

**2016 Annual Drinking Water Quality Report**  
**Cherokee County Rural Water District #12**

We're very pleased to provide you with this year's Annual Quality Water 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 primary water source is ground water from our North and South wells. We are pleased to report that our drinking water is safe and meets Federal and State requirements. Oklahoma DEQ Source Water Assessment and Protection report the qualitative susceptibility rating as moderate. If you have any questions about this report or concerning your water utility, please contact our office at 918-772-2915. 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 at 5:30 p.m. on the last Wednesday of each month at the SHV Community Center, Tahlequah, OK.

Rural Water District #12 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>, 2016. (Some of our data may be more than one year old because the state allows us to monitor for some constituents 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. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

**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:

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

*Maximum residual disinfectant level goal or (MRDLG)* - 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 contaminants.

*Maximum residual disinfectant level or (MRDL)* - 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.

*Parts per million (ppm) or Milligrams per liter (mg/l)* - one part of contaminant per million parts of water.

*Parts per billion (ppb) or Micrograms per liter (ug/l)* - one part of contaminant per billion parts of water.

*Non-Detects (ND)* - Laboratory analysis indicates that the constituent is not present.

*NA:* - Not applicable.

*Avg:* - Regulatory compliance with some MCLs are based on running annual average of monthly samples.

<b>TEST RESULTS</b>						
Contaminant	Violation Y/N	Highest Level Detected	Range Detected	MCL	MCLG	Likely Source of Contamination
<b>Microbiological Contaminants</b>						
Total Coliform Bacteria System takes <40 monthly samples	None	None	None	5% positive 1 positive	0	Naturally present in the environment

<b>Lead and Copper</b>								
Lead and Copper	Date sampled	MCLG	Action Level (AL)	90 <sup>th</sup> Percentile	# sites over AL	Units	Violations	Likely Source of Contamination
Copper	2016	1.3	1.3	0.105	0	ppm	None	Erosion of Natural deposits; leaching from wood preservatives; Corrosion of household plumbing systems

Regulated Contaminants								
Disinfectants and Disinfection By-Products	Collection Date	Highest level detected	Range of levels detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	2016	1	1 - 1	MRDLG =4	MRDLG =4	ppm	None	Water additive used to control microbes.
Total Trihalomethanes (TTHM)	2016	5.18	5.18 - 5.18	No goal for the total	80	ppb	None	By-product of drinking water disinfection
Inorganic Contaminants								
Barium	3-18-2014	0.0285	0.0285-0.0285	2	2	ppm	None	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Radioactive Contaminants								
Beta/photon emitters	2016	1.68	1.68-1.68	0	4	mrem/yr	None	Decay of natural and man-made deposits
Combined Radium	2016	0.279	0.279-	0	5	pCi/L	None	Erosion of natural deposits
Gross alpha excluding Radon and uranium	2016	1.6	1.6-	0	15	pCi/L	None	Erosion of natural deposits
Violation Type	Violation Begin 07-01-2016	Violation End 01/12/2017	Violation Explanation We failed to provide to you, our CCR Report drinking water customers, an annual report that informs you about the quality of our drinking water and characterizes the risks from risks exposure to contaminants detected in our drinking water.					

The Lead and Copper Rule protects public health by minimizing lead and copper levels in drinking water, primarily by reducing water corrosivity. Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials. Not all sample results for HAA5 & TTHM may have been used for calculating the Highest Level Detected because some results may be part of an evaluation to determine where compliance sampling should occur in the future.

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

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 storm water 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 storm water 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 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.

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are man-made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

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). \* \* Please call our office 918-772-2915 if you have questions.