

Harris County Municipal Utility District No. 489

2022 Drinking Water Quality Report

DEAR CUSTOMER:

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

The sources of drinking water (both tap water and bottled water) generally 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 (1-800-426-4791). Contaminants that may be present in the source water include:

- 1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and 2) 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.
- 3) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- 4) 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.
- 5) Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining 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 district's operator, Inframark.

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 (800-426-4791).

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 <http://www.epa.gov/safewater/lead>.

The source of drinking water used by Harris County MUD 489 is purchased ground water on a year-round basis from Harris County MUD 418 that comes from both the Evangeline Aquifer and purchased surface water from the West Harris County Regional Water Authority that comes from the City of Houston because our water system does not have a water plant.

TCEQ completed a Source Water Susceptibility for all drinking water systems that own their sources. This report describes the susceptibility and types of constituents that may come into contact with the drinking water source based on human activities and natural conditions. The system(s) from which we purchase our water received the assessment report. For more information on source water assessments and protection efforts at our system contact Mackenzie Osborne, Inframark, at (832-490-7912).

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following: <http://www.tceq.texas.gov/gis/swaview>

Further details about sources and source water assessments are available in Drinking Water Watch at the following URL: <http://dww2.tceq.texas.gov/DWW/>

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not causes for health concern. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water. The pages that follow list all of the federally regulated or monitored contaminants which have been found in your drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants.

When drinking water meets federal standards there may not be any health based benefits to purchasing bottled water or point of use devices.

Public input concerning the water system may be made at regularly scheduled meetings, generally held at 11:00 AM on the 3rd Monday of the month at 1300 Post Oak Blvd, Ste 2500, Houston, TX 77056. You may also contact Mackenzie Osborne, Inframark, at 832-490-7912 with any concerns or questions you may have regarding this report.

Este reporte incluye informacion importante sobre el agua para tomar. Para asistencia en espanol, favor de llamar al tel. (281) 579-4507.

Definitions & 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 are based on running annual average of monthly samples.

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 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 a contaminant that is allowed in drinking water. MCLs are set as close to 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 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 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)

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.

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.

Substance	Unit of Measure	Year	MCL	Average Level Detected	Min - Max Level Detected	MCLG	In Compliance	Typical Sources
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Inorganic Contaminants (Regulated at the Water Plant)

Nitrite	ppm	2018	1	0.08	0.08 - 0.08	1	Yes	Natural Erosion
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Disinfectant Byproducts

Haloacetic Acids (HAA5)	ppb	2022	60	12.05	1.1 - 23	0	Yes	By-product of drinking water disinfection.
Total Trihalomethanes	ppb	2022	80	16.65	5.3 - 28	0	Yes	By-product of drinking water disinfection.

Substance	Unit of Measure	Year	MRDL	Average Level Detected	Min - Max Level Detected	MRDLG	In Compliance	Typical Sources
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Maximum Residual Disinfectant Level

Chlorine Residual	ppm	2022	4.0	1.76	1.14 - 2.63	4.0	Yes	Water additive used to control microbes.
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Substance	Unit of Measure	Year	90th % Value	EPA Action Level	Results above Action Level	MCLG	In Compliance	Typical Sources
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Lead and Copper (Regulated at Customers Tap)

Copper	ppm	2022	0.0319	1.3	0	1.3	Yes	Corrosion of household plumbing systems, erosion of natural deposits; leaching from wood preservatives.
Lead	ppb	2022	0	15	0	0	Yes	Corrosion of household plumbing systems; erosion of natural deposits.

Our Water System Received Water
From City of Houston
Water Quality Results are Listed Below

Substance	Unit of Measure	Year	MCL	Average Level Detected	Min - Max Level Detected	MCLG	In Compliance	Typical Sources
Radioactive Contaminants (Regulated at the Water Plant)								
Combined Radium	pCi/L	2022	5	2.47	2.18 - 2.75	0	Yes	Erosion of natural deposits.
Gross Alpha	pCi/L	2022	15	11.15	10.8 - 11.5	0	Yes	Erosion of natural deposits.
Synthetic Organic Contaminants Including Pesticides and Herbicides								
Atrazine	ppb	2022	3	0.34	0 - 1.7	3	Yes	Runoff from herbicide used on row crops.
Di(2-ethylhexyl)phthalate	ppb	2022	6	0.77	0 - 2.3	0	Yes	Discharge from rubber and chemical factories.
Simazine	ppb	2022	4	0.07	0 - 0.11	4	Yes	Herbicide runoff.
Volatile Organic Contaminants								
Xylenes	ppm	2022	10	0.000275	0 - 0.001	10	Yes	Discharge from petroleum factories.
Unregulated Contaminants								
Bromodichloromethane	ppb	2022	N/A	5.82	0 - 11	N/A	Yes	By-product of drinking water disinfection.
Bromoform	ppb	2022	N/A	0.83	0 - 1.6	N/A	Yes	By-product of drinking water disinfection.
Chloroform	ppb	2022	N/A	10.98	0 - 20	N/A	Yes	By-product of drinking water disinfection.
Dibromochloromethane	ppb	2022	N/A	2.5	0 - 5.8	N/A	Yes	By-product of drinking water disinfection.
Manganese	ppm	2022	N/A	0.01	0 - 0.085	N/A	Yes	Abundant naturally occurring element.

