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 City's 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 2021.

ABBREVIATIONS

N/A:	Not Applicable	pCi/L:	pico Curies per Liter; measure of radioactivity
ND:	None Detected	ppm:	parts per million or milligrams per liter (mg/L)
NTU:	Nephelometric Turbidity Units (a measure of turbidity)	ppb:	parts per billion, or micrograms per liter (μ g/L)

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Bacteria

Contaminant	Year	MCLG	Total Coliform MCL	Highest # of Total Coliform Positive	Fecal Coliform or E Coli MCL	Total # of Positive E Coli or Fecal Coliform Samples	Violation (Yes/No)	Likely Source of Contamination
Coliform Bacteria	2021	0	TT	1	Routine and repeat samples are total coliform-positive and either is E. coli-positive	0	No	Naturally present in the environment.

Copper and Lead

Contaminant	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation (Yes/No)	Likely Source of Contamination
Copper	2020	1.3	1.3	0.1877	0	ppm	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2020	0	15	1.9	0	ppb	No	Corrosion of household plumbing systems; Erosion of natural deposits.

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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)	2021	2.70	0.5	4.00	4	4	ppm	No	Water additive used to control microbes.
Chlorine Dioxide	2021	100	0	270	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)	2021	7.3	0.0	11.9	No Goal for the total	60	ppb	No	By-product of drinking water disinfection.
TTHMs (Total	2021	19	0.0	7.7	No Goal for	80	dqq	No	By-product of drinking
timatomethanes)	2021	4.5	0.0		the total				water disinfection.

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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	2021	0.086	0.086	0.086	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Cyanide	2021	20	0	20	200	200	ppb	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories.
Fluoride	2021	0.13	0.13	0.13	4	4	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate (as Nitrogen)	2021	1.87	0	1.87	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Synthetic Organic Contaminants including Pesticides and Herbicides

Contaminant	Year	Highest Level Detected	Minimum Level Detected	Maximum Level Detected	MCLG	MCL	Unit of Measure	Violation (Yes/No)	Likely Source of Contamination
Atrazine	2021	0.98	0	0.98	3	3	ppb	No	Runoff from herbicide used on row crops.
Simazine	2021	0.12	0	0.12	4	4	ppb	No	Runoff from herbicide use.

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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
Beta/photon emitters*	2021	4.7	4.7	4.7	0	50*	pCi/L	No	Decay of natural and man-made deposits.
Combined Radium 226 / 228	2020	1.96	1.96	1.96	0	5	pCi/L	No	Erosion of natural deposits.

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

Volatile Organic Contaminants

Contaminant	Year	Highest Level Detected	Minimum Level Detected	Maximum Level Detected	MCLG	MCL	Unit of Measure	Violation (Yes/No)	Likely Source of Contamination
Xylenes	2021	0.0005	0	0.0005	10	10	ppm	No	Discharge from petroleum factories; discharge from chemical factories.

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	6.15	4.17	10.4	n/a	TT	ppm	Naturally present in the environment.
TOC- Drinking Water	3.43	2.22	5.1	n/a	TT	ppm	Naturally present in the environment.
TOC % Removal	43.3	30.7	56.3	n/a	TT	%	n/a

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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	Likely Source of Contamination
Highest single measurement	1.0 NTU	0.06	N	Soil runoff
Lowest monthly % meeting limit	0.3 NTU	100%	N	Soil runoff

Secondary Constituents and Other Non-Regulated Contaminants

Contaminant	Year	Average Level Detected	Minimum Level Detected	Maximum Level Detected	Unit of Measure	Secondary MCL
Bromodichloromethane	2021	0.4	0	1	ppb	no MCL
Bromoform	2021	0.2	0	1.4	ppb	no MCL
Calcium	2021	44.2	28	64.6	ppm	no MCL
Chloride	2021	51.1	32.9	63.9	ppm	250
Chloroform	2021	0.4	0	1.4	ppb	no MCL
Chlorodibromomethane	2021	0.2	0	1.3	ppb	no MCL
Iron	2021	12.2	0	151	ppb	300
Magnesium	2021	8.4	8.3	8.5	ppm	no MCL
Manganese	2021	7.4	0	72.5	ppb	50
Nickel	2021	1.8	1.8	1.8	ppb	100
рН	2021	8.1	7.4	8.6	units	> 7
Potassium	2021	5.2	5.2	5.2	ppm	no MCL
Sodium	2021	56.4	36.9	97.9	ppm	no MCL
Sulfate	2021	21	15	27	ppm	300
Total Alkalinity	2021	175	131	225	ppm	no MCL
Total Dissolved Solids	2021	251	91	878	ppm	1000
Total Hardness as CaCO ₃	2021	148	101	213	ppm	no MCL
Zinc	2021	0.0049	0	0.0097	ppm	5