CITY OF FRIENDSWOOD 2009 CONSUMER CONFIDENCE REPORT

2009 Annual Report on Drinking Water Quality for the City of Friendswood
Phone Number 281-996-3382

City of Friendswood
Public Works Building
1306 Deepwood
Friendswood, TX 77546-4856
(281) 996-3380 • Fax (281) 482-1083

En Espanol: Este reporte incluye informacion importante sobre el aqua para tomar. Para obtener una copia de esta informacion traducida al Espanol, favor de llamar al telefono (281) 996-3380.

Your Drinking Water Is Safe!

The Consumer Confidence Report (CCR) Regulations were published by the U.S. Environmental Protection Agency (USEPA) on August 19, 1998 and became effective on September 19, 1998. All community water systems are required to deliver their CCR annually by July 1. CCRs are the centerpiece of the public's "right to know" required by the 1996 State Drinking Water Act amendments and must include information on the water source, information on regulated and unregulated contaminants found in drinking water, special health effects language provided by the EPA and information on drinking water violations.

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 activities. Contaminants that may be present in the 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 purchased from the City of Houston. Our surface water plant receives its raw water from Lake Livingston and the Trinity River. In addition, we can supply ground water utilizing six water wells drawing their water from the Gulf Coast Aquifer at a depth of six hundred feet or deeper. A source Water Susceptibility Assessment for your drinking water sources is currently being updated by TCEQ. 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 the assessment allows 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.

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

This report is a summary of the quality of 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.

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 Safe Drinking Water Hotline at **800-426-4791.**

Water Conservation Plan

In addition to a drought contingency plan, the City of Friendswood has adopted a water conservation plan in order to conserve the available water supply and protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, and fire protection, and also to protect and preserve public health, welfare, and safety, as well as minimize the adverse impacts of water supply shortage or other water supply emergency conditions. You are asked to conserve water in order to help us achieve our goals.

Tips on How to Conserve Water With Your Plants

- Plant your garden when temperatures are cooler and plants require less water—This is less stressful for the plants.
- Use a thick layer of mulch around landscape plants and o bare soil surfaces—This reduces evaporation, promotes plant growth and reduces weeds.
- Collect the runoff from your roof in a barrel and use it on your plants and garden.
- Arrange plants in your garden according to watering need.
- Remove weeds from the garden—This helps cut down on excess water consumption due to plant competition.
- Don't overreact and try to drown the brown spots in your lawn. Simply moisten the area up a bit and the grass will green up in a few days.
- Create a compost pile and use it in your yard to add needed nutrients and organic matter to the soil.
- Don't over-water your plants. Learn how much water they need and how best to apply just the right amount.

Special Notice for the ELDERLY, INFANTS, CANCER PATIENTS, HIV/AIDS PATIENTS OR OTHERS WITH IMMUNE SYSTEM PROBLEMS

You may be more vulnerable than the general population to certain 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 providers. Additional guidelines on appropriate means to lessen the risk of infeciton by Cryptosporidium are available from the Safe Drinking Water Hotline, **800-426-4791.**

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 concerns. Therefore, secondary constituents are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

Definitions of Terms Used in the Report

Maximum Contaminant Level (MCL) – the highest permissible level of a contaminant 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 (TT) – a required process intended to reduce the level of a contaminant in drinking water.

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

NTU – Nephelometric Turbidity Units

pCi/L – picocuries per liter (a measure of radioactivity)

ppb – parts per billion, or micrograms per liter (ug/l)

ppq – parts per quadrillion, or picograms per liter

MFL – million fibers per liter (a measure of asbestos)

ppm – parts per million, or milligrams per liter (mg/l)

ppt – parts per trillion, or nanograms per liter

Public Participation Opportunities

The City of Friendswood's water system is maintained by the Public Works Department (281-996-3382) and is part of the city government. The City Council meets every first and third Monday of each month at 7:00 p.m. The meetings are held at City Hall and are open to the public. For more information about meetings, call 281-996-3200.

