

Harris County MUD No. 433

2017 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.

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.

Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care provider. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants 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 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 433 is ground water and purchased surface water from the West Harris County Regional Water Authority. The TCEQ has completed a Source Water Assessment for all drinking water systems that own their sources. The report describes the susceptibility and types of constituents that may come into contact with your 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 Jason Demel at Inframark.

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/swview>

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

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 contaminants that may be present in source water:

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.

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.

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.

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 (1-800-426-4791).

Public input concerning the water system may be made at regularly scheduled meetings, generally held at 11:30 AM on the 2nd Wednesday of the month at Mischer Investments, 9 Greenway Plaza, Suite 2900, Houston, TX 77046. You may also contact Jason Demel, Inframark, at 281-371-2980 with any concerns or questions you may have regarding this report.

Este reporte incluye informacion importante sobre el agua para tomar. Si tiene preguntas o discusiones sobre este reporte en espanol, favor de llamar al tel. (281) 579-4507 para hablar con una persona bilingue en espanol.

Definitions & Abbreviations:

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 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 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.

Action Level (AL): The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.

Parts per million (ppm): The equivalent of milligrams per liter (mg/l) is analogous to 1 minute in 2 years.

Parts per billion (ppb): The equivalent of micrograms per liter (µg/l) is analogous to 1 second in 32 years.

Picocuries per liter (pCi/L): A measure of radioactivity.

N/A: Not applicable.

NTU: Nephelometric Turbidity Units.

Level 1 assessment: Study of the water system to identify potential problems and determine (if possible) why total coliform bacteria were found.

Level 2 assessment: Very detailed study of the water system to identify potential problems and determine (if possible) why an *Escherichia coli* (E. coli) maximum contaminant level (MCL) violation has occurred and/or why total coliform bacteria were found on multiple occasions.



Substance	Unit of Measure	Year	MCL	Average Level Detected	Minimum - Maximum Level Detected	MCLG	In Compliance	Typical Sources
Radioactive Contaminants (Regulated at the Water Plant)								
Uranium	pCi/L	2016	30	1.8	1.8 - 1.8	0	Yes	Erosion of natural deposits.
Gross Alpha	pCi/L	2016	15	2.55	2 - 3.1	0	Yes	Erosion of natural deposits.
Synthetic Organic Contaminants Including Pesticides and Herbicides								
Simazine	ppb	2017	4	0.19	0.19 - 0.19	4	Yes	Herbicide runoff.
Atrazine	ppb	2017	3	0.34	0.34 - 0.34	3	Yes	Runoff from herbicide used on row crops.
Unregulated Contaminants								
Dibromochloromethane	ppb	2017	N/A	3	3 - 3	N/A	Yes	By-product of drinking water disinfection.
Chloroform	ppb	2017	N/A	14	14 - 14	N/A	Yes	By-product of drinking water disinfection.
Bromodichloromethane	ppb	2017	N/A	7.7	7.7 - 7.7	N/A	Yes	By-product of drinking water disinfection.

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	MRDL	Average Level Detected	Minimum - Maximum Level Detected	MRDLG	In Compliance	Typical Sources
Inorganic Contaminants (Regulated at the Water Plant)								
Nitrate	ppm	2017	10	0.69	0.38 - 1.01	10	Yes	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Nitrite	ppm	2017	1	0.01	0.01 - 0.01	1	Yes	Natural Erosion
Fluoride	ppm	2016	4	0.19	0.19 - 0.19	4	Yes	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Barium	ppm	2016	2	0.09	0.09 - 0.09	2	Yes	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Disinfectant Byproducts								
Haloacetic Acids (HAA5)	ppb	2017	60	25	24.5 - 25.5	0	Yes	By-product of drinking water disinfection.
Total Trihalomethanes	ppb	2017	80	24.35	24.1 - 24.6	0	Yes	By-product of drinking water disinfection.

Substance	Unit of Measure	Year	MRDL	Average Level Detected	Minimum - Maximum Level Detected	MRDLG	In Compliance	Typical Sources
Maximum Residual Disinfectant Level								
Chlorine Residual	ppm	2017	4.0	3.02	2.52 - 3.67	4.0	Yes	Water additive used to control microbes.

Substance	Unit of Measure	Year	90th Percentile Value	EPA Action Level	Number of Results above Action Level	MCLG	In Compliance	Typical Sources
Lead and Copper (Regulated at Customers Tap)								
Lead	ppb	2016	0	15	0	0	Yes	Corrosion of household plumbing systems; erosion of natural deposits.
Copper	ppm	2016	0.033	1.3	0	1.3	Yes	Corrosion of household plumbing systems, erosion of natural deposits; leaching from wood preservatives.



