

Harris Co. MUD 502 2023 Annual Water Quality Report

Water Sources

The sources of drinking water (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 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:

- 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.

Harris Co. MUD 502 receives surface water from West Harris County Regional Water Authority whose sources are Lake Houston and the Trinity River. A Source Water Assessment for your drinking water source is currently being conducted by the TCEQ and should be provided to us this year. The report will describe the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information in this assessment will allow us to focus our source water protection strategies. For more information on source water assessments and protection efforts at our system, contact the District Operator at **832-467-1599, or toll free at 1-866-467-1599**. Further details about sources and source-water assessments are available in the Drinking Water Watch at the following URL: <https://dww2.tceq.texas.gov/DWWW/>.

Important Information about 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. 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 at 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.

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 at 1-800-426-4791.

Special Notice:

Required language for ALL community public water supplies: 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; 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 from 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 Safe Drinking Water Hotline at 1-800-426-4791.

Protecting the Water You Drink

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.

Public Participation Opportunities

The Harris Co. MUD 502 Board of Directors meets regularly each month typically at 11:00 AM on the 1st Wednesday of the month at 9955 Barker Cypress Road, Suite 250, Cypress, TX 77433. For more information regarding the date, time and location of the meeting call **832-467-1599** or send your comments to:

Harris Co. MUD 502
17495 Village Green Dr.
Houston, Texas 77040

Secondary Constituents

Contaminants, such as calcium, sodium or iron, may be found in drinking water and may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns.

This report is a summary of the quality of the water we provide our customers. The analysis was made using data from 2023 EPA required tests (unless noted). The State of Texas allows us to monitor some substances less than annually because the concentration does not change frequently. Although the District samples your water for up to 97 substances we are listing only those substances detected in your water. The District is required by the Federal Safe Drinking Water Act to send this report annually.

For more information on taste, odor, or color of drinking water please call the District's Operator, Inframark, at **832-467-1599, or toll free at 1-866-467-1599** if you have any questions regarding this report.



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The Board of Directors of Harris Co. MUD 502 is pleased to give you this report about your drinking water based upon 2023 test results.

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

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono **832-467-1599**.

Regulated Contaminants

	Contaminant	Year	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Unit	Violation	Likely Source of Contamination	
Disinfectant By-Products	Haloacetic Acids (HAA5)*	2023	28.3	28.3-28.3	NA	60	ppb	No	By-product of drinking water disinfection.	
	Total Trihalomethanes (TTHM)*	2023	31.3	31.3-31.3	NA	80	ppb	No	By-product of drinking water disinfection.	
*The value in the Highest Level column is the highest level of all HAA5 and TTHM sample results collected at a location over a year.										
Inorganic Contaminants	Arsenic**	2023	3.2	0.0-3.2	0	10	ppb	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.	
	**While your drinking water meets EPA standards for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from 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.									
	Barium	2023	0.104	0.0543-0.104	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	
	Fluoride	2023	0.36	0.25-0.36	4	4	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.	
	Cyanide	2023	20	0-20	200	200	ppb	No	Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.	
Radioactive Contaminants	Nitrate [measured as Nitrogen]	2023	0.50	0.21-0.50	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	
	Beta/photon emitters**	2023	4.9	0.0-4.9	0	50	pCi/L	No	Decay of natural and man-made deposits.	
	**EPA considers 50 pCi/L to be the level of concern for beta particles.									
	Combined Radium 226/228	2023	2.8	2.8-2.8	0	5	pCi/L	No	Erosion of natural deposits.	
Synthetic Organic Contaminants	Uranium	2023	1.6	0.0-1.6	0	30	ug/l	No	Erosion of natural deposits.	
	Atrazine	2023	0.22	0.17-0.22	3	3	ppb	No	Runoff from herbicide used on row crops.	
	Simazine	2023	0.09	0.08-0.09	4	4	ppb	No	Runoff from herbicide used on row crops.	

Lead and Copper

Contaminant	Year	MCLG	AL	90th Percentile	# Sites over AL	Unit	Violation	Likely Source of Contamination
Copper	2023	1.3	1.3	0.0089	0	ppm	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2023	0	15	0	0	ppb	No	Corrosion of household plumbing systems; Erosion of natural deposits.

Turbidity

Contaminant	Year	Turbidity Limit	Highest Single Measurement	Lowest % of Samples Meeting Limit	Unit	Violation	Typical Source
Turbidity	2023	0.3	0.52	95.70%	NTU	No	Soil runoff.

95% or more of the monthly samples must be below the 0.3 NTU limit to be in compliance. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbiological growth. 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.

Disinfectant

Disinfectant	Year	MRDLG	MRDL	Annual Average	Range of Levels Detected	Unit	Violation	Source of Contaminant
Total Chlorine	2023	4	4	2.88	2.1-4.0	ppm	No	Disinfection used to control microbes.

Definitions - The included tables contain scientific terms and measures, some of which may require explanation.

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 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.
NA:	not applicable.
NTU:	nephelometric turbidity units (a measure of turbidity)
ppb:	micrograms per liter or parts per billion
ppm:	milligrams per liter or parts per million
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.

Most Importantly, Your Water Meets All State and Federal Drinking Water Requirements.