



2018 Annual Drinking Water Quality Report for the City of Fredericksburg ~ PWS # TX0860001

Provided to you by:

The City of Fredericksburg

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CONSUMER CONFIDENCE REPORT

The United States Environmental Protection Agency (EPA) requires all drinking water suppliers to provide a water quality report to their customers on an annual basis. This report is for the period of January 1 to December 31, 2018, and is a summary of the quality of the water we provide our customers. The analysis was made using the data from the most recent EPA required tests and is presented in the following report. In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limits the amount of certain contaminants in water provided by public water systems. Food & Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. We hope this information helps you become more knowledgeable about what is in your drinking water. It is important to us that you have information about your drinking water so you can have confidence in the product we deliver. In the tables included in this report, you will find a list of what is in the water and at what levels. ***The City of Fredericksburg water system has received a Superior Water Supply Rating from the TCEQ.***

WATER SOURCES

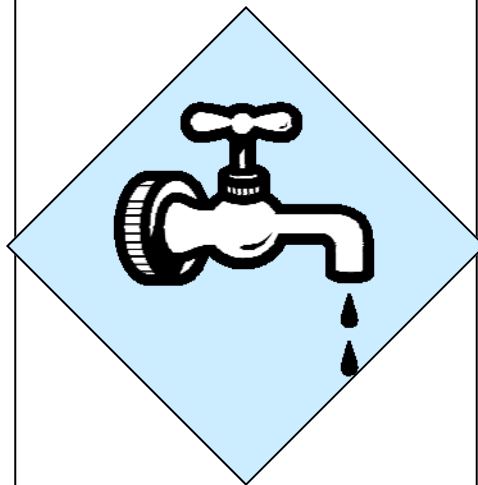
The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals, and in some cases, radioactive material, and can pick 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.

WHERE DO WE GET OUR DRINKING WATER?

Our drinking water is obtained from nine groundwater wells; eight are located in the Ellenburger and one in the Hickory Sands Aquifers. A Source Water Susceptibility Assessment for our drinking water sources is currently being updated by the Texas Commission on Environmental Quality. The 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 our source water protection strategies. Details about sources and sourcewater assessments are available on the Texas Drinking Water Watch at <http://dww2.tceq.texas.gov/DWW/>. For more information on source water assessments and protection efforts at our system, please contact us.

ALL DRINKING WATER MAY CONTAIN CONTAMINANTS

When drinking water meets federal standards, there may not be any health-based benefits to purchasing bottled water or point of use devices. 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 Environmental Protection Agency's Safe Drinking Water Hotline (1-800-426-4791).

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 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 physical or healthcare provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (1-800-426-4791).

WE WELCOME YOUR COMMENTS AND PARTICIPATION

The City of Fredericksburg Water Department is part of your city government. The City Council meets the first and third Mondays of every month at 6:00 p.m. at the Law Enforcement Center located at 1601 East Main Street. If you have any questions or concerns about water quality, please call Jeff Rich, Water Department Superintendent, at 830-997-7521.

EN ESPAÑOL

Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre este informe en español, favor de llamar al tel. (830) 997-7521 para hablar con una persona bilingüe en español.

UNDERSTANDING THE CHARTS

These tables list all of the federally regulated or monitored contaminants which have been found in your drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants.

Definitions & Abbreviations

Maximum Contaminant Level (MCL) - 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.

Maximum Contaminant Level Goal (MCLG) - 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.

Maximum Residual Disinfectant Level (MRDL) - 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.

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.

mrem - Millirems per year (a measure of radiation absorbed by the body).

na - Not applicable.

NTU - Nephelometric Turbidity Units. This is the unit used to measure water turbidity.

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

Action Level Goal (ALG) - 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.

ppm - milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.

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

ppb - micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.

Treatment Technique (TT) - A required process intended to reduce the level of a contaminant in drinking water.

pCi/L - Picocuries per liter is a measure of radioactivity in water.

MFL - million fibers per liter (a measure of asbestos)

ppt - parts per trillion, or nanograms per liter

ppq - parts per quadrillion, or picograms per liter

REGULATED CONTAMINANTS DETECTED

Lead & Copper - Tested 2018

Substance	MCLG	Action Level (AL)	90th Percentile	# of Sites Over Action Level	Violation	Possible Source of Substance
Lead* (ppb)	0	15	3.7	2	N	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	0	1.3	0.164	0	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems

***Additional Health Information for Lead**

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. This water supply 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 <http://www.epa.gov/safewater/lead>.

