HARRIS COUNTY MUNICIPAL UTILITY DISTRICT No. 162
2009 Annual Drinking Water Quality Report
Public Water Supply No. 1011612

EPA Safe Drinking Water Hotline (800 426-4791) | Water Quality Information (281 861-6215)

Our Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements

Providing safe and reliable drinking water is the highest priority of the Board of Directors of Harris County Municipal Utility District No. 162. This report is a summary of the quality of water we provide to our customers. We hope this information helps you become more knowledgeable about what's in our drinking water. The analysis was made using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached water quality tables. Our water system is currently purchasing water from the West Harris County Regional Water Authority (WHCRWA) and blending with MUD 162 water. The water quality table for MUD 162 and the water systems that provided water to our system in 2008 are included in this report. **All contaminants are below the regulatory standards.**

SPECIAL NOTICE

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 the **SAFE DRINKING WATER HOTLINE (800 426-4791)**

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 **Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791) or the EPA's website at www.epa.gov/safewater.**

En Espanol: *Este reporte incluye informacion importante sobre el agua potable. Si tiene preguntas o' comentarios sobre este informe en espanol, favor de llamar al tel. (281 861-6215) para hablar con una persona bilingue en espanol.*

UNDERSTANDING THE TABLES

The attached tables contain all of the federally regulated or monitored contaminants which have been found in our drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants. **Our drinking water complied with all Environmental Protection Agency (EPA) and Texas drinking water health standards** . 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 concerns but they may greatly affect the appearance and taste of your water. Secondary constituents are listed in the tables on the attached pages of this report.

DEFINITIONS

Maximum Contaminant Level (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 (MCLG) - The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

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

Public Participation Opportunities

Harris County MUD No. 162

Date: 2nd Tuesday of Each Month or as otherwise posted.

Time: 4:00 pm

Location: 1301 McKinney, Suite 5100

Phone No: 713 651-5401

Maximum Residual Disinfectant Level (MRDL) - The highest level of disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the 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 contamination.

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 or milligrams per liter (mg/L). **ppb** -Parts per billion or micrograms per liter (*u*g/L).

pCi/L - picocuries per liter; a measure of radioactivity. **NTU-**Nephelometric Turbidity Units

WATER SOURCES

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: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants, and organic chemical contaminants.

Where Do We Get Our Drinking Water ?

Our drinking water is obtained from a combination of water sources and is blended at our water plant. The Texas Commission on Environmental Quality (TCEQ), the state agency that provides sampling and monitoring for the EPA, is updating an assessment of our source water. This information 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 information contained in this assessment will allow us to focus our source water protection strategies. Some of this source water assessment information will be available later this year on Texas Drinking Water Watch at http://dww.tceq.state.tx.us/DWW/. For more information on source water assessments and protection efforts at our system, please contact us at 281 861-6215.

Harris County MUD No. 162- Inorganic Contaminants

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2006	Barium	0.057	0.057	0.057	2	2	ppm	Erosion of natural deposits.
2008	Fluoride	0.42	0.42	0.42	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth.
2009	Nitrate	0.19	0.19	0.19	10	10	ppm	Erosion of natural deposits.
2007	Combined Radium 226 & 228	2.18	2.18	2.18	5	0	pCi/L	Erosion of natural deposits.
2007	Gross Beta Emitters	7	7	7	50	0	pCi/L	Decay of natural and man-made deposits.
2007	Gross Alpha	9.9	9.9	9.9	15	0	pCi/L	Erosion of natural deposits.

Harris County MUD No. 162 - Maximum Residual Disinfectant Level

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Disinfectant
2009	Chloramine Residual	2.45	0.5	4	4	4	ppm	Disinfectant used to control microbes .

Harris County MUD No 162- Disinfection Byproducts

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2007	Total Trihalomethanes	22.2	22	22.3	80	ppb	Byproduct of drinking water disinfection.
2007	Total Haloacetic Acids	15.4	14.2	16.6	60	ppb	Byproduct of drinking water disinfection.

Harris County MUD No. 162- Lead & Copper - Regulated at the Customer's Tap

Year	Contaminant	The 90th Percentile	Number of Sites Exceeding Action Levels	Action Level	Unit of Measure	Source of Contaminant
2002	Copper	0.109	0	1.3	ppm	Corrosion of household plumbing systems; erosion of natural deposits;
2002	Lead	3.1	0	15	ppb	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. Harris County MUD No. 162 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 water 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.

