

Maximum Residual Disinfectant Level

| Year | Disinfectant Level  | Average Concentration | Minimum | Maximum | MRDL | MRDLG | Unit of Measure | Source of Constituent                  |
|------|---------------------|-----------------------|---------|---------|------|-------|-----------------|--|
| 2008 | Chloramine Residual | 1.90                  | 0.50    | 3.50    | 4    | 4     | ppm             | Disinfectant used to control microbes. |

Lead and Copper at household tap/Analyzed every 3 years

| Year | Constituent | The 90th Percentile | Number of Sites Exceeding Action Level | Action Level | Unit of Measure | Source of Constituent   |
|------|-------------|---------------------|--|--------------|-----------------|---|
| 2007 | Lead        | 7.2                 | 1                                      | 15           | ppb             | Corrosion of household plumbing systems; erosion of natural deposits.                                   |
| 2007 | Copper      | 0.873               | 1                                      | 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 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.gov/safewater/lead>.

**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 | Constituent    | Highest Monthly Number of Positive Samples | MCL | Unit of Measure  | Source of Constituent                 |
|------|----------------|--|-----|------------------|---------------------------------------|
| 2008 | Total Coliform | 2  | *   | Presence/Absence | Naturally present in the environment. |
| 2008 | Fecal Coliform | 0  | *   | Presence/Absence |                                       |

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

Secondary and Other Constituents Not Regulated

No associated adverse health effects.

| Year | Constituent                           | Measured Concentration | Number of Analyses | Secondary Limit | Unit of Measure | Source of Constituent  |
|------|---------------------------------------|------------------------|--------------------|-----------------|-----------------|--|
| 2008 | Bicarbonate                           | 108                    | 1                  | NA              | ppm             | Corrosion of carbonate rocks such as limestone.  |
| 2008 | Chloride                              | 79.6                   | 1                  | 300             | ppm             | Abundant naturally occurring element, used in water purification, byproduct of oil field activity. |
| 2008 | Hardness as Ca/Mg                     | 217                    | 1                  | NA              | ppm             | Naturally occurring calcium and magnesium.   |
| 2008 | pH                                    | 7.68                   | 1                  | 7               | units           | Measure of corrosivity of water.   |
| 2008 | Sulfate                               | 102                    | 1                  | 300             | ppm             | Naturally occurring common industrial byproduct; byproduct of oil field activity.                  |
| 2008 | Total Alkalinity as CaCO <sub>3</sub> | 108                    | 1                  | NA              | ppm             | Naturally occurring soluble mineral salts.   |
| 2008 | Total Dissolved Solids                | 396                    | 1                  | 1000            | ppm             | Total dissolved mineral constituents in water.   |

**Required Additional Health Information**

In order to ensure that tap water is safe to drink, the USEPA 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 USEPA'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.

**National Primary Drinking Water Regulation Compliance**

*This report was prepared with technical assistance from the Guadalupe-Blanco River Authority. GBRA will be happy to answer any questions about the Port Lavaca Water Treatment Plant or its water quality and treatment process. Please contact us at 361-552-9751 or through our website at [www.gbra.org](http://www.gbra.org). Water quality data for community water systems throughout the United States is available at [www.waterdata.com](http://www.waterdata.com).*

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 the result of oil and gas production and mining activities.

# WATER QUALITY '08

City of Port Lavaca  
EXCELLENCE IN WATER QUALITY



Port Lavaca Water Department 361-552-9793 Ext.239

GBRA Water Treatment Plant 361-552-9751

Dear Customer:

The City of Port Lavaca is pleased to provide you with this 2008 Water Quality Report. We take all possible precautions to safeguard your water supply and hope you will be encouraged to learn about the high quality of water provided to you.

The federal Safe Drinking Water Act (SDWA) requires water utilities to issue an annual report to customers, in addition to other notices that may be required by law. This report explains where your drinking water comes from, what it contains, and the health risks our water testing and treatment are designed to prevent.

We are committed to providing you with information about your water supply because informed customers are our best allies in supporting improvements needed to maintain the highest drinking water standards.

**We are proud to report that the Texas Commission on Environmental Quality (TCEQ) has assessed our system and determined that your drinking water, provided by the City of Port Lavaca through the Guadalupe-Blanco River Authority's 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 level 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, call the numbers listed in this report.

**Customer Views Welcome**

The City of Port Lavaca strongly supports the national primary drinking water regulation compliance process. If you are interested in learning more about the water department, water quality, or participating in the decision-making process, there are a number of opportunities available.

