WATER QUALITY 2021

CITY OF PORT LAVACA
TEXAS

PWS# 0290002

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 the 2021 Water Quality Report (January 1-December 31, 2021). 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 water quality standards.

The tables on 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 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 am – 5 pm, 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 pm at City Hall and all meetings are open to the public. Our website is **www.portlavaca.org**. For an electronic version of this document please visit: **www.gbra.org/documents/publications/ccrs/2021/PortLavaca.pdf**

En Español

Este informe incluye information importante sobre el agua potable. Si tiene preguntas o commentarios sobre este informe en Espanol, favor de llamar al tel. 361-552-9793 Ext. 239 para hablar con una personal bilingue en espanol durante las horas regulares de oficina (8 am – 5 pm).

CONSERVE WATER/SAVE WATER!

Water Saving Tips:
Reduce indoor water usage by 40-50% by installing low-flush toilets and low flow fixtures
Water lawns once a week rather than a short period every day
Fix leaks and stop the dripping faucets
American Water Works Drip calculator to estimate water waste
https://drinktap.org/Water-Info/Water-Conservation/Drip-Calculator

Information about your Drinking Water

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.

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 EPAs 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, 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.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the system's business office.

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).

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.

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

A Source Water Susceptibility for your drinking water source was conducted by TCEQ in 2004. 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 at our system contact GBRA 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. 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 Contaminant" column shows where the substance usually originates.

DEFINITIONS and ABREVIATIONS

Action Level (AL) – the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.
Action Level Goal (ALG) – The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.
Avg – Regulatory compliance with some MCL's are based on running annual average of monthly samples.
Maximum Contaminant Level (MCL) – the highest level of the contaminant allowed in drinking water. MCL's are set as close to the MCLG's 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. MCLG's allow for a margin of safety.
Maximum residual disinfectant level or 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.
Maximum residual disinfectant level goal or 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.
MRL – Minimum reporting level
NA – Not Applicable
ND – Not Detected
NTU's – 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 (ug/L)
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

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

Year	Detected Constituent	Highest Level of Any Sample Point	Number of Analyses	MCL	MCLG	Units of Measure	Source of Constituent
Inorganics							
2021	Fluoride	0.52	1	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; runoff from fertilizer use.
2021	Barium	0.0789	1	2	2	ppm	Discharge of drilling wastes; erosion of natural deposits.
2021	Nitrate	0.76	1	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks; treated wastewater effluent; erosion of natural deposits.
2021	Chromium	ND	1	100	100	ppb	Discharge from steel and pulp mills; erosion of natural deposits.
2017	Gross Beta Emitters	5.6	1	50	0	pCi/l	Decay of mineral and man-made deposits.

Year	Detected Constituent	Concentration Detected	Number of Analyses	MCL	MCLG	Unit of Measure	Source of Constituent
Organics							
2021	Atrazine	0.1	1	3	3	ppb	Runoff from herbicide used on row crops.

Unregulated Contaminants

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. Any unregulated contaminants detected are reported in the following table. For additional information and data visit http://www.epa.gov/safewater/ucmr/ucmr2/index.html, or call the Safe Drinking Water Hotline at (800) 426-4791.

Year	Constituent	Average Concentration of Analysis	Range of Detected Levels	Reason for Monitoring
Trihalomethanes				
2021	Chloroform	18.16	7.9-43.3	Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.
2021	Bromoform	3.02	2.0-3.9	
2021	Bromodichlormethane	22.08	12.9-41.8	
2021	Chlorodibromomethane	15.58	9.9-21.7	
Haloacetic Acids				
2021	Chloroacetic acid	ND	ND-ND	Monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.
2021	Dichloroacetic acid	14.4	5.9-30.6	
2021	Trichloroacetic acid	7.1	2.7-15.7	
2021	Bromoacetic acid	ND	ND-ND	
2021	Dibromoacetic acid	4.3	3.3-5.2	
2021	Bromochloroacetic acid	9.1	4.9-14.7	

Disinfection Byproducts

Year	Contaminant	Average level	Minimum level	Maximum lev	MCL	Unit of Meas	Source of Contaminant
2021	Total Haloacetic Acids	25.83	11.9	51.5	60	ppb	Byproduct of drinking water disinfection.
2021	Total Trihalomethanes	63.65	37.2	110	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.

Year	Detected Constituent	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Constituent
2021	Turbidity	0.22	100	0.3	NTU	Organic particles.

Disinfectant Residuals

Year	Constituent	Highest Average	Range of Detects (low-high)	MRDL	MCLG	Units	Source of Constituent
2021	Chloramines	3.68	1.0-5.0	4	4	ppm	Disinfectant used to control microbes.

TOC (Total Organic Carbon)

Total organic carbon (TOC) 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	Detected Constituent	Average Measurement	Minimum Measurement	Maximum Measurement	Units of Measurement	Source of Constituent
2021	Source Water TOC	5.48	2.23	12.9	ppm	Naturally occuring and there are no health effects directly associated with it.
2021	Drinking Water	2.86	1.46	5.59	ppm	Naturally occuring and there are no health effects directly associated with it.
2021	Removal Ratio	1.98	1.42	2.33	%	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.