Harris County MUD No. 162- Unregulated Contaminants

Year	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2006	Chloroform	17	17	17	ppb	Byproduct of drinking water disinfection.
2006	Bromodichloromethane	7.5	7.5	7.5	ppb	Byproduct of drinking water disinfection
2006	Dibromochloromethane	2.1	2.1	2.1	ppb	Byproduct of drinking water disinfection

Chloroform, bromodichloromethane and dibromochloromethane are disinfection byproducts. There is no maximum contaminant level for these chemicals at the point of entry to distribution.

Harris County MUD No. 162 - Organic Contaminants

Year or Range	Contaminant	Average Level	Minimum Level Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2009	Atrazine	0.27	0.27	0.27	3	3	ppb	Runoff from herbicide used on row crops.

Harris County MUD No. 162 - Secondary and Other Not Regulated Constituents

Year	Constituent	Average Level	Minimum Level	Maximum Level	Limit	Unit of Measure	Source of Constituent
2006	Aluminum	0.038	0.038	0.038	0.05	ppm	Abundant naturally occurring element
2008	Bicarbonate	132	132	132	N/A	ppm	Corrosion of carbonate rocks such as limestone.
2006	Calcium	35.2	35.2	35.2	N/A	ppm	Abundant naturally occurring element.
2008	Chloride	40	40	40	300	ppm	Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
2006	Magnesium	3.2	3.2	3.2	N/A	ppm	Abundant naturally occurring element
2006	Manganese	0.0159	0.0159	0.0159	0.05	ppm	Abundant naturally occurring element.
2006	Nickel	0.002	0.002	0.002	N/A	ppm	Erosion of natural deposits
2008	pH	7.5	7.5	7.5	>7.0	Units	Measure of corrosivity of water.
2006	Sodium	43	43	43	N/A	ppm	Erosion of natural deposits;
2008	Sulfate	45	45	45	300	ppm	Naturally occurring; common industrial byproduct;
2008	Total Alkalinity as CaCO3	108	108	108	N/A	ppm	Naturally occurring soluble mineral salts.
2008	Total Dissolved Solids	251	251	251	1000	ppm	Total dissolved mineral constituents in water.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
Water Quality Tables

WHCRWA provided water to Harris County MUD 162 during 2009. The water was blended with groundwater from Harris County MUD no. 162's water wells. WHCRWA's water quality information is listed on the next two pages.

Inorganic Contaminants

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2006	Barium	0.057	0.057	0.057	2	2	ppm	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries.
2006	Fluoride	0.63	0.63	0.63	4	4	ppm	Erosion of natural deposits.
2006	Nitrate	0.54	0.54	.054	10	10	ppm	Erosion of natural deposits.

Organic Contaminants

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2005 to 2009	Simazene	0.02	0	0.14	4	4	ppb	Herbicide runoff
2005 to 2009	Atrazine	0.09	0	0.71	3	3	ppb	Runoff from herbicide used on row crops.
2005 to 2009	Heptachlor	0.28	0	40	400	0	ppt	Residue of banned termiticide.
2005 to 2009	Benzo(a)pyrene (PAH)	0.21	0	30	200	0	ppt	Leaching from linings of water storage tanks and distribution lines.

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
2009	Turbidity	0.40	99.00	0.3	NTU	Soil runoff

Disinfection Byproducts

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2008	Total Haloacetic Acids	13.9	13.9	13.9	60	ppb	Byproduct of drinking water disinfection.
2008	Total Trihalomethanes	20.8	20.8	20.8	80	ppb	Byproduct of drinking water disinfection.

WEST HARRIS COUNTY REGIONAL WATER AUTHORITY
Water Quality Tables (Continued)

Unregulated Contaminants

Year	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2006	Chloroform	17	17	17	ppb	Byproduct of drinking water disinfection.
2006	Dibromochloromethane	2.1	2.1	2.1	ppb	Byproduct of drinking water disinfection.
2006	Bromodichloromethane	7.5	7.5	7.5	ppb	Byproduct of drinking water disinfection.

Chloroform, bromodichloromethane and dibromochloromethane are disinfection byproducts. There is no maximum contaminant level for these chemicals at the point of entry to distribution.

