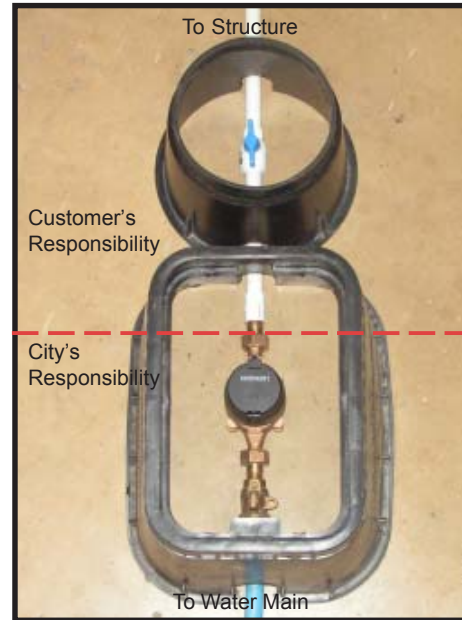


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# 2009 Annual Water Quality Report



## City of Brownwood



**City of  
Brownwood**  
P.O. BOX 1389  
BROWNWOOD, TEXAS 76804

## City of Brownwood

PWSID # 0250002

The City of Brownwood Utility Department has been providing clean water to the community since the early 1900s, helping to keep you and your family healthy. We take this mission very seriously. As shown in this annual report covering the year 2009, the water we delivered surpassed the strict regulations of the State of Texas and the U.S. Environmental Protection Agency. This report is a summary of the quality of water we provide for our customers.

The City of Brownwood purchases treated water from Brown County Water Improvement District #1. The District's water source is surface water from Lake Brownwood.

The TCEQ has completed a Source Water Susceptibility for all drinking water systems that own their sources. This report describes the susceptibility and types of constituents that may come into contact with the drinking water source based on human activities and natural conditions. The system from which we purchase our water received the assessment report. For more information on source water assessments and protection efforts for our system, contact Brown County Water Improvement District #1. Some of this source water assessment information will be available later this year on Texas Drinking Water Watch at <http://dww.tceq.state.tx.us/DWW/>.

The city water delivery system consists of more than 150 miles of various size water mains and four storage tanks containing 5 million gallons of water. We are continuing to make improvements and expanding our capabilities in order to provide to you, our customer, a quality product and quality service.

There is nothing more basic to life in our community than quality drinking water. That is why we at the City of Brownwood Utility Department maintain our distribution system and anticipate needs and problems before they arise. To maintain superior water quality, disinfectant residual tests are run daily and dead end mains flushed monthly. Our overall success depends on quality workmanship, quality teamwork, a quality workplace and quality communication with one another, our customers, and the public. The City of Brownwood maintains a superior water system rating from the State of Texas.

### Educational Information:

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 EPA's Safe Drinking Water Hotline (1-800-426-4791).

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.

### Need More Information!

For more information about your drinking water and for opportunities to get involved, please contact the Utility Dept. by calling (325) 646-6000 or by writing to P.O. Box 1389, Brownwood, Texas 76804. Also, you are welcome and encouraged to attend council meetings on the second and fourth Tuesdays: 9:00 a.m., at City Hall, 501 Center Street.

Este reporte incluye informacion importante sobre el agua para tomar. Para obtener una copia de esta informacion traducida al Espanol, favor de llamar al telefono (325) 646-5775.

### Water Saving Tips

#### **Front Page: Typical Residential Water Service**

**All new residential, commercial, and industrial constructions in Brownwood are required, by Code, to install personal cut-off valves to control water flow. Older structures may or may not have the valve. Some old valves may be inoperable.**

**These valves can prevent property damage, and save water and money, caused by internal water leaks. If your property does not have a valve or working valve, you, as the owner of the primary residence or home-stead may install your own valve. Any commercial, industrial, or rental property requires a master plumber. A request for a permit must be submitted thru the City of Brownwood Development Services Department, prior to installation.**

## Contaminants in Drinking Water

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, those who are undergoing treatment with steroids, and people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

### 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, 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.

### Definitions:

**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 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.

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

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

**90th Percentile:** 90% of samples are equal to or less than the number in the chart.

### 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.

### Abbreviations

NTU - Nephelometric Turbidity Units

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 (µg/L)