Coliform Bacteria

Maximum Contaminant Level Goal	Highest No. of Coliform Positive	E.Coli Maximum Containment Level	Total No. of Positive E.Coli Samples	Violation	Likely Source of Contamination
0	0	System has a combination of routine and repeat coliform and E.coli positive samples	0	N	Naturally present in the environment

Violations Table

No Violations

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Table II - Tests results for the City of Port Lavaca Customers (Sampled in the Port Lavaca Distribution System)

Inorganics

Year	Detected Constituent	Measured Concentration	Number of Analyses	MCL	MCLG	Unit of Measure	Source of Constituent
2021	Nitrogen, Nitrate	0.71	1	10	10	ppm	Runoff from fertilizer use; leeching from septic tanks; treated wastewater effluent; erosion of natural deposits.

Nitrate Advisory - Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

Lead and Copper (Analyzed every 3 years)

Year	Detected Constituent	The 90th Percentile	Number of Sites Exceeding Action	Action Level	Unit of Measure	Source of Constituent
2019	Lead	2.8	0	15	ppb	Corrosion of house hold plumbing systems; erosion of natural deposits
2019	Copper	0.38	2	1.3	ppm	Corrosion of house hold plumbing systems; erosion of natural deposits

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.epa.gov/safewater/lead.

Maximum Residual Disinfectant Level

Systems must complete and submit disinfection data on the Surface Water Monthly Operations Report (SWMOR). On the CCR report, the system must provide disinfectant type, minimum, maximum, and average levels.

Year	Disinfectant	Average level	Minimum level	Maximum level	MRDL	Unit of Measure	Source of Constituent
2021	Chloramine Residual	2.7	0.03	5.85	4	ppm	Disinfectant used to control microbes.

Total Trihalomethanes (TTHM)

Year	Detected Constituent	Average of Sampling Points	Range of Detected Levels	MCL	MCLG	Unit of Measure	Source of Constituent
2021	Total Trihalomethanes	89	38.4-121	80	0	ppb	By-product of drinking water chlorination.

Haloacetic Acids (HAA5)

Year	Detected Constituent	Average of Sampling Points	Range of Detected Levels	MCL	MCLG	Unit of Measure	Source of Constituent
2021	Total Haloacetic Acids	37	12.1-69.4	60	0	ppb	By-product of drinking water chlorination.

Coliform Bacteria

Maximum Contaminant Level Goal	Highest No. of Coliform Positive		E.Coli Maximum Containment Level	Total No. of Positive E.Coli Samples	Violation	Likely Source of Contamination
0	0		System has a combination of routine and repeat coliform and E.coli positive samples	0	N	Naturally present in the environment

Violations Table

Violation Type		Violation Began		Violation End	Violation Explanation
TTHM MCL, LRAA	SITE 3	1/1/2021		3/31/2021	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 the period indicated.
TTHM MCL, LRAA	SITE 2	4/1/2021		6/30/2021	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 the period indicated.
TTHM MCL, LRAA	SITE 3	4/1/2021		6/30/2021	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 the period indicated.
TTHM MCL, LRAA	SITE 4	4/1/2021		6/30/2021	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 the period indicated.
TTHM MCL, LRAA	SITE 3	7/1/2021		9/30/2021	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 the period indicated.

Water Loss for the City of Port Lavaca

199.982 MG (million gallons) for the year or 42.4 %

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
2021	Aluminum	42.5	1	50	ppb	Abundant naturally occuring element
2021	Bicarbonate	201	1	NA	ppm	Corrosion of carbonate rocks such as limestone.
2021	Calcium	70.3	1	NA	ppm	Abundant naturally occuring element.
2021	Chloride	101	1	300	ppm	Abundant naturally occuring element, used in water purification, byproduct of oil field activity.
2021	Copper	0.0866	1	NA	ppm	Corrosion of household plumbing systems; erosion from natural deposits; leeching from wood preservatives.
2021	Hardness as Ca/Mg	248	1	NA	ppm	Naturally occurring calcium and magnesium.
2021	Magnesium	17.5	1	NA	ppm	Abundant naturally occuring element.
2021	pH	7.7	1	7	units	Measure of corrosivity of water.
2021	Nickel	0.0039	1	0.1	ppm	
2021	Sodium	73.3	1	NA	ppm	Erosion of natural deposits. Byproduct of oil field activity.
2021	Zinc	ND	1	5	ppm	
2021	Sulfate	97	1	300	ppm	Naturally occurring, common industrial byproduct, byproduct of oil field activity.
2021	Total Alkalinity as CaCO3	165	1	NA	ppm	Naturally occurring soluable mineral salts.
2021	Total Dissolved Solids	491	1	1000	ppm	Total dissolved mineral constituents in water.
2021	Potassium	8.23	1	NA	ppm	
2021	Cyanide	ND	1	NA	ppm	
2021	Iron	ND	1	NA	ppm	Abundant naturally occuring element.

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