

Harris County Municipal Utility District #321

2022 Drinking Water Quality Report

This report is an annual summary of the quality of your drinking water. It is required by the Texas Commission on Environmental Quality and is based on the most recent U.S. Environmental Protection Agency required tests.

OUR DRINKING WATER IS SAFE

The Texas Commission on Environmental Quality (TCEQ), has 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 and protection efforts at our systems contact Natalia Espitia at: (281) 353-9809.

En Español

Este reporte incluye información importante sobre su agua potable. Para asistencia en español, favor de llamar al telefono: (281) 353 -9809

Where do we get our drinking water?

Harris County M.U.D. 321 provides surface water from the City of Houston surface water sources.

Contaminants that may be Present in Source Water

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.

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 source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic system, agricultural livestock operations, and wildlife;
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban stormwater, 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 stormwater 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 stormwater runoff, and septic systems; and
- **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, the EPA prescribes regulations that limits the amount of certain contaminants in water provided by public water systems. Federal Food and Drug Administration Agency regulations establish limits for contaminants in bottled water that 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 h2o innovation at (281) 353-9809.

Special Notice for the ELDERLY, INFANTS, CANCER PATIENTS, people with HIV/AIDS or 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 Immuno-compromised 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 Safe Drinking Water Hotline (800-426-4791).

Public Participation Opportunities:

The Harris County MUD 321 Board of Directors meet at 11:00 A.M. on the third Tuesday of each month at 3200 Southwest Frwy, Suite 2600, Houston, TX 77027. You may contact Natalia Espitia, with H₂O Innovation at 281-353-9809 with any concerns or questions you may have.



About the Following Table

The following table contains all of the chemical constituents which have been found in your drinking water. USEPA requires water systems to test up to 97 constituents. The constituents detected in your water are listed in the attached table.

DEFINITIONS

Maximum Contaminant Level (MCL) - The highest level of a contaminant in drinking water. MCL's are set as close to the MCLG's 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 not known or expected health risk. MCLG's allow for a margin of safety.

Maximum residual disinfectant level (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 (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.

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

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

ppm = parts per million, one part per million corresponds to one minute in two years or a single penny in \$10,000

ppb = parts per billion, one part per billion corresponds to one minute in 2,000 years or a single penny in \$10,000,000

pCi/L = picocuries per liter: Measure of radioactivity

Harris County Municipal Utility District 321 TX1012913 2022 Drinking Water Quality Report:

Inorganic Contaminants							
Year	Constituent	Highest Detected Level at Any Sampling Point	Range of Detected Levels	MCL	MCLG	Units of Measure	Source of Constituent
2021	Nitrate	0.12	0.12 - 0.12	10	10	ppm	Runoff from fertilizer use.

Organic Contaminants							
Year	Constituent	Highest Detected Level at Any Sampling Point	Range of Detected Levels	MCL	MCLG	Units of Measure	Source of Constituent
2021	Haloacetic Acids (HAA5)	1.8	1.8 - 1.8	60	n/a	ppb	By-product of drinking water disinfection.
2019	Total Trihalomethanes (TTHM)	10.6	8.8 - 10.6	80	0	ppb	By-product of drinking water disinfection.

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

Unregulated Contaminants**				
Year	Constituent	Average of All Sampling Points	Range of Detected Levels	Units of Measure
2019	Chloroform	3.82	1.30 - 5.80	ppb
2019	Bromodichloromethane	2.77	1.50 - 4.50	ppb
2019	Dibromochloromethane	3.22	1.50 - 5.10	ppb
2019	Bromoform	2.27	1.80 - 2.70	ppb
2021	Dichloroacetic Acid	1.80	1.80 - 1.80	ppb
2019	Trichloroacetic Acid	1.50	1.00 - 1.80	ppb
2019	Dibromoacetic Acid	1.75	1.40 - 2.20	ppb
2019	Bromochloroacetic Acid	2.00	1.30 - 3.00	ppb

**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.

Lead and Copper

Year	Constituent	The 90th Percentile	Number of Sites Exceeding Action Levels	Action Level	MCLG	Units of Measure	Violation	Source of Constituent
2021	Copper	0.151	0	1.3	1.3	ppm	N	Erosion of natural deposits; Leaching from wood preservatives.
2021	Lead	1.41	0	15	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits

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. This water supply 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 or at <http://www.epa.gov/safewater/lead>.

Disinfectant Residuals

Year	Constituent	Highest Average	Range of Detected Levels	MRDL	MRDLG	Units of Measure	Source of Constituent
2022	Chlorine Disinfectant	3.70	1.17 - 4.10	4	4	ppm	Disinfectant used to control microbes.

**The chlorine disinfectant maximum contaminant level (MCL) of 4.0 mg/L is a running annual average. Although some of the disinfectant sample result levels were occasionally over 4.0 mg/L, the running annual average was always below 4.0 mg/L and the District was never in violation.

During 2022, Harris County M.U.D. 321 received surface water from the City of Houston TX1010013
The following water quality information was provided by the City of Houston:

Inorganic Contaminants

Year	Constituent	Highest Detected Level at Any Sampling Point	Range of Detected Levels	MCL	MCLG	Units of Measure	Source of Constituent
2022	Barium	0.41	0.0438 - 0.41	2	2	ppm	Discharge of drilling wastes;
2022	Nitrate	0.43	0 - 0.43	10	10	ppm	Runoff from fertilizer use;
2022	Fluoride	0.76	0.1 - 0.76	4	4	ppm	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2022	Arsenic	7.60	0 - 7.60	10	0	ppb	Erosion of natural deposits; Runoff from orchards; Runoff from glass/electronics production wastes.
2022	Cyanide	120	0 - 120	200	200	ppb	Discharge from plastic/fertilizer factories.
2022	Selenium	9.5	0 - 9.5	50	50	ppb	Discharge from petroleum/metal refineries.

