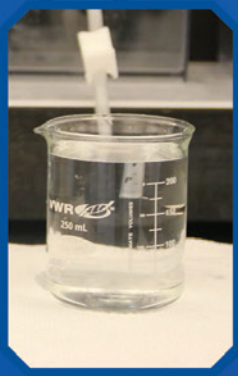


SUGAR LAND 2015

WATER QUALITY REPORT

City of Sugar Land
Public Works

Main System - PWS 0790005
RiverPark System - PWS 0790354

DIRECTOR'S MESSAGE

The Water Division takes pride in maintaining a tradition of producing ample superior quality water, vigilantly maintaining the 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.

Este reporte incluye informacion importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono **281-275-2450**.

With great pride, the City of Sugar Land Public Works Department presents the 2015 Water Quality Report. Once again, the report demonstrates that Sugar Land's drinking water meets or exceeds water quality standards. This annual report represents the commitment and determination of City Council, management, and our 63 water professionals to consistently produce and deliver safe drinking water to your home and business.

Drinking water in both the City's Main system and the City's RiverPark system is consistently below any maximum contaminant levels (MCL) set by the U.S. Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ) and meets all health-based drinking water criteria. Testing results for inorganic, organic, and radioactive contaminants; disinfectants and disinfectant by-products; lead and copper levels; and microbiological contaminants are presented in the water quality data tables in this report.

Our team of highly trained and dedicated professionals continues to maintain standards and operation efficiency well above water industry standards. Aggressive water monitoring, preventative maintenance, prompt leak repairs, and quick response to customer concerns are core principals of our operation. These programs, coupled with a robust capital improvement program that plans for timely rehabilitation projects and new infrastructure construction are evidence of a well maintained, superior water system. The more than 12.8 million dollars invested since October 2014 in water and wastewater system improvements demonstrate the City's commitment in maintaining the water treatment and delivery infrastructure necessary to provide safe drinking water throughout our expanding community.

The water division staff reaffirms our commitment to delivering ample clean, safe drinking water to you, our customers. Please contact us at 281-275-2450 when you have questions, concerns, or need to report a problem related to water quality, the City's delivery of water, or the collection of wastewater. It is our pleasure to be your water provider and serve superior drinking water every day.

Robert Valenzuela, CFM, P.E.
Director of Public Works

WHAT IS A WATER QUALITY REPORT?

A Water Quality Report, also known as a Consumer Confidence Report, is an annual report that presents the water quality of a city's drinking water. Water Quality Reports are required by the EPA and the TCEQ. The report summarizes data collected on drinking water during a calendar year. Water samples are taken daily and tested for chemical, bacteriological and disinfectant residual contaminants. The samples are taken from various locations throughout the water plant's production and distribution system. The report also documents any monitoring or testing violations of drinking water standards set by the EPA and the TCEQ.

SUGAR LAND'S WATER SOURCES

The City of Sugar Land uses both groundwater and surface water. The RiverPark System retrieves water from two deep groundwater wells. The groundwater is treated at the City's RiverPark groundwater plant and then distributed to customers.

The City's Main System draws groundwater from 14 wells at six separate groundwater plants. These wells, with an average depth of greater than 1,200 feet, extract water from the Chicot and Evangeline aquifers. Surface water from the Brazos River is treated at the City's Surface Water Treatment Plant. The groundwater and surface water are blended together at two groundwater plants before entering the distribution systems.

SOURCE WATER ASSESSMENT REPORTS

The TCEQ completed an assessment of Sugar Land's source water and results indicate that some sources are susceptible to certain contaminants. The sampling requirements for the City's two water systems are based on this susceptibility and previous sample data. Any detection of these contaminants may be found in this Consumer Confident Report. Source water assessments are available through the Source Water Assessment Viewer (www.TCEQ.Texas.gov/GIS/SWAView) and Drinking Water Watch (DWW2.TCEQ.Texas.gov/DWW). Call **281-275-2450** for more information on the City's source water protection efforts.

A MESSAGE TO INDIVIDUALS WITH A COMPROMISED IMMUNE SYSTEM FROM THE EPA

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 at 800-426-4791.

OPPORTUNITIES FOR PUBLIC COMMENT ON WATER PLANNING AND WATER QUALITY

For more information about this report or participating in public meetings concerning the City of Sugar Land's drinking water, call **281-275-2450**.

DISINFECTING SUGAR LAND'S WATER

The City of Sugar Land takes every precaution to ensure Sugar Land residents have safe, clean drinking water. Disinfectants protect the water against microbial contaminants as it travels through the many miles of pipes and pumps. Chlorine is added to the RiverPark System, and chloramine is added to the Main System. Corrosion inhibitors are also added to reduce corrosion of metal components in the private plumbing systems in homes and buildings.

POSSIBLE CONTAMINANTS

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 **Public Works Department** at **281-275-2450**.

