

# WATER QUALITY '05

## CALHOUN COUNTY RURAL WATER SUPPLY OF GBRA

### Excellence in Water Quality

GBRA Water Treatment Plant, Box 146, Port Lavaca, Texas 77979 Tel:361/552-9751

Dear Customer:

The Guadalupe-Blanco River Authority (GBRA) is pleased to provide you with this calendar year 2005 Water Quality Report. We hope you will be encouraged to learn about the high quality of drinking water produced and distributed for you by the professional staff at GBRA.

The federal Safe Drinking Water Act (SDWA) requires water utilities to issue an annual report to customers that explains where your drinking water comes from, what it contains, and the health risks that our water testing and treatment program are designed to prevent.

The Texas Commission on Environmental Quality (TCEQ) inspects the GBRA system on an annual basis, as required by law. **Your drinking water from our surface water treatment plant meets or exceeds all federal and state established water quality standards.** The tables in this report list all substances that were detected in our treated water, and the highest levels at which they were detected. The tables also reflect the highest levels allowed by federal regulatory agencies.

Please read this information carefully and if you have questions, please do not hesitate to call the phone numbers listed in this report.

### En Español

Este reporte incluye la informacion importante sobre su agua de beber. Si tiene preguntas o comentarios sobre este informe en Espanol, favor de llamar 361/552-9751 para hablar con una persona bilingue en espanol durante las horas regulares de oficina (8 a.m. - 5 p.m.).

### Special Notice for the ELDERLY, INFANTS, CANCER PATIENTS, people with HIV/AIDS OR OTHER IMMUNE PROBLEMS:

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, 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.

The United States Environmental Protection Agency (EPA) and the Center for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline (1-800-426-4791).

### Required Additional Health Information

In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (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 that must provide the same protection for public health.

All 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 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:

(A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

(B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

(C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff, and residential uses;

(D) Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems;

(E) Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Many constituents (such as calcium, sodium or iron) which are often found in drinking water, can cause taste, color, and odor problems. The taste, color and odor constituents are called secondary constituents and are regulated by the state of Texas, not EPA. These constituents are not causes for health concerns. Secondary constituents may affect the appearance and taste of your water.

## Customer Views Welcome

GBRA strongly supports the national primary drinking water regulations compliance process. Questions about water quality may be answered by calling 361/552-9751 or writing to us at Box 146, Port Lavaca, Texas 77979. You are also encouraged to attend the Rural Water Annual Membership meeting hosted each January by GBRA.

## Where Do We Get Our Drinking Water and What Happens to It?

Surface water (water from a lake, pond, river or stream) is diverted from the Guadalupe River and pumped to the GBRA Water Treatment Plant. There, licensed operators treat the water by settling and filtering out suspended solids, dirt, and other organic particles until the water reaches a crystal-clear quality. A disinfectant compound of chlorine and ammonia is used to destroy any pathogens (germs) present. Fluoride is added to promote dental health.

The TCEQ completed an assessment of your source water and results indicate that our source is susceptible to certain contaminants. The sampling requirements for your water system is based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system contact the GBRA Port Lavaca Water Treatment Plant at 361/552-9751.

## What We Found

The following table contains all of the chemical constituents that have been found in your drinking water. EPA requires water systems to test for more than 90 constituents. The column marked "Highest Level at Any Sampling Point" shows the highest test results during the year. The "Source of Constituent" column shows where this substance usually originates.

### DEFINITIONS:

**Maximum Contaminant Level (MCL)** - the highest level of a contaminant 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 allowed in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

**Maximum Residual Disinfectant Level (MRDL)** - the highest concentration of disinfectant residual allowed in the distribution system.