Organic Contaminants

Year	Constituent	Highest Detected Level at Any Sampling Point	Range of Detected Levels	MCL	MCLG	Units of Measure	Source of Constituent
2022	Haloacetic Acids (HAA5)	33.6	0 - 33.6	60	n/a	ppb	By-product of drinking water disinfection.
2022	Total Trihalomethanes (TTHM)	38.3	0 - 38.3	80	n/a	ppb	By-product of drinking water disinfection.

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

Unregulated Contaminants**

Year	Constituent	Average of All Sampling Points	Range of Detected Levels	Units of Measure
2022	Chloroform	16.38	1.3 - 25.9	ppb
2022	Bromodichloromethane	9.07	1.2 - 13.3	ppb
2022	Dichloroacetic Acid	14.23	1.0 - 24.9	ppb
2022	Trichloroacetic Acid	4.36	1.4 - 7.7	ppb
2022	Dibromoacetic Acid	1.83	1.0 - 3.4	ppb
2022	Bromochloroacetic Acid	5.43	1.0 - 8.6	ppb
2022	Dibromochloromethane	3.34	1.0 - 5.8	ppb

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Organic Contaminants

Year	Constituent	Highest Detected Level at Any Sampling Point	Range of Detected Levels	MCL	MCLG	Units of Measure	Source of Constituent
2022	Atrazine	1.70	0 - 1.7	3	3	ppb	Runoff from herbicide used on row crops.
2022	Di (2-ethylhexyl) phthalate	2.30	0 - 2.3	6	0	ppb	Discharge from chemical factories.
2022	Simazine	0.11	0 - 0.11	4	4	ppb	Herbicide runoff.
2022	Xylenes	0.0006	0 - 0.0006	10	10	ppm	Discharge from petroleum factories.
2021	Ethylbenzene	1	0 - 1	700	700	ppb	Discharge from petroleum refineries.
2021	Toluene	0.001	0 - 0.001	1	1	ppm	Discharge from petroleum factories.

Radioactive Contaminants

Year	Constituent	Highest Detected Level at Any Sampling Point	Range of Detected Levels	MCL	MCLG	Units of Measure	Source of Constituent
2022	Combined Radium 226/228	2.75	2.18 - 2.75	5	0	pCi/L	Erosion of natural deposits.
2022	Gross Alpha excluding radon and uranium	11.5	10.8 - 11.5	15	0	pCi/L	Erosion of natural deposits.
2021	Beta / photon emitters	6.6	0 - 6.6	50	0	pCi/L*	Decay of natural man made deposits.
2021	Uranium	11.4	0 - 11.4	30	0	ug/L	Erosion of natural deposits.

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

Turbidity	Level Detected	Limit (Treatment Technique)	Violation	Source of Constituent
Highest Single Measurement	0.51 NTU	1 NTU	NO	Soil runoff.
Lowest Monthly % meeting limit	100%	0.3 NTU	NO	Soil runoff.

****Information Statement:** Turbidity is a measure of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

During 2022, Harris County M.U.D. No. 321 received surface water from Harris County M.U.D. No. 406 TX1013413. The following water quality information was provided by Harris County M.U.D. No. 406:

Inorganic Contaminants							
Year	Constituent	Highest Detected Level at Any Sampling Point	Range of Detected Levels	MCL	MCLG	Units of Measure	Source of Constituent
2022	Barium	0.336	0.273 - 0.336	2	2	ppm	Discharge of drilling wastes,
2022	Nitrate	0.18	0 - 0.18	10	10	ppm	Runoff from fertilizer use.
2022	Fluoride	0.18	0.18 - 0.18	4	4	ppm	Erosion of natural deposits.
2022	Arsenic*	6.70	0 - 6.70	10	0	ppb	Erosion of natural deposits.
2022	Cyanide	70	0 - 70	200	200	ppb	Discharge from plastic/fertilizer factories.

*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 level 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.

Unregulated Contaminants**				
Year	Constituent	Average of All Sampling Points	Range of Detected Levels	Units of Measure
2022	Chloroform	2.83	1.0 - 5.3	ppb
2022	Bromodichloromethane	2.20	1.6 - 2.9	ppb
2020	Dichloroacetic Acid	3.50	3.5 - 3.5	ppb
2019	Trichloroacetic Acid	2.05	2.0 - 2.1	ppb
2019	Dibromoacetic Acid	1.97	1.4 - 2.9	ppb
2020	Bromochloroacetic Acid	1.50	1.5 - 1.5	ppb
2022	Dibromochloromethane	4.50	1.9 - 8.1	ppb

**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.

Organic Contaminants							
Year	Constituent	Highest Detected Level at Any Sampling Point	Range of Detected Levels	MCL	MCLG	Units of Measure	Source of Constituent
2022	Atrazine	0.8	0 - 0.8	3	3	ppb	Runoff from herbicide used on row crops.

Organic Contaminants							
Year	Constituent	Highest Detected Level at Any Sampling Point	Range of Detected Levels	MCL	MCLG	Units of Measure	Source of Constituent
2020	Haloacetic Acids (HAA5)	3.5	0 - 3.5	60	n/a	ppb	By-product of drinking water disinfection.
2020	Total Trihalomethanes (TTHM)	5.3	0 - 5.3	80	n/a	ppb	By-product of drinking water disinfection.

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

The drinking water produced by Your District exceeds the minimum water quality standards as established by the USEPA.

Our water is safe to drink