

# Attachment 1

## City of Altus Public Water System I.D. 1011501 Annual Water Quality Report 2012

We're pleased to present this year's Annual Water Quality Report. This report is designed to inform you about the water quality and services we provide. We want you to be aware of our continuing efforts to improve the water treatment process and protect our water resources. Our goal is to provide a safe high quality, and dependable supply of drinking water. We are committed to insuring the quality of your water. Our primary water source is The Mountain Park Conservancy District, which provides untreated water from Tom Steed Reservoir. The reservoir is located in southern Kiowa County approximately six miles north of Snyder, Oklahoma. Our emergency source of water is the Altus Reservoir, which is recharged from Lake Lugert-Altus located in eastern Greer and northwestern Kiowa County approximately 18 miles north of Altus. Both reservoirs are classified by the Environmental Protection Agency as "surface water sources". The Mountain Park Conservancy District has a source water protection plan with a copy available at our office that shows the vulnerability of our source water as HIGH. Additional information such as potential sources of contamination is listed. This plan is available for public view upon written request submitted to the office of Public Works at 509 S. Main, Altus OK 73521.

**This report indicates the quality of our water and what it means to you.**

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo ó hable con alguien que lo entienda bien.

If you have any questions about this report or your water utility, please contact Gene Leister, Water Treatment Supervisor at 481-2270. We want all our 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 Tuesdays of each month at 6:30 p.m. in the city council chambers.

Altus Water Treatment personnel routinely monitor the drinking water for constituents according to Federal and State laws. The table below shows results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2012. 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.**

In the 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:

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

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

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

**Nephelometric Turbidity Unit (NTU)** - a 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 Goal (MCLG)** -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.

**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.

**City of Altus Public Water Supply 2012 Lab Results I.D. # OK1011501**

<b>Contaminant</b>	<b>Violation Yes/No</b>	<b>Highest Level Detected</b>	<b>Range Detected</b>	<b>MCL</b>	<b>MCLG</b>	<b>Likely Source of Contamination</b>
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**Microbiological Contaminants**

Total Coliform Bacteria	No	0		5 %	0	Naturally present in the environment
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Turbidity (NTU)	No	TT=0.98 NTU  Less than 0.3 NTU's in 98% of monthly samples.	0.03-0.98	TT=5 NTU  TT=Less than 0.3 NTU's in 95% of monthly samples	N/A	Soil runoff
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**Volatile Organic Contaminates**

TTHM (Total trihalomethanes (ppm))	Yes	.112 Highest quarterly avg.	.060-.168	.080	0	By-product of drinking water chlorination
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THAA5 (Total haloacetic acids) (ppm)	No	.033 Highest quarterly avg.	.009-.040	.060	0	By-product of drinking water chlorination
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**Inorganics Contaminates**

Chlorites (ppm)	No	.85	.52-.85	1.0	0.8	Additive used to control microbes
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Fluoride (ppm)	No	.85	0.39-.85	4	4	Erosion of natural deposits, discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth.
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Nitrate (ppm) (as Nitrogen)	No	.21	.21-.21	10	10	Runoff from fertilizer use, erosion of natural deposits.
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Lead 90 <sup>th</sup> percentile (ppm)	No	.0076	0.0-0.113	.015	0	Corrosion of household plumbing systems, erosion of natural deposits.
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Copper 90 <sup>th</sup> percentile (ppm)	No	0.381	.00-1.34	1.3	0	Corrosion of household plumbing systems, erosion of natural deposits.
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Contaminate	Violation Yes/No	Highest Level Detected	Range Detected	MCL	MCLG	Likely Source of Contamination
Control of DBP precursors TOC (Avg. Yearly Ratio)	Yes	.67	.40-1.26	Minimum removal ratio 1.0	N/A	Naturally present in the environment

### What does this mean?

This table shows our system had two violations during the year. The violations were for exceeding the Total Trihalomethane (TTHM) limit of 80 ppb, Total Organic Carbon (TOC) removal requirement of at least 25% and The Total Coliform Rule.

### TTHM/TOC violation

#### What happened?

The drinking water produced during the past 18 months has had elevated levels of THMs above the established EPA standard. The cause is primarily attributable to deterioration of key components of the treatment process. Additionally the THM problem has been extremely difficult to successfully treat during the past 12-18 months due to the unusually high temperature of the water and historic demand for water. Plans for both interim and permanent corrective measures include substantial alterations to the treatment plant as well as making major repairs and replacement of critical equipment and processes are underway. These improvements are planned to achieve environmental compliance within the next 18 months.

The noted violations did not pose an immediate risk. If they had, you would have been notified immediately. However, 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 system, and may have an increased risk of cancer.

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 maximum contaminate level (MCL) may lead to adverse health effects to the liver, kidney or nervous system and may lead to an increased risk of cancer.

#### What is being done?

- Lower disinfection levels as practical.
- Intensify surveys of distribution system for potential problems areas, e.g., poor circulation, dead ends, etc.
- Modify some current chemical treatments to improve TOC removal.
- Continue working with our engineering consultant to design additions, repairs, and alterations to the plant to bring finished water back into and maintain compliance going forward.

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 agricultural, livestock operations, wildlife, sewage treatment plants and septic systems,.

**\*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 two liters of water everyday at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer and 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).

Thank you for allowing us to continue providing your family with clean, quality water. In order to maintain a safe and dependable water supply we continually make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. We appreciate your support and understanding. For more information, please contact Robert Stephenson, Chief of Operations, at 481-3518 or Gene Leister, Water Treatment Plant Supervisor, at 481-2270. Written inquiries should be address to City of Altus, Attn: Robert Stephenson, 509 S. Main, Altus, Oklahoma 73521

\* Oklahoma Department of Environmental Quality Guidance dated 26 March, 2008.