

City of Altus
Public Water System I.D. 1011501
Annual Water Quality Report
2015

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. This reservoir is classified by the Environmental Protection Agency as a "surface water source". The Mountain Park Conservancy District has a source water protection plan with a copy available at our office that shows the vulnerability of our surface 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. Our secondary source of water is the Altus Well Field in Wilbarger County Texas which draws groundwater from the Seymour Aquifer. This source of water is classified as a "ground water source". The well field was not operational during 2015 but substantial efforts were made to rehabilitate wells to return them to service.

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 or Johnny Barron, Public Works Director at 481-3518. We want all our customers to be informed about their water utility. The water utility is managed by the Altus Municipal Authority (AMA). AMA meetings are open to the public and are held on the first and third Tuesdays of each month at 6:30 p.m. in the city council chambers at City Hall, 509 S. Main Street.

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 1st to December 31st, 2015. 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 less than 5 NTU is not typically 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 2015 Lab Results I.D. # OK1011501

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

Total Coliform Bacteria	No	0	None	5 %	0	Naturally present in the environment
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Turbidity (NTU)	No	0.18 NTU Less than 0.3 NTU's in 99.9% of monthly samples.	0.03-0.18	5 NTU Less than 0.3 NTU's in 95% of monthly samples	N/A	Soil runoff
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Volatile Organic Contaminants

Total trihalomethanes (TTHM)	Yes	189 ppb Highest quarterly avg.	102-204	80 ppb	0	By-product of drinking water chlorination
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Total haloacetic acids (THAA5)	No	32 ppb Highest quarterly avg.	8-53	60 ppb	0	By-product of drinking water chlorination
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Inorganic Contaminants

Chlorites	Yes	1.14 ppm	0.320-1.140	1.0 ppm	0.8 ppm	Additive used to control microbes
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Fluoride	No	0.39 ppm	0.15-0.39	4.0 ppm	4.0 ppm	Erosion of natural deposits, discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth.
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Nitrate (as Nitrogen)	No	0.21 ppm	0.21-0.21	10 ppm	10 ppm	Runoff from fertilizer use, erosion of natural deposits.
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Total Organic Carbon (avg. removal ratio for the year)	Yes	0.62	0.62-0.95	Minimum removal ratio 1.0	N/A	Naturally present in the environment
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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%.

TTHM/TOC violation - What happened?

The drinking water produced in 2015 had elevated levels of TTHM above the established EPA standard. The cause of this was inadequate removal of total organic compounds during the treatment process. Permanent corrective measures have been completed and current monitoring indicates water is compliant.

Total Organic Carbon has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts such as TTHM. Permanent corrective measures have been completed including rehabilitation of the well field and the reverse osmosis treatment plant. Both of these serve to reduce TOC and TTHM in drinking water.

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.

What is being done?

- Chlorine disinfection at the water treatment plant is being modified to reduce the concentration of chlorine byproducts
- Monitoring of distribution system for potential problem areas, e.g., poor circulation, dead ends, etc.
- Five wells in the Round Timber Well Field went into production on May 4, 2016. Two additional wells will come on line in the near future.
- As of April 7, 2016, the reverse osmosis plant has been running at limited capacity and producing high quality water. The current drinking supply is a three-way blend of groundwater, surface water treated by reverse osmosis and surface water treated by mixed-media filtration. The blended water is has substantially lower levels of TOC and TTHM.
- Construction is continuing to complete other modifications to the conventional mixed-media filtration plant. When complete, these modifications will further increase water quality.

Chlorite Violation - What happened?

Chlorite occurs in drinking water when chlorine dioxide is added at the water treatment plant as a disinfectant to inhibit the growth of microorganisms in the filter media. Chlorine dioxide is used, instead of chlorine, to limit the formation of disinfection byproducts such as TTHMs. When ingested, chlorite (ClO_2) acts as an ion binding with common minerals such as sodium to form mineral salts such as sodium chlorite (NaClO_2).

Chlorite is not considered especially harmful and is not carcinogenic. Toxicology studies suggest that exposures to high levels of chlorite over many years may have mild effects on the brain and liver.

What is being done?

- The chlorine dioxide feed system is being monitored to keep chlorite formation to a minimum.

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 prior to treatment 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 Gene Leister, Water Treatment Plant Supervisor, at 481-2270. Written inquiries should be addressed to City of Altus, Attn: Gene Leister 509 S. Main, Altus, Oklahoma 73521

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