



2015

Drinking **WATER**

QUALITY Report

TX1050001

Annual Water Quality Report for the period of January 1 to December 31, 2015.

Este reporte incluye información importante sobre el agua para toma. Para asistencia en español, favor de llamar al telefono (512) 393-8010.

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.

FACTS ABOUT YOUR DRINKING WATER

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.

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) 393-8038 if you have any questions or would like to request a meeting regarding your drinking water.

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 sub-

stances resulting from the presence of animals or from human activity.

A Source Water Susceptibility Assessment for your drinking water source(s) is currently being updated by the Texas Commission on Environmental Quality. 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 on source water protection strategies.

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at: <http://gis3.tceq.state.tx.us/swav/Controller/index.jsp?wtrsrc=>

Further details about sources and source water assessments are available in Drinking Water Watch at: <http://dww.tceq.texas.gov/DWW>.

ALL DRINKING WATER MAY CONTAIN CONTAMINANTS

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.

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.

IMPORTANT HEALTH INFORMATION

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.

LEAD IN HOMES

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 2015, our system lost an estimated 394,463,672 of the 2,631,740,357 gallons that entered the system—or 14.99% 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.

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

Avg (Average): Regulatory compliance with some MCLs is based on running annual average of monthly samples.

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.

SMCL Secondary Maximum Contaminant Level Allowed based on aesthetic considerations, such as taste, color and odor (not a Federally enforceable standard).

NOTE: All substances displayed on the following tables were sampled and analyzed during 2015 unless otherwise specified beside the name of the substance.

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

Inorganic Contaminants	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Unit of Measure	Likely Source of Contamination
Fluoride	0.84	0.21 – 0.84	4	4	No	ppm	Erosion of natural deposits; Water additive which promotes strong teeth; By-product from fertilizer and aluminum factories.
Nitrate – measured as Nitrogen	2.3	0.44 – 2.3	10	10			Erosion of natural deposits; Runoff from fertilizer use; Leaching from septic tanks, sewage.
Barium	0.0408	.0283 – .0408	2	2			Erosion of natural deposits; Discharge of drilling wastes; Discharge from metal refineries.
Cyanide	.010	0-0.010	2	2			Discharge from plastic and fertilizer factories; Discharge from steel/metal factories.
Selenium	0.0041	0-0.0041	0.050	0.050			Erosion of natural deposits; Discharge from mines; Discharge from petroleum and metal refineries.
Radioactive Contaminants	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation	Unit of Measure	Likely Source of Contamination
Combined Radium 226/228 (2011)	1	1-1	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	0.19 NTU	No	Soil runoff.
Lowest monthly % meeting limit	.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.

* UNREGULATED CONTAMINANTS

Total Organic Carbon (TOC)	Average Level	Minimum Level	Maximum Level	Unit of Measure	Possible Source of Substance
Source Water TOC	1.79	0.99	3.12	ppm	Total Organic Carbon (TOC) is naturally present in the environment.
Drinking Water TOC	1.26	0.79	1.9		

* SECONDARY & OTHER CONSTITUENTS

Substance	Average Level	Minimum Level	Maximum Level	SMCL	Unit of Measure	Possible Source of Substance
Total Dissolved Solids	278	225	378	1,000	ppm	Total dissolved mineral constituents in water.
Chloride	22.3	20	25	300		Abundant naturally occurring element; used in water purification; byproduct of oil field activity.
Sodium	12.2	9.66	15.1	N/A		Erosion of natural deposits; byproduct of oil field activity.
Sulfate	24	19	31	300		Naturally occurring; common industrial byproduct; byproduct of oil field activity.
Total Hardness (as CaCO ₃)	239	183	334	N/A		Naturally occurring; soluble mineral salts.

* **Unregulated contaminants are those for which the 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 regulations are warranted.**

REGULATED IN THE DISTRIBUTION SYSTEM

Substance	Average Level	Range of Levels Detected	MRDLG	MRDL	Violation	Unit of Measure	Source of Substance
Chlorine Residuals	1.2	0.24 - 2.46	<4.0	4.0	No	ppm	Chlorine gas or Sodium hypochlorite used as a disinfectant to control microbes.
Substance	Highest Locational Running Annual Average	Range of Levels Detected	MCLG	MCL	Violation	Unit of Measure	Source of Substance
Haloacetic Acids (HAA5)	18.2	1.2 – 24.5	No goal for the total	60	No	ppb	By-product of drinking water chlorination.
Total Trihalomethanes (TTHM)	69.3	7.0 – 91.5		80	No		
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% per month	1.5%	0		No	Naturally present in the environment.	

Total Trihalomethanes (TTHM) Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Total coliform bacteria are used as indicators of microbial contamination of drinking water. 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. Fecal coliform bacteria and, in particular, E. coli, are members of the coliform bacteria group originating in the intestinal tract of warm-blooded animals and are passed into the environment through feces. The presence of fecal coliform bacteria (E. coli) in drinking water may indicate recent contamination of the drinking water with fecal material. The preceding table indicates whether total coliform or fecal coliform bacteria were found in the monthly drinking water samples submitted for testing by your water supplier last year.

REGULATED AT THE CUSTOMER'S TAP

Substance	MCLG	Action Level	90 th Percentile Values	# Sites Exceeding Action Level	Violation	Unit of Measure	Possible Source of Substance
Copper (2015)	1.3	1.3	0.26	0	No	ppm	Erosion of natural deposits; Corrosion of household plumbing systems.
Lead (2015)	0	15	3.4	1		ppb	Erosion of natural deposits; Corrosion of household plumbing systems.

Violation Type	Violation Begin	Violation End	Violation Explanation
Lead Consumer Notice Rule (LCR)	12/30/2015	2/17/2016	The City failed to provide TCEQ the Lead Consumer Notice Certification Form by December 30, 2015 for the lead tap water monitoring conducted in September 2015. However, per the rule, the City did provide the consumer notice of the results to all participants within 30 days.

Lead and Copper Rule protects public health by minimalizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.