

Unregulated Initial Distribution System Evaluation for Disinfection Byproducts WAIVED OR NOT YET SAMPLED

Unregulated Contaminants:

Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection byproducts. There is no maximum contaminant level for these chemicals at the entry point of distribution

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2021	Chloroform	1.4	< 1.0	3.3	ppb	Byproduct of drinking water disinfection.
2021	Bromodichloromethane	1.68	< 1.0	6.3	ppb	Byproduct of drinking water disinfection.
2021	Dibromochloromethane	1.02	< 1.0	6.1	ppb	Byproduct of drinking water disinfection.
2021	Bromoform	0.35	< 1.0	2.1	ppb	Byproduct of drinking water disinfection.

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.

Year	Contaminant	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Contaminant
2021	Turbidity	0.22	100%	0.3	NTU	Soil runoff.

Disinfectant Residual

Disinfectant Level Quarterly Operating Reports (DLQOR).

Disinfectant Residuals	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
Chloramines	2021	1.85	0.61 - 3.5	4	4	mg/L	N	Water additive used to control microbes

Total Coliform

Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform of E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	0	0		0	N	Naturally present in the environment

In the water loss audit submitted to the Texas Water Development Board for the time period of January-December 2021, our system lost an estimated 58,833,415 gallons of water. If you have any questions about the water loss audit, please call the City of Humble Public Works Department at 281-446-2327.

If you have any other questions about how the amount of water lost should appear on your CCR, please call the TCEQ Public Drinking Water Section at 512-239-4691.

2021 Annual Drinking Water Quality Report

(January 1 to December 31, 2021)

CITY OF HUMBLE

Phone No: (281) 446-2327 or (281) 446-3061

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 persons 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.

For More Information Regarding This Report Contact:

Name: City of Humble Public Works Dept.
Phone No: (281) 446-2327

En Español

Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre este informe en español favor de llamar al tel. (281) 446-2327 - para hablar con una bilingüe en español.

Our Drinking Water is Regulated

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

Source of 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 pickup substances resulting from the presence of animals or from human activity.

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.

Where do we get our drinking water?

The source of drinking water used by the City of Humble is 30% Purchased Surface Water from the City of Houston and 70% Produced Ground Water from City owned wells. These wells are located in Harris County, Texas and pump from the Gulf Coast Aquifer.

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 (1 -800-426-4791). 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.

Secondary Constituents

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.

Information about Source Water Assessments

The TCEQ completed an assessment of your source water and results indicate that some of your sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts for our system contact Mark K. Arnold at 281-446-2327.

For more information about your sources of water please refer to the Source Water Assessment Viewer available at the following URL: <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://dww.tceq.texas.gov/DWW/>

Source Water Name	TCEQ ID#	Type of Water	Report Status	Location/Aquifer
1 - Well #1	G101 0014 E	GW	Active	Gulf Coast
6 - Well #6	G101 0014 B	GW	Active	Gulf Coast
7 - Well #7	G101 0014 C	GW	Active	Gulf Coast
8 - Well #8	G101 0014 D	GW	Active	Gulf Coast
9 - Well #9	G101 0014 G	GW	Active	Gulf Coast
SW From City of Houston EP141 NE	TX1010013	SW	Active	Northeast Surface Water Facility

DEFINITIONS AND ABBREVIATIONS

Definitions and Abbreviations: The following tables contain scientific terms and measures, some of which may require explanation.

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

Action Level Goal (AGL): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

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 a 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 a 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 disinfection level goal or 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)

na: 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 - or one ounce in 7,350,000 gallons of water.

ppm: milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

ppq: parts per quadrillion, or picograms per liter (pg/L)

ppt: parts per trillion, or nanograms per liter (ng/L)

Treatment Techniques or TT: a required process intended to reduce the level of a contaminate in drinking water.

2021 Regulated Contaminants Detected

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Arsenic	2020	7.4	0 - 7.4	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2020 - 2021	0.352	0.054 - 0.352	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Cyanide	2020	50	0 - 50	200	200	ppb	N	Discharge from Plastic and Fertilizer Factories Discharge from Steel and Metal Factories.
Fluoride	2020	0.23	0.11 - 0.23	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen]	2021	0.39	0 - 0.39	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	2020	4.1	0 - 4.1	50	50	ppb	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Required Additional Health Information for Arsenic

“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.”

Radioactive Contaminates	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Beta/Photon Emitters	2020	4.7	0 - 4.7	0	50	pCi/L	N	Decay of natural and man-made deposits.
Combined Radium 226/228	2020	3.75	0 - 3.75	0	5	pCi/L	N	Erosion of natural deposits.
Gross Alpha excluding Radon and Uranium	2020	5.0	3.0 - 5.0	0	15	pCi/L	N	Erosion of natural deposits.
Uranium	2020	3.2	1.0 - 3.2	0	30	ug/L	N	Erosion of natural deposits.

The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.

Organic Contaminants:

Synthetic organic contaminatns including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Atrazine	2021	0.64	< 0 - 0.64	3	3	ppb	N	Runoff from herbicide used on row crops.
Simazene	2021	0.07	< 0 - 0.07	4	4	ppb	N	Herbicide Runoff.

Disinfection Byproducts:

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Haloacetic Acids (HAA5)*	2021	20.4	0 - 20.4	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2021	20.5	0 - 20.5	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

Lead and Copper

Definitions: Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety. Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.								
Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contaminant
Lead	2021	0	15	3.7	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.
Copper	2021	1.3	1.3	0.14	0	ppm	N	Erosion of natural deposits; Leaching from wood preservative; Corrosion of household plumbing systems.

The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.

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>.