Secondary and Other Not Regulated Constituents

(No associated adverse health effects)

Year	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Source of Constituent
2006	Aluminum	0.038	0.038	0.038	0.05	ppm	Abundant naturally occurring element.
2006	Bicarbonate	101	101	101	N/A	ppm	Dissolving of carbonate rocks such as limestone.
2006	Calcium	35.2	35.2	35.2	N/A	ppm	Abundant naturally occurring element.
2006	Chloride	35	35	35	300	ppm	Abundant naturally occurring element; used in water purification.
2006	Magnesium	3.2	3.2	3.2	N/A	ppm	Abundant naturally occurring element.
2006	Manganese	0.0159	0.0159	0.0159	0.05	ppm	Abundant naturally occurring element.
2006	Nickel	0.002	0.002	0.002	N/A	ppm	Erosion of natural deposits
2006	ph	7.4	7.4	7.4	>7.0	units	Measure of corrosivity of water.
2006	Sodium	43	43	43	N/A	ppm	Erosion of natural deposits.
2006	Sulfate	65	65	65	300	ppm	Naturally occurring.
2006	Total Alkalinity as CaCO3	83	83	83	N/A	ppm	Naturally occurring soluble mineral salts.
2006	Total Dissolved Solids	262	262	262	1000	ppm	Total dissolved mineral constituents in water.
2006	Total Hardness as $CaCO_3$	101	101	101	N/A	ppm	Naturally occurring calcium

During 2009, Harris County MUD No. 162 received water from Harris County MUD No. 186. Harris County MUD No. 186 is also blending their groundwater with water received from WHCRWA. The water quality information for Harris County MUD No. 186 is listed on the next two pages.

Harris County MUD No. 186 - Inorganic Contaminants

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2006	Barium	0.057	0.057	0.057	2	2	ppm	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries.
2008	Fluoride	0.74	0.74	0.74	4	4	ppm	Erosion of natural deposits.
2009	Nitrate	0.23	0.23	0.23	10	10	ppm	Erosion of natural deposits.
2009	Gross beta emitters	2.6	2.6	2.6	50	0	pCi/L	Decay of natural and man made deposits.
2009	Gross Alpha	2.4	2.4	2.4	15	0	pCi/L	Erosion of natural deposits.

Harris County MUD no. 186 — Disinfection Byproducts

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2007	Total Haloacetic Acids	7.6	6.4	8.7	60	ppb	Byproduct of drinking water disinfection.
2007	Total Trihalomethanes	10.3	8.4	12.1	80	ppb	Byproduct of drinking water disinfection.

Harris County MUD No. 186 — Unregulated Contaminants

Year	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Contaminant
2006	Chloroform	17	17	17	ppb	Byproduct of drinking water disinfection.
2006	Dibromochloromethane	2.1	2.1	2.1	ppb	Byproduct of drinking water disinfection.
2006	Bromodichloromethane	7.5	7.5	7.5	ppb	Byproduct of drinking water disinfection.

Chloroform, bromodichloromethane and dibromochloromethane are disinfection byproducts. There is no maximum contaminant level for these chemicals at the point of entry to distribution.

Harris County MUD No. 186 — Secondary and Other Not Regulated Constituents

(No associated adverse health effects)

Year	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Source of Constituent
2006	Aluminum	0.038	0.038	0.038	0.05	ppm	Abundant naturally occurring element.
2008	Bicarbonate	94	94	94	N/A	ppm	Dissolving of carbonate rocks such as limestone.
2006	Calcium	35.2	35.2	35.2	N/A	ppm	Abundant naturally occurring element.
2008	Chloride	35	35	35	300	ppm	Abundant naturally occurring element; used in water purification.
2006	Magnesium	3.2	3.2	3.2	N/A	ppm	Abundant naturally occurring element.
2006	Manganese	0.0159	0.0159	0.0159	0.05	ppm	Abundant naturally occurring element.
2006	Nickel	0.002	0.002	0.002	N/A	ppm	Erosion of natural deposits
2008	ph	7.5	7.5	7.5	>7.0	units	Measure of corrosivity of water.
2006	Sodium	43	43	43	N/A	ppm	Erosion of natural deposits.
2008	Sulfate	70	70	70	300	ppm	Naturally occurring.
2008	Total Alkalinity as $CaCO_3$	77	77	77	N/A	ppm	Naturally occurring soluble mineral salts.
2008	Total Dissolved Solids	246	246	246	1000	ppm	Total dissolved mineral constituents in water.