



## *City of Paris*

# *2016 Drinking Water Quality Report*

### **Your Drinking Water is SAFE**

The City of Paris is committed to providing safe and dependable drinking water to the citizens of Paris and Lamar County. Utilities Department employees take pride in supplying water of high quality and quantity that consistently exceeds the requirements set by state and federal drinking water standards. In 2016, the City treated over 3.94 billion gallons of water and distributed it through 238 miles of water lines, ranging in size from 2" - 60". In the water loss audit submitted to the Texas Water Development Board for the time period of Jan-Dec 2016, our system lost an estimated 83,597,718 gallons of water, if you have any questions about the water loss audit please call **(903) 784-2464**. The Texas Commission on Environmental Quality (TCEQ) has assessed the City of Paris water system and has determined our water is safe to drink. This determination was made by the TCEQ based on information in the attached tables for tests performed during 2016. The City of Paris is rated a Superior water system by the TCEQ.

It is important to the City of Paris that you have this information about your drinking water so you can have confidence in the water we produce. The following tables are a list of what has been found in the water and at what levels. Many of the listed elements are not actually contaminants but natural chemical and physical properties inherent to all drinking water. Most of these parameters are not related to public health and are not regulated by state and federal standards. These unregulated items have been included for your information since they can have an effect on the aesthetic quality of water and are often significant to many industrial water users.

### **We Welcome Your Comments**

If you have questions concerning your drinking water, would like to schedule a speaker for your group or take a tour of the water treatment plant, please call the City of Paris Utilities Department at **(903) 784-2464**. For questions about your water utility bill, please call the Water Billing Office at **(903) 784-9270**.

The Paris City Council meets at 5:30 PM on the second and fourth Monday of each month at the City Hall Council Chambers, 107 East Kaufman St. Special council meetings are called as needed. Call the City Manager's office at **(903) 784-9202** for special meeting dates and times. You can also subscribe to meeting announcements by registering through the City's website at [www.paristexas.gov](http://www.paristexas.gov)

For water conservation information please refer to the following EPA website <http://www.epa.gov/watersense/>

### **All Drinking Water May Contain Contaminants**

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 **(1-800-426-4791)** or by accessing the EPA website at <http://www.epa.gov/safewater/dwh/index.html>

### **Special Information for People with Weakened Immune Systems**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer and undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, those undergoing treatment with steroids, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* or other microbial contaminants are available from the Safe Drinking Water Hotline **(1-800-426-4791)**.

### **Cryptosporidium**

*Cryptosporidium* is a waterborne microscopic parasite that invades the digestive tract of humans and animals. This parasite can cause diarrhea, cramps, fever and other gastrointestinal disorders. No specific drug therapy has proven effective against infection from this parasite but people with healthy immune systems typically recover within about two weeks. Individuals with weak immune systems, however, may not be able to develop resistance to the parasite and may suffer long term chronic illnesses or even death. *Cryptosporidium* is highly resistant to disinfection by chlorine and removal by proper filtration is the method used by most water treatment plants. The City of Paris monitored for *Cryptosporidium* in the untreated lake water in 2008 and 2009 and is currently monitoring again from October 2016 through September 2018. No *Cryptosporidium* has ever been detected in any monthly sample.

## Where Do We Get Our Drinking Water?

All City of Paris water comes from surface water sources. The majority of water is from Pat Mayse Lake with supplement from Lake Crook. The watersheds of both lakes are typically used for agriculture, grazing and recreation with no industrial or waste treatment plant discharges to contribute pollutants to the water supply. Some agricultural chemicals, such as herbicides, are occasionally detected in the source water but at levels far below concentrations considered unsafe. The TCEQ has completed a Source Water Susceptibility Assessment and results indicate the source water is susceptible to certain contaminants. The sampling requirements for the City of Paris are based on this susceptibility and previous sampling data. Any detection of these contaminants can be found in this report. For more information on source water assessments and protection efforts at our system contact the City of Paris Utilities Dept. at (903) 784-2464.

## Possible Contaminant Sources

**Microbial Contaminants**, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations or wildlife.

**Inorganic Contaminants**, such as salts and metals, 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** may come from a variety of sources such as agriculture, urban storm water runoff or residential uses.

**Organic Contaminants**, including synthetic and volatile organic chemicals, may be by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff or septic systems.

**Radioactive Contaminants**, can be naturally occurring or be the result of oil and gas production or mining activities.

