2020 Water Quality Data

This table shows data for samples collected during 2020 (unless otherwise noted). Analyses made by professionals after water treatment showed 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 = Treatme nt Technique: A required process intended to reduce the level of a contaminant in drinking water.

Regulated Contaminants	Level Found	Minimum	Maximum	Maximum Contaminant Level (MCL*)	MCLG*	Violation	Likely Source of Contaminants
Turbidity Level found			0.21	TT*=less than 0.3 NTU 95 percent of the time.	N/A		Soil runoff.
Lowest monthly % meeting regs	100.0%					No	
Arsenic	0.19	0.00	1.02	10 parts per billion	0	No	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes.
Barium	0.042	0.031	0.054	2 parts per million	2	No	Naturally present in the environment, drilling waste, metal refineries.
Total Chlorine	2.4	1.6	3.0	MRDL* = 4.0 parts per million annual average	4	No	Water additive to control microbes.
Chloride	0.42	0.28	0.57	1 part per million	0.8	No	By-product of drinking water disinfection.
Copper	0.348 parts per million (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	0.69	0.32	0.85	4 parts per million	4	No	Erosion of natural deposits, water additive which promotes strong teeth, discharge from fertilizer and aluminum factories.
Lead	3.87 parts per billion (ppb) at the 90th percentile; 2 sites above AL*			AL* = 15 parts per billion (ppb) at 90th percentile	0	No	Corrosion of household plumbing systems, erosion of natural deposits.
Nitrate/Nitrite	0.69	0	2.2	Nitrate=10 parts per million; Nitrite=1 part per million	10:1	No	Naturally occurring, fertilizers, sewage treatment plants, leaching from septic tanks, erosion of natural deposits
Total Organic Carbon	1.9	0.8	3.3	Results are parts per million. MCL is TT*=percent removal	N/A	No	Naturally found in the environment.
Haloacetic Acids	28	5	36	60 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.
Total Trihalomethanes	48	24	60	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.
Atrazine	0.2	0	0.3	3 parts per billion	3	No	Runoff from herbicide used on row crops

Secondary Contaminants.	Average	Minimum	Maximum	Recommended Level (Non-Health Based Standards)			Likely Source of Contaminants
pH	N/A	7.6	8.8	Aesthetic level 6.5-8.5 s.u.*			Measure of acidity. Naturally present, adjusted in drinking water treatment.
Chloride	12	9	17	Aesthetic level 250 parts per million			Naturally present, brine from oilfield operations
Sulfate	21	4.5	51	Aesthetic level 250 parts per million			Naturally present in the environment.

Other Required Monitoring	Average	Minimum	Maximum	Recommended Level			Likely Source of Contaminants
Sodium	10	7.3	14	Results are parts per million. Standard has not been established.			Naturally occurring, urban stormwater runoff or discharge from sewage treatment plants.
Cryptosporidium	2nd round of monitoring (over 12 month duration) was completed in 2017. Detections were found in source water only and were not detected at levels of concern. 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. 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.						

ADDITIONAL MONITORING:

Tulsa was required to participate in Unregulated Contaminant Monitoring (UCMR4) in 2018. 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 UCMR4 monitoring.
**Some contaminants below have established standards, but were collected in conjunction with UCMR4 sampling requirements. Regular routine monitoring results for these contaminants are listed in the table above.

Unregulated Contaminants	Average (parts per billion)	Minimum (parts per billion)		Maximum (parts per billion)
Manganese	0.216	0		0.444
Monobromoacetic Acid	0.199	0		0.514
Bromodichloroacetic Acid	4.23	1.43		8.57
Bromochloroacetic Acid	4.59	1.22		8.93
Chlorodibromoacetic Acid	1.63	0.554		3.15
Dichloroacetic Acid**	6.61	3.61		13.0
Trichloroacetic Acid**	5.74	2.69		8.72
Dibromoacetic Acid**	1.31	0.396		2.81
	Average (parts per million)	Minimum (parts per million)		Maximum (parts per million)
Bromide	45.8	24.9		73.6
TOC**	3.08	2.11		4.32