### *More Water Saving Tips*

#### *Check Hoses:*

**\* It's a good idea to replace dishwasher and clothes washer hoses every five years. Hoses don't last forever and can create devastating damage - and waste lots of water - if they fail.**

#### *Turn it Down*

**\* The average bathroom faucet runs at the rate of about 2 gallons (7.5 liters) of water per minute. Try running water at less than full flow. Turn the water off while you floss and brush your teeth.**

**\* For more information, educational brochures are available in the City Hall lobby, contact your County Agricultural Extension Agent, local WaterWise landscape professional, or Texas WaterWise Council ([www.waterwisetexas.org](http://www.waterwisetexas.org))**

#### Inorganic Contaminants

Year or Range	Constituent	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Contaminant
2009	Fluoride	0.18	0.1	0.2	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2009	Nitrate	0.17	0.17	0.17	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2004	Gross beta emitters	5.9	5.9	5.9	50	0	pCi/L	Decay of natural and man-made emitters deposits.

Organic Contaminants TESTING WAIVED, NOT REPORTED, OR NONE DETECTED

#### Maximum Residual Disinfectant Level

Year	Disinfectant	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Disinfectant
2009	Chloramines	3.47	0.5	7.1	4	4	ppm	Disinfectant used to control microbes.

#### Disinfection By-products

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2009	Total Haloacetic Acids	17.5	15.0	19.2	60	ppb	By-product of drinking water disinfection.
2009	Total Trihalomethanes	37.5	29.8	56.1	80	ppb	By-product of drinking water disinfection.

#### Unregulated Initial Distribution System Evaluation for Disinfection Byproducts

This evaluation is sampling required by EPA to determine the range of total trihalomethane and haloacetic acid in the system for future regulations. The samples are not used for compliance, and may have been collected under non-standard conditions. EPA also requires the data be reported here.

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2008	Total Haloacetic Acids	16	11.4	20.7	NA	ppb	By-product of drinking water disinfection.
2008	Total Trihalomethanes	32.8	28.9	38	NA	ppb	By-product of drinking water disinfection.

#### Unregulated Contaminants

Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection by-products. There is no maximum contaminant level for these chemicals at the entry point to distribution.

Year or Range	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Contaminant
2009	Chloroform	3.6	3.6	3.6		ppb	By-product of drinking water disinfection.
2009	Bromoform	3.4	3.4	3.4		ppb	By-product of drinking water disinfection.
2009	Bromodichloromethane	8.6	8.6	8.6		ppb	By-product of drinking water disinfection.
2009	Dibromochloromethane	10	10	10		ppb	By-product of drinking water disinfection.

#### Lead and Copper

Year	Contaminant	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Contaminant
2007	Lead	4	0	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
2007	Copper	0.117	0	1.3	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

*"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 you 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 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>"*

#### Turbidity

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

Year	Contaminant	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Contaminant
2009	Turbidity	.27	100%	95% ≤ 0.3	NTU	Soil runoff.

#### Total Coliform

Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing for them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are more hardy than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Year	Contaminant	Lowest Monthly Number of Positive Samples	MCL	Unit of Measure	Source of Contaminant
2009	Total Coliform Bacteria	0	*	Presence	Naturally present in the environment

\* Two or more coliform found in samples in any single month.

Fecal Coliform REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA.

Secondary and Other Constituents Not Regulated (No associated adverse health effects)

Year	Constituent	Average Level	Minimum Level	Maximum Level	Secondary Limit	Unit of Measure	Source of Contaminant
2009	Bicarbonate	123	123	123	NA	ppm	Corrosion of carbonate rocks such as limestone.
2009	Chloride	63	63	63	300	ppm	Abundant naturally occurring element; used in water purification; by-product of oil field activity
2009	pH	7.2	7.2	7.2	>7.0	units	Measure of corrosivity of water.
2009	Sulfate	45	45	45	300	ppm	Naturally occurring; common industrial by-product; by-product of oil field activity.
2009	Total Alkalinity as CaCO3	101	101	101	NA	ppm	Naturally occurring soluble mineral salts.
2009	Total Dissolved Solids	270	270	270	1000	ppm	Total dissolved mineral constituents in water.