The following table contains all of the chemical constituents which have been found in your drinking water. The U.S. EPA requires testing of the water system for at least 97 possible constituents. In some cases, the testing frequency for various constituents can range from one to three years:

INORGANIC CONTAMINANTS:

Year or Range	Constituent	Average Level	Range of Detects (Min-Max)	MCL	MCLG	Units	Source
2009-2005	Barium	0.125	0.049-0.341	2	2	ppm	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
2009-2005	Fluoride	0.66	0-0.79	4	4	ppm	Erosion of natural deposits; Water additives which promote strong teeth; Discharge from fertilizer and aluminum factories
2009-2005	Nitrate	0.15	0-0.57	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits
2009-2006	Nitrite	0.11	0-0.78	1	1	ppm	Runoff from fertilizer use; Leaching from septic tanks; Sewage; Erosion of natural deposits
2009-2005	Selenium	0.20	0-8.6	50	50	ppb	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
2009-2005	Uranium	0.60	0-12.2	30	0	ppb	Erosion of natural deposits
2009-2005	Combined Radium 226 & 228	0.78	0-4.6	5	0	pCi/l	Erosion of natural deposits
2009-2005	Gross Beta Emitters	3.81	0-9.9	50	0	pCi/l	Decay of natural and man-made deposits
2009-2005	Gross Alpha	4.45	0-16.9	15	0	pCi/l	Erosion of natural deposits

ORGANIC CONTAMINANTS:

Year or Range	Constituent	Average Level	Range of Detects (Low-High)	MCL	MCLG	Units	Source
2009-2005	Atrazine	0.04	0-0.71	3	3	ppb	Runoff from herbicide used on row crops
2009-2005	Heptachlor	0.07	0-40	400	0	ppt	Residue of banned termiticide
2009-2005	Benzo (a) Pyrene (PAH)	0.05	0-30	200	0	ppt	Leaching from linings of water storage tanks and distribution lines
2009-2005	Xylenes	0.14	0-12.6	10000	10000	ppb	Discharge from petroleum factories; Discharge from chemical factories
2009-2005	Carbon Textrachloride	0.01	0-1.2	5	0	ppb	Discharge from chemical plants and other industrial activities
2009-2005	Toluene	0.01	0-3.7	1000	1000	ppb	Discharge from petroleum factories
2009-2005	Ethylbenzene	0.02	0-2.4	700	700	ppb	Discharge from petroleum refineries

DISINFECTANT RESIDUALS:

Year	Constituent	Average Level	Range of Detects (Low-High)	MRDL	MCLG	Units	Source
2009	Chloramines Residual	2.61	0.5-3.6	4	4	ppm	Disinfectant used to control microbes

DISINFECTION BY-PRODUCTS:

Year	Constituent	Average of All Sampling Point	Range of Detects (Low-High)	MCL	Units	Source
2009	Total Haloacetic Acids	14.5	10.7-46	60	ppb	By-product of drinking water disinfection
2009	Total Trihalomethanes	17.7	12.3-30	80	ppb	By-product of drinking water disinfection

UNREGULATED INITIAL DISTRIBUTION SYSTEM EVALUATION FOR DISINFECTION BY-PRODUCTS: This evaluation is a sampling required by the EPA to determine the range of total trihalomethane and haloacetic acid in the system for future regulations. The samples are not used for compliance, and may have been collected under non-standard conditions. The EPA also requires the data to be reported here.

Year	Constituents	Average of All Sampling Point	Range of Detects (Low-High)	MCL	Units	Source
2007	Total Haloacetic Acids	21.5	0-87.4	NA	ppb	By-product of drinking water disinfection
2007	Total Trihalomethanes	28.6	16.7-139.4	NA	ppb	By-product of drinking water disinfection

UNREGULATED CONTAMINANTS: Bromoform, Chloroform, Dichloroboromomethane and Dibromochloromethane are disinfection by-products. There is no maximum contaminant level for these chemicals at the entry point to distribution.