## Taste and Odor

Your water can be completely safe to drink and still have an unpleasant taste and odor due to non-health related water quality problems. Microscopic organisms such as algae will periodically produce a “bloom” in the lake causing taste and odor problems in the treated water. Hot dry periods and high water temperatures occasionally cause a die off of vegetation in the lake contributing to taste and odor as well. Lake “turnover” on a few occasions has caused taste and odor problems but algae are typically the cause of most taste and odor incidents. During these events, powdered activated carbon is added at the treatment plant to remove taste and odor. Potassium permanganate may be added at the water intake pump station to oxidize taste and odor-producing organic materials when needed. In spite of all taste and odor removal techniques, some persons may still detect an unpleasant taste and/or odor. However, the water is still safe to drink.

## Understanding the Tables

The following tables list the chemical and physical constituents detected in the City of Paris treated water in 2016. Some constituents are listed with prior year data for chemicals that are on a reduced monitoring schedule. The list of definitions explains the terms used in the tables.

**Action Level** The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

**Coliforms** The *Total coliform* bacteria group is used as indicators of microbial contamination of drinking water because they are easily detected and found in the digestive tract of warm-blooded animals. While not necessarily disease producers themselves, they are often found in association with other microbes capable of causing disease. The total coliform group is hardier than many disease causing organisms; therefore, their absence from drinking water is a good indication that the water is bacteriologically safe for human consumption. *Fecal coliform* (mostly *E. coli*) is a portion of the coliform bacteria group originating in the intestinal tract of warm-blooded animals that passes into the environment as feces. Fecal coliform is often used as an indicator of fecal contamination of domestic water supplies.

**Maximum Contaminants Level Goal (MCLG)** 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.

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

**N/A** Not Applicable

**Nephelometric Turbidity Units (NTU)** A standard unit used to measure the turbidity of water.

**Parts per billion (ppb) Concentration** of a constituent in billionths. Often expressed as micrograms per liter. One part per billion is equivalent to one penny in ten million dollars.

**Parts per million (ppm) Concentration** of a constituent in millionths. Often expressed as milligrams per liter. One part per million is equivalent to one penny in ten thousand dollars.

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

**Turbidity** A measure of the cloudiness of water measured in NTUs. Turbidity is an indicator of the effectiveness of the treatment plant’s sedimentation and filtration systems. Turbidity has no health effects. However, turbidity can interfere with the disinfection process and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms such as bacteria, viruses and parasites that can cause symptoms such as nausea, cramps, diarrhea, headaches and other gastrointestinal disorders.

**Regulated at the Treatment Plant**

<i>Constituent</i>	<i>Level Detected</i>	<i>MCL</i>	<i>MCLG</i>	<i>Possible Source of Substance</i>
Fluoride (ppm)	0.268	4.0	4.0	Water treatment additive to promote strong teeth; erosion of natural deposits.
Nitrate (ppm)	0.332	10	10	Runoff from fertilizer; leaching from septic tanks; erosion of natural deposits.
Barium (ppm)	0.033	2	2	Erosion of natural deposits; waste from drilling or metal refining.
Atrazine (ppb)	0.14	3	3	Runoff from herbicide used on row crops.

<i>Constituent</i>	<i>Measurement</i>	<i>Lowest % of Monthly Samples Meeting Limits</i>	<i>MCL</i>	<i>MCLG</i>	<i>Possible Source</i>
Turbidity	High: 3.60 Avg: 0.16	97.8%	0.3*	N/A	Soil runoff in source water.

\*Turbidity MCL is exceeded if more than 5% of all samples taken in a single month are greater than 0.3 NTU. The treatment technique must not exceed 1 NTU at any time.

**Treatment Technique Violation for Turbidity**

A chemical feed pump malfunction on 3/12/2016 resulted in a high turbidity reading that exceeded acceptable treatment technique standards. The treatment plant was taken off line and the equipment was repaired. As a precaution, a boil water notice was issued and samples were collected to insure the safety of the water. Results of the tests indicated no harmful organisms were present and the boil water notice was rescinded 3/14/2016. Turbidity has no health effects but can interfere with disinfection and may provide a medium for microbial growth of bacteria, viruses and parasites. These organisms, if present, can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

<i>Constituent</i>	<i>Source Water</i>	<i>Treated Water</i>	<i>Removal Ratio*</i>	<i>Possible Source</i>
Total Organic Carbon (ppm)	Highest: 6.09	Highest: 3.00	Highest: 119%	Naturally occurring in source water.
	Lowest: 4.47	Lowest: 2.39	Lowest: 100%	
	Average: 5.36	Average: 2.77	Average: 109%	

Total Organic Carbon has no adverse health effects but is monitored to determine the potential to form possible harmful disinfection byproducts from the water treatment process.

