



## 2023 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) 939-8716

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, 2023, to December 31, 2023.

### 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

Some persons may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. *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. However, 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.

The City of Tyler has tested for *Cryptosporidium* in both untreated and treated water. It has only been found in the untreated water supply and 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.

### 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 eleven deep wells tapping the Carrizo-Wilcox aquifer. Tyler's wells are currently categorized as inactive but would be available in an emergency.

### 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 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)939-8716. 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)939-8716.

### 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. The presence of contaminants does not necessarily indicate that the water poses a health risk.

**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

**ND** - Indicates that the parameter tested below the detection limit.

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

**Parameter** - a particular chemical, combination of chemicals or microbiological entity that can be assigned a value: commonly a concentration, but may also be a logical entity (present or absent)

**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 parameter in drinking water.

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

**< (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.

<b>CITY OF TYLER</b>						
<b>DRINKING WATER QUALITY MONITORING ANALYSIS</b>						
<b>January 1, 2023, to December 31, 2023</b>						

Regulated in the Distribution System and the Treatment Plants						
Parameters	Units	HRA Average	Range	MCL	MCLG	Source in Drinking Water
Total Trihalomethanes	ppb	48.7	31.2 – 76.4	80	0	Chlorination byproduct
Total Haloacetic Acids	ppb	24.2	14.3 – 38.6	60	0	Chlorination byproduct

Distribution System Disinfectant Residual								
Disinfectant Residual	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
Chlorine	2023	2.03	0.8 – 3.0	4	4	mg/L	N	Water additive used to control microbes.

Regulated at the Customer's Tap						
Parameters	Units	90th Percentile	MCL	MCLG	# of Sites Exceeding AL	Sources in Drinking Water
Copper	ppm	0.0033	AL = 1.3	1.3	0	Corrosion of customer
Lead	ppm	ND	AL = 0.015	0	0	Corrosion of customer
The City of Tyler's last Lead and Copper Rule sampling was in 2023. The results for the 2023 lead and copper sampling indicated that our water system is below the action limit for lead and copper.						
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 various 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 <a href="http://www.epa.gov/safewater/lead">http://www.epa.gov/safewater/lead</a> .						

Regulated at the Treatment Plants					
Parameter	Units	Results	MCL	MCLG	Source
Turbidity (TT=Treatment Technique)	NTU	Max 0.6	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 2023.					

Parameters	Units	Max	Range	MCL	MCLG	Source
Bromate	ppm	5.25	0 - 5.25	10	0	By-product of drinking water disinfection
Barium	ppm	0.061	0.056 - 0.061	2	2	Erosion of natural
Fluoride	ppm	0.225	0.0401 – 0.225	4	4	Drinking water
Nitrate	ppm	0.16	0.0682 - 0.16	10	10	Fertilizer runoff; Erosion of natural deposits

The percentage of Total Organic Carbon (TOC) removal was measured each month, and the system met all TOC removal requirements.

Secondary and Other Constituents				
Parameters				
	Units	Average	Range	Maximum Secondary
Alkalinity, Bicarb.	ppm	37.3	30.3 – 33.4	N/A
Aluminum	ppm	0.033	0.015 – 0.051	N/A
Conductivity	umho/cm	280	240 – 319	0.20
Hardness, Total	ppm	56.6	50.3 – 62.8	N/A
Total Dissolved Solids	ppm	127	137 – 181	N/A
Total Organic Carbon	ppm	3.23	2.12 – 4.58	N/A
Calcium	ppm	10.1	4.13 – 16.0	N/A
Chloride	ppm	23.9	16.0 – 31.8	N/A
Magnesium	ppm	4.10	3.18 – 5.01	N/A
Manganese	ppm	0.0015	<0.001 –	N/A
Sodium	ppm	33.2	29.0 – 37.4	N/A
Copper	ppm	0.0033	<0.001 –	N/A
Iron	ppm	<0.05	<0.05	N/A
Nickel	ppm	<0.001	<0.001 –	N/A
Zinc	ppm	<0.005	<0.005	N/A
Monochloroacetic acid	ppm	3.11	1.3 – 5.3	5.0
Dichloroacetic acid	ppb	13.7	8.2 – 21.9	N/A
Trichloroacetic acid	ppb	5.98	2.6 – 11.1	N/A
Monobromoacetic acid	ppb	0.1	<1.0 – 1.2	N/A
Dibromoacetic acid	ppb	1.34	<1.0 – 2.4	N/A
Bromochloroacetic acid	ppb	5.44	3.2 – 8.0	N/A

Other Parameters				
Antimony	Units	Result	MCL	MCLG
Arsenic	ppm	<0.001	0.001	6
Beryllium	ppm	<0.001	0.004	N/A
Cadmium	ppm	<0.001	0.005	4
Chromium	ppm	<0.001	0.1	5
Mercury	ppm	<0.0002	0.002	100
Selenium	ppm	<0.005	0.005	2
Silver	ppm	<0.001	0.1	50
Thallium	ppm	<0.001	0.002	N/A

Revised Total Coliform Rule (RTCR)			
The Revised Total Coliform Rule (RTCR) seeks to prevent waterborne diseases caused by <i>E. coli</i> . <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young			
Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, E. COLI, POS E COLI (RTCR)	09/01/2023	09/30/2023	<p><i>E. coli</i> bacteria were found in our drinking water during the period indicated in violation of a standard. We had a total coliform-positive repeat sample following an <i>E. coli</i>-positive routine sample.</p> <p>All mandatory repeat samples were collected and were negative for <i>E. coli</i>, and the system was deemed to be in compliance per EPA regulations.</p>

**§290.272(g)(10)(A)**

(A) Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

*E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We found *E. coli* bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

We were required to complete a Level 2 assessment because we found *E. coli* in our water system. In addition, we were required to take five (5) corrective actions, and we completed all five (5).