Drinking water (both tap and bottled water) comes from rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over land or through the ground, it may pick up naturally occurring minerals, substances from animals or humans and even radioactive material.

Contaminants that may be present in drinking 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 might have 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 byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems; and
- radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

LEAD LEVEL CONCERNS

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 two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may want 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 at **800-426-4791** or on the EPA's website (www.EPA.gov/SafeWater/Lead).

CRYPTOSPORIDIUM AND *GIARDIA*

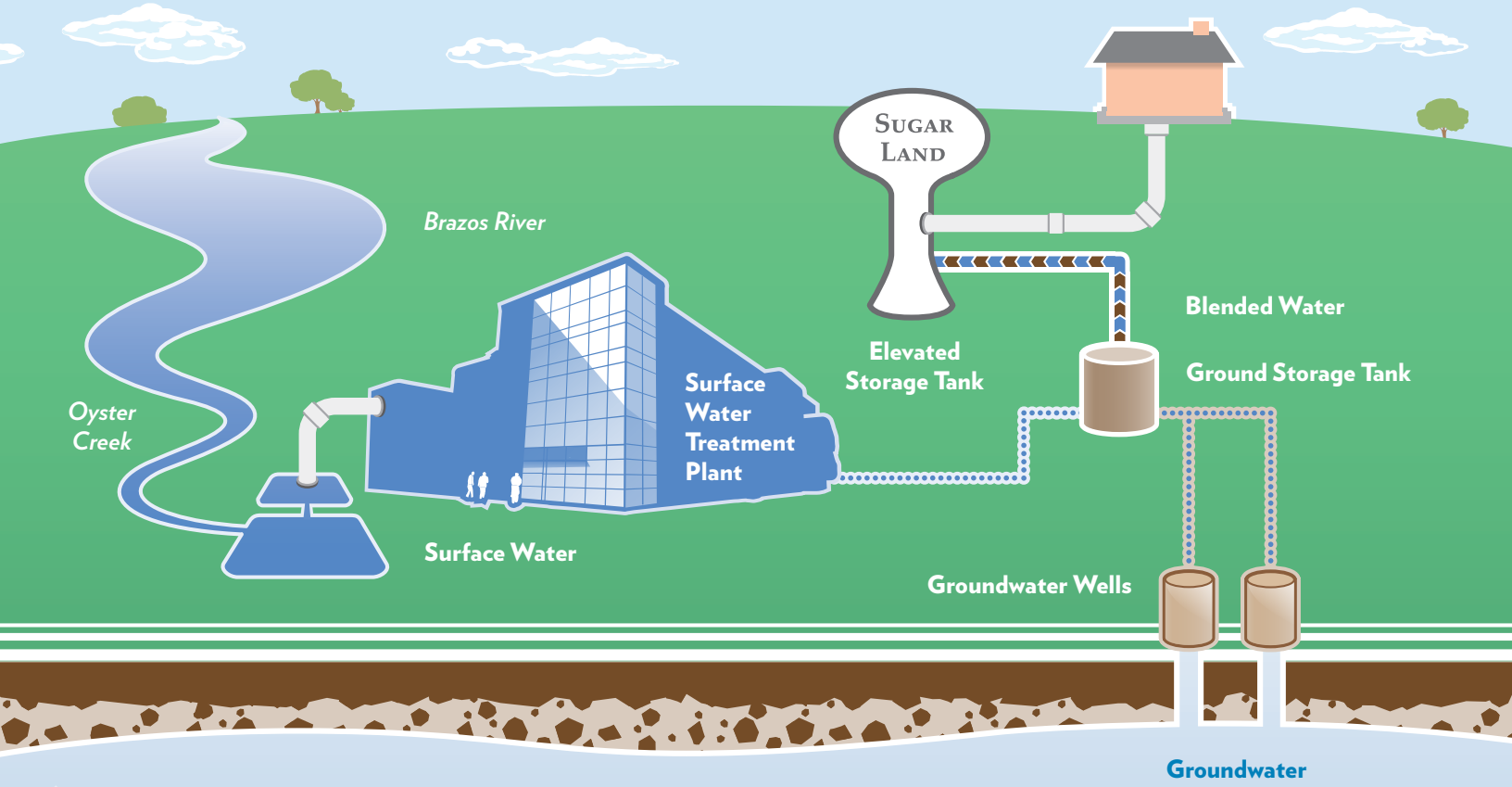
Cryptosporidium and *Giardia* are waterborne, pathogenic organisms. They can be passed into the environment through urban runoff or a sewage leak. Exposure to these organisms can lead to symptoms such as diarrhea, abdominal discomfort, fever, weight loss, malabsorption and anemia. Although not life-threatening to healthy adults, *Cryptosporidium* and *Giardia* can be fatal to infants, the elderly, pregnant women and people with a compromised immune system. (See the message from the EPA on page 2 if you may be at risk.)

