



# 2008 DRINKING WATER QUALITY REPORT

If you would like additional information concerning this report about the quality of your drinking water, please contact Tyler Water Utilities at (903)939-8278.

On September 18, 1998, the U.S. Environmental Protection Agency (EPA) adopted a rule requiring all water utilities to provide a detailed annual report informing its customers of the quality of their drinking water. Tyler Water Utilities is proud of our history of providing our customers with a safe and reliable supply of drinking water. In accordance with EPA requirements, the City of Tyler hereby provides this Annual Water Quality Report, which covers the period from January 1, 2008 to December 31, 2008.

## PUBLIC PARTICIPATION OPPORTUNITIES

The public may participate in City Council meetings held every second and fourth Wednesday at 9 a.m. involving water quality matters.

## REQUIRED INFORMATION

The Texas Commission on Environmental Quality (TCEQ) requires that the following information be provided in this report:

You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly, or immuno-compromised persons such as those undergoing chemotherapy for cancer; those 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 provider. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline at (800)426-4791.

En Espanol: Este reporte incluye informacion importante sobre el agua para tomar. Para asistencia en espanol, favor de llamar al telefono (903)531-1230.

## SOURCES OF DRINKING WATER

Tyler Water Utilities receives raw surface water from two major sources. Raw water from Lake Tyler and Lake Tyler East, located approximately eight miles southeast of Tyler, is pumped to Golden Road Water Treatment Plant. Raw water from Lake Palestine, located approximately ten miles southwest of Tyler, is pumped to Lake Palestine Water Treatment Plant. At the treatment plants, raw water is treated, filtered, and disinfected before distribution. Tyler's water distribution system is also supplemented by twelve deep wells tapping the Carrizo-Wilcox aquifer.

## ADDITIONAL INFORMATION

To ensure 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. 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 Environmental Protection Agency's Safe Drinking Water Hotline at (800)426-4791. Contaminants may be found in drinking water that may cause taste, color, or odor problems. These of problems are not necessarily cause for health concern. For more information on taste, odor, or color of drinking water, please contact Tyler Water Utilities at (903)939-8278. 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 detection of these contaminants will be found in this water quality report. For more information on source water assessments and protection efforts at our system, call (903)939-8278.

## WATER QUALITY RESULTS

Tyler Water Utilities was fully compliant with state and federal drinking water regulations in 2008, ensuring safe drinking water to all our customers. The following tables provide the water quality results of Tyler's drinking water. Please note that a list of definitions has been provided to help you understand the tables.

## DEFINITIONS

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

**Contaminant** - Any physical, chemical, biological or radiological substance or matter in water.

**HRA Avg. (Highest Running Annual Average)** - The highest of four (4) values calculated by averaging each quarter's average result with the previous three (3) quarter's average results.

**LMPS (Lowest Monthly Percentage of Samples)** - The lowest of the monthly percentage of samples that meets the turbidity limit of <0.3 NTU.

**MCL (Maximum Contaminant Level)** - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.

**MCLG (Maximum Contaminant Level Goal)** - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**N/A** - Not Applicable

**NTU (Nephelometric Turbidity Unit)** - A unit of turbidity determined by measuring the side scattering of light caused by particulate matter.

**pCi/l (Picocuries per liter)** - A measure of radioactivity

**ppb (Parts per Billion)** - In drinking water, one atom or molecule of a substance in one billion molecules of water. Example: One cent in 10 million dollars equals one ppb.

**ppm (Parts per Million)** - In drinking water, one atom or molecule of a substance in one million molecules of water. Example: One cent in 10 thousand dollars equals one ppm.

**TT (Treatment Technique)** - A required process intended to reduce the level of a contaminant in drinking water.

**umho/cm** - A unit of measurement for conductivity.

**90th Percentile** - The value determined by ranking and numbering sample results from highest to lowest (lowest = 1), multiplying the total number of samples by 0.90 (90%), and determining the sample result at the calculated ranking. Example: If 30 samples are collected, the 90th percentile would be the 27th highest sample result.

**< (less than sign)** - The sign indicating the value was 'less than' or not detected at the detection limit of the analytical method or 'less than' the regulatory limit.

## CITY OF TYLER DRINKING WATER QUALITY MONITORING ANALYSIS

January 1, 2008 to December 31, 2008

### Regulated at the Customer's Tap

Lead / Copper Results	Units	90th Percentile	MCL	MCLG	# of Sites Exceeding AL	Sources in Drinking Water
Copper	ppm	0.037	AL = 1.3	1.3	0	Corrosion of customer plumbing
Lead	ppb	3.60	AL = 15.0	0	0	Corrosion of customer plumbing

The City of Tyler's last Lead and Copper Rule sampling was on September 14, 2006. Due to an excellent compliance history, the City's sampling has been reduced to once every three (3) years. **Lead was not detected in any treatment plant samples in 2006.**

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>.

