than or equal to the limit of 0.3 NTUs.</i>	

DISINFECTION BY-PRODUCTS - NHCRWA

Year	Contaminant	Highest Level Detected	Range of Detected Levels	MCL	MCLG	Units	Violation
2023	Trihalomethanes (TTHM)	16	15.5 - 15.5	80	No goal*	ppb	No
2023	Haloacetic Acids (HAA5)	18	17.7 - 17.7	60	No goal*	ppb	No

*No goal = No goal for the total

MONITORING RESULTS FROM UPSTREAM SUPPLIES - CONT'D

Throughout 2023, Emerald Forest Utility District received groundwater through an interconnect with Harris County FWSD 61 which supplies drinking water to some of the retail establishments within the district. The following tables contain water quality information from Harris County FWSD 61.

INORGANIC CONTAMINANTS - HC FWSD 61

Year	Contaminant	Highest Level Detected	Range of Detected Levels	MCL	MCLG	Units	Violation
2021	Arsenic	3.9	3.9 - 3.9	10	0	ppb	No
2021	Barium	0.201	0.201 - 0.201	2	2	ppm	No
2021	Fluoride	0.25	0.25 - 0.25	200	200	ppb	No
2023	Nitrate (measured as Nitrogen)	0.13	0.13 - 0.13	4	4	ppm	No

RADIOACTIVE CONTAMINANTS - HC FWSD 61

Year	Contaminant	Highest Level Detected	Range of Detected Levels	MCL	MCLG	Units	Violation
2018	Beta/photon emitters	9.9	9.9 - 9.9	50	0	pCi/L	No
2018	Combined Radium 226 & 228	2.85	2.85 - 2.85	5	0	pCi/L	No
2018	Gross alpha excluding radon and uranium	14.1	14.1 - 14.1	15	0	pCi/L	No

PUBLIC PARTICIPATION OPPORTUNITIES

Date: Second Monday of each month

Time: 2:30 P.M.

Location: 3200 Southwest Freeway, Suite 2600, Houston, Texas 77027

Phone Number: 281-897-9100

To learn about future public meetings (concerning your drinking water), or to request to schedule one, please call us at (281) 897-9100.

CONTAMINANTS AND SOURCES

CONTAMINANT	SOURCE
Arsenic	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Atrazine	Runoff from herbicide used on row crops
Barium	Discharge of drilling wastes; Discharge from metal refineries. Erosion of natural deposits.
Beta/photon emitters	Decay of natural and man-made deposits.
Copper	Corrosion of household plumbing systems erosion of natural deposits.
Cyanide	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.
Disinfectant residual	Water additive used to control microbes.
Fluoride*	Erosion of natural deposits; Discharge from fertilizer and aluminum factories; Water additive which promotes strong teeth.
Gross alpha emitters	Erosion of natural deposits.
Lead	Corrosion of household plumbing systems; erosion of natural deposits.
Nitrate	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Radium	Erosion of natural deposits
Selenium	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Total Trihalomethanes (TTHM)	By-product of drinking water disinfection.
Total Haloacetic Acids (HAA5)	By-product of drinking water disinfection.
Turbidity	Soil runoff
Uranium	Erosion of natural deposits.

*Emerald Forest Utility District does not treat source water with fluoride.

DEFINITIONS AND ABBREVIATIONS

Action Level (AL)	The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Avg	Regulatory compliance with some MCLs is based on running annual average of monthly samples.
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.
Maximum Contaminant Level (MCL)	The highest level of 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 (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 (MRDL)	The highest level of disinfectant is 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 contaminants.
MFL	Million fibers per liter (a measure of asbestos)
mrem	Millirems per year (a measure of radiation absorbed by the body)
NA	MCL not regulated or not applicable
ND	Non-detect. Indicates a contaminant was not detected in the sample. If contaminant was present, it was below the detection limit for the laboratory test.
NTU	Nephelometric Turbidity Units (a measure of turbidity).
pCi/L	Picocuries per liter (a measure of radioactivity); One pCi/L is equivalent to two atoms disintegrating per minute per liter.
ppb	Parts per billion or micrograms per liter ($\mu\text{g}/\text{L}$); one ounce in 7,350,000 gallons of water. In other words, if an Olympic sized swimming pool were filled with ping-pong balls, a ppb would be equivalent to one ping-pong ball in that pool.
ppm	Parts per million or milligrams per liter (mg/L); one ounce in 7,350 gallons of water. In other words, if you were to fill a 10-gallon aquarium using an eyedropper, it would take 1 million individual drops to do so. So, one (1) drop in 10 (ten) gallons is 1 ppm.
Treatment Technique (TT)	Required process intended to reduce the level of a contaminant in drinking water.
Turbidity	Turbidity is a measure of how clear the water looks. This is measured at the surface water production plant in NTUs.