Neither *Cryptosporidium* nor *Giardia* is found in groundwater, but they can be found in untreated surface water. In October 2015, Sugar Land began monthly monitoring for *Cryptosporidium* in the untreated surface water. *Cryptosporidium* was detected in one of three samples of untreated surface water at a level 0.1 oocysts*/ liter. Sugar Land's Surface Water Treatment Plant utilizes membrane filtration and post-filtration disinfection to remove waterborne organisms such as *Cryptosporidium* and *Giardia* from surface water before it enters the distribution system.

**a cyst containing an egg formed by a parasitic protozoan*

MAIN SYSTEM OVERVIEW

In the Main System, treated surface water that comes from the Surface Water Treatment Plant is blended with groundwater before entering the distribution system.



PRODUCTION AND DISTRIBUTION PROFILE

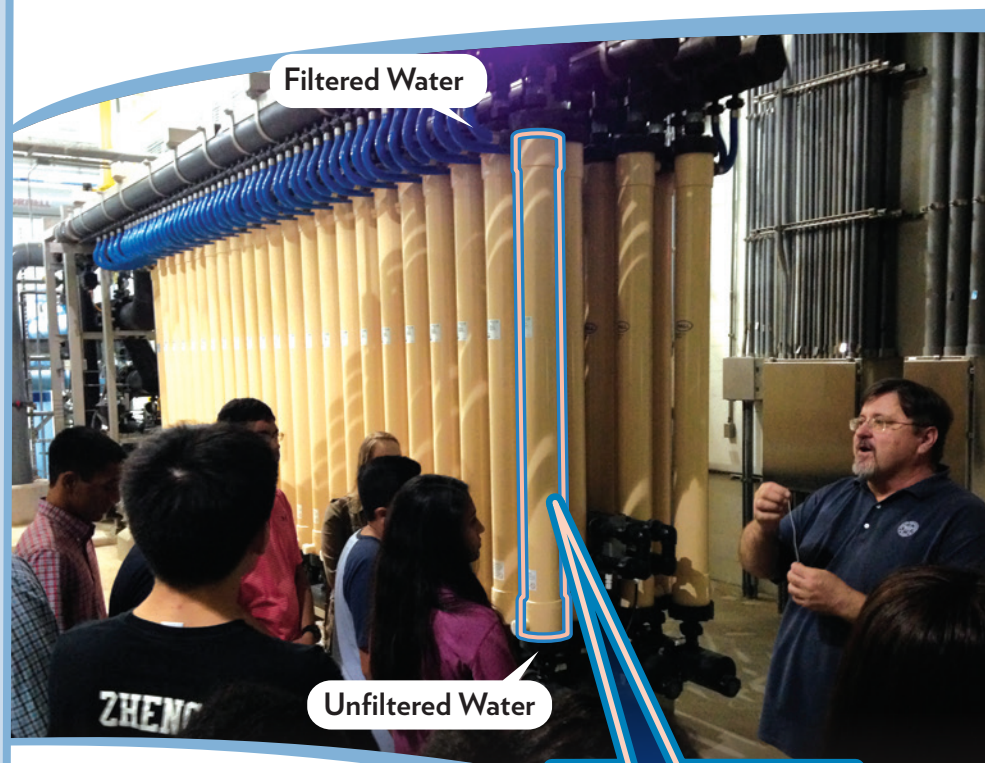
Two sources supply the City's Main System: surface water from Oyster Creek and the Brazos River treated at the City's Surface Water Treatment Plant and deep high quality groundwater wells. The RiverPark System retrieves from groundwater wells and is treated in one of the City's groundwater plants. Even though Sugar Land's water is excellent quality, chlorine is added to the RiverPark System and chloramine is added to the Main System to protect the finished water against microbial contaminants as it travels through the many miles of pipes and pumps before being delivered to customers. Fluoride is added to both systems to help prevent tooth decay. Corrosion inhibitors are also added to reduce corrosion of metal components in the private plumbing systems in homes and buildings.

