

# 2016 Annual Drinking Water Quality Report

## Consumer Confidence Report (CCR)



(512) 312-0084

PWS ID#: TX1050012

[www.ci.buda.tx.us](http://www.ci.buda.tx.us)

The Texas Commission on Environmental Quality (TCEQ) requires that all drinking water suppliers provide a water quality report to their customers on an annual basis to provide you with important information about your drinking water. This report is for the period of January 1 to December 31, 2016.

### Public Participation Opportunities

City of Buda is dedicated to providing high quality drinking water to our citizens. The public is welcome to attend the Buda City Council meetings held the 1<sup>st</sup> and 3<sup>rd</sup> Tuesday of the month at 6:30 p.m. The meetings are located in the council chambers at City Hall located at 121 Main Street in Buda.

For information regarding this report contact:  
Brian Lillibridge, Water Specialist  
512-312-2876

### En Español

**Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (512) 312-0084.**

### 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 Safe Drinking Water Hotline at (800) 426-4791**.

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 and 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.

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

### Sources of 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 substances resulting from the presence of animals or from human activity.

### City of Buda's Water Supply

Our drinking water is obtained from both groundwater and surface water sources. Our groundwater comes from the Edwards Aquifer which currently supplies 40% of our water supply. This water is treated at each individual well site in the City of Buda. The remaining 60% of our water comes from Canyon Lake via the Guadalupe River. This water is treated at the San Marcos Surface Water Treatment Plant. The plant is owned by the City of San Marcos and operated by the Guadalupe Blanco River Authority (GBRA). For information regarding GBRA's water treatment processes, please call (512) 353-3888.

The TCEQ completed an assessment of your source water and results indicate that some of your sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system, contact Brian Lillibridge at (512) 312-2876.

### 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; 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. You should seek advice about drinking water from your physician or health care providers. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (800-426-4791).

### Health 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 is primarily 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>.

### Secondary Contaminants

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 cause for health concern. Therefore, secondary contaminants are not required to be reported in this document but they may greatly affect the appearance and taste of your water. For more information on taste, odor, or color of drinking water, please contact the system's business office at (512) 312-2876.

### Source Water Assessments

The TCEQ completed an assessment of your source water and results indicate that some of your sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in the Consumer Confidence Report. For more information on source water assessments and protection efforts at our system, contact Brian Lillibridge, Water Specialist at (512) 312-0084. For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: <http://www.tceq.texas.gov/gis/swaview>

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

# Water Quality Test Results

**Definitions – the following tables contain scientific terms and measures, some of which may require explanation:**

**Average (avg):** Regulatory compliance with some MCLs are based on running annual average of monthly samples.

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

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

**Level 1 Assessment:** A Level 1 assessment is 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 Level 2 assessment is a very 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.

**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 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 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 contaminants.

**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.

**MFL:** million fibers per liter (a measure of asbestos)

**mrem:** millirems per year (a measure of radiation absorbed by the body)

**na:** not applicable

**NTU:** nephelometric turbidity units (a measure of turbidity)

**pCi/L:** picocuries per liter (a measure of radioactivity).

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

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

**ppq:** parts per quadrillion, or picograms per liter (pg/L)

## 2016 Regulated Contaminants Detected

**Lead and Copper** (Note: Lead and copper sampling is required every 3 years. These are the most recent results.)

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90 <sup>th</sup> Percentile	No. of Sites over AL	Units	Violation	Likely Source of Contaminant
Copper	2016	1.3	1.3	0.16	0	ppm	NO	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2016	0	15	1.9	0	ppb	NO	Corrosion of household plumbing systems; Erosion of natural deposits.

