

2016 Annual Drinking Water Quality Report

(Consumer Confidence Report)

CITY OF GRAHAM
940-549-3324

SPECIAL NOTICE

Required language for ALL community public water supplies:

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly or immunocompromised such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who have undergone treatment with steroids; and people with 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.

Public Participation Opportunities

Date: Every other Thursday

Time: 9:30 a.m.

Location: Council Chambers

Graham Visitor and Business Center

608 Elm Street ~ Graham, Texas 76450

Phone Number: (940) 549-3324

To learn about future public meetings (concerning your drinking water), or to request to schedule one, please call us.

Our Drinking Water Is Regulated

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

Source of Drinking Water

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 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 be the result of oil and gas production and mining activities.

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. (940) 549-3324 - para hablar con una persona bilingüe en español.

Where do we get our drinking water?

The source of drinking water used by CITY OF GRAHAM is Surfaced Water.

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 focus source water protection strategies. Some of this source water assessment information is available on Texas Drinking Water Watch at <http://dww.tceq.state.tx.us/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 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 EPA's Safe Drinking Water Hotline (1-800-426-4791).

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, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

Required Additional Health Information of 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 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>.

Abbreviations

NTU - Nephelometric Turbidity Units
MFL - million fibers per liter (a measure of asbestos)
pCi/L - picocuries per liter (a measure of radioactivity)
ppm - parts per million, or milligrams per liter (mg/L)
ppb - parts per billion, or micrograms per liter
ppt - parts per trillion, or nanograms per liter
ppq - parts per quadrillion, or picograms per liter

Definitions

Maximum Contaminant Level Goal or 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 Contaminant Level or 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 residual disinfectant level goal or 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 contaminants.
Maximum residual disinfectant level or 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.
Avg:	Regulatory compliance with some MCLs are based on running annual average of monthly samples.
ppm:	milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.
ppb:	micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.
na:	not applicable
na:	The following tables contain scientific terms and measures, some of which may require explanation.

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Haloacetic Acids (HAA5)*	2016	33.3	26	No goal for total	60	ppb	N	By-product of drinking water chlorination
Total Trihalomethanes (TTHm)*	2016	26.9	1.00	No goal	80	ppb	N	By-product of drinking water chlorination
Inorganic Contaminants	Collection Date	Highest Level	Range of Levels	MCLG	MCL	Units	Violation	Likely Source of Contamination
Arsenic	2016	.00070	1.6-1.6	0	.01	ppb	N	Erosion of natural deposits; runoff from orchards; runoff glass and electronics production wastes
Barium	2016	.0007	0.06-0.06	2	2	ppm	N	Discharge of drilling wastes; discharge of metal refineries; erosion of natural deposits
Chromium	2016	.00040	0.7-0.7	.01	.01	ppl	N	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride	2016	.050	0.7	4.0	4.0	ppm	N	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury	2016	.00007		.002	.002	ppb	N	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nitrate (measured as Nitrogen)	2016	.0100	0.09-0.09	10	10	ppm	N	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	2016	< 0.001	5.13-5.13	.05	.05	ppb	N	Discharge from petroleum metal refineries; erosion of natural deposits; discharge from mines
Thallium	2016	.0002	0.234-0.234	.002	.002	ppb	N	Discharge from electronics, glass, and leaching from ore-processing sites; drug factories

Turbidity

	Limit (Treatment Technique)	Level Detected	Violation	Likely Source of Contamination
Highest single measurement	1 NTU	0.29 NTU	N	Soil runoff
Lowest monthly % meeting limit	.3 NTU	100%	N	Soil runoff

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform of E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli Fecal Coliform Samples	Violation	Likely Source of Contamination
0	0	0	0	0	N	Naturally present in the environment

Maximum Residential Disinfectant Level

Disinfectant Type	Average Level	Min. Level	Max. Level	MRDL	MRDLG	Unit	Source
cla	2.3	1.2	5.0	4	4	ppm	Disinfectant used to control microbes

Lead and Copper

Definitions:

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.

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

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over All	Units	Violation	Likely Source of Contamination
Copper	9-23-16	1.3	1.3	0.124	20	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	9-23-16	.015	.015	.001	20	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Water Loss Audit

In the water loss audit submitted to the Texas Water Development Board for the time period of January-December 2016, our system lost an estimated 248,697,928 gallons of water. If any questions about the water loss audit, call 940-549-1466.

Lead and Copper Rule			
The Lead and Copper Rule protects public health by minimizing 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.			
Violation Type	Violation Begin	Violation End	Violation Explanation
INITIAL TAP SAMPLING (LCR)	06/01/2014	09/01/2014	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.
LEAD CONSUMER NOTICE (LCR)	06/01/2013	09/01/2013	We collected lead and copper samples in 2013 and while all samples were properly collected and within required parameters we failed to provide the Lead Consumer Notification to the sample sites and the Lead Consumer Certification to the TCEQ in a timely fashion which caused an infraction of the rules
PUBLIC EDUCATION (LCR)	06/01/2014	09/01/2014	We failed to adequately educate you regarding the health problems associated with and sources of elevated lead levels in our water system.

Public Notification Rule			
The Public Notification Rule helps to ensure that consumers will always know if there is a problem with their drinking water. These notices immediately alert consumers if there is a serious problem with their drinking water (e.g., a boil water emergency).			
Violation Type	Violation Begin	Violation End	Violation Explanation
PUBLIC NOTICE RULE LINKED TO VIOLATION	MM/DD/YYYY	MM/DD/YYYY	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.

Chlorine Dioxide			
Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.			
Violation Type	Violation Begin	Violation End	Violation Explanation
MRDL ACUTE (CHLORINE DIOXIDE)	07/01/2016	07/31/2016	Water samples showed that the amount of this disinfectant in our drinking water was above its maximum allowed level for the period indicated. Because of the disinfectant and the sample locations, this posed an acute health risk.

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