

2008 Annual Drinking Water Quality Report
City of Claremore Public Works Authority

We're very pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. Our water source is surface water drawn from Claremore Lake.

This report shows our water quality and what it means.

If you have any questions about this report or concerning your water utility, please contact City of Claremore Water Resources Director Janet Donnelly at (918) 341-1841 or Thomas Harris at (918) 341-1331. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the first and third Mondays of each month at 6:00 pm at City Hall.

The City of Claremore Public Works Authority routinely monitors for constituents in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1, to December 31, 2008. (Some of our data may be more than one year old because the state allows us to monitor for some contaminants less often than once per year.) All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

WATER QUALITY DATA TABLE

The table below lists all of the drinking water contaminants we detected for the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report.

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present

Parts per million (ppm) or Milligrams per liter (mg/l)

Parts per billion (ppb) or Micrograms per liter (ug/l)

Parts per trillion (ppt) or Nanograms per liter (nanograms/l)

Parts per quadrillion (ppq) or Picograms per liter (picograms/l)

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT) - (mandatory language) A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level (MCL) - (mandatory language) The MCL is 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.

Maximum Contaminant Level Goal - (mandatory language) The MCLG is 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.

Violations						
Contaminant	Compliance Period	Violation Type				
Carbon Total	1Q2008	Inadequate DBP Precursor Removal				
Carbon Total	4Q2008	Inadequate DBP Precursor Removal				
Total Trihalomethanes (TTHM)	1Q2008	MCL, Average				

TEST RESULTS						

Contaminant	Violation Y/N	Highest Level Detected	Range Detected	MCL	MCLG	Likely Source of Contamination
Microbiological Contaminants						
Total Coliform Bacteria (System takes ≥40 monthly samples) (System takes <40 monthly samples)	N	0%	N/A	5% positive 1 positive	0	Naturally present in the environment
Fecal coliform and E.coli	N	0	N/A	a routine sample and repeat sample are total coliform positive, and one is also fecal coliform or E. coli positive	0	Human and animal fecal waste
Turbidity (NTU) June 2008 <i>(highest single measurement)</i>	N	0.227	0.02-0.28	TT = 1 NTU	N/A	Soil runoff
Turbidity (NTU) Feb 2008 <i>(highest monthly level)</i>	N	0%	N/A	TT ≤ 0.3 NTU in 95% of monthly samples	N/A	
Radiochemical Contaminants						
Combined radium 226/228 (pCi/L) 2004	N	0.7pCi/L	0.2pCi/L - 0.7pCi/L	5	0	Erosion of natural deposits
Inorganic Contaminants						
Barium (ppb) 2006	N	38UG/L	38 UG/L 38 UG/L	2000	2000	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper (ppm) 90 th Percentile 2007	N	0.233M G/L		AL=1.3 MG/L	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride (ppm) 2006	N	0.1 MG/L	0.1MG/L - 0.1MG/L	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate - NO ₃ (ppm) (as Nitrogen)	N	0.1MG/L	0.1MG/L - 0.1MG/L	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Nitrite - NO ₂ (ppm) (as Nitrogen)	N	0.1 MG/L	0.1MG/L – 0.1MG/L	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Volatile Organic Contaminants						
Haloacetic Acids (HAA5) (ppb) 2008	Y	75UG/L	32UGL – 75UG/L	60	N/a	By-product of drinking water chlorination
TTHM [Total trihalomethanes] (ppb) 2008	Y	122UG/ L	34.7UG/L- 122.2UG/L	80	N/a	By-product of drinking water chlorination
Chlorite (ppb) 2008	N	668UG/ L	343UG/L – 837UG/L	1	0.8	Water additive used to control microbes.

Stage 2 Disinfection By-Products

Haloacetic Acids (HAA5) (ppb) 2008	Y	63UG/L	30.6UGL – 63.0UG/L	60	N/a	By-product of drinking water chlorination
TTHM [Total trihalomethanes] (ppb) 2008	Y	90.3UG/ L	33.3UG/L- 90.3UG/L	80	N/a	By-product of drinking water chlorination

Volatile Organic Contaminants:

Haloacetic Acids. Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

TTHMs [Total Trihalomethanes]. 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.

We constantly monitor the water supply for various constituents. We have detected cryptosporidium in the source water. We detected this constituent in 1 out of 12 samples tested. We believe it is important to know that cryptosporidium may cause serious illness in 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. These people should seek advice from their health care providers.

The LT2ESWTR requires systems to monitor their source water (water prior to treatment plant), calculate an average Cryptosporidium concentration and use those results to determine if their source is vulnerable to contamination and may require additional treatment. We believe it is important for you to know that *cryptosporidium* may cause serious illness in 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. These people should seek advice from their health care providers. The following table summarizes the source water data collected in 2007:

Analyses of water prior to treatment	Number of Analyses	Mean	Range of Analyses	Units
Cryptosporidium	12	.09	0.071-0.100	Oocyst per liter
E. Coli	12	123.45	2-345	Colonies/ 100 ML
Turbidity	12	17.53	12-220	NTU

Initial sampling results indicate that – *cryptosporidium* was found in the water source. Additional treatment process is needed to remove potential contaminants to meet the EPA water quality standards

What does this mean?

The table shows that our system uncovered some problems this year. The duration of the violation was during the first quarter. Potential adverse health effects are: for Haloacetic Acids- Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

TTHMs [Total Trihalomethanes]. 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.

We have corrected this by the second quarter of 2008.

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 (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.

Contaminants that may be present in source water before we treat it include:

**Microbial contaminants*, such as viruses and bacteria, which 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 and residential uses.

**Radioactive contaminants*, which are naturally occurring.

**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.

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make improvements in your water system. We have entered into a comprehensive Water Master Plan to determine supply and distribution needs for the next 20 and 50 year marks. We look forward to sharing with the community the outcome of this study later this year or early next year.

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers.

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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).