

WATER QUALITY REPORT

January 1 - December 31, 2020



TX1050001

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water. We hope this information helps you become more knowledgeable about what's in your drinking water. Please feel free to contact our Water Quality Manager at (512) 393-8010 if you have any questions or would like to request a meeting regarding your drinking water. Este reporte incluye información importante sobre el agua para toma. Para asistencia en español, favor de llamar al telefono (512) 393-8010.

The City of San Marcos is recognized by the Texas Commission on Environmental Quality as a "Superior Public Water System." This recognition is achieved by exceeding the minimum acceptable standards for operating a public water system and for the quality of the water. Our water system was in full compliance with the State of Texas and EPA national primary drinking water regulations during the 12-month period covered by this report.

FACTS ABOUT YOUR WATER SOURCES

The City of San Marcos Water/Wastewater Utilities' goal and responsibility is to provide you safe and reliable drinking water. Our drinking water is obtained from surface and ground water sources. Our ground water comes from the Edwards Aquifer (South BFZ) and our surface water comes from Canyon Lake.

The sources of drinking water (both tap and bottled) 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.

A Source Water Susceptibility Assessment for your drinking water sources has not been conducted by the Texas Commission on Environmental Quality. The report describes the susceptibility and the 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 allows us to focus our source water protection strategies.

FACTS (continued)

Dinking 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.

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

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 us at (512) 393-8010.

Contaminants that may be present in source water before treatment 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 may come from 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 by-products of industrial processes and petroleum production and can also come from gas stations, urban storm water runoff and septic systems.
- **Radioactive contaminants** which can be naturally-occurring or the result of oil and gas production and mining activities.

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; persons 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. These people should seek advice about drinking water from their health care providers. 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**.

INFORMATION ABOUT LEAD

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water primarily comes from materials and components associated with service lines and home plumbing. We are responsible for providing high quality drinking water, but we 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 <http://www.epa.gov/safewater/lead>.

WATER LOSS

The City is required to submit a Water Audit Report to the Texas Water Development Board annually. In 2020 our system lost an estimated 139,665,124 gallons of the 3,032,393,353 gallons that entered the system — or approximately 4.6% of our water.



KEY TERMS AND ABBREVIATIONS

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

Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Level 1 Assessment: A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

MCL (Maximum Contaminant Level): 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.

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

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): 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 contaminants.

N/A: Not applicable

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L: Picocuries per liter (a measure of radioactivity)

ppb (parts per billion or micrograms per liter): One ounce in 7,350,000 gallons of water, or 1 penny in 10 million dollars.

ppm (parts per million or milligrams per liter): One ounce in 7,350 gallons of water, or 1 penny in 10 thousand dollars.

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

PUBLIC PARTICIPATION

The Citizen Utility Advisory Board (CUAB) advises Council regarding business aspects of water and wastewater. Meetings are scheduled as needed. If you'd like to be notified of future meetings, sign up for e-Notify Me at www.sanmarcostx.gov. If you have a question, reach us by phone at (512) 393-8010 or visit us on the web at www.sanmarcostx.gov/water.

REGULATED CONTAMINANTS (Substances were sampled in 2020 unless specified beside name)

Inorganic Contaminants	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Unit of Measure	Likely Source of Contamination
Barium	0.0501	0.0395– 0.0501	2	2	No	ppm	Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries.
Fluoride	0.22	0.19– 0.22	4	4			Erosion of natural deposits; City discontinued adding fluoride in 2015.
Nitrate – measured as Nitrogen	1.9	1.19 – 1.9	10	10			Erosion of natural deposits; Runoff from fertilizer use; Leaching from septic tanks, sewage.
Selenium	0.0049	0—0.0049	0.05	0.05			Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

Radioactive Contaminants	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Unit of Measure	Likely Source of Contamination
Combined Radium 226/228 (2017)	1.5	1.5-1.5	0	5	No	pCi/L	Erosion of natural deposits.

Turbidity	Limit (Treatment Technique)	Level Detected	Violation	Possible Source of Substance
Highest single measurement	1 NTU	0.09 NTU	No	Soil runoff.
Lowest monthly % meeting limit	0.3 NTU	100%		

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 system and disinfectants.

Total Organic Carbon

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted.

Disinfection By-products	Highest Level Detected*	Range of Levels Detected	MCLG	MCL	Unit of Measure	Violation	Source of Substance
Chlorite	0.658	0 -0.658	0.8	1.0	ppm	No	By-product of drinking water disinfection.
Haloacetic Acids (HAA5)*	13	0 – 17.7	No goal for the total	60	ppb	No	
Total Trihalomethanes (TTHM)*	50	4.4 - 65.3	No goal for the total	80	ppb	No	

*The value in the Highest Level Detected column for HAA5 and TTHM is the highest average of all the sample results collected at a location over a year.

REGULATED CONTAMINANTS (continued)

Substance	MCLG	Action Level	90 th Percentile Values	# Sites Over Action Level	Violation	Unit of Measure	Possible Source of Substance
Copper (2018)	1.3	1.3	0.18	0	No	ppm	Erosion of natural deposits; Corrosion of household plumbing systems.
Lead (2018)	0	15	2.1	0		ppb	Erosion of natural deposits; Corrosion of household plumbing systems.

Substance	Average Level	Range of Levels Detected	MRDLG	MRDL	Violation	Unit of Measure	Source of Substance
Disinfectant Residual	1.41	0.26 - 3.10	<4.0	4.0	No	ppm	Chlorine gas or Sodium hypochlorite used as a disinfectant to control microbes.
Substance	Total Coliform MCL	Highest Monthly % of Total Coliform Positive Samples	Total No. of Positive E-Coli or Fecal Coliform Samples		Violation	Source of Substance	
Coliform Bacteria	5% of monthly samples are positive	1.4	0		No	Naturally present in the environment.	

WATER HARDNESS

Substance	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Substance
Total Hardness (as CaCO₃)	16.0	14.1	19.2	N/A	gpg (grain per gallon)	Hard water is formed when water percolates through deposits of limestone and chalk which are largely made of calcium and magnesium carbonates. Hard water is not a health risk, but a nuisance because of mineral buildup on plumbing fixtures and poor soap and/or detergent performance.
	274	241	329	N/A	ppm	