

2013 Annual Water Quality Report

City of Barnsdall

PWS ID# OK1021304

We are once again pleased to present this year's Annual Water Quality Report. This report is designed to inform our clients of all water testing results between January 1 and December 31, 2013. Our constant goal is to provide a safe and dependable supply of drinking water that meets all state and federal standards. We continually strive to improve water treatment methods and protect our water resources. We are committed to insuring the quality of your drinking water.

Is my water safe?

We provide safe drinking water to your home. Our source water is surface water drawn from Waxhoma Lake, treated and distributed to each home. We are required to test for lead and copper, bacteriological, inorganic, and other possible contaminants to ensure that your drinking water is safe for consumption.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-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 microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Why are there contaminants in my drinking water?

Drinking water, including bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. The sources of drinking water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up contaminants resulting from animals or human activity: Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, that 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, urban storm water runoff, and residential uses;
- 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;
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

Abbreviations:

ppm	parts per million, or milligrams per Liter (mg/L)
ppb	parts per billion, or micrograms per Liter ($\mu\text{g/L}$)
pCi/L	picocuries per Liter (a measure of radioactivity)
Mrem/ yr	Millirems per year (a measure of radioactivity)
MCLG	Maximum Contaminant Level Goal. The level of contaminant in drinking water below which there is no known or expected risks to health. MCLGs allow for a margin of safety.
MCL	Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water.
NA	not applicable

For More Information

For any questions relating to your drinking water please contact Kathy Brown at (918) 847-3522. More information about contaminants and potential health effects can be obtained by calling the Safe Drinking Water Hotline (800-426-4791). We want our valued customers to be informed about their water.

Violations Table

Violation Type	Violation Begin	Violation End	Violation Explanation
Total Trihalomethanes (TTHM)****			
MCL, Average	01/01/213	03/31/2103	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, Average	04/01/213	06/31/2103	Water samples showed that the amount of this contaminant in our drinking water was above its standard for the period indicated.
MCL, Average	07/01/213	09/31/2103	Water samples showed that the amount of this contaminant in our drinking water was above its standard for the period indicated.

*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.

**Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

***Total organic carbon 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.

****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.

2013 Monitoring Results for The City of Barnsdall

All test results are for the year 2013 unless otherwise noted

Contaminants	Sample Date	Highest Level Detected	Range	MCLG	MCL	Units	Violation	Likely Sources of Contamination
Inorganic Contaminants								
Barium	2013	0.0248	0.0248- 0.0248	2	2	ppm	No	Discharged drilling and refinery waste; Erosion of natural deposits.
Nitrate (Measured as Nitrogen)	2013	0.14	0.14- 0.14	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Radioactive Contaminants								
Beta/photon Emitters ¹	2011	2.678	2.678- 2.678	0	4	Mrem / yr	No	Decay of natural and man-made deposits.
Disinfectants and Disinfection By-Products								
Chlorine	2013	1	1.0- 1.0	MRDL G =4	MRDL =4	ppm	No	Water additive used to control microbes.
HAA5	2013	48	38.3- 70.7	NA	60	ppb	No	By-product of drinking water chlorination
TTHM	2013	145	94- 265	NA	80	ppb	No	By-product of drinking water chlorination

¹The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, is more than one year old.

Contaminant	Limit (Treatment Technique)	Level Detected	Violation	Likely Sources of Contamination
Turbidity²				
Highest single measurement	1 NTU	0.9 NTU	No	Soil runoff
Lowest monthly percent meeting limit	0.3 NTU	96.67%	No	Soil runoff.

²Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration. system.

Violations Table

Violation Type	Violation Begin	Violation End	Violation Explanation
Lead and Copper*			
Follow-up or routine tap M/R (LCR)	10/01/2012	2013	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.
Follow-up or routine tap M/R (LCR)	01/01/2013	2103	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.
Total Coliform**			
Monitoring (TCR), routine major	03/01/2013	03/31/2013	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.
Total Organic Carbon***			
Inadequate DBP precursor removal	01/01/213	03/31/2103	Our treatment plant failed to adequately reduce the total organic carbon content of our source water which is needed to properly minimize the amount of disinfection byproducts in our drinking water.
Inadequate DBP precursor removal	04/01/213	06/31/2103	Our treatment plant failed to adequately reduce the total organic carbon content of our source water which is needed to properly minimize the amount of disinfection byproducts in our drinking water
Inadequate DBP precursor removal	07/01/213	09/31/2103	Our treatment plant failed to adequately reduce the total organic carbon content of our source water which is needed to properly minimize the amount of disinfection byproducts in our drinking water
Inadequate DBP precursor removal	10/01/213	12/31/2103	Our treatment plant failed to adequately reduce the total organic carbon content of our source water which is needed to properly minimize the amount of disinfection byproducts in our drinking water