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

Substance	Unit of Measure	Year	MCL	Average Level Detected	Minimum - Maximum Level Detected	MCLG	In Compliance	Typical Sources
Radioactive Contaminants (Regulated at the Water Plant)								
Radium 228	pCi/L	2017	5	0.62	0 - 1.39	0	Yes	Erosion of natural deposits.
Combined Radium	pCi/L	2017	5	1.38	0 - 2.99	0	Yes	Erosion of natural deposits.
Uranium	pCi/L	2017	30	2.55	0 - 11.42	0	Yes	Erosion of natural deposits.
Gross Alpha	pCi/L	2017	15	4.28	0 - 10	0	Yes	Erosion of natural deposits.
Gross Beta	pCi/L	2017	50	3.34	0 - 8.7	0	Yes	Decay of natural and man-made deposits.
Synthetic Organic Contaminants Including Pesticides and Herbicides								
Di(2-ethylhexyl)phthalate	ppb	2017	6	0.6	0 - 1.4	6	Yes	Discharge from rubber and chemical factories.
Simazine	ppb	2017	4	2	0 - 19	4	Yes	Herbicide runoff.
Atrazine	ppb	2017	3	0.24	0 - 0.91	3	Yes	Runoff from herbicide used on row crops.
Endrin	ppb	2017		0.01	0 - 0.01	2		Residue from herbicide use
Volatile Organic Contaminants								
Toluene	ppm	2017	1	0.0005	0 - 0.001	1	Yes	Discharge from petroleum factories.
Xylenes	ppm	2017	10	0.01	0 - 0.013	10	Yes	Discharge from petroleum factories.
Ethylbenzene	ppb	2017	700	1.1	0 - 2.2	700	Yes	Discharge from petroleum refineries.
Unregulated Contaminants								
Dibromochloromethane	ppb	2017	N/A	4.75	0 - 20	N/A	Yes	By-product of drinking water disinfection.
Chloroform	ppb	2017	N/A	15.29	0 - 47	N/A	Yes	By-product of drinking water disinfection.
Bromoform	ppb	2017	N/A	3.33	0 - 11	N/A	Yes	By-product of drinking water disinfection.
Bromodichloromethane	ppb	2017	N/A	6.73	0 - 12	N/A	Yes	By-product of drinking water disinfection.
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)								
Nitrate	ppm	2017	10	0.25	0 - 0.95	10	Yes	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Fluoride	ppm	2017	4	0.31	0 - 0.51	4	Yes	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Cyanide	ppb	2017	200	42.86	0 - 100	200	Yes	Discharge from plastic and fertilizer factories; discharge from steel/metal factories.
Arsenic	ppb	2017	10	2.9	0 - 5.7	0	Yes	Erosion of natural deposits; runoff from orchards; runoff from glass, and electronics production wastes.
Barium	ppm	2017	2	0.17	0.0446 - 0.398	2	Yes	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium	ppb	2017	100	10.1	10.1 - 10.1	100	Yes	Natural Erosion
Selenium	ppb	2017	50	2.94	0 - 7.9	50	Yes	Erosion of natural deposits.

Turbidity



Substance	Unit of Measure	Year	MCL	Average Level Detected	Minimum - Maximum Level Detected	MCLG	In Compliance	Typical Sources
Turbidity	NTU	2017	1	0.16	0.07 - 0.31	N/A	Yes	Soil runoff.

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.

**Our Water Supply 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	Minimum - Maximum Level Detected	MCLG	In Compliance	Typical Sources
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Unregulated Contaminants

Dibromochloromethane	ppb	2015	N/A	3.4	3.4 - 3.4	N/A	Yes	By-product of drinking water disinfection.
Chloroform	ppb	2015	N/A	20	20 - 20	N/A	Yes	By-product of drinking water disinfection.
Bromodichloromethane	ppb	2015	N/A	9	9 - 9	N/A	Yes	By-product of drinking water disinfection.

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)

Nitrate	ppm	2017	10	0.33	0.33 - 0.33	10	Yes	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Nitrite	ppm	2015	1	0.03	0.03 - 0.03	1	Yes	Natural Erosion

Disinfectant Byproducts

Haloacetic Acids (HAA5)	ppb	2015	60	20.5	20.5 - 20.5	0	Yes	By-product of drinking water disinfection.
Total Trihalomethanes	ppb	2015	80	32.4	32.4 - 32.4	0	Yes	By-product of drinking water disinfection.

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

Chlorine Residual	ppm	2017	4.0	2.83	2.5 - 3.03	4.0	Yes	Water additive used to control microbes.
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* All levels detected were below the MCLs.