\*Removal Ratio is the percent removed by the treatment process divided by the percent removal required by the TCEQ.

**Unregulated Contaminants Monitored at the Treatment Plant**

<i>Constituent</i>	<i>Average of All Sampling Points</i>	<i>Range of Detected Levels*</i>
Chloroform (ppb)	51.9	51.9
Bromodichloromethane (ppb)	10.6	10.6
Dibromochloromethane (ppb)	1.06	1.06

*Reason for Monitoring:* Unregulated contaminant monitoring 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 and whether future regulation is warranted. 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.

**Regulated in the Distribution System**

<i>Constituent</i>	<i>Highest Monthly Number of Positive Samples</i>	<i>MCL</i>	<i>MCLG</i>	<i>Possible Source</i>
Total Coliform	0	>5%/Month*	0	Human and animal fecal wastes; naturally present in the environment.

\*The City of Paris typically submits thirty (30) samples per month for Coliform testing. An MCL violation occurs when two (2) or more samples are Coliform positive in a single month or more than 5% of samples if 40 or more samples are collected in a single month.

<i>Constituent</i>	<i>Average</i>	<i>Minimum</i>	<i>Maximum</i>	<i>MCL</i>	<i>MCLG</i>	<i>Source</i>
Chloramine (ppm)	2.4	0.2	4.4	4.0	<4.0	Disinfectant used to control microbes.

Chloramine residuals are collected in the distribution system daily.

<i>Constituent</i>	<i>Average of All Quarterly Samples</i>	<i>Range of Detected Levels</i>	<i>MCL</i>	<i>MCLG</i>	<i>Possible Source</i>
Total Trihalomethanes (ppb)	61.7	38.9 – 79.8	80*	0	Byproduct of drinking water chlorination.

\*MCL of 80 ppb is violated when the average of four (4) consecutive quarterly samples exceeds 80.

<i>Constituent</i>	<i>Average</i>	<i>Range of Detected Levels</i>	<i>MCL</i>	<i>MCLG</i>	<i>Possible Source</i>
Total Haloacetic Acids (ppb)	49.1	33.5 – 63.0	60*	0	Byproduct of drinking water chlorination.

\*MCL of 60 ppb is violated when the average of four (4) consecutive quarterly samples exceeds 60.

**Regulated at the Tap**

<i>Constituent</i>	<i>90<sup>th</sup> Percentile of Sampling Event</i>	<i>Action Level</i>	<i>Number of Sites Exceeding Action Level</i>	<i>Possible Source</i>
Lead (ppb)	1.90	15	0	Corrosion of household plumbing; erosion of natural deposits.
Copper (ppm)	0.210	1.3	0	Corrosion of household plumbing; erosion of natural deposits; leaching from wood preservatives.
The City of Paris is on reduced monitoring for Lead and Copper due to historically low concentrations. Monitoring is performed every three years.				

*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. Our 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 have your water tested for a fee. 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>.*

**Non-regulated and Secondary Constituents**

<i>Constituent</i>	<i>Level Detected</i>	<i>Secondary Limit</i>	<i>Possible Source</i>
Total Alkalinity (ppm)	31.2	N/A	Erosion of natural deposits.
Calcium (ppm)	18.2	N/A	Erosion of natural deposits.
Chloride (ppm)	5.36	300	Erosion of natural deposits.
Total Dissolved Solids (ppm)	124	1,000	Erosion of natural deposits; by-product of water treatment
Sulfate (ppm)	31.9	300	Erosion of natural deposits.
Total Hardness (ppm)	51.7	N/A	Erosion of natural deposits.
Sodium (ppm)	11.8	N/A	Erosion of natural deposits.
Aluminum (ppm)	0.028	0.05-0.2	Erosion of natural deposits; by-product of water treatment
Magnesium (ppm)	1.50	N/A	Erosion of natural deposits.
Manganese (ppm)	0.0028	0.05	Erosion of natural deposits.
Potassium (ppm)	2.75	N/A	Erosion of natural deposits.
Conductivity (umhos/cm)	196	N/A	Erosion of natural deposits; by-product of water treatment
Cyanide (ppm)	0.0615	N/A	Discharge from steel/metal, plastic and fertilizer factories
Silver (ppm)	0.00047	0.1	Erosion of natural deposits; possible antimicrobial agent

*Thank You*

*The City of Paris*