Year or Range	Constituent	Average Level	Range of Detects (Low-High)	MCL	Units	Source
2009-2005	Dibromomethane	0.01	0-2.3	Unregulated	ppb	By-product of drinking water disinfection
2009-2005	Chloroform	8.73	0-72	Unregulated	ppb	By-product of drinking water disinfection
2009-2005	Bromoform	1.24	0-13	Unregulated	ppb	By-product of drinking water disinfection
2009-2005	Bromodichloromethane	7.33	0-42	Unregulated	ppb	By-product of drinking water disinfection
2009-2005	Dibromochloromethane	4.73	0-20	Unregulated	ppb	By-product of drinking water disinfection

LEAD AND COPPER:

Year	Constituent	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level	Units	Source
2007	Lead	9.4	1	15	ppb	Corrosion of household plumbing systems; Erosion of natural deposits
2007	Copper	0.629	0	1.3	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Additional Health Information for Lead — "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 water 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."

TOTAL COLIFORM BACTERIA are used as indicators of microbial contamination of drinking water because testing 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 hardier than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Over 400 samples were submitted for testing last year. It is not unusual to have an occasional positive sample simply because of test sensitivity and/or human error in sampling techniques. Once the system is notified of a positive sample, the system operator immediately collects repeat samples from the original sample point and additional locations up and down stream of that location.

Year	Constituent	Highest Monthly Number Of Positive Samples	Range of Detects (Low-High)	MRDL	MCL	Units	Source
2009	Total Coliform Bacteria	1			Two or more coliform found in any single month	Presence	Naturally present in the environment
2009	Fecal Coliform	Not Detected					

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	Constituent	Highest Average Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Units	Source
2009	Turbidity	0.28	100	0.3	NTU	Soil run-off

SECONDARY AND OTHER CONSTITUENTS NOT REGULATED

Year or Range	Constituent	Average Level	Range of Detects (Low-High)	Secondary Limits	Units	Source
2009-2005	Aluminum	0.001	0-0.057	0.05	ppm	Abundant naturally occurring element
2009-2005	Bicarbonate	188	43-271	NA	ppm	Corrosion of carbonate rocks such as limestone
2009-2005	Calcium	35.4	11.9-60.9	NA	ppm	Abundant naturally occurring element
2009-2005	Chloride	62	19-157	300	ppm	Abundant naturally occurring element; Used in water purification; By-product of oil field activity
2009-2005	Copper	0.005	0-0.011	1	ppm	Corrosion of household plumbing; Erosion of natural deposits; Leaching from wood preservatives
2009-2005	Iron	0.095	0-0.275	0.3	ppm	Erosion of natural deposits; Iron or steel water delivery equipment or facilities
2009-2005	Lead	0.001	0-0.001	NA	ppm	Corrosion of household plumbing; Erosion of natural deposits
2009-2005	Magnesium	5	1.8-11	NA	ppm	Abundant naturally occurring element
2009-2005	Manganese	0.018	0-0.03	0.05	ppm	Abundant naturally occurring element
2009-2005	Nickel	0.002	0-0.003	NA	ppm	Erosion of natural deposits
2009-2005	PH	7.2	7.1-8	> 7	units	Measure of corrosivity of water
2009-2005	Sodium	73	25-135	NA	ppm	Erosion of natural deposits; By-product of oil field activity
2009-2005	Sulfate	24	3-97	300	ppm	Naturally occurring; Common industrial by-product; By-product of oil field activity
2009-2005	Total Alkalinity as CaCO3	154	36-222	NA	ppm	Naturally occurring soluble mineral salts
2009-2005	Total Dissolved Solids	314	151-505	1000	ppm	Total dissolved soluble mineral salts
2009-2005	Total Hardness as CaCO3	109	43-197	NA	ppm	Naturally occurring calcium
2009-2005	Zinc	0.471	0-1.17	5	ppm	Moderately abundant naturally occurring element used in the metal industry