2021 Consumer Confidence Report for Public Water System
HARRIS COUNTY MUD 191

This is your water quality report for
January 1 to December 31, 2021

Harris County Municipal Utility District No. 191 ("HARRIS COUNTY MUD 191") provides: (1) Surface Water purchased from North Harris County Regional Water Authority and sourced from **Lake Houston (on the San Jacinto River)** located in **Harris County, Texas** and (2) Groundwater sourced from **a well (Gulf Coast Aquifer)** located in **Harris County, Texas.**

For more information regarding this report contact:

Name: Natalia Espitia or Richard Rankin, H_2O Innovation (operating company, system business office)

Phone: (281) 353-9809

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

Definitions and Abbreviations

Definitions and Abbreviations	**The following 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 that a water system must follow.
Average (Avg.):	Regulatory compliance with some MCLs are based on running annual average of monthly samples.
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)
pCi/L:	picocuries per liter (a measure of radioactivity)
ppb:	parts per billion or micrograms per liter (µg/L); or one ounce in 7,350,000 gallons of water.
ppm:	parts per million, or milligrams per liter (mg/L); or one ounce in 7,350 gallons of water.
Treatment Technique (TT):	A required process intended to reduce the level of a contaminant in drinking water.

Information about your Drinking Water

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 EPAs Safe Drinking Water Hotline at (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 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.

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 provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (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. HARRIS COUNTY MUD 191 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*.

Opportunities for public participation

Opportunities for public participation in decisions that may affect the quality of the water include attendance at meetings of the Board of Directors of HARRIS COUNTY MUD 191, usually held on the fourth Wednesday of the month at 6:30 PM, but sometimes meetings are rescheduled (or special meetings are called). The current meeting place is the Champions MPC Clubhouse, 13719 Champions Centre Drive, Houston, Texas 77069, but the place may be changed. For specific information on Board meetings, consult notice(s) posted on the bulletin board at the Champions MPC Clubhouse, 13719 Champions Centre Drive, Houston, Texas 77069 or on the internet at *https://hcmud191.org/meetings/*. You may contact Natalia Espitia or Richard Rankin, H2O innovation (operating company, system business office), at (281) 353-9809 for information about water quality and Board meetings and to provide input into decisions that may affect the quality of the water.

Information about Source Water

HARRIS COUNTY MUD 191 purchases water from NORTH HARRIS COUNTY REGIONAL WATER AUTHORITY sourced from **Lake Houston (on the San Jacinto River)** located in **Harris County, Texas.** HARRIS COUNTY MUD 191 also produces **groundwater from a well (Gulf Coast Aquifer)** located in **Harris County, Texas.** Water from both sources is combined in the storage and distribution systems of HARRIS COUNTY MUD 191.

TCEQ completed an assessment of HARRIS COUNTY MUD 191's source water, and results indicate that some of such sources are susceptible to certain contaminants. The sampling requirements for the HARRIS COUNTY MUD 191 water system is based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this Consumer Confidence Report, and the data presented in this report is from the most recent testing done in accordance with the regulations (but not older than five years). For more information on source water assessments and protection efforts at our system contact Natalis Espitia or Rich Rankin, H20 innovation (operating company, system business office) at (281) 353-9809.

Information about Surface Water
Purchased from NORTH HARRIS COUNTY REGIONAL WATER AUTHORITY

2021 Water Quality Test Results (data provided by NHCRWA)

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation (Y/N)	Likely Source of Contamination
Haloacetic Acids (HAA5)	2021	50.7*	50.7 – 50.7	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalo-methanes (TTHM)	2021	48.2**	48.2 – 48.2	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

* 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.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation (Y/N)	Likely Source of Contamination
Barium	2021	0.35	0.0396 – 0.35	2	2	ppm	N	Discharge of drilling wastes.
Nitrate [measured as Nitrogen]	2021	0.23	0.23 – 0.23	10	10	ppm	N	Erosion of natural deposits.
Fluoride	2021	0.37	0.23 – 0.37	4	4	ppm	N	Erosion of natural deposits.
Arsenic	2021	5.3	0.02 – 5.3	10	0	ppb	N	Erosion of natural deposits.

Cyanide	2021	140	0 – 140	200	200	ppb	N	Discharge rom plastic/metal refineries.
Selenium	2021	4.5	4.5 – 4.5	50	50	ppb	N	Discharge from petroleum/metal refineries.

Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation (Y/N)	Likely Source of Contamination
Atrazine	2021	0.64	0.14 – 0.64	3	3	ppb	N	Runoff from herbicides used on row crops.
Di (2-ethylhexyl) phthalate	2021	2.3	0.99 – 2.3	0	6	ppb	N	Discharge from rubber and chemical factories.
Simazine	2021	1.0	0.07 – 1.0	4	4	ppb	N	Herbicide runoff.

Turbidity*	Level Detected	Limit (Treatment Technique)	Violation	Likely Source of Contamination
Highest single measurement	0.49 NTU	1 NTU	N	Soil runoff.
Lowest monthly % meeting limit	100%	0.3 NTU (rounded)	N	Soil runoff.

*Information Statements: (1) Turbidity is a measurement of the cloudiness of the water caused by suspended particles. It is monitored because it is a good indicator of water quality and the effectiveness of the filtration system and disinfectants. (2) 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.

Unregulated Contaminants**	Collection Date	Average	Range of Individual Samples	Units
Chloroform	2021	17.37	3.20 – 32.80	ppb
Bromochloroacetic Acid	2021	4.99	1.00 – 8.20	ppb
Dichloroacetic Acid	2021	14.43	1.70 – 21.50	ppb
Monochloroacetic Acid	2021	6.50	2.40 – 10.40	ppb
Trichloroacetic Acid	2021	4.47	1.30 – 7.60	ppb
Bromodichloromethane	2021	7.80	1.20 – 15.0	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. The unregulated contaminants displayed in this table are those: (i) which were detected, and (ii) for which monitoring is required by 40 CFR §141.40, and found in 30 TAC §290.275(4) (except *Cryptosporidium).*

Information about Combination of Surface Water (purchased from NHCRWA) and Groundwater (produced by HARRIS COUNTY MUD 191)

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation (Y/N)	Likely Source of Contamination
Copper	2021	1.3	1.3	0.0936	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of
Lead	2021	1.3	1.3	0.0936	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of

2021 Water Quality Test Results

Disinfection By-Products	Collection Date	Highest Level Detected*	Range of Individual Samples	MCLG	MCL	Units	Violation (Y/N)	Likely Source of Contamination
Haloacetic Acids (HAA5)	2021	21	20.6 - 20.6	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalo-methanes (TTHM)	2021	13	13.2 - 13.2	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

* 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'

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation (Y/N)	Likely Source of Contamination
Barium	09/05/2019	0.119	0.119 - 0.119	2	2	ppm	N	Discharge of Drilling wastes.
Fluoride	09/10/2020	0.14	0.14 – 0.14	4	4.0	ppm	N	Erosion of natural deposits.
Nitrate [measured as Nitrogen]	2021	0.12	0.12 – 0.12	10	10	ppm	N	Runoff from fertilizer use.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation (Y/N)	Likely Source of Contamination
Uranium	08/08/2018	1.6	1.6 - 1.6	0	30	µg/L	N	Erosion of natural deposits.

Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation (Y/N)	Likely Source of Contamination
Atrazine	2021	0.16	0.16 - 0.16	3	3	ppb	N	Runoff from herbicide used on row crops.

Disinfectant Residual

Disinfectant Residual	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
Total Chlorine	2021	3.28*	0.79 – 4.1	4*	4*	ppm	N	Water additive used to control microbes.

*Indicates levels computed or set as running annual averages. ("Range of Levels Detected" includes individual levels, not averages.)

Unregulated Contaminants**	Collection Date	Average	Range of Individual Samples	Units
Chloroform	2021	13.25	11.5 – 15.00	ppb
Bromochloroacetic Acid	2021	2.0	2.0 – 2.0	ppb
Dichloroacetic Acid	2021	15.1	15.1 – 15.1	ppb
Bromodichloromethane	2021	1.9	1.7 – 2.1	ppb
Trichloroacetic Acid	2021	3.0	3.0 – 3.0	ppb
Monochloroacetic Acid	2021	2.5	2.5 – 2.5	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. The unregulated contaminants displayed in this table are those: (i) which were detected, and (ii) for which monitoring is required by 40 CFR §141.40, and found in 30 TAC §290.275(4) (except *Cryptosporidium).*