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

**NTU** = Nephelometric Turbidity Units, a measure of clarity.

**ppm** = parts per million, or milligrams per liter (mg/L).

**ppb** = parts per billion, or micrograms per liter (µg/L).

**pCi/L** = picocuries per liter, a measure of radioactivity.

**TABLE I - Test results for GBRA water supply to Calhoun County Rural Water customers (As sampled at the GBRA Water Treatment Plant)**

### Inorganics

Year	Detected Constituent	Highest Level at Any Sampling Point	Number of Analyses	MCL	MCLG	Unit of Measure	Source of Constituent
2002	Barium	0.074	1	2	2	ppm	Discharge of drilling wastes; erosion of natural deposits.
2002	Chromium	1.49	1	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
2005	Fluoride	0.86	1	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2005	Nitrate	0.06	1	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks; treated wastewater effluent; erosion of natural deposits.
2004	Gross Beta	4.8	1	50	0	pCi/L	Decay of mineral and man-made deposits.

### Organics

Year	Detected Constituent	Concentration Detected	Number of Analyses	MCL	MCLG	Unit of Measure	Source of Constituent
2005	Atrazine	0.38	1	3	3	ppb	Runoff from herbicide used on row crops.

### Unregulated Contaminants

We participated in gathering data under UCMR in order to assist EPA in determining the occurrence of possible drinking water contaminants. If any unregulated contaminants were detected, they are shown in the table below. This data may also be found on EPA's website at <http://www.epa.gov/safewater/data/ncod.html>, or you can call the Safe Drinking Water Hotline at 1-800-426-4791.

Year	Constituent	Average of All Sampling Points	Range of Detected Levels	Reason for Monitoring
<b>Trihalomethanes</b>				
2005	Chloroform	11.528	7.5-18.0	Monitoring contaminants helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.
2005	Bromoform	4.412	1.2-7.56	Same as above.
2005	Bromodichloromethane	23.872	20.4-29.2	Same as above.
2005	Chlorodibromomethane	22.04	12.8-29.32	Same as above.
<b>Haloacetic Acids</b>				
2005	Chloroacetic acid	6.025	ND-8.5	Monitoring helps EPA determine where certain contaminants occur and the need for regulation.
2005	Dichloroacetic acid	14.175	7.1-19.4	Same as above.
2005	Trichloroacetic acid	3.975	ND-8.7	Same as above.
2005	Bromoacetic acid	ND	ND-ND	Same as above.
2005	Dibromoacetic acid	11.6	6.4-20.5	Same as above.
2005	Bromochloroacetic acid	5.87	ND-8.4	Same as above.

**Disinfection Byproducts**

Year	Constituent	Average Level	Minimum Level	Maximum MCL Level	Unit of Measure	Source of Constituent
2005	Total Haloacetic Acids	33.3	19.6	43.2	60 ppb	Byproduct of drinking water disinfection.
2005	Total Trihalomethanes	65.3	53.9	76.2	80 ppb	Byproduct of drinking water disinfection.

**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. Turbidity is measured every 15 minutes.

Year	Constituent	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Constituent
2005	Turbidity	0.19	100	0.3	NTU	Organic particles.

**Disinfectant Residuals**

Year	Constituent	Highest Average	Range of Detects (low-high)	MRDL	Unit of Measure	Source of Constituent
2005	Chloramines	3.432	1.3-4.5	4	ppm	Disinfectant used to control microbes.

**Total Organic Carbon (TOC)**

Year	Detcted Constituent	Highest Measurement	Lowest Measurement	Average Measurement	Unit of Measure	Source of Constituent
2005	Source Water TOC	4.95	2.16	3.235	ppm	Naturally ocuring. There are no health effects directly associated with it.
2005	Drinking Water TOC	2.48	1.51	1.913	ppm	Same as above.
2005	Removal Ratio	3.014	1.28	2.187	% removal	NA

Removal Ratio is the percent of TOC removal by the treatment process divided by the percent of TOC required by TCEQ to be removed.

**Total Coliform** NOT DETECTED

**E. coli** NOT DETECTED

**Cyptosporidium Monitoring Information**

Cryptosporidium monitoring will begin in 2006. Initial testing for cryptosporidium has found no organisms. Cryptosporidium is a microbial pathogen that may be found in water contaminated by feces. Although filtration removes Cyptosporidium, it cannot guarantee 100 percent removal nor can the testing methods determine if the organisms are alive and capable of causing cryptosporidiosis, an abdominal infection with nausea, diarrhea, and abdominal cramps that may occur after ingestion of contaminated water.

