

Cherokee County Rural Water District #9
2016 Annual Drinking Water Quality Report

We're pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality of water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. Our water source is surface water from Ft. Gibson Lake. Cherokee County Rural Water District #9 is in the planning stages of upgrading existing facilities to aid in the compliance of the future D.E.Q. 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 our office at 918-772-2915. The District's address is P.O. Box 382, Hulbert, OK 74441. We want our valued customers to be informed about their water district. You are welcome to attend any of our regularly scheduled meetings. They are held at 7:00 p.m., on the second Thursday of each month at the Rural Water District #9 Water Plant, Sunset Valley, Hulbert, OK.

Cherokee County Rural Water District #9 routinely monitors for constituents in your drinking water according to Federal and state laws. The following table shows the results of our monitoring for the period of January 1, 2016 to December 31, 2016. (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.)

Microbiological Contaminants: (1) 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.

Inorganic Contaminants: (2) 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: (3) 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. (4) 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.

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 & 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).

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 significant increased risk 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. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements.

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. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

We at Rural Water District #9 work around the clock to provide top quality water to every tap. Please call our office at 918-772-2915 if you have questions.

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	MRDL = 4	ppm	N	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2016	34	13.2 - 75.5	No goal for the total	60	ppb	N	By-product of drinking water disinfection
Not all sample results 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								
Haloacetic Acids (HAA5)	2016	34	13.2 - 75.5	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Not all sample results 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								
Haloacetic Acids (HAA5)*	2016	34	13.2 - 75.5	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Not all sample results 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 Trihalomethanes (TTHM)	2016	47	8.45 - 97	No goal for the total	80	ppb	N	By-product of drinking water disinfection
Not all sample results 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 Trihalomethanes (TTHM)	2016	47	8.45 - 97	No goal for the total	80	ppb	N	By-product of drinking water disinfection.
Not all sample results 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								
Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units <td>Violation</td> <td>Likely Source of Contamination</td>	Violation	Likely Source of Contamination
Barium	06/18/2013	0.063	0.063 - 0.063	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	06/18/2013	0.1	0.1 - 0.1	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen]	2016	0.238	0.238 - 0.238	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units <td>Violation</td> <td>Likely Source of Contamination</td>	Violation	Likely Source of Contamination
Beta/photon emitters	03/20/2014	3.63	3.63 - 3.63	0	4	mrem/yr	N	Decay of natural and man-made deposits.
Combined Radium 226/228	03/20/2014	0.588	0.588 - 0.588	0	5	pCi/L	N	Erosion of natural deposits.
Gross alpha excluding radon and uranium	03/20/2014	0.255	0.255 - 0.255	0	15	pCi/L	N	Erosion of natural deposits.

2016 Regulated Contaminants Detected

Lead and Copper

Definitions:
 Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	08/13/2014	1.3	1.3	0.076	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

Violations Table

Consumer Confidence Rule		
The Consumer Confidence Rule requires community water systems to prepare and provide to their customers annual consumer confidence reports on the quality of the water delivered by the systems.		
Violation Type	Violation Begin	Violation End
CCR REPORT	07/01/2016	01/12/2017
Violation Explanation		
We failed to provide to you, our drinking water customers, an annual report that informs you about the quality of our drinking water and characterizes the risks from exposure to contaminants detected in our drinking water.		