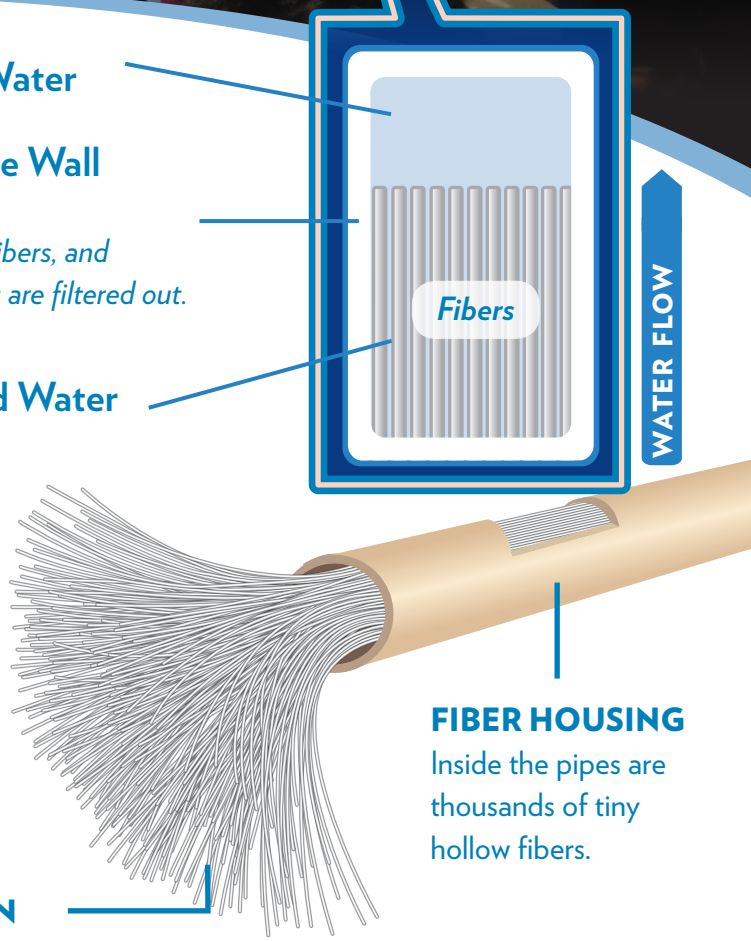
The City of Sugar Land's Surface Water Treatment Plant began production in November 2013. Today it generates 9 million gallons of drinking water per day.

After the water has been treated to meet federal and state standards, the water is delivered to homes and businesses. The City of Sugar Land is committed to providing high quality water. If you have any questions regarding the data in this report, contact the **Public Works Department** at **281-275-2450**.

Annual System Demand	5.83 billion gallons
Maximum Peak Daily Demand	36.7 million gallons
Daily System Capacity	64.8 million gallons
Daily Average Demand	15.3 million gallons
Daily Average Demand per Capita	174 gallons
Number of Wells	17
Average Well Depth	1,250 feet
Ground Storage Well Capacity	14.5 million gallons (in 15 tanks)
Elevated Storage Tanks Capacity	6.2 million gallons (in 5 towers)
Miles of Distribution Line	452.7
Number of Water Meters	29,117
Number of Fire Hydrants	4,182
Number of Mainline Valves	6,206
Water Loss	11.61 percent

WATER FILTRATION PROCESS





Filtered Water

Membrane Wall
Water passes through the fibers, and contaminants are filtered out.

Unfiltered Water

FIBER HOUSING
Inside the pipes are thousands of tiny hollow fibers.

FILTRATION
The hollow fibers absorb water, but particles that are larger than 0.1 micron cannot pass through the pores. Bacteria, parasites, sand, silt, clay and other contaminants that are too big to pass through are filtered out.

