

Our Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements. The City of Sugar Land Public Water System has been rated Superior.

Mission Statement

The Utilities Department takes pride in maintaining a tradition of producing ample superior quality water, vigilantly maintaining water and wastewater infrastructure, and providing responsive and efficient customer-oriented service in a cost-effective and innovative manner emphasizing responsible environmental stewardship and compliance with all regulatory requirements.

SUGAR LAND

2009
Water Quality Report

DIRECTOR'S MESSAGE

The following pages contain the City of Sugar Land's 2009 Annual Water Quality Report that details the safety and quality of the drinking water delivered to your home or business. In perusing this report, you will discover the City provides drinking water that meets or exceeds all stringent drinking water standards established by the Texas Commission on Environmental Quality (TCEQ) and the U.S. Environmental Protection Agency (EPA). The 42 Utilities Department staff members appreciate your confidence in the quality of the water we deliver and maintain a commitment of continued vigilance, responsiveness, and efficiency in meeting the service levels you expect.

Our Department is marching forward and executing the long-evolving plans to secure

adequate water sources and production and distribution facilities capable of meeting needs in the community. Sugar Land's Water Master Plan, repair and maintenance reports (used to determine infrastructure rehabilitation needs), regulatory requirements, and the City's Development Plan are tools used to sustain the City's Superior Water System. Supplying Sugar Land's growing water demand requires implementation of well-developed water management strategies to ensure ample, high-quality water is available to everyone turning on a faucet.

For example, the City has been planning to convert some of its water supply to surface water. This plan is closer to fruition as the long-anticipated Surface Water Treatment Plant begins construction later this year. Oyster Creek will provide raw wa-

ter to the new plant that will be capable of producing 9 million gallons per day. Located in the Gannoway Lake area, the plant will include state-of-the-art water processing equipment and will be online in late 2012.

We value your trust in our ability to provide high quality water services. Questions concerning the quality of your water and the delivery system are important to us. We are always eager to share information and even give you a tour!

— **SuEllen Staggs**
Director of Utilities

DRINKING WATER AND YOUR HEALTH

WATER QUALITY

The Texas Commission on Environmental Quality is responsible for overseeing the state's environmental areas, which includes the City of Sugar Land's water quality. The TCEQ collects and analyzes samples for metals, minerals, volatile and semi-volatile organic compounds, chlorine byproduct compounds and radiological compounds. The TCEQ has rated Sugar Land as having a "Superior" water system, its highest rating.

In addition to TCEQ-required daily process control samples taken at the water plants and system entry points, the City of Sugar Land performs over 80 bacteriological tests monthly in its distribution system, collects quality assurance/quality control samples at least once a week and voluntarily tests its groundwater wells twice a year.

WATER SOURCE

The City currently draws 100% of its drinking water from 15 permitted wells at 6 separate groundwater plants. These are deep wells with an average depth greater than 1200 feet, producing water from the Chicot and Evangeline aquifers. A Source Water Susceptibility Assessment for your drinking water source(s)

is currently being updated by the Texas Commission on Environmental Quality and will be provided to us this year. The report will describe the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. Any detection of these contaminants will be found in this report. For more information on source water assessments and protection efforts, please call the Utilities Department at 281-275-2450.

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, secondaries are not required to be reported in this document but they may affect the appearance and taste of your water. Secondary constituent information is available on the Utilities Department's page of the City's Web site, www.sugarlandtx.gov. From the left menu, cursor over "Water Services" and click on "Water Quality Report."

OTHER 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.

DRINKING WATER AND YOUR HEALTH

Notice from the EPA

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. Contaminants may be found in drinking water that may cause taste, color or odor problems. Presence of contaminants does not necessarily indicate that the water poses a health risk. In order to ensure that tap water is safe to drink, the EPA and the TCEQ enforce regulations that limit the amount of certain contaminants in water provided by public water systems. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline 800-426-4791.

