

# 2007 Annual Drinking Water Quality Report

(Consumer Confidence Report)

CITY OF PORT ARTHUR

(409) 983-3841 or (409) 983-8230

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**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 EPA/Centers 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 Safe Drinking Water Hotline (1-800-426-4791).

## En Español

Este reporte incluye informacion importante sobre el agua para tomar. Si tiene preguntas o discusiones sobre este reporte en espanol, favor de llamar al tel. (409) 983-8230 par hablar con una personal bilingue en espanol.

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## OUR DRINKING WATER IS REGULATED

by the Texas Commission on Environmental Quality (TCEQ) and they have determined that certain water quality issues exist which prevent our water from meeting all of the requirements as stated in the Federal Drinking Water Standards. Each issue is listed in this report as a violation and we are working closely with the TCEQ to achieve solutions.

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**WATER SOURCES:** 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 can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water before treatment include: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants, and organic chemical contaminants.

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## WHERE DO WE GET OUR DRINKING WATER?

Our drinking water is obtained from Surface water sources. It comes from the following Lake/River/Reservoir/Aquifer: LNVA CANAL, TERMINAL RESERVOIR, PORT ARTHUR RESERVOIR. TCEQ completed an assessment of our source water and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for our water system are based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this report. If we receive or purchase water from another system, their susceptibility is not included in this assessment. For more information on source water assessments and protection efforts at our system, please contact us.

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## ALL DRINKING WATER MAY CONTAIN CONTAMINANTS

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).

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## PUBLIC PARTICIPATION OPPORTUNITIES

The Port Arthur City Council meets every other Tuesday in the Council Chambers of City Hall at 444 4<sup>th</sup> Street. For exact dates and times contact the City Secretary's office at (409) 983-8115.

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## 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.

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## ABOUT THE FOLLOWING PAGES

The pages that follow list all of the federally regulated or monitored contaminants which have been found in your drinking water. The U. S. EPA requires water systems to test for up to 97 contaminants.

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## ABBREVIATIONS

NTU – Nephelometric Turbidity Units  
MFL – million fibers per liter (a measure of asbestos)  
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)  
ppt – parts per trillion, or nanograms per liter  
ppq – parts per quarillion, or picograms per liter

## DEFINITIONS

**Maximum Contaminant Level (MCL)** – the highest permissible level of a contaminant 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.

**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.

## Source Water Assessment

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 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 John Tomplait at (409) 983-3841.

**UNREGULATED CONTAMINANTS**

Year (Range)	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measurement
2004	Barium	0.04	0.04	0.04	2	2	ppm
Source of Contaminant – Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.							
2007	Fluoride	0.86	0.86	0.86	4	4	ppm
Source of Contaminant – Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.							
2007	Nitrate	0.06	0.06	0.06	10	10	ppm
Source of Contaminant – Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.							
2005	Gross beta emitters	3	3	3	50	0	pCi/L
Source of Contaminant – Decay of natural and man-made deposits.							

Organic Contaminants TESTING WAIVED, NOT REPORTED, OR NONE DETECTED

**MAXIMUM RESIDUAL DISINFECTANT LEVEL**

Year	Contaminant	Average Level	Minimum Level	Maximum Level	MRDL	MCLG	Units of Measure
2007	Chloramines	2.7	2.2	3.0	4	<4.0	ppm
Source of Contaminant – disinfectant used to control microbes.							

**DISINFECTION BYPRODUCTS**

Year (Range)	Contaminant	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measurement
2007	Total Haloacetic Acids	15.9	10.3	21.4	60	ppb
Source of Contaminant - Byproduct of drinking water disinfection.						
2007	Total Trihalomethanes	18.7	15.6	21.7	80	ppb
Source of Contaminant – Byproduct of drinking water disinfection.						

Unregulated Initial Distribution System Evaluation for Disinfection Byproducts WAIVED OR NOT YET SAMPLED

**UNREGULATED CONTAMINANTS**

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

Year (Range)	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measurement
2007	Chloroform	11	11	11	ppb
Source of Contaminant – Byproduct of drinking water disinfection.					
2007	Bromodichloromethane	7.6	7.6	7.6	ppb
Source of Contaminant – Byproduct of drinking water disinfection.					
2007	Dibromochloromethane	2.6	2.6	2.6	ppb
Source of Contaminant – Byproduct of drinking water disinfection.					

**LEAD AND COPPER**

Year (Range)	Contaminant	The 90 <sup>th</sup> Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measurement
2006	Lead	8.1	2	15	ppb
Source of Contaminant – Corrosion of household plumbing systems; erosion of natural deposits.					
2006	Copper	0.28	0	1.3	ppm
Source of Contaminant – Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.					

**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 (Range)	Contaminant	Highest Single Measurement	Lowest Monthly % of Sample Meeting Limits	Turbidity Limits	Unit Measurement
2007	Turbidity	0.30	100.00	0.3	NTU
Source of Contaminant – Soil runoff.					

**TOTAL ORGANIC CARBON**

Total organic carbon (TOC) 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	Contaminant	Average Level	Minimum Level	Maximum Level	Unit of Measurement
2007	Source Water	6.8	5.2	11.1	ppm
Source of Contaminant –Naturally present in the environment.					
2007	Drinking Water	5.1	4.1	7.8	ppm
Source of Contaminant – Naturally present in the environment.					
2007	Removal Ratio	51	35	80	% removal*
Source of Contaminant – NA					

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

**Cryptosporidium Monitoring Information**

We are currently testing for the presence of cryptosporidium. Testing will be complete on 05/01/09. Cryptosporidium is a microbial pathogen that may be found in water contaminated by feces. Although filtration removes Cryptosporidium, it cannot guarantee 100% 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.

**Total Coliform** REPORTED MONTHLY TESTS FOUND NO COLIFORM BACTERIA.  
**Fecal Coliform** REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA

**VIOLATIONS**

Violation Type	Health Effects	Duration	Explanation	Steps to Correct
Filtration-WTP/filtration Combined filter Effluent exceeded 1 ntu	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.	12/01/2007 to 12/31/2007	Chemical pump failure.	Pump repaired

**Addition Health information for Lead-***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 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.*

**SECONDARY AND OTHER CONSTITUENTS NOT REGULATED**

<b>Year (Range)</b>	<b>Contaminant</b>	<b>Average Level</b>	<b>Minimum Level</b>	<b>Maximum Level</b>	<b>Limit</b>	<b>Unit of Measurement</b>
2007	Bicarbonate Source of Constituent – Corrosion of carbonate rocks such as limestone.	13	13	13	NA	ppm
2004	Calcium Source of Constituent – Abundant naturally occurring element.	6.7	6.7	6.7	NA	ppm
2007	Chloride Source of Constituent – Abundant naturally occurring element; used in water purification; byproduct of oil field activity.	18	18	18	300	ppm
2004	Copper Source of Constituent – Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.	0.003	0.003	0.003	1	ppm
2004	Iron Source of Constituent – Erosion of natural deposits; iron or steel water delivery equipment or facilities.	0.018	0.018	0.018	0.3	ppm
2004	Magnesium Source of Constituent – Abundant naturally occurring element.	2.1	2.1	2.1	NA	ppm
2004	Nickel Source of Constituent – Erosion of natural deposits.	0.001	0.001	0.001	NA	ppb
2007	pH Source of Constituent – Measure of corrosivity of water.	7.4	7.4	7.4	>7	units
2004	Sodium Source of Constituent – Erosion of natural deposits; byproduct of oil field activity.	15	15	15	NA	ppm
2007	Sulfate Source of Constituent – Naturally occurring; common industrial byproduct of oil field activity.	9	9	9	300	ppm
2007	Total Alkalinity as CaCO3 Source of Constituent – Naturally occurring soluble mineral salts.	11	11	11	NA	ppm
2007	Total Dissolved Solids Source of Constituent – Total dissolved mineral constituents in water.	73	73	73	1000	ppm
2004	Total Hardness as CaCO3 Source of Constituent – Naturally occurring calcium.	25	25	25	NA	ppm