WATER QUALITY DATA

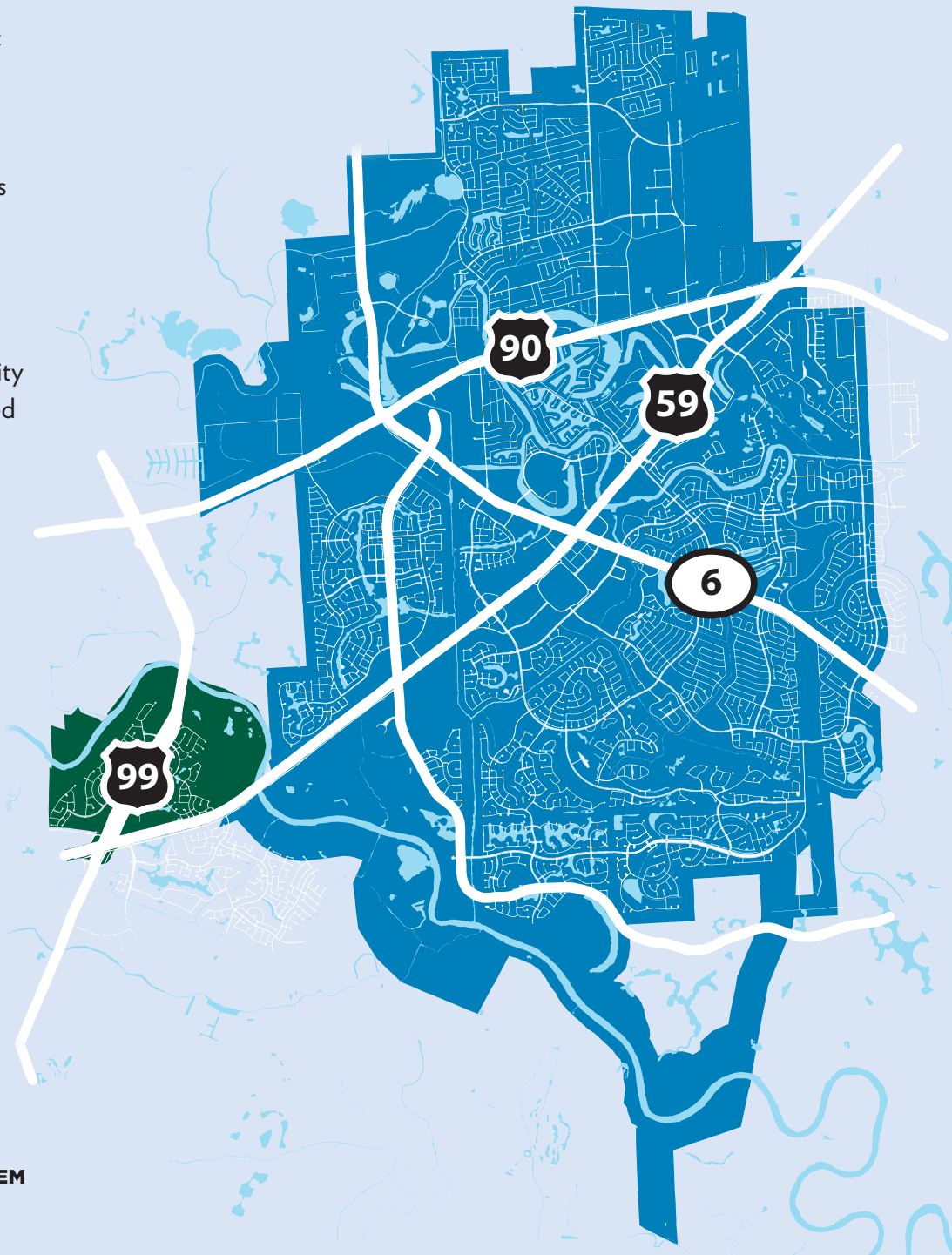
The TCEQ's mission is to protect the public's health and Texas' natural resources. Like the TCEQ, the City's goal is to have clean air and water and to safely dispose of waste. The TCEQ monitors Sugar Land's water by collecting and analyzing water samples for metals, minerals, volatile and semi-volatile organic compounds, disinfectant byproduct compounds and radiological compounds. In addition to the tests that the TCEQ performs, the agency requires that the City of Sugar Land do testing in-house.

In 2015, Water Utilities staff performed over 90 bacteriological tests each month from samples taken from the Main System as well as five tests each month from samples from the RiverPark System. The City also collected quality assurance and quality control samples at least once per week at 12 locations in the distribution system.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. 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**.

SUGAR LAND'S PUBLIC WATER SYSTEMS

The City of Sugar Land operates two independent public water systems (PWS) within the corporate limits of the city. The main system (PWS 0790005) serves the City east of the Brazos River and the RiverPark system (PWS 0790354) serves the subdivision west of the Brazos River. The two systems are not connected; therefore, water quality data for both systems is presented separately in this report.



SUGAR LAND MAIN SYSTEM

RIVERPARK SYSTEM

DEFINITIONS

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

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

AVERAGE LEVEL OF QUARTERLY DATA (AVG)
Regulatory compliance with some Maximum Contaminant Levels are based on running annual average of monthly samples.

CONSTITUENT
Federally regulated or monitored analyte.

INORGANIC CONTAMINANTS
Salts and metals which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

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.

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

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.

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

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

TREATMENT TECHNIQUE (TT)
A required process intended to reduce the level of a contaminant in drinking water.

TTHM
Total Trihalomethanes

TURBIDITY
A measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration.

WATER QUALITY DATA TABLES

An important component of water treatment and distribution is compliance with the many state and federal laws and regulations that govern public water systems. The seven groundwater treatment plants and the SWTP are monitored daily, and monthly reports are submitted to the TCEQ. The data presented in this report is from the most recent testing done in accordance with the regulations. The EPA and the State of Texas require the City of Sugar Land to monitor for certain contaminants less than once per year because the concentrations do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. Unless otherwise noted, the data presented in this report is from testing done in 2015.

ABBREVIATIONS

N/A: Not applicable
ND: None detected
NTU: Nephelometric turbidity units (a measure of turbidity)
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)

SUGAR LAND MAIN SYSTEM - 0790005

Copper and Lead

Contaminant	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation (Yes/No)	Likely Source of Contamination
Copper	2015	1.3	1.3	0.6229	0	ppm	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2015	0	15	7	1	ppb	No	Corrosion of household plumbing systems; Erosion of natural deposits.