Questions about water quality can be answered by calling 361-552-9793 Ext. 239 from 8 a.m. - 5 p.m., Monday through Friday. Inquiries about public participation and policy decisions should be directed to the City Secretary's office at 361-552-9793 Ext. 225.

The Port Lavaca City Council meets every 2nd and 4th Monday of the month at 6:30 p.m. at City Hall and all meetings are open to the public. Our website is [www.portlavaca.org](http://www.portlavaca.org).

**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. 361-552-9793 Ext. 239 para hablar con una persona bilingüe en español 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.

United States Environmental Protection Agency (USEPA) 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 USEPA's Safe Drinking Water Hotline (1-800-426-4791).



## Where Do We Get Our Drinking Water?

The City of Port Lavaca received its water from surface water diverted from the Guadalupe River and treated at the Port Lavaca Water Treatment Plant, operated by the Guadalupe-Blanco River Authority (GBRA).

The TCEQ completed an assessment of your source water and results indicate that some of our 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 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.

Trained operators monitor and test the water, including the addition of fluoride and chloramine, to ensure that our water meets or exceeds all state and federal drinking water standards. The treated water is delivered to the city's water towers and delivered through its distribution system to you.

## What We Found

The following tables list the contaminants that have been found in your drinking water. USEPA requires water systems to test for more than 97 contaminants. 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 the 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 in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

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

**NTU** - Nephelometric Turbidity Units.

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

**ppb** - parts per billion, or micrograms per liter (ug/L).

**MRDL** - Maximum Residual Disinfection Level.

**ND** - Not Detected.

**NA** - Not Applicable

**TABLE I - Test results for the GBRA water supply to Port Lavaca (Sampled at the GBRA Water Treatment Plant)**

### Inorganics

| Year | Detected Constituent | Measured Concentration | Number of Analyses Performed | 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.   |
| 2008 | Fluoride             | 0.72                   | 1                            | 4   | 4    | ppm             | Erosion of natural deposits; water additive which promotes strong teeth; runoff from fertilizer use.              |
| 2008 | Nitrate              | ND                     | 1                            | 10  | 10   | ppm             | Runoff from fertilizer use; leaching from septic tanks; treated wastewater effluent; erosion of natural deposits. |
| 2004 | Gross Beta Emitters  | 4.8                    | 1                            | 50  | 0    | pCi/l           | Decay of mineral and man-made deposits.   |

### Organics

| Year | Detected Constituent | Measured Concentration | Number of Analyses Performed | MCL | MCLG | Unit of Measure | Source of Constituent                    |
|------|----------------------|------------------------|------------------------------|-----|------|-----------------|--|
| 2008 | Atrazine             | 0.14                   | 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 call the Safe Drinking Water Hotline at 1-800-426-4791.

| Year             | Constituent            | Average Concentration | Range of Detected Levels | Reason for Monitoring   |
|------------------|------------------------|-----------------------|--------------------------|---|
| Trihalomethanes  |                        |                       |                          |   |
| 2008             | Chloroform             | 7.975                 | 5.0 - 11.6               | Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants. |
| 2008             | Bromoform              | 17.075                | 13.4 - 23.9              |   |
| 2008             | Bromodichloromethane   | 23.025                | 12.1 - 33.9              |   |
| 2008             | Chlorodibromomethane   | 7.25                  | 1.8 - 10.9               |   |
| Haloacetic Acids |                        |                       |                          |   |
| 2008             | Chloroacetic acid      | 0.7                   | ND - 2.8                 | Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants. |
| 2008             | Dichloroacetic acid    | 6.3                   | 4.0 - 8.2                |   |
| 2008             | Trichloroacetic Acid   | 3.9                   | ND - 7.9                 |   |
| 2008             | Bromoacetic acid       | 3.075                 | ND - 5.0                 |   |
| 2008             | Dibromoacetic acid     | 5.875                 | ND - 9.6                 |   |
| 2008             | Bromochloroacetic acid | 9.525                 | 6.7 - 12.2               |   |

### Disinfection Byproducts

| Year | Constituent            | Average Concentration | Minimum | Maximum | MCL | Unit of Measure | Source of Constituent                     |
|------|------------------------|-----------------------|---------|---------|-----|-----------------|---|
| 2008 | Total Haloacetic Acids | 19.85                 | 12.3    | 29.2    | 60  | ppb             | Byproduct of drinking water disinfection. |
| 2008 | Total Trihalomethanes  | 55.325                | 35.4    | 80.3    | 80  | ppb             | Byproduct of drinking water disinfection. |

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 4 times per day through grab samples and continuously through automatic on-line individual filter turbidity monitors.

