

Skiatook's 2016 Annual Drinking Water Quality Report

The City of Skiatook is pleased to present the 2016 Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about the water quality and services delivered to you from January 1st-December 31st, 2015. Our goal is and always has been to provide our citizen's a safe and dependable supply of drinking water.

Water sold to customers of Skiatook is surface water that comes from Skiatook Lake and Tulsa Mohawk and is treated at the Skiatook Water Treat Plant. Your water is treated by disinfection. Disinfection involves the addition of chlorine or other disinfectant to kill dangerous bacteria and microorganisms that may be in the water. The Skiatook Water Treatment Plant was switched from chlorine to chloramines for disinfection in October 2015. Disinfection is considered to be one of the major public health advances of the 20th century. The City routinely monitors for contaminants in your drinking water according to State and Federal laws. The City monitors for pollutants that may be dangerous to your health as well as for microbiological contaminants and triennially for lead and copper concentrations.

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 at (800) 426-4791.

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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity: microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The Skiatook Public Works Authority meets the second and last Tuesday of each month at 6:00 p.m. in the Municipal Board Room, 220 S. Broadway, Skiatook, OK. Please feel free to participate in these meetings. Copies of this report are available at no cost at Skiatook City Hall located at

110 N. Broadway, Skiatook, OK, or at www.cityofskiatook.com located under Document Central labeled "2016 Water Quality Report". For further information, please contact the City Manager, Dan Yancey, at (918) 396-2797 x113.

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference - try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense for more information.

Monitoring and reporting of compliance data violations

04/01/15-06/11/15

We failed to submit our operational evaluation level (OEL) report to our regulator. The report is needed to determine best treatment practices necessary to minimize possible future exceedences of TTHM.

Skiatook and Tulsa Water Quality Data Tables

2015 WATER QUALITY DATA						
Contaminants	Average	Range of levels		Max Contaminant Level (MCL*)	MCLG	Likely source of contaminants
Chlorine	1	1 to 1		MRDL*-4.0 parts per million annual average	4	Water additive to control microbes.
Halo Acetic Acids	14	9.29-18.2		60 parts per billion LRAA*	n/a	By-product of drinking water disinfection
Trihalomethane	77	59.1-98.2		80 parts per billion LRAA*	n/a	By-product of drinking water disinfection
Barium	0.045			2 parts per million	2	Naturally present in the environment, drilling waste, metal refineries.
Fluoride	0.5	0.00-1.11		4 parts per million	4	Erosion of natural deposits, water additive which promotes strong teeth, discharge from fertilizer and aluminum factories.
Nitrate - Nitrite	BPQL	BPQL		Nitrate=10 parts per million	10; 1	Naturally occurring, fertilizers, sewage treatment plants, leaching from septic tanks.
Beta Particles	3.27	3.27-3.27		50pCi/L* (4 mrem/yr*)	0	Decay of natural and man-made mineral deposits.
Copper	0.106	BPQL		AL*=1.3 parts per million at 90th percentile	1.3	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives.
Lead	0	BPQL		AL*=15 parts per billion	0	Corrosion of household plumbing systems, erosion of natural deposits.
E. coli	N/A	N/A		Routine sample with (+) E. Coli followed by repeat sample with (+) Total Coliform or E. Coli	0	Human and animal fecal waste
Chlorite	N/A	N/A		1 part per million	0.8	By-product of drinking water disinfection
Contaminants	Ave	Min	Max	Max Contaminant Level (MCL*)	MCLG	Likely source of contaminants
Turbidity level found			0.3	TT<less than 0.3 NTU 98% of the time	n/a	Soil runoff.
Lowest monthly % meeting regs	97%					
Total Coliform Bacteria within distribution system			0	Presence of coliform bacteria in more than 5% of samples	0	Naturally present in the environment
Total Organic Carbon*	N/A	N/A	2.8	Results are parts per million. MCL is TT*=percent removal	n/a	Naturally present in the environment

*The percentage of Total Organic Carbon removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

VIOLATIONS TABLE

TOTAL TRIHALOMETHANES (TTHM): Some people who drink water containing trihalomethanes 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.

Violation Type	Violation Begin	Violation End	Violation Explanation
MCL, LRAA	1/1/2015	6/11/2015	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL for a locational running annual average abbreviated LRAA) for the period indicated.
MCL, LRAA	4/1/2015	6/30/2015	
MCL, LRAA	7/1/2015	9/30/2015	
MCL, LRAA	10/1/2015	12/31/2015	

CITY OF TULSA

2015 WATER QUALITY DATA

Contaminants	Level Found	Minimum	Maximum	Max Contaminant Level (MCL*)	MCLG	Likely source of contaminants
Turbidity level found			0.18	TT<less than .03 NTU 95 % of the time	n/a	Soil runoff.
Lowest monthly % meeting regs	100.0%					
Total Coliform Bacteria within distribution system			0.900%	Presence of coliform bacteria in more than 5% of samples	0	Naturally present in the environment
E Coli			1 (routine)	Routine sample with (+) E. Coli followed by repeat sample with (+) Total Coliform or E. Coli	0	Human and animal fecal waste
Barium	0.048	0.032	0.055	2 parts per million	2	Naturally present in the environment, drilling waste, metal refineries.
Total Chlorine	2.5	1.6	3.20	MRDL*-4.0 parts per million annual average	4	Water additive to control microbes.
Chlorite	0.35	0.2	0.56	1 part per million	0.8	By-product of drinking water disinfection
Total Chromium	0.14	0	0.28	100 parts per billion	100	Discharge from steel and pulp mills; erosion of natural deposits
Copper***	0.19 ppm at the 90th percentile; 0 sites above AL			AL*=1.3 parts per million at 90th percentile	1.3	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives.
Fluoride	0.68	0.35	1.4	4 parts per million	4	Erosion of natural deposits, water additive which promotes strong teeth, discharge from fertilizer and aluminum factories.
Lead***	0 ppb at the 90th percentile; 0 sites above AL			AL*=15 parts per billion	0	Corrosion of household plumbing systems, erosion of natural deposits.
Nitrate - Nitrite	0.18	0	0.35	Nitrate=10 parts per million	10; 1	Naturally occurring, fertilizers, sewage treatment plants, leaching from septic tanks.
Total Organic Carbon	1.90	0.70	2.90	Results are parts per million. MCL is TT*=percent removal	n/a	Naturally present in the environment
Halo Acetic Acids	21	0	35	60 parts per billion LRAA*	n/a	By-product of drinking water disinfection
Trihalomethane	37	13	56	80 parts per billion LRAA*	n/a	By-product of drinking water disinfection
pH	n/a	7.20	8.50	Aesthetic level 6.5-8.5 s.u.*		Measure of acidity. Naturally present, adjusted in drinking water treatment.
Chloride	16.0	11.0	13.0	Aesthetic level 250 parts per million		Naturally present, brine from oilfield operations.
Sodium	10.0	6.5	12.0	Standard has not been established		Naturally present, urban stormwater runoff or discharge from sewage treatment plants.
Sulfate	20.0	4.1	42.0	Aesthetic level 250 parts per million		Naturally present in the environment.

Data collected September 2010. Monitoring frequency is in compliance with regulation. *Data collected August 2013. Monitoring frequency is in compliance with regulation. ****Data collected quarterly 2014 in conjunction with UCMR3 sampling. Monitoring frequency is in compliance with regulation.

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	0.02	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