

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
2016	Lead	2	0	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
2016	Copper	0.234	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	Detected Constituent	Highest Monthly Number	MCL	Unit of Measure	Source of Constituent
2016	Total Coliform	3	*	Presence/Absence	Naturally present in the environment.
2016	E. Coli	0	*	Presence/Absence	Naturally present in the environment.

*Two or more "coliform present" 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
2016	Aluminum	34	1	50	ppb	Abundant naturally occurring element.
2016	Bicarbonate	172	1	NA	ppm	Corrosion of carbonate rocks such as limestone.
2016	Calcium	62.3	1	NA	ppm	Abundant naturally occurring element.
2016	Chloride	44	1	300	ppm	Abundant naturally occurring element, used in water purification, byproduct of oil field activity.
2016	Copper	0.0379	1	NA	ppm	Corrosion of household plumbing systems; erosion of natural deposits.
2016	Hardness as Ca/Mg	207	1	NA	ppm	Naturally occurring calcium and magnesium.
2016	Magnesium	12.5	1	NA	ppm	Abundant naturally occurring element.
2016	pH	7.3	1	7	units	Measure of corrosivity of water.
2016	Nickel	0.0019	1	0.1	ppm	
2016	Sodium	25.4	2	NA	ppm	Erosion of natural deposits. Byproduct of oil field activity.
2016	Zinc	ND	1	5	ppm	
2016	Sulfate	69	1	300	ppm	Naturally occurring common industrial byproduct; byproduct of oil field activity.
2016	Total Alkalinity as CaCO3	141	1	NA	ppm	Naturally occurring soluble mineral salts.
2016	Total Dissolved Solids	321	1	1000	ppm	Total dissolved mineral constituents in water.
2016	Iron	ND	1	NA	ppm	Abundant naturally occurring element.
2016	Potassium	4.23	1	NA	ppm	
2016	Cyanide	ND				

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 GBRA 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. Water quality data for community water systems throughout the United States is available at 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 '16

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 2016 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 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.

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.

The 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).



Main Office: 933 East Court Street ~ Seguin, Texas 78155

flowing solutions

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 GBRA Port Lavaca Water Treatment Plant, operated by the Guadalupe-Blanco River Authority (GBRA).

A Source Water Susceptibility Assessment for your drinking water source(s) is currently being updated by TCEQ. 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 to focus source water protection strategies. For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: <https://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://dww2.tceq.texas.gov/DWW/>.

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. For information on the treatment of your drinking water and water quality protection efforts contact the GBRA Port Lavaca Water Treatment Plant at 361-552-9751.

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
2016	Barium	0.0738	1	2	2	ppm	Discharge of drilling wastes; erosion of natural deposits.
2016	Chromium	ND	1	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
2016	Fluoride	0.58	1	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; runoff from fertilizer use.
2016	Nitrate	0.02	2	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks; treated wastewater effluent; erosion of natural deposits.
2011	Gross Beta Emitters	4.8	1	50	0	pCi/l	Decay of mineral and man-made deposits.

Organics

Year	Detected Constituent	Concentration Detected	Number of Analyses Performed	MCL	MCLG	Unit of Measure	Source of Constituent
2016	Atrazine	ND	1	3	3	ppb	Runoff from herbicide used on row crops.

Disinfection Byproducts

Year	Constituent	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Constituent
2016	Total Haloacetic Acids	30.9	16.3	48.9	60	ppb	Byproduct of drinking water disinfection.
2016	Total Trihalomethanes	73.475	49.8	96.7	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 6 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
2016	Turbidity	0.16	100	0.3	NTU	Organic particles.

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 <https://www.epa.gov/dwucomr> or call the Safe Drinking Water Hotline at 1-800-426-4791. Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection byproducts. There is no maximum contaminant level for these chemicals at the entry point to distribution.

Year	Constituent	Average Concentration	Range of Detected Levels	Reason for Monitoring
Trihalomethanes				
2016	Chloroform	26.2	12.0 - 41.7	Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.
2016	Bromoform	26.6	1.6 - 3.2	
2016	Bromodichloromethane	18.4	17.7 - 34.6	
2016	Chlorodibromomethane	2.275	15.4 - 23.6	
Haloacetic Acids				
2016	Chloroacetic acid	1.75	ND - 7.0	Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.
2016	Dichloroacetic acid	16.975	8.9 - 24.7	
2016	Trichloroacetic Acid	8.3	3.7 - 11.8	
2016	Bromoacetic acid	ND	ND - ND	
2016	Dibromoacetic acid	3.875	2.7 - 5.4	
2016	Bromochloroacetic acid	9.65	7.0 - 13.0	

TOC (Total Organic Carbon)

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	Average Measurement	Lowest Measurement	Highest Measurement	Units of Measurement	Source of Constituent
2016	Source Water TOC	4.69	2.36	7.87	ppm	Naturally occurring; no health effects directly associated with it.
2016	Drinking Water TOC	2.69	1.63	4.02	ppm	Naturally occurring; no health effects directly associated with it.
2016	Removal Ratio	2.002	1.39	2.56	%	NA

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

Disinfectant Residuals

Year	Constituent	Highest Average	Range of Detects (low-high)	MRDL	MCLG	Unit of Measure	Source of Constituent
2016	Chloramines	3.442	0.7 - 4.9	4	0	ppm	Disinfectant used to control microbes.

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.

2016 Total Coliform REPORTED MONTHLY TESTS FOUND NO COLIFORM BACTERIA

2016 E.coli REPORTED MONTHLY TESTS FOUND NO E.coli BACTERIA

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
2016	Total Trihalomethanes	70.02	43.7 - 103	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
2016	Total Haloacetic Acids	23.7	14.7 - 31.9	60	0	ppb	Byproduct of drinking water chlorination.

Maximum Residual Disinfectant Level

Year	Disinfectant Level	Average Concentration	Minimum	Maximum	MRDL	Unit of Measure	Source of Constituent
2016	Chloramine Residual	2.06	0	5	4	ppm	Disinfectant used to control microbes.

Violations Table

Total Trihalomethanes (TTHM)

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, LRAA	07/01/2016	09/30/2016	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for period indicated..

WATER LOSS FOR THE CITY OF PORT LAVACA

61.839 MG (MILLION GALLONS) FOR THE YEAR OR 14%