| Year | Detected Constituent | Highest Single Measurement | Lowest Monthly % of Samples Meeting Limits | Turbidity Limits | Unit of Measure | Source of Constituent |
|------|----------------------|----------------------------|--|------------------|-----------------|-----------------------|
| 2008 | Turbidity            | 0.11                       | 100  | 0.3              | NTU             | Organic particles.    |

Total organic carbon (TOC) sampled from source water has no health effects. The disinfectant can combine with TOC to form disinfection byproducts. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. Byproducts of disinfection include trihalomethanes (THMs) and haloacetic acids (HAA) which are reported elsewhere in this report.

| Year | Constituent        | Highest Measurement | Lowest Measurement | Average Measurement | Source of Constituent   |
|------|--------------------|---------------------|--------------------|---------------------|---|
| 2008 | Source Water TOC   | 3.04667             | 2.32               | 3.85                | Naturally occurring; no health effects directly associated with it. |
| 2008 | Drinking Water TOC | 2.0582              | 1.57               | 3.05                | Naturally occurring; no health effects directly associated with it. |
| 2008 | Removal Ratio      | 2.3041              | 0.487              | 5.094               | NA  |

### Disinfectant Residuals

| Year | Constituent | Highest Average | Range of Detects (low-high) | MRDL | MCLG | Unit of Measure | Source of Constituent                  |
|------|-------------|-----------------|-----------------------------|------|------|-----------------|--|
| 2008 | Chloramines | 3.655           | 0.5 - 4.3                   | 4    | 0    | ppm             | Disinfectant used to control microbes. |

### Cryptosporidium Monitoring Information

The EPA Long Term 2 Enhanced Surface Water Treatment Rule (LT2 Rule) requires that the water treatment plants monitor the source water (water prior to treatment plant) for Cryptosporidium, turbidity, and *E.coli*. Cryptosporidium is a microbial pathogen that may be found in water contaminated with feces. Monitoring results will be used to determine whether additional treatment is required and to refine the relationship established between *E.coli* and Cryptosporidium levels in the source water. Although treatment plant filters remove Cryptosporidium, filters cannot guarantee 100% removal nor can the analysis determine if the organisms are alive and capable of causing cryptosporidiosis, an abdominal infection causing nausea, vomiting, diarrhea and abdominal cramps that may occur after ingestion of contaminated water. Bimonthly sampling of the Guadalupe River, the source water for the Port Lavaca Water Treatment Plant, began in October 2006 and will continue until September 2008. The following table summarizes the source water data collected in 2008.

| Year | Analysis of Source Water Prior to Treatment | No. of Analyses | Mean    | Range of Analyses | Units                |
|------|---|-----------------|---------|-------------------|----------------------|
| 2008 | Cryptosporidium                             | 18              | 0.16783 | 0.098 - 0.273     | Oocyst per Liter     |
| 2008 | <i>E.coli</i>                               | 18              | 29.405* | <1 - 550          | Most Probable Number |
| 2008 | Turbidity                                   | 18              | 31.063  | 16 - 62           | NTU                  |

\*geometric mean

2008 Total Coliform NOT DETECTED      2008 *E.coli* NOT DETECTED

**TABLE II - Test Results for GBRA water supply to City of Port Lavaca customers (As sampled in the customer distribution system)**

### Trihalomethanes (THM)

| Year | Detected Constituent  | Average of all Sampling Points | Range of Detected Levels | MCL | MCLG | Unit of Measure | Source of Constituent                     |
|------|-----------------------|--------------------------------|--------------------------|-----|------|-----------------|---|
| 2008 | Total Trihalomethanes | 55.2                           | 37.8 - 86.2              | 80  | 0    | ppb             | Byproduct 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                     |
|------|------------------------|--------------------------------|--------------------------|-----|------|-----------------|---|
| 2008 | Total Haloacetic Acids | 20.2                           | 13.2 - 28                | 60  | 0    | ppb             | Byproduct 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 trihalomethanes 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 to be reported here.

### Disinfection Byproducts

| Year | Constituent            | Average Concentration | Minimum | Maximum | MCL | Unit of Measure | Source of Constituent                     |
|------|------------------------|-----------------------|---------|---------|-----|-----------------|---|
| 2008 | Total Haloacetic Acids | 26.6                  | 6.4     | 67.7    | NA  | ppb             | Byproduct of drinking water disinfection. |
| 2008 | Total Trihalomethanes  | 78.8                  | 37.9    | 213.9   | NA  | ppb             | Byproduct of drinking water disinfection. |