### Regulated Contaminants

<i>Disinfectants and Disinfection By-Products</i>	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Haloacetic Acids (HAA5)	2016	17	4.6 – 25.4	No goal for the total	60	ppb	NO	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)	2016	52	15.1 – 83.9	No goal for the total	80	ppb	NO	By-product of drinking water disinfection

<i>Inorganic Contaminants</i>	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	6/9/2015	0.159	0.0297 - 0.159	2	2	ppm	NO	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	6/9/2015	0.69*	0.21-0.69	4	4.0	ppm	NO	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen)	2016	2	0.0 - 1.85	10	10	ppm	NO	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Selenium	6/9/2015	3.1	0-3.1	50	50	ppb	NO	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.

\*Special statement regarding fluoride appears later in report.

<i>Radioactive Contaminants</i>	Collection Date	Highest Level Detected	Range of levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination.
Combined Radium 226/228	6/9/2015	3.4	1.5 – 3.4	0	5	pCi/L	NO	Erosion of natural deposits.

Gross Alpha (excluding radon and uranium)	2015	3.4	0 – 3.4	0	15	pCi/L	NO	Erosion of natural deposits.
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<i>Volatile Organic Contaminants</i>	Collection Date	Highest Level Detected	Range of levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination.
Ethylbenzene	2016	0.8	0 – 0.8	700	700	ppb	NO	Discharge from petroleum refineries.
Xylenes	2016	0.005	0 – 0.005	10	10	ppb	NO	Discharge from petroleum refineries; Discharge from chemical factories.

#### Disinfectant Residuals

Type of Disinfection	Average Quarterly Level	Lowest Single Sample	Highest Single Sample	MRDL	MRDLG	Units	Violation	Source
Free Chlorine	0.92 mg/L	0.40 mg/L	1.8 mg/L	4 ppm	4 ppm	mg/L	NO	Chlorine Gas; water additive used to control microbes

#### Coliform Bacteria

MCLG	Total Coliform MCL	Highest No. of Positive	E. Coli or Fecal Coliform MCL	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation (Y/N)	Likely Source of Contamination
0	0 positive monthly samples	0	0	0	NO	Naturally present in the environment.

#### 2016 Water Loss

Total gallons lost: 17,381,918

Dates of Loss: January – December 2016

In the water loss audit submitted to the Texas Water Development Board for the time period of January through December 2016, our system lost an estimated 17,381,918 gallons of water through main breaks, leaks, inaccurate metering, and other causes. If you have any questions about the water loss audit, please call 512-312-2876.

#### San Marcos Water Treatment Plant Turbidity

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Min	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.02	0.02
Max	0.03	0.06	0.1	0.06	0.07	0.13	0.05	0.04	0.03	0.04	0.03	0.06

Average Turbidity for 2016: 0.04 NTU

2016 Nitrate level: 1.28 mg/l

## Special Statement Regarding Fluoride

The City of Buda does not currently add additional fluoride to any of its water supply sources. Past water quality samples from one of the City's groundwater wells indicate that naturally occurring fluoride present in the aquifer formation exceeds the EPA's secondary constituent level (SCL) of 2.0 mg/l. **The fluoride level of water from this well has never exceeded the Maximum Contaminant Level (MCL) of 4.0 mg/l.**

Water produced from this well enters the distribution system in the Bonita Vista neighborhood where it soon blends with other sources of treated water, effectively lowering the fluoride level below the SCL. When fluoride values exceed the established SCL, additional treatment is not required by the water provider, but the following statement must be provided to the public:

**This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system [name] has a fluoride concentration of [insert value] mg/L.**

Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/L of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/L of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/L because of this cosmetic dental problem.

For more information, please call [name of water system contact] of [name of community water system] at [phone number]. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP.

The groundwater well discussed above was not required to be sampled during 2016, so values for it are not included in this year's annual drinking water quality report. Although no specific treatment action is required, the City is taking the following actions to bring the fluoride level in the water produced from this well below the SCL:

- reduce or stop usage of the well when system water demands are low
- blend water from the well with other treated water supply sources to lower the fluoride level below the SCL before distribution into the water supply system

**If you have any questions regarding this annual water quality report, please contact the City of Buda Public Works Department at 512-312-2876.**