Inorganic Contaminants

Contaminant	Year	Highest Level Detected	Minimum Level Detected	Maximum Level Detected	MCLG	MCL	Unit of Measure	Violation (Yes/No)	Major Sources in Drinking Water
Arsenic	2015	2.7	0	2.7	n/a	10	ppb	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2015	0.191	0.107	0.191	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2015	0.32	0.20	0.32	4	4	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (as Nitrogen)	2015	2.31	0	2.31	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Disinfectants and Disinfection By-Products

Contaminant	Year	Average Level of Quarterly Data	Lowest Result of a Single Sample	Highest Result of a Single Sample	MRDLG	MRDL	Unit of Measure	Violation (Yes/No)	Likely Source of Contamination
Chloramines (Chlorine Residual, Total)	2015	2.23	0.45	3.31	4	4	ppm	No	Water additive used to control microbes.
Chlorine Dioxide	2015	154	0	560	800	800	ppb	No	Water additive used to control microbes.

Contaminant	Year	Highest Average Level Detected	Minimum Level Detected	Maximum Level Detected	MCLG	MCL	Unit of Measure	Violation (Yes/No)	Likely Source of Contamination
Haloacetic acids (HAA5)	2015	7.2	0.0	9.6	No Goal for the total	60	ppb	No	By-product of drinking water disinfection.
TTHMs (Total trihalomethanes)	2015	7.3	0.0	6.6	No Goal for the total	80	ppb	No	By-product of drinking water disinfection.
Chlorite	2015	0.42	0.0	0.885	0.8	1	ppm	No	By-product of drinking water disinfection.

Synthetic Organic Contaminants including Pesticides and Herbicides

Contaminant	Year	Highest Average Level Detected	Minimum Level Detected	Maximum Level Detected	MCLG	MCL	Unit of Measure	Violation (Yes/No)	Likely Source of Contamination
Atrazine	2015	0.15	0	0.18	3	3	ppb	No	Runoff from herbicide used on row crops.
Simazine	2015	0.32	0	0.81	4	4	ppb	No	Runoff from herbicide use.

Turbidity

Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration.	Limit (Treatment Technique)	Level Detected	Violation (Yes/No)	Likely Source of Contamination
Highest single measurement	**1.0 NTU**	0.17 NTU	N	Soil runoff.
Lowest monthly % meeting limit	**0.3 NTU**	100%	N	Soil runoff.

SUGAR LAND MAIN SYSTEM - 0790005

Radioactive Contaminants

Alpha emitters: Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Compliance for alpha particle activity is based on a running annual average. A system is in compliance if the running annual average at each entry point remains below the MCL of 15 pCi/l. Only one sample was collected during 2015.

Contaminant	Year	Highest Level Detected	Minimum Level Detected	Maximum Level Detected	MCLG	MCL	Unit of Measure	Violation (Yes/No)	Likely Source of Contamination
Beta/photon emitters*	2015	5.2	5.2	5.2	0	50*	pCi/L	No	Decay of natural and man-made deposits.
Gross Alpha (excluding Radon & Uranium)	2015	20	20	20	0	15	pCi/L	No	Erosion of natural deposits.
Combined Radium 226 /228	2015	4.15	4.15	4.15	0	5	pCi/L	No	Erosion of natural deposits.
Uranium	2015	1	1	1	0	30	ppb	No	Erosion of natural deposits.

** EPA considers 50 pCi/L to be the level of concern for beta particles.*

Total Organic Carbon

Total organic carbon has no adverse health effects. Total organic carbon provides a medium for the formation of disinfection byproducts when water is disinfected. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. Byproducts of disinfection include trihalomethanes (THMs) and haloacetic acids (HAAs) which are reported on elsewhere in this report.

Constituent	Average	Minimum	Maximum	MCLG	MCL	Unit of Measure	Likely Source of Contamination
TOC- Source Water	6.5	4.2	8.8	n/a	TT	ppm	Naturally present in the environment.
TOC- Drinking Water	4	2.9	4.8	n/a	TT	ppm	Naturally present in the environment.
TOC % Removal	37.5	21.9	51.9	n/a	TT	%	n/a

Unregulated Contaminants

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. For additional information and data, call the ***Safe Drinking Water Hotline*** *at* ***800-426-4791*** *or visit the EPA's website (Water.EPA.gov/LawsRegs/RulesRegs/SDWA/UCMR).*

Contaminant	Year	Average Level Detected	Minimum Level Detected	Maximum Level Detected	Unit of Measure	Likely Source of Contamination
Chloroform	2015	1.38	0	3.8	ppb	By-product of drinking water disinfection.
Bromodichloromethane	2015	1.27	0	6.6	ppb	By-product of drinking water disinfection.
Chlorodibromomethane	2015	1.5	0	8	ppb	By-product of drinking water disinfection.
Bromoform	2015	0.7	0	3.3	ppb	By-product of drinking water disinfection.

