PWS ID# 3003303

301 N 1st Street
Altus AFB, OK 73521

30 June 2016

Re: 2015 Annual Water Quality Report
(Consumer Confidence Report)

Dear Water Customer:

Altus Air Force Base purchases water from the City of Altus and provides safe drinking water to your homes. Attachment 1 from the City of Altus water system, and the table below, show the quality of your water. Bioenvironmental Engineering (BE) is required to collect and test bacteria, disinfection by-products, lead, and copper samples in addition to those already tested by the City of Altus. No bacteria were detected in the samples collected in 2015. Lead and copper sampling is conducted on a 3 year rotation and was last accomplished September 2015; therefore, samples will be taken again 2018.

Altus AFB Monitoring period of January 1st thru December 31st, 2015

Microbiological Monitoring Results

Contaminant	Violation Y/N	Range Detected	Highest Level Reported	MCL[1]	MCLG[2]	Likely Source of Contamination
Total Coliform Bacteria (5 per month)	N	N/A	0	5%	0	Naturally present in the environment

Non-biological Monitoring Results

Contaminant	Violation Y/N	Range Detected	Highest Level Reported	MCL	MCLG	Likely Source of Contamination
Total Trihalomethanes (TTHMs) (mg/L)	Y	0.089 - 0.274	0.184 Highest Quarterly Average	0.080	0	By-product of drinking water chlorination
Halo Acetic Acids (mg/L)	N	<0.006 – 0.062	0.052 Highest Quarterly Average	0.060	0	By-product of drinking water chlorination
Lead and Copper (ug/L) (September 2015)	N	< 5.0 (Lead)	< 5.0 (Lead)	15.0 (Lead)	0	Corrosion of household plumbing systems
		18.3 – 995 (Copper)	995 (Copper)	1300 (Copper)	0	
Fluoride (mg/L)	N	0.15 -.39	.39	4	4	Erosion of natural deposits, discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth.
Chlorites (ppm)	Y	.320 - 1.140	1.140	1.0	0.8	Additive used to control microbes
Nitrate (ppm) (as Nitrogen)	N	0 -.21	.21	10	10	Runoff from fertilizer use, erosion of natural deposits.

Control of DBP precursors TOC (Avg. Yearly Ratio)	Y	.62 - .95	.95	Minimum removal ratio 1.0	N/A	Naturally present in the environment

1-Maximum Contaminant Level – highest level of contaminant allowed in drinking water
2-Maximum Contaminant Level Goal – level below which the is no known or expected health risk

The noted violations did not pose an immediate risk. If violations noted above pose an immediate risk, BE is required to notify you immediately. However, some individuals who drink water containing Trihalomethanes (THMs) in excess of the Maximum Concentration Level (MCL) over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of cancer.

TTHM/TOC/Chlorite Violation Summary:
Altus AFB is required to comply with the disinfection by-product rule (DBPR). The requirement is a rolling 4-quarter average which must not exceed either the Total Trihalomethane (TTHM) limit of 0.080 mg/L or the Halo Acetic Acid (HAA) limit of 0.060 mg/L.

Altus AFB began sampling TTHMs 1st Quarter of 2013 and went into violation for DBPR beginning 2nd Quarter of 2013. This was partially due to the drought conditions for the past several years which caused an increase of organic material concentrations in the Tom Steed Reservoir. This increase in organic material has had a direct effect in the Total Organic Carbon (TOC) levels. With the high levels of organic material in our source water, the City of Altus had to counteract by increasing the level of chlorine to ensure our water was potable. Since the levels of chlorine was increased this caused an elevated levels of Chlorites and TTHMs in our water system.

What is Being Done?
The City of Altus has recently taken several steps to enhance the quality of our water. Two well fields in North