

Oklahoma City Water Quality Summary 2008

Detected Contaminants	Units	MCLG	MCL	Hefner WTP PWS ID 1020902	Draper WTP PWS ID 1020902B	Overholser WTP PWS ID 1020902C	Compliance	Major Sources in Drinking Water	
Inorganic Compounds				range detected					
Fluoride	ppm	4	4	0.29-1.36	0.14-1.62	0.35-1.20	YES	Added during treatment for dental health or dissolved from natural deposits	
Lead	ppb	0	AL = 15	most recent systemwide distribution testing Sep 2006 - 90th Percentile < 1			All Sites < AL YES	Corrosion of household plumbing; erosion of natural deposits	
Barium	ppm	2	2	highest level			YES	Discharge of Drilling Wastes; discharge from metal refineries; erosion of natural deposits	
				0.011	0.012	0.030			
Copper	ppm	0	AL = 1.3	most recent systemwide distribution testing Sep 2006 - 90th Percentile = 0.079			All Sites < AL YES	Corrosion of household plumbing; erosion of natural deposits	
Arsenic	ppb	0	10	highest level			YES	Erosion of natural deposits; runoff from orchards; runoff from electronics and glass production wastes	
				<2	3	3.4			
Nitrate	ppm	10	10	highest level			YES	Runoff from fertilizer; leaching from septic tanks, sewage or erosion of natural deposits	
				0.18	0.044	0.050			
Radiological				range detected in most recent testing - 2006					
Gross Alpha	pCi/L	15	15	0.356 +/- 0.247	0.836 +/- 0.713	0 +/- 0.930	YES	Decay of natural and man-made deposits	
Gross Beta	pCi/L	50	50	6.31 +/- 0.832	10.80 +/- 1.23	6.02 +/- 1.39			
Radium 226	pCi/L	5	5	0.045 +/- 0.185	0 +/- 0.176	0.346 +/- 0.276			
Disinfection By-Products				highest quarterly average (RAA)					
Total Trihalomethanes	ppb	0	80 (RAA)	7.2	76.6	75.8	YES	Byproduct of drinking water chlorination	
				range detected					
				<4 - 48.6	49.7 - 97.0	25.9 - 100			
				highest quarterly average (RAA)					
Haloacetic Acids	ppb	0	60 (RAA)	5.1	55.3	45.3	YES	Byproduct of drinking water disinfection	
				range detected					
				<6 - 37.0	31.0 - 88.0	26.0 - 82.0			
Bromate*	ppb	0	(RAA) 10	highest quarterly average range detected			5.19 <5 - 10.1	YES	Byproduct of disinfection by ozone Only Hefner Plant uses ozone
Precursor Removal				average of monthly ratios					
Total Organic Carbon (TOC)			TT = Ratio must be greater than or equal to 1.00 for compliance	1.83	1.00 **	1.62	YES	Naturally occurring	
				Monthly Ratio = (% TOC removed) divided by (% TOC removal required)					
Disinfection Residual				average readings					
Chloramines	ppm	-	MRDL 4.0	3.57	3.80	3.60	YES	Water additive used to control microbes	
			Range detected	2.30-4.20	2.60-4.80	2.50-4.60			
Microbiological				2008 System-wide distribution testing month having the highest % positive					
Coliform Bacteria	CFUs % positive	0	presence of Coliform bacteria in <5% of samples	February 0.8% (2 of 245)			YES	Naturally present in the environment - No Fecal Coliforms or E. Coli in 3260 tests in 2008	
Clarity				monthly lowest % < 0.3 NTU					
Turbidity	NTU % > 0.3	NA	TT = > 0.3 NTU in not more than 5% of samples	100.0%	98.92%	100.0%	YES	Lime and/or calcium carbonate particles from softening efforts; Soil runoff	
				highest single reading					
				0.30	0.41	0.23			
LT2 Source Water Monitoring - 2008 Monitoring Results				Cryptosporidium : all source waters tested at less than 0.075 cysts/L (lowest risk category)			YES	EPA Required Source Water Monitoring to test for presence of cryptosporidium	
Stage 2 Disinfection Byproducts Rule Monitoring***				Trihalomethanes					
				Range Detected: <4 - 110 / Systemwide Avg: 48.2			YES		
				Haloacetic Acids					
				Range Detected: 6 - 88 / Systemwide Avg: 31.1					

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 a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MRDL	Maximum Residual Disinfectant Level - The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants. Compliance with the MRDL is calculated as a Running Annual Average (RAA).
MRDLG	Maximum Residual Disinfectant Level Goal - The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.
RAA	Running Annual Average - average of last 12 months, or last 4 quarters that facility is in operation.
AL	Action Level
TT	(Treatment Technique) A required process intended to reduce the level of a contaminant in drinking water
NTU	Nephelometric Turbidity Units (a measure of clarity)
pCi/L	picocuries per liter (a measure of radioactivity)
ppm	parts per million, or milligrams per liter (mg/L)
ppb	part per billion, or micrograms per liter (ug/L)
CFU	Colony Forming Units
<	less than
>	greater than

* **Bromate Health Note:** Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.

** **Total Organic Carbon Note:** Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL (Maximum Contaminant Level) may lead to adverse health effects. TOC compliance is based on the percent TOC removed, not the total amount present. The starting TOC at the Draper Treatment facility is low, therefore, the potential for formation of THMs and HAAs is low. The THM and HAA values for the Draper Treatment facility are below the MCL, which is currently considered a safe level for these disinfection byproducts.

*** **Stage 2 Disinfection Byproducts Rule Monitoring:** U.S. water utilities are required to continuously improve the quality of water delivered to customers. The Federal Environmental Protection Agency and the Oklahoma Department of Environmental Quality enforce drinking water laws and develop long-range improvement activities. In 2008, Oklahoma City collected information on how THMs and HAAs change the water system and will work with EPA and DEQ to decrease the numbers.

Monitoring Frequency Note: The State allows us to monitor for some contaminants less than once per year because the concentrations do not change frequently. Some of our data, though representative, are more than one year old.

No Fecal Coliform or E. coli in 3260 tests in 2008.