**§290.272(g)(10)(B)**

(B) During the past year we were required to conduct 1 Level 1 assessment(s). 1 Level 1 assessment(s) were completed. In addition, we were required to take {5} corrective actions and we completed {5} of these actions.

**§290.272(g)(10)(C)**

(C) During the past year 1 Level 2 assessments were required to be completed for our water system. 1 Level 2 assessments were completed. In addition, we were required to take 5 corrective actions and we completed 5 of these actions.

On September 7, 2023, the City of Tyler had a sample at one of our bacteriological sample site locations test positive for *E. coli*. As per TCEQ regulations, the city resampled at that location, a second sample was collected upstream of that location, and a third sample was taken downstream. On September 8, 2023, the original site that was resampled tested negative for *E. coli* but tested positive for total coliform. The upstream and downstream samples tested negative for *E. coli* and negative for total coliform. Since the original sample site tested was *E. coli* positive, and the resample tested positive for total coliform, the city was in violation of the *E. coli* Maximum Contaminant Level (MCL) and was required to do a Level II Assessment. After an onsite investigation at the original site, the city discovered a possible Sanitary Defect, which refers to a flaw or issue that could potentially allow microbial contamination to enter the distribution system. The city resampled the same site on September 8, 2023. Three samples were taken again: the original, one upstream, and one downstream. All samples came back negative for *E. coli* and negative for total coliform the next day, September 9, 2023. Because of the potential Sanitary Defect, the city had a Customer Service Investigation (CSI) performed at the location by a TCEQ-licensed CSI. The investigation found a type of customer-owned water treatment device, which was a direct cross-connection.

This was identified to be a Sanitary Defect, and the customer was required to install a backflow device to protect the city's water supply. The backflow device was tested upon installation and passed.

**§290.272(g)(11)(B)**

(B) We had a total coliform-positive repeat sample following an *E. coli* -positive routine sample.

The Level II Assessment required the city to perform (5) corrective actions.

1. Complete a new Bacteriological (BAC'T) Sample Site Program.
2. Complete a new daily chlorine monitoring plan.
3. Complete tank inspections on all booster pump station pressure tanks.
4. Complete elevated storage tank repairs stated in the annual inspections.
5. Correct all identified Sanitary Defects.

**Corrective Action Items Status**

1. The new BAC'T Sample Site Program was submitted to TCEQ in January 2024.
2. The new daily chlorine monitoring plan was completed and began in January 2024.
3. All booster pump stations pressure tanks have been inspected by January 2024.
4. Elevated Storage Tanks identified as needing rehabilitation are on a TCEQ compliance schedule to be rehabilitated.
5. The identified Sanitary Defect has been corrected. A backflow device was installed at the location to protect the city's water supply.

Lead and Copper Rule			
The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead—and copper-containing plumbing materials.			
Violation Type	Violation Begin	Violation End	Violation Explanation
LEAD CONSUMER NOTICE (LCR)	12/30/2023	01/29/2024	We failed to provide the results of lead tap water monitoring to the consumers at the location water was tested. These were supposed to be provided no later than 30 days after learning the results.  Results of the lead and copper analysis results were provided to the consumers and TCEQ in January 2024.

**Environmental Protection Agency, EPA UCMR5 Program**

In 2023 the City of Tyler collected samples per requirements of the EPA's UCMR5 Program. This consisted of samples collected at the Lake Palestine Water Treatment Plant and the Golden Road Water Treatment plant once a quarter for the year. The samples were then sent to an independent lab for analysis. More can be learned at the City of Tyler's PFAS webpage [Understanding PFAS \(cityoftyler.org\)](https://www.cityoftyler.org/understanding-pfas)

Unregulated Parameters					
Unregulated contaminants are those for which the 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 <a href="https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule">https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule</a> , or call the Safe Water Hotline at (800-426-4791).					
Constituent Parameter	Sampling Type	Units	Average	Range	MCL
PFBA	Entry Point	ppb	0.00659	<0.005 - 0.0142	N/A
PFPeA	Entry Point	ppb	0.00578	<0.003 - 0.02450	N/A
PFHxA	Entry Point	ppb	0.00405	<0.003 - 0.01100	N/A
PFHpA	Entry Point	ppb	0.00309	<0.003 - 0.00374	N/A
PFHxS	Entry Point	ppb	0.00342	<0.003 - 0.00633	0.01
PFOA	Entry Point	ppb	0.00462	<0.004 - 0.00892	0.004
PFOS	Entry Point	ppb	0.00404	<0.004 - 0.00433	0.004
Lithium	Entry Point	ppb	10.37500	<9 - 20	N/A

**Water Loss Audit**

In the water loss audit submitted to the Texas Water Development Board for the period of January through December 2023, our system lost an estimated 1,080,849,916 gallons of water. If you have any questions about the water loss audit, please call 903-531-1238.