Water Improvement District #3
Consumer Confidence Report
Annual Drinking Water Quality Report 2016

Water Improvement District #3 is pleased to provide you with our 2016 Annual Drinking Water report for January 2015-December 2015. We strive to keep you informed about the quality of water and services delivered to you over the past year. Our goal is and always has been to provide to you a safe dependable supply of drinking water.

WATER SOURCE

Water sold to customer of Water Improvement District #3 is purchased from the City of Tulsa. Potable water from the City of Tulsa is treated surface water transported from three lakes in northeastern Oklahoma. Lake Oologah on the Verdigris River (in Rogers and Nowata counties), Lakes Spavinaw and Eucha on Spavinaw Creek (in Mayes and Delaware counties) and Lake Hudson on the Neosho River (in Mayes County). The City of Tulsa operates more than 2,200 miles of underground water lines that carry treated drinking water from two treatment facilities; Mohawk Park and A. B. Jewell Plant; to your faucets. Daily changes in supply and demand determine which plant provides drinking water to specific areas. Generally, customers in the north and west portions of Tulsa receive treated water from Mohawk Park and those in the south and east areas receive treated water from the A. B. Jewell Plant.

MONITORING

Rainwater flows downhill both over the land and under the ground to collect in streams and in our lakes. As water travels to our lakes, it dissolves minerals naturally found in rocks and soil. The water can also pick up harmful materials like pesticides, herbicides and bacteria left in and on the ground after human or animal activity. Tulsa water flows through pipes from our source lakes to Tulsa's water treatment plants. **Water Improvement District #3** and City of Tulsa ran numerous tests looking for pollutants that might be dangerous to your health, and substances that can make the water smell bad to people who are sensitive to them. Turley Water monitors your water monthly for microbiological contaminants and triennially for lead and copper concentrations.

The Environmental Protection Agency (EPA) limits how much of a harmful substance is in the public water supply after water treatment. The Food and Drug Administration (FDA) sets similar limits to bottled water. The Oklahoma Department of Environmental Quality (ODEQ) has studied our source lakes. Their Source Water Assessment shows that human activities could pollute this water. If you would like to know more about this study, or how the ODEQ works to protect source water, contact them at (405)702-8100 or visit www.deq.state.ok.us/wqdnew/sourcewater/index. For the detailed City of Tulsa Annual Water Quality Report for 2016 please visit www.cityoftulsa.org/City-Services/Water/Quality.aspx

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. EPA/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 (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. The City of Tulsa 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 Hotline or www.epa.gov/safewater/lead.

Copies of the CCR are available in the office along with the City of Tulsa's report.

2016 Water Quality Data

This table shows data for samples collected during 2016 (unless otherwise noted). Analyses made by professionals after water treatment showed that the levels of all contaminants found were much less than the levels that are cause for concern.

***Definitions:**

AL = Action Level: The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow.

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

MCLG = Maximum Contaminant Level Goal: The level of contaminant in drinking water below which there is no known or expected health risk.

MRDL = Maximum Residual Disinfectant Level: The highest level of disinfectant allowed in drinking water.

LRAA = Locational Running Annual Average: average calculated at each monitoring location

NTU = Nephelometric Turbidity Unit

s.u. = Standard Units

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

****Data collected quarterly 2014 in conjunction with UCMR3 sampling. Monitoring frequency is in compliance with regulation.**

******Current round of testing is ongoing, data calculated over 21 months, testing will complete in 2017; oocysts found in source water only; Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.***

Regulated Contaminants	Level Found	Minimum	Maximum	Maximum Contaminant Level (MCL*)	MCLG*	Violation	Likely Source of Contaminants
Turbidity Level found			0.26	TT*=less than 0.3 NTU 95 percent of the time.	n/a		Soil runoff.
Lowest monthly % meeting regs	100.0%					No	
Total Coliform bacteria within distribution system			0.47% (monthly)	Presence of coliform bacteria in more than 5 percent of monthly samples.	0	No	Naturally present in the environment.
E coli			1 (routine)	Routine sample with positive *E. coli* followed by repeat sample with positive Total Coliform or *E. coli*.	0	No	Human and animal fecal waste.
Cryptosporidium***	0.008	0.000	0.100	TT*=Presence of cryptosporidia >0.075 oocysts/L over 48 month sampling period	0	No	Human and animal fecal waste.
Barium	0.041	0.030	0.058	2 parts per million	2	No	Naturally present in the environment, drilling waste, metal refineries.
Total Chlorine	2.5	1.6	3.1	MRDL* = 4.0 parts per million annual average	4	No	Water additive to control microbes.
Chlorite	0.23	0.05	0.36	1 part per million	0.8	No	By-product of drinking water disinfection.
Total Chromium**	0.14	0	0.28	100 parts per billion	100	No	Discharge from steel and pulp mills; erosion of natural deposits
Copper	0.28 ppm at the 90th percentile; 0 sites above AL			AL* = 1.3 parts per million (ppm) at 90th percentile	1.3	No	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives.
Fluoride	0.67	0.24	0.84	4 parts per million	4	No	Erosion of natural deposits, water additive which promotes strong teeth, discharge from fertilizer and aluminum factories.
Lead	0.002 ppb at the 90th percentile; 0 sites above AL			AL* = 15 parts per billion (ppb) at 90th percentile	0	No	Corrosion of household plumbing systems, erosion of natural deposits.
Nitrate	0.35	0	1.1	10 parts per million;	10	No	Naturally occurring, fertilizers, sewage treatment plants, leaching from septic tanks, erosion of natural deposits
Total Organic Carbon	1.9	1.10	3.1	Results are parts per million. MCL is TT*=percent removal	n/a	No	Naturally found in the environment.
Haloacetic Acids	17	6	27	highest LRAA; Minimum and Maximum are from individual readings.	n/a	No	By-product of drinking water disinfection.
Total Trihalomethanes	36	24	51	80 parts per billion LRAA*. Level found is highest LRAA; Minimum and Maximum are from individual readings.	n/a	No	By-product of drinking water disinfection.

Secondary Contaminants	Average	Minimum	Maximum	Recommended Level			Likely Source of Contaminants
pH	n/a	7.1	8.5	Aesthetic level 6.5-8.5 s.u.*			Measure of acidity. Naturally present, adjusted in drinking water treatment.
Chloride	13	8	20	Aesthetic level 250 parts per million			Naturally present, brine from oilfield operations
Sodium	10	5.9	14	Standard has not been established			Naturally occurring, urban stormwater runoff or discharge from sewage treatment plants.
Sulfate	21	4.1	58	Aesthetic level 250 parts per million			Naturally present in the environment.

ADDITIONAL MONITORING:

Tulsa was required to participate in Unregulated Contaminant Monitoring (UCMR3) in 2014. 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. The following are those contaminants that were detected during UCMR3 monitoring.

Unregulated Contaminants	Average (parts per billion)	Minimum (parts per billion)		Maximum (parts per billion)
Bromochloromethane	0.020	0		0.092
Chlorate	79.3	0		244
Hexavalent Chromium	0.011	0		0.055
Molybdenum	0.14	0		1.1
Strontium	157	44.8		362
Vanadium	0.57	0		1.2