Inorganic Contaminants		For each constituent, the Average, Minimum and Maximum Level Columns represent the City's water testing results.						
YEAR OR RANGE	CONTAMINANT	AVERAGE LEVEL	MINIMUM LEVEL	MAXIMUM LEVEL	MCL	MCLG	UNIT OF MEASURE	SOURCE OF CONTAMINANT
2008	Arsenic	1	0	3	10	0	ppb	Erosion of natural deposits; runoff from orchards; runoff from glass and electronic production wastes.
2008	Barium	0.207	0.178	0.262	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
2008	Fluoride	0.7	0.48	0.92	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2009	Nitrate	0.03	0.01	0.08	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
2008	Selenium	9.5	0	38.9	50	50	ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
2005-2008	Combined Radium 226 & 228	0.36	0	0.59	5	0	pCi/L	Erosion of natural deposits.
2005-2008	Gross Beta Emitters	2.97	0	4.5	50	0	pCi/L	Decay of natural and man-made deposits.
2005-2008	Gross Alpha	5.53	1.2	9.2	15	0	pCi/L	Erosion of natural deposits.
Maximum Residual Disinfectant Level								
YEAR	DISINFECTANT	AVERAGE LEVEL	MINIMUM LEVEL	MAXIMUM LEVEL	MRDL	MRDLG	UNIT OF MEASURE	SOURCE OF DISINFECTANT
2009	Chlorine Residual, Free	1.47	0.51	2.04	4	4	ppm	Disinfectant used to control microbes.
Disinfection Byproducts: NOT REPORTED OR NONE DETECTED								
Unregulated Initial Distribution System Evaluation of Disinfection Byproducts: WAIVED OR NOT YET SAMPLED								
Organic Contaminants: TESTING WAIVED, NOT REPORTED, OR NONE DETECTED								
Unregulated Contaminants: NOT REPORTED, OR NONE DETECTED								
NOT REQUIRED: Turbidity NOT DETECTED IN REPORTED MONTHLY TESTS: Total Coliform, Fecal Coliform Bacteria								
Lead and Copper								
The 90th percentile score for lead and copper indicates the measure, in parts per billion, that 90% of the homes sampled are at or below.								
YEAR	CONTAMINANT	THE 90th PERCENTILE	NUMBER OF SITES EXCEEDING ACTION LEVEL	ACTION LEVEL	UNIT OF MEASURE	SOURCE OF CONTAMINANT		
2009	Lead	1.7	0	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits.		
2009	Copper	0.451	0	1.3	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.		

The City has participated in the second cycle of the (2008) Unregulated Contaminant Monitoring Regulation (UCMR2). Our sampling did not show any positive results for contaminants tested by the USEPA. Data is available for your review at 111 Gillingham Lane, Sugar Land, Texas 77478.

Definitions

Action Level (AL)

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Constituent

Federally regulated or monitored analyte.

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.

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 contaminant.

Maximum Residual Disinfectant Level Goal (MRDLG)

The level of a 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.

Treatment Technique (TT)

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

SUGAR LAND WATER QUALITY OVERVIEW

IS *CRYPTOSPORIDIUM* OR *GIARDIA* IN OUR WATER SUPPLY?

Cryptosporidium and *Giardia* are waterborne pathogenic organisms. Both are naturally present in the intestines of most mammals including humans, and are passed into the environment through urban runoff or sewage disposal system failure. Exposure to *Cryptosporidium* or *Giardia* can lead to symptoms such as diarrhea, abdominal discomfort, fever, weight loss, malabsorption or anemia. Although not life-threatening to healthy adults, *Cryptosporidium* and *Giardia* can be fatal to infants, the elderly, pregnant women and immunocompromised persons.

Neither *Cryptosporidium* or *Giardia* is found in deep wells such as the City of Sugar Land's which are protected from surface water contamination. For more information about *Cryptosporidium* and *Giardia* and other microbial contaminants, contact the EPA's Safe Drinking Water Hotline at 800-426-4791.

UNREGULATED CONTAMINANTS

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

The water system described in this report serves customers within Sugar Land's corporate city limits.

FLUORIDE AND INFANT FORMULA *Interim Guidance from the American Dental Association*

The ADA has endorsed fluoridation of community water supplies as safe and effective for preventing tooth decay for more than 40 years. However, recent studies revealed infants might receive greater than optimal amounts of fluoride when fed formula mixed with water containing fluoride. The ADA recommends ways to reduce fluoride intake from reconstituted infant formula:

- Breast milk is widely acknowledged as the most complete form of nutrition for infants.
- Ready-to-feed formula is preferred to help ensure fluoride intake does not exceed optimal amounts.
- Liquid concentrate or powdered infant formula mixed with bottled water that is fluoride free or contains low levels of fluoride can reduce the risk of fluorosis.

- Occasional use of water containing optimal levels of fluoride should not appreciably increase a child's risk for fluorosis.

Parents and care givers should consult with their pediatrician, family physician or dentist on the most appropriate water to use to reconstitute infant formula.

More information is available from www.ada.org/2467.aspx.

Special Notice for the ELDERLY, INFANTS, CANCER PATIENTS, people with HIV/AIDS or other immune problems:

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; 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.

INFORMATION ON LEAD LEVELS

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. The City of Sugar Land 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.

CITY OF SUGAR LAND PUBLIC WATER SYSTEM

1.