Disinfectants & Disinfection Byproducts - Tested 2018

Contaminant	Highest Single Sample	Range of Levels Detected	MCLG	MCL	Violation	Possible Source Of Contaminant
Haloacetic Acids (HAA5) (ppb)	6.2	1.8 - 6.2	0	60	N	By-product of drinking water chlorination
Total Trihalomethanes (TTHm) (ppb)	33	1.5 - 33	0	80	N	By-product of drinking water chlorination

*Not all sample results may have been used for calculating the Highest Single Sample because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

Coliform Bacteria - Tested in 2018

MCLG	Total Coliform Maximum Contaminant Level	Highest # of Positive Samples	Fecal Coliform or E. Coli Maximum Contaminant Level	Total # of Positive E. Coli or Fecal Coliform Samples	Violation	Possible Source of Contaminant
0	1 positive monthly sample	There were no TC detections for this system in this CCR period	1 positive monthly sample	0	N	Naturally present in the environment

Inorganic Contaminants - Tested 2017 unless noted otherwise

Contaminant	Highest Single Sample	Range of Levels Detected	MCLG	MCL	Violation	Possible Source Of Contaminant
Arsenic (ppm)	0.0022	0 - 0.0022	0	0.1	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	0.116	0.102 - 0.116	2	2	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppm)	< 0.01	< 0.01	0.1	0.1	N	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	0.75	0.66 - 0.75	4	4	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate* (ppm) [Measured as Nitrogen] (Tested 2018)	1.97	1.25 - 1.97	10	10	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppm)	0.0065	0.0047– 0.0065	0.05	0.05	N	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines

*Nitrate Advisory

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agriculture activity. If you are caring for an infant, you should ask advice from your health care provider.

Radioactive Contaminants - Tested 6/21/2017 unless noted otherwise

Contaminant	Highest Single Sample	Range of Levels Detected	MCLG	MCL	Violation	Possible Source Of Contaminant
Combined Radium 226/228 (pCi/L)	< 1	< 1	0	5	N	Erosion of natural deposits
Gross alpha excluding radon & uranium (pCi/L)	5	3 - 5	0	15	N	Erosion of natural deposits
Gross Beta Particle (pCi/L)	6.8	4.4 - 6.8	0	50	N	Decay of natural and man-made deposits.
Uranium (ug/l)	2.5	1.8 - 2.5	0	30	N	Erosion of natural deposits

DISINFECTION DATA

Chlorine Residual Disinfectant Level - Tested in 2018

Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source Of Disinfectant
Chlorine Residual, Free	1.41	0.78	1.89	4	< 4	ppm	Disinfectant used to control microbes.

VIOLATIONS

The City of Fredericksburg's Water System had no violations in 2018.

Violation Type	Violation Begin	Violation End	Violation Explanation	Corrective Action Taken
none				

UNREGULATED CONSTITUENTS

Secondary and Other Constituents Not Regulated by EPA

Constituent	Average Level	Range (Minimum-Maximum) of Detected Levels	Secondary Limit	Unit of Measure	Source of Constituent
Bicarbonate	354	337 - 371	N/A	ppm	Corrosion of carbonate rocks, such as limestone.
Chloride	79	66 - 94	250	ppm	Abundant naturally-occurring element; used in water purification; byproduct of oil field activity.
Hardness as Ca/Mg	360	296 - 410	N/A	ppm	Naturally-occurring calcium and magnesium.
pH	7.45	7.2 - 7.7	6.5 - 8.5	units	Measure of corrosivity of water.
Sulfate	41	32 - 48	250	ppm	Naturally occurring; common industrial byproduct; byproduct of oilfield activity.
Total Alkalinity	298	270 - 318	N/A	ppm	Naturally-occurring soluble mineral salts
Total Dissolved Solids	468	304 - 560	500	ppm	Total dissolved mineral constituents in water

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 concern. Therefore, these secondary constituents are not required to be reported in this document, but they may greatly affect the appearance and taste of your water.

2018 Water Loss Audit

In the water loss audit submitted to the Texas Water Development Board (TWDB) for the time period of January to December 2018, our system lost an estimated 14.91 gallons of water per connection per day. If you have questions about the water loss audit please call the City at (830)997-7521.

OUR DRINKING WATER MEETS OR EXCEEDS ALL FEDERAL (EPA) DRINKING WATER REQUIREMENTS

Providing safe and reliable drinking water is the highest priority for the City of Fredericksburg Water Department. Our employees take pride in producing and delivering water to your tap that meets or exceeds state and federal requirements.

This report is a summary of the quality of the water that the City of Fredericksburg provides our customers. This analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in this report. We hope this information helps you become more knowledgeable about what is in your drinking water.