

2016 Annual Drinking Water Quality Report

(Consumer Confidence Report)

HARRIS COUNTY MUNICIPAL UTILITY DISTRICT No. 53 - PWSID 1010720
Phone Number 713-637-8835

YOUR WATER IS SAFE TO DRINK

Annual Water Quality Report for the period of January 1 to December 31, 2016.

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. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

In order to ensure that tap water is safe to drink, EPA and the Texas Commission on Environmental Quality prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

For more information regarding this report contact: Billy Allen at 713-637-8835.

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 pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water before treatment 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.

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 at (800-426-4791). The sources of drinking water used by Harris County MUD 53 are purchased surface water from the San Jacinto and Trinity Rivers and wells that pump from the Evangeline Aquifer.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which will 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 providers. 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. 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 www.epa.gov/safewater/lead.

If you would like to participate in future meeting regarding water quality, please contact Billy Allen at 713-637-8835. The Board of Directors meets on the second Tuesday of each month at 6:30 pm at 367 Queenstown Rd., Houston, Texas 77015.

En Español

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúzcalo ó hable con alguien que lo entienda bien. Para asistencia en español, favor de llamar al telefono 713-637-8835.

Source Water Assessment

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 the contaminants may be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system, contact Billy Allen at 713-637-8835.

Definitions

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

AvG: Regulatory compliance with some MCLs is 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.

MFL: million fibers per liter (a measure of asbestos)
na: not applicable.

NTU: Nephelometric Turbidity Units

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.

ppt: parts per trillion, or nanograms per liter

ppq: parts per quadrillion, or picograms per liter

2016 Regulated Contaminants Detected

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)	90 th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	2016	1.3	1.3	0.13	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2016	0	15	2	0	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)	2016	36	24.1 – 40.0	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TThm)	2016	29	21.1 – 33.3	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic – 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 levels of arsenic, which is a chemical known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.	05/22/2014	10	8.6 – 10	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	05/22/2014	0.138	0.107 – 0.138	2	2	ppm	N	Discharge from drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Flouride	05/22/2014	0.78	0.67 – 0.78	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]	2016	1	0.51 – 0.51	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrite [measured as nitrogen]	2015	0.01	0 – 0.01	1	1	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Radioactive Contaminants	Collection Date	Highest Single Sample	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	1-7-2011	4.9	4.2 – 4.9	0	50	pCi/L*	N	Decay of natural and man-made deposits
* EPA considers 50 pCi/L to be the level of concern for beta particles.								
Combined Radium 226/228	1-7-2011	1	1 – 1	0	5	pCi/L	N	Erosion of natural deposits

Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Atrazine	2016	0.25	0 – 0.25	3	3	ppb	N	Runoff from herbicide used on row crops.
Benzo(a)pyrene	2015	400	0 – 400	0	200	ppt	N	Leaching from linings of water storage tanks and distribution lines
Simazine	2016	0.13	0 – 0.13	4	4	ppb	N	Herbicide runoff.

Violations Table

Lead and Copper Rule			
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			
Violation Type	Violation Begin	Violation End	Violation Explanation
FOLLOW-UP OR ROUTINE TAP M/R (LCR)	10/01/2016	2016	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated. This was only one sample of the 30 we collected.
LEAD CONSUMER NOTICE (LCR)	12/30/2013	10/04/2016	We failed to provide the results of lead tap water monitoring to the consumers at the location water was tested. These were supposed to be provided no later than 30 days after learning the results.

Disinfection – We use chloramines to disinfect our drinking water

Highest Running Annual Average for Year	Minimum Level Detected for year	Maximum Level Detected For year	MRDL	MRDL Goal	Unit of measure	Source of Chemical
3.35	0.2	3.9	4	4	ppm	Chlorine: DXI Liquid Ammonia Sulfate: Water Utility Svcs.

Turbidity

Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system. The yearly maximum was 0.74 NTU. The yearly average was 0.09. We met the treatment technique for turbidity with 95% of monthly samples below the turbidity limit of 0.3 NTU.

Water Quantity and Accountability (gallons)

Purchased surface water	Pumped from our wells	Sold or other authorized uses	Loss	Accountability
549,238,000	24,084,000	487,615,000	85,707,000	85.05%