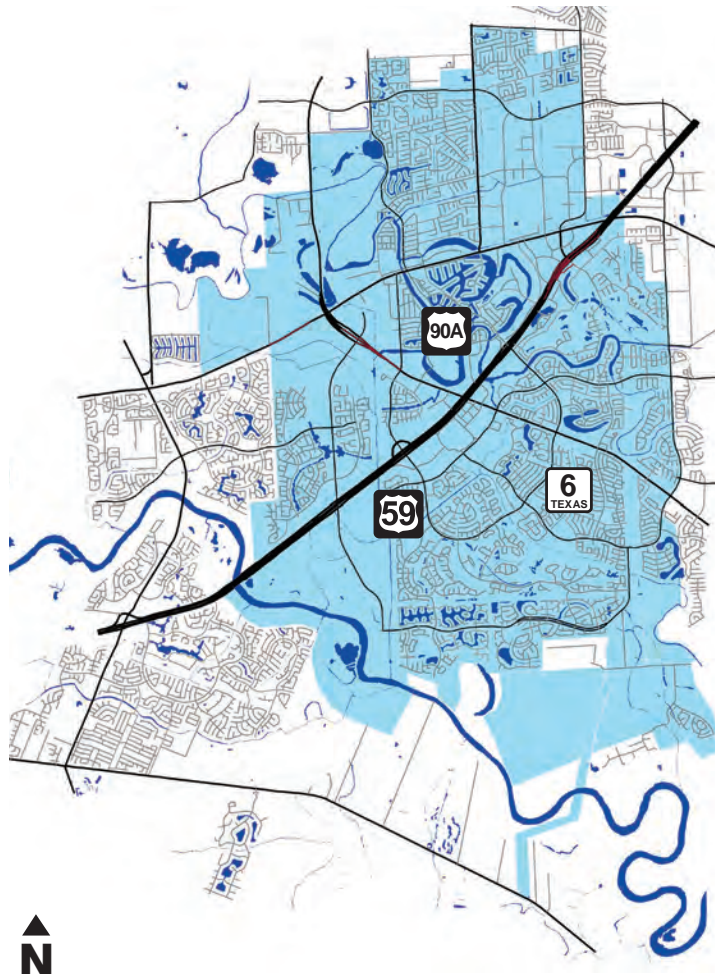
Water comes from high-quality groundwater sources, and is pumped from deep wells into one of our groundwater plants.

2.

Even though our groundwater is already of excellent quality, chlorine is added at our water plants to protect the finished water against microbial contaminants as it travels through the water system. At the same plants, a fluoride supplement is added to help prevent tooth decay. Corrosion inhibitors are also added to reduce corrosion of metal components within the homeowner's private plumbing system.

3.

Water then travels to your residence or place of business where you are provided with top quality and absolutely safe, superior-rated water.





City of Sugar Land and Sugar Land - Riverpark Water Production & Distribution Profile

Annual system demand:	6.3 billion gallons
Maximum peak daily demand:	31.3 million gallons
System capacity:	39.96 million gallons/day
Daily average demand:	16.1 million gallons
Daily average demand per capita:	223 gallons
Number of wells:	17
Average well depth:	1,250 feet
Ground storage capacity:	12.23 million gallons
Elevated storage facilities:	4 towers/4.2 million gallons
Miles of distribution line:	412
Number of water meters:	26,723
Number of fire hydrants:	3,733
Number of valves:	5,127
Supply ground water source:	Chicot and Evangeline Aquifers

Definitions of Contaminants

Microbial contaminants

Viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Inorganic contaminants

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

These may come from a variety of sources such as agriculture, urban storm water runoff and residential uses.

Organic Chemical contaminants

Synthetic and volatile organic chemicals which are by-products of industrial processes and petroleum production; can also come from gas stations, urban storm water runoff and septic systems.

Radioactive contaminants

Naturally occurring or the result of oil and gas production and mining activities.

Abbreviations

AL: Action Level

MCL: Maximum Contaminant Level

MCLG: Maximum Contaminant Level Goal

MRDLG: Maximum Residual Disinfection Level Goal

N/A: Not applicable

ND: None detected

pCi/L: pico curies per liter; measure of radioactivity

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion, or micrograms per liter (µg/L)

CUSTOMER SERVICE IS OUR NUMBER ONE PRIORITY

We take pride in the water that is provided to our customers and we are continually striving to improve our service to you. To accomplish this goal, we need your help. Any time you find your water quality or service response is below your expectations, please contact us at 281-275-2450. We will respond promptly and professionally.

To learn about future public meetings concerning our drinking water or to request to schedule one, please call us at 281-275-2450.

EN ESPAÑOL

Este informe incluye información importante sobre el agua potable.

Si tiene preguntas o comentarios sobre éste informe en español, favor de llamar al tel. 281-275-2450 para hablar con una persona bilingüe en español.



CITY OF SUGAR LAND

Utilities Department
111 Gillingham Lane
Sugar Land, TX 77478

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