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 cause for health concerns and are not required to be reported in this document, but they may affect the appearance and taste of your water.

Contaminant	Year	Average Level Detected	Minimum Level Detected	Maximum Level Detected	Unit of Measure	Secondary MCL
Bicarbonate	2015	200	162	238	ppm	no MCL
Calcium	2015	45.9	43.5	48.3	ppm	no MCL
Chloride	2015	38.5	31	46	ppm	250
Copper	2015	0.0027	0.0023	0.0031	ppm	1
Fluoride	2015	0.26	0.20	0.32	ppm	2
Iron	2015	123	<10	246	ppb	300
Magnesium	2015	8.12	7.84	8.41	ppm	no MCL
Manganese	2015	35.0	10.1	59.8	ppb	50
Nickel	2015	0.8	<1	1.6	ppb	100
pH	2015	7.9	6.8	8.2	units	> 7
Sodium	2015	39.0	38.1	39.8	ppm	no MCL
Sulfate	2015	23	16	30	ppm	300
Total Alkalinity	2015	164	133	195	ppm	no MCL
Total Dissolved Solids	2015	277.5	267	288	ppm	1000
Total Hardness as $CaCO_3$	2015	148	141	155	ppm	no MCL

SUGAR LAND RIVERPARK SYSTEM - 0790354

Copper and Lead

Contaminant	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units of Measure	Violation (Y/N)	Likely Source of Contamination
Copper	2015	1.3	1.3	0.1313	0	ppm	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2015	0	15	1.9	0	ppb	No	Corrosion of household plumbing systems; Erosion of natural deposits.

Disinfectants and Disinfection By-Products

Contaminant	Year	Average Level of Quarterly Data	Lowest Result of a Single Sample	Highest Result of a Single Sample	MRDLG	MRDL	Unit of Measure	Violation (Yes/No)	Likely Source of Contamination
Chlorine Residual, Free	2015	1.42	0.79	1.98	4	4	ppm	No	Water additive used to control microbes.

Inorganic Contaminants

Contaminant	Year	Highest Level Detected	Minimum Level Detected	Maximum Level Detected	MCLG	MCL	Unit of Measure	Violation (Yes/No)	Major Sources in Drinking Water
Barium	2010	.159	.159	.159	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2014	0.64	0.64	0.64	4	4	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (as Nitrogen)	2015	0.05	0.05	0.05	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Radioactive Contaminants

Contaminant	Year	Highest Level Detected	Minimum Level Detected	Maximum Level Detected	MCLG	MCL	Unit of Measure	Violation (Yes/No)	Likely Source of Contamination
Gross Alpha (excluding Radon & Uranium)	2014	2.9	2	2.9	0	15	pCi/L	No	Erosion of natural deposits.
Combined Radium 226 /228	2014	2.9	2.9	2.9	0	5	pCi/L	No	Erosion of natural deposits.
Uranium	2014	1.2	1.2	1.2	0	30	ppb	No	Erosion of natural deposits.

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 cause for health concerns and are not required to be reported in this document, but they may affect the appearance and taste of your water.

Contaminant	Year	Average Level Detected	Minimum Level Detected	Maximum Level Detected	Unit of Measure	Secondary MCL
Bicarbonate	2014	238	238	238	ppm	no MCL
Calcium	2010	41.3	41.3	41.3	ppm	no MCL
Chloride	2014	48	48	48	ppm	250
Fluoride	2014	0.64	0.64	0.64	ppm	2
Iron	2010	21	21	21	ppb	300
Magnesium	2010	7.61	7.61	7.61	ppm	no MCL
Manganese	2010	3.7	3.7	3.7	ppb	50
pH	2015	7.6	7.6	7.6	units	> 7
Sodium	2010	53.7	53.7	53.7	ppm	no MCL
Sulfate	2014	11	11	11	ppm	300
Total Alkalinity	2014	193	193	193	ppm	no MCL
Total Dissolved Solids	2014	308	308	308	ppm	1000
Total Hardness as $CaCO_3$	2010	134	134	134	ppm	no MCL
Zinc	2010	0.0079	0.0079	0.0079	ppm	5

WATER LOSS

Each year the City is required to prepare and submit a water-loss audit to the Texas Water Development Board and report system water loss to our customers. In 2015, water loss in the RiverPark system was 0.84 percent of the 203.8 million gallons produced. The City's Main System experienced an 11.6 percent loss of the more than 5,630 million gallons produced by the Surface Water Treatment Plant and the 14 groundwater wells. City staff strives to minimize losses through short time leak repair protocols, routine system maintenance, a robust meter replacement program, and documenting water used for system maintenance.