**TABLE II - Test results for GBRA water supply to Calhoun County Rural Water customers (As sampled in the customer distribution system)**

**Maximum Residual Disinfectant Level**

Year	Constituent	Highest Average	Range of Detects (Low - High)	MRDL	Unit of Measure	Source of Constituent
2005	Chloramines	2.59	1.0 -3.8	4	ppm	Disinfectant used to control microbes.

**Inorganics**

Year	Detected Constituent	Highest Level at Any Sampling Point	Number of Analyses	MCL	MCLG	Unit of Measure	Source of Constituent
1999	Gross Alpha	1	1	15	0	pCi/L	Erosion of natural deposits.
2004	Gross Beta	3.2	1	50	0	pCi/L	Decay of natural and man-made deposits.

**Lead and Copper (None taken for 2005 - analyzed every 9 years)**

Year	Detected Constituent	The 90th Percentile	Number of Sites Exceeding Action	Action Level	Unit of Measure	Source of Constituent
1999	Lead	2.70	0	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
1999	Copper	0.081	0	1.3	ppm	Corrosion of household plumbing systems; erosion of natural deposits.

**Trihalomethanes (THM)**

Year	Detected Constituent	Average of All Sampling Points	Range of Detected Levels	MCL	MCLG	Unit of Measure	Source of Constituent
2004	Total Trihalomethanes	70.7	56.2 - 92.3	80	0	ppb	By-product of drinking water chlorination.

**Haloacetic Acids (HAA5)**

Year	Detected Constituent	Average of All Sampling Points	Range of Detected Levels	MCL	MCLG	Unit of Measure	Source of Constituent
2004	Total Haloacetic Acids	41.2	18.1 - 64.5	60	0	ppb	By-product of drinking water chlorination.

**TABLE II Continued**

**Secondary and Other Unregulated Constituents**

No associated adverse health effects

Year	Constituent Detected	Measured Concentration	Number of Analyses	Secondary Limit	Units of Measure	Source of Constituent
2002	Aluminum	0.031	1	50	ppb	Abundant naturally occurring element.
2005	Bicarbonate	97	1	NA	ppm	Corrosion of carbonate rocks such as limestone.
2002	Calcium	66.9	1	NA	ppm	Abundant naturally occurring element.
2005	Chloride	32	1	300	ppm	Abundant naturally occurring element. Used in water purification; by-product of oil field activity.
2002	Copper	0.054	1	NA	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
2005	Hardness as Ca/Mg	162	1	NA	ppm	Naturally occurring calcium and magnesium.
2002	Magnesium	15	1	NA	ppm	Abundant naturally occurring element.
2005	pH	7.67	1	7	units	Measure of corrosivity of water.
2002	Sodium	25	1	NA	ppm	Erosion of natural deposits. Byproduct of oil field activity.
2005	Sulfate	81	1	300	ppm	Naturally occurring; common industrial byproduct; byproduct of oil field activity.
2005	Total Alkalinity as CaCO <sub>3</sub>	97	1	NA	ppm	Naturally occurring soluble mineral salts.
2005	Total Dissolved Solids	254	1	1000	ppm	Total dissolved mineral constituents in water.
2005	Total Hardness as CaCO <sub>3</sub>	162	1	NA	ppm	Naturally occurring calcium.

**Total Coliform** NOT DETECTED **E. coli** NOT DETECTED

*National Primary Drinking Water Regulation Compliance*

*This report was prepared by the Guadalupe-Blanco River Authority. Please contact GBRA at 361/552-9751 or through their website at [www.gbra.org](http://www.gbra.org). for further information. Water quality data for community water systems throughout the United States is available at [www.waterdata.com](http://www.waterdata.com).*