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.

Substance	Unit of Measure	Year	MCL	Average Level Detected	Min - Max Level Detected	MCLG	In Compliance	Typical Sources
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Inorganic Contaminants (Regulated at the Water Plant)

Arsenic	ppb	2022	10	3.22	0 - 7.6	0	Yes	Erosion of natural deposits; runoff from orchards; runoff from glass, and electronics production wastes.
Barium	ppm	2022	2	0.19	0.044 - 0.41	2	Yes	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Cyanide	ppb	2022	200	40.0	0 - 120	200	Yes	Discharge from plastic and fertilizer factories; discharge from steel/metal factories.
Fluoride	ppm	2022	4	0.3	0.1 - 0.76	4	Yes	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate	ppm	2022	10	0.14	0 - 0.43	10	Yes	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Selenium	ppb	2022	50	4.17	0 - 9.5	50	Yes	Erosion of natural deposits.

Turbidity

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial 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.

	Level Detected	Limit (Treatment Technique)	In Compliance	Likely Source of Contamination
Highest single measurement	0.51 NTU	1 NTU	Yes	Soil runoff.
Lowest monthly % meeting limit	100%	0.3 NTU	Yes	Soil runoff.

Our Water System Received Water From
West Harris County Regional Water Authority
Water Quality Results are Listed Below

Substance	Unit of Measure	Year	MCL	Average Level Detected	Min - Max Level Detected	MCLG	In Compliance	Typical Sources
Inorganic Contaminants (Regulated at the Water Plant)								
Nitrate	ppm	2022	10	0.29	0.29 - 0.29	10	Yes	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Disinfectant Byproducts								
Haloacetic Acids (HAA5)	ppb	2022	60	30.3	30.3 - 30.3	0	Yes	By-product of drinking water disinfection.
Total Trihalomethanes	ppb	2022	80	31.9	31.9 - 31.9	0	Yes	By-product of drinking water disinfection.

Substance	Unit of Measure	Year	MRDL	Average Level Detected	Min - Max Level Detected	MRDLG	In Compliance	Typical Sources
Maximum Residual Disinfectant Level								
Chlorine Residual	ppm	2022	4.0	3.47	3.11 - 3.87	4.0	Yes	Water additive used to control microbes.

Our Water System Received Water From
Harris County MUD No. 418
Water Quality Results are Listed Below

Substance	Unit of Measure	Year	MCL	Average Level Detected	Min - Max Level Detected	MCLG	In Compliance	Typical Sources
Synthetic Organic Contaminants Including Pesticides and Herbicides								
Atrazine	ppb	2022	3	0.13	0 - 0.25	3	Yes	Runoff from herbicide used on row crops.
Simazine	ppb	2022	4	0.05	0 - 0.09	4	Yes	Herbicide runoff.

Substance	Unit of Measure	Year	MCL	Average Level Detected	Min - Max Level Detected	MCLG	In Compliance	Typical Sources
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Unregulated Contaminants

Bromodichloromethane	ppb	2022	N/A	4.1	0 - 8.2	N/A	Yes	By-product of drinking water disinfection.
Bromoform	ppb	2022	N/A	0.5	0 - 1	N/A	Yes	By-product of drinking water disinfection.
Chloroform	ppb	2022	N/A	9.0	0 - 18	N/A	Yes	By-product of drinking water disinfection.
Dibromochloromethane	ppb	2022	N/A	1.45	0 - 2.9	N/A	Yes	By-product of drinking water disinfection.
Manganese	ppm	2022	N/A	0.01	0.006 - 0.007	N/A	Yes	Abundant naturally occurring element.

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.

Inorganic Contaminants (Regulated at the Water Plant)

Arsenic	ppb	2022	10	6.25	0 - 10.1	0	Yes	Erosion of natural deposits; runoff from orchards; runoff from glass, and electronics production wastes.
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The maximum contaminant level (MCL) for arsenic decreased from 0.05 mg/L (50 ppb) to 0.010 mg/L (10 ppb) effective January 23, 2006. Because the highest reported arsenic level on this report is between 5 ppb and 10 ppb, the following information is required by EPA: "While your drinking water meets EPA's standard 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	ppm	2022	2	0.1	0.054 - 0.139	2	Yes	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium	ppb	2022	100	6.1	0 - 12.2	100	Yes	Natural Erosion
Fluoride	ppm	2022	4	0.67	0.24 - 1.09	4	Yes	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate	ppm	2022	10	0.19	0 - 0.29	10	Yes	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Selenium	ppb	2022	50	3.95	0 - 7.9	50	Yes	Erosion of natural deposits.

Disinfectant Byproducts

Total Trihalomethanes	ppb	2022	80	27.1	27.1 - 27.1	0	Yes	By-product of drinking water disinfection.
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Substance	Unit of Measure	Year	MRDL	Average Level Detected	Min - Max Level Detected	MRDLG	In Compliance	Typical Sources
Maximum Residual Disinfectant Level								
Chlorine Residual	ppm	2022	4.0	3.05	2.82 - 3.38	4.0	Yes	Water additive used to control microbes.

* All levels detected were below the MCLs.