A water-loss audit is a tool used by water utilities to assess the volume of water produced compared to volumes of water sold to customers. Water loss cannot be avoided as line breaks and undetected leaks and line flushing occur throughout any water delivery system. Keeping losses to a minimum represents a utility's commitment to efficient water management and low water rates. A low water loss indicates delivery lines are maintained, metering equipment is accurate and the utility is proficiently accounting for water used for system maintenance.

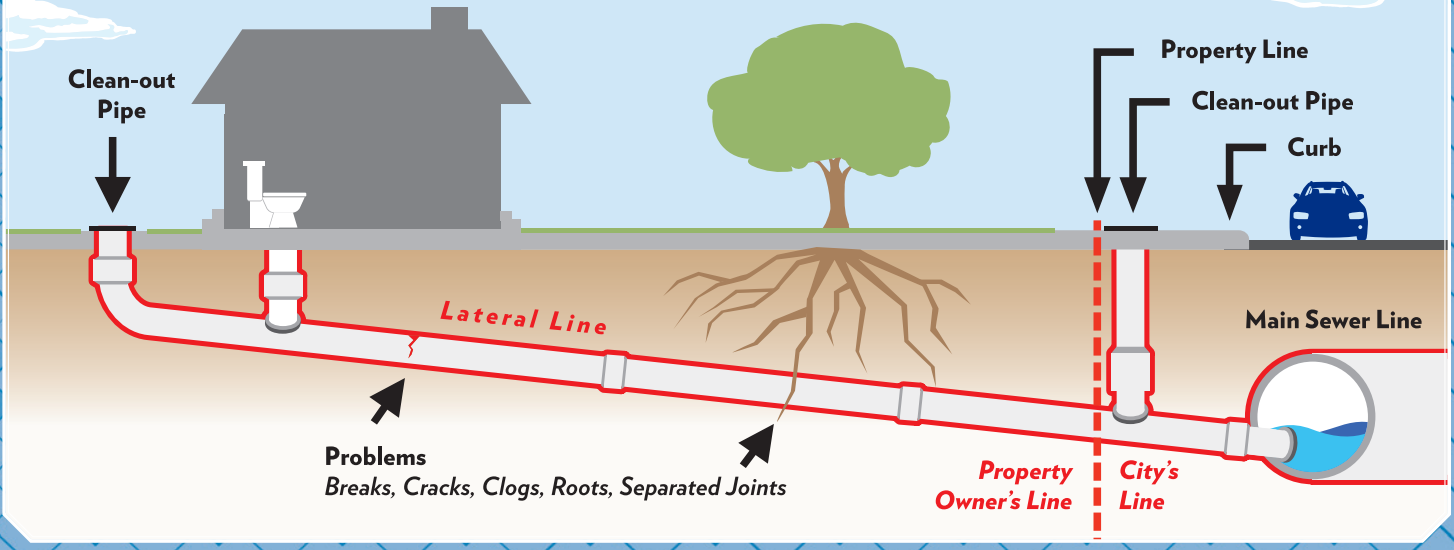
Hot, dry weather can cause water lines to more easily break. The City depends on the public to alert the **Public Works Department** if a leak is seen by calling **281-275-2450** at any time day or night. The public has a greater chance of seeing a water leak, as City employees are not able to monitor the entire city at all times.

"We encourage Sugar Land citizens to contact us when they see a water leak," said Joe Reyes, Public Works field operations manager. "Our customer service team investigates all reported water leaks to determine the cause."

REPORT WATER LEAKS

If you see a water leak along a roadway or in a yard, please report it to the **Public Works Department**. **CALL 24/7: 281-275-2450**.

SANITARY SEWER



In addition to leaks in the City's Main System lines, leaks can occur in clogged sewer lines in homes and businesses. The City repairs stoppages in its collection system. Household clogs may require the resident to hire a plumber. Reyes says: "It is always good to call the City first. Hiring a plumber can be costly, and we do not reimburse homeowners for a plumber if the City was not called first."

Sewer lines can become clogged by fat, oil, grease and feminine hygiene products. To prevent sewer line stoppages, dispose of the following items in the trash, not in the drain, disposal or toilet.

- egg shells
- "flushable" wipes
- diapers
- fruit and vegetable peels
- hygiene products
- oil or grease

If water is flowing down a drain more slowly than usual or water backs up, report the problem to the City's **24-hour customer service line** at **281-275-2450**. If necessary, a City employee will come to a home or business to investigate the problem and determine whether the clog is in the home's wastewater line or the City's collection pipe.

AVOID SANITARY SEWER BACK-UPS

- scrape grease and fatty food scraps into the trash.
- collect cooking oil in container; then toss in the garbage.
- never pour sauces down the drain, dispose in the trash.
- potato, vegetable, and egg shell peels belong in the trash or compost bin.
- only toilet tissue down the toilet; no "flushable" wipes or personal hygiene products.

Public Works • 111 Gillingham Lane • Sugar Land, TX 77478