

2011  
Annual Drinking Water Quality Report  
*City of Coweta*

We're very pleased to provide you with this year's Annual Quality Water Report. We want to keep you informed about the 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 an oxbow of the Verdigris River. The river supplies surface water to a 2.5 million gallon per day treatment facility located east of Coweta. The City of Coweta is currently in the planning process to upgrade the existing facilities to aid in the compliance of Federal and Oklahoma Department of Environmental regulations.

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 the Coweta Public Works Authority at (918) 486-8073 or by mail at P.O. Box 850 Coweta, OK 74429. 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 City Council meetings. A list of meetings may be obtained from Coweta City hall by calling (918) 486-2189.

The City of Coweta 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<sup>st</sup> to December 31<sup>st</sup> 2010. (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)* - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

*Maximum Contaminant Level (MCL)* - 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* - 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.

<b>WATER QUALITY DATA</b>						
Contaminant	Violation Yes/No	Highest Level Detected	Range Detected	MCL	MCLG	Likely Source of Contamination
<b>Microbiological Contaminants</b>						
1. Total Coliform Bacteria (System takes ≥40 monthly samples) <i>(highest number of samples in a single month)</i>	No	0	0	5% positive 1 positive	0	Naturally present in the environment
2. Fecal coliform and E.coli <i>(highest number of samples in a single month)</i>	No	0	0	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
3. Turbidity (NTU) <i>(highest single measurement)</i>	No	0.3 NTU	0.3 NTU	TT = 1 NTU	N/A	Soil runoff
4. Turbidity (NTU) <i>(highest monthly level)</i>	No	100%	0.3	TT ≤ 0.3 NTU in 95% of monthly samples	N/A	Soil runoff
5. Total Organic Carbon	Yes	N/A		TT		Naturally present in the environment
<b>Radiochemical Contaminants</b>						
7. Gross Alpha (pCi/L)	No	0.408	0.408 - 0.408	15	0	Erosion of natural deposits
<b>Inorganic Contaminants</b>						
12. Barium (ppb)	No	0.019 ppm	0.019 - 0.019 ppm	2 ppm	2 ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
18. Chlorite (ppm)	No	0.186 ppm	0 - 0.186	1	0.8	By-product of drinking Water chlorination
21. Copper (ppm)	No	0.7926	1	AL=1.3 <i>Action Level- 90% of samples Must be below This level</i>	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
24. Lead (ppb)	No	5.9	1	AL=15 <i>Action Level – 90% of samples must be below this level.</i>	0	Corrosion of household plumbing systems, erosion of natural deposits
26. Nitrate - NO <sub>3</sub> (ppm) (as Nitrogen)	No	0.255	0 - 0.255	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

<b>Volatile Organic Contaminants</b>						
42. Haloacetic Acids (HAA5) (ppb)	Yes	129	98.1 - 129	60	N/A	By-product of drinking water chlorination
49. TTHM [Total trihalomethanes] (ppb)	Yes	173	123 - 173	80	N/A	By-product of drinking water chlorination

**Microbiological Contaminants:**

(5) 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 may lead to adverse health effects, liver, or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

**Radiochemical Contaminants:**

(7) Gross Alpha. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

**Inorganic Contaminants:**

(12) Barium. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.

(18) Chlorite. Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.

(21) Copper. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.

(24) Lead. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

(26) Nitrate. Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.

**Volatile Organic Contaminants:**

(42) 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.

(49) 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.

Stage 2 DBP Rule requires some systems to complete an Initial Distribution System Evaluation (IDSE) to characterize DBP levels in their distribution systems and identify locations to monitor DBPs for Stage 2 DBP Rule compliance. The following table summarizes the individual sample results for the IDSE monitoring in 2009:

Contaminant	Number of Analyses	Minimum Level Detected	Highest Level Detected
Haloacetic Acids (HAA5) (ppb)	16	10 ug/L	175ug/L
Total Trihalomethanes (TTHM) (ppb)	16	56 ug/L	274 ug/L

**What does this mean?**

The table shows that our system uncovered some problems this year.

For Total organic carbon (TOC) there was not adequate percentage removal for the period of JAN2010, APR2010, JULY2010, and OCT2010.

For Haloacetic Acids (HAA5) we were out of compliance for the following quarters: 1<sup>st</sup> Qtr 2010, 2<sup>nd</sup> Qtr 2010, 3<sup>rd</sup> Qtr 2010, and 4<sup>th</sup> Qtr 2010, which is a violation for MCL.

For TTHMs (Total Trihalomethanes) we were out of compliance for the following quarters: 1<sup>st</sup> Qtr 2010, 2<sup>nd</sup> Qtr 2010, 3<sup>rd</sup> Qtr 2010, and 4<sup>th</sup> Qtr 2010, which is a violation for MCL.

The potential adverse health effects are:

(5) 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 may lead to adverse health effects, liver, or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

(42) Haloacetic Acids (HAA5). Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

(49) 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 for various contaminants in the water supply to meet all regulatory requirements. This past year we failed to test our drinking water for the following contaminants during the periods indicated:

TOC (Total Organic Compounds) for the period of 10/2010 to 12/2010 (4<sup>th</sup> QTR). This does not pose a threat to the quality of our water supply but because of this failure we cannot be sure of the quality of our drinking water during this period.

HAA5 (Haloacetic Acids) for the period of 10/2010 to 12/2010 (4<sup>th</sup> QTR). This does not pose a threat to the quality of our water supply but because of this failure we cannot be sure of the quality of our drinking water during this period.

TTHm (Total Trihalomethanes) for the period of 10/2010 to 12/2010 (4<sup>th</sup> QTR). This does not pose a threat to the quality of our water supply but because of this failure we cannot be sure of the quality of our drinking water during this period.

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.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

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).

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).

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 Coweta 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 Water Hotline or at <http://www.epa.gov/safewater/lead>.

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a significant increased risk of having the described health effect.

Spanish - Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted o hable con alguien que lo entienda bien.