Regulated in the Distribution System						
Parameters	Units	HRA Average	Range or Max	MCL	MCLG	Source in Drinking Water
*Total Trihalomethanes (TTHMs)	ppb	57.3	13.1 – 105.0	80	0	Chlorination by-product
Total Haloacetic Acids	ppb	32.6	5.4 – 47.8	60	0	Chlorination by-product
* TTHMs – Some people who drink water containing TTHMs 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.						
Chloramines	ppm	1.71	0.5 – 3.8	4	4	Disinfectant to control microbes
Total Coliform Bacteria	% positive samples / month		0.9%*	5%	0	Naturally present in the environment
* The highest percentage of positive samples per month was 0.9% (1 out of 101) during December. The valid rechecks (3) were all negative. The City did not violate the Total Coliform Rule in 2008.						
Unregulated Initial Distribution System Evaluation – Disinfection Byproducts						
This evaluation is sampling required by the EPA to determine the range of total trihalomethane 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.						
Parameters	Units	HRA Average	Range or Max	MCL	MCLG	Source in Drinking Water
Total Trihalomethanes	ppb	97.5	100.6	80	0	Chlorination by-product
Total Haloacetic Acids	ppb	27.3	59.1	60	0	Chlorination by-product
Regulated at the Treatment Plant						
Parameter	Units	Results	MCL	MCLG	Source	
Turbidity	NTU	Max 0.30	TT = 1.0 NTU	N/A	Soil runoff	
	Percent	LMPs 100%	TT = <0.3 NTU in 99% of samples			
Measuring turbidity is required by state and federal law, and aids the City in determining the effectiveness of the clarification and filtration processes in removing particulate matter from drinking water. The City met all turbidity requirements in 2008.						
Regulated at Treatment Plant and Wells						
Parameter	Units	Max	Range	MCL	MCLG	Source
Barium	ppm	0.06	0.044 – 0.083	2	2	Erosion of natural deposits
Fluoride	ppm	0.41	0.05 – 0.68	4	4	Drinking water additive
Nitrate	ppm	<0.07	<0.05 - 0.12	10	10	Fertilizer runoff; Erosion of natural deposits
Cryptosporidium						
Cryptosporidium is a tiny intestinal parasite found naturally in the environment. It is spread by human and animal waste. If ingested, cryptosporidium may cause cryptosporidiosis, an abdominal infection (symptoms include nausea, diarrhea, and abdominal cramps). Some of the ways cryptosporidium can be spread include drinking contaminated water, eating contaminated food that is raw or undercooked, exposure to the feces of animals or infected individuals (i.e. changing diapers without washing hands afterward), or exposure to contaminated surfaces. Not everyone exposed to the organism becomes ill. During 2008, Tyler tested for cryptosporidium in both untreated and treated water. It has only been found in the untreated water supply. Cryptosporidium has not been found in the Tyler treated drinking water. Tyler works to protect the watershed from contamination and optimizes the treatment process. Although Tyler's water treatment process removes cryptosporidium, immuno-compromised persons should consult their physician regarding appropriate precautions to avoid infection.						
Unregulated Parameters						
Unregulated contaminants are those for which EPA has not established drinking water standards. These are monitored to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.						
Parameter	Units	Average	Range	MCL	MCLG	
Bromodichloromethane	ppb	<17.8	<1.0 – 27.7	N/A	N/A	
Bromoform	ppb	<1.2	<1.0 – 1.4	N/A	N/A	
Chloroform	ppb	33.4	1.1 – 67.0	N/A	N/A	
Dibromochloromethane	ppb	7.9	<1.0 – 14.4	N/A	N/A	
Secondary and Other Constituents						
Parameters	Units	Average	Range	Maximum Secondary Constituent Level		
Alkalinity, Total	ppm	75.00	22.00 – 136.00	N/A		
Alkalinity, Bicarb.	ppm	75.00	22.00 – 136.00	N/A		
Aluminum	ppm	<0.14	<0.04 – 0.27	0.20		
Conductivity	umho/cm	282.86	187.00 – 293.0	N/A		
Hardness, Total	ppm	42.15	16.00 – 67.20	N/A		
Total Dissolved Solids	ppm	161.29	119.00 – 278.00	1000		
Total Organic Carbon	ppm	3.40	2.80 – 4.70	N/A		
Calcium	ppm	11.15	4.46 – 20.50	N/A		
Chloride	ppm	<16.18	<5.00 – 46.20	250		
Magnesium	ppm	2.27	1.19 – 3.01	N/A		
Manganese	ppm	0.02	0.02 – 0.05	.05		
Sodium	ppm	41.44	7.39 – 80.70	N/A		
Copper	ppm	0.110	0.003 – 0.492	1.0		
Iron	ppm	<0.710	<0.050 – 3.110	0.30		
Lead	ppm	<0.003	<0.001 – 0.012	N/A		
Nickel	ppm	<0.001	<0.001 – 0.003	N/A		
Zinc	ppm	0.020	0.008 – 0.045	5.0		
Monochloroacetic acid	ppb	<6.01	<2.00 – 17.90	N/A		
Dichloroacetic acid	ppb	<12.44	<1.10 – 25.30	N/A		
Trichloroacetic acid	ppb	<9.43	<1.00 – 17.50	N/A		
Monobromoacetic acid	ppb	<2.34	<1.00 – 4.50	N/A		
Dibromoacetic acid	ppb	<2.42	<1.00 – 4.10	N/A		
Bromochloroacetic acid	ppb	<6.11	<1.00 – 11.30	N/A		
Other Constituents						
Parameters	Units	Result	MCL	MCLG		
Antimony	ppb	<1.0	6	6		
Arsenic	ppb	<2.0	10	N/A		
Beryllium	ppb	<1.0	4	4		
Cadmium	ppb	<1.0	5	5		
Chromium	ppb	<2.0	100	100		
Mercury	ppb	<0.2	2	2		
Selenium	ppb	<4.0	50	50		
Silver	ppb	<1.0	N/A	N/A		
Thallium	ppb	<1.0	2	0.5		
Radioactive Parameters						
Gross Alpha Emitters (2005)	pCi/l	<2.0	15	0		
Gross Beta Emitters (2005)	pCi/l	<4.0	50	0		
Radium 228 (2005)	pCi/l	<1.0	5	0		
Organic Compounds						
Parameters	Units	Average	Range	MCL	MCLG	Source
Atrazine	ppb	<0.12	<0.1 – 0.14	3	3	Herbicide runoff
Additional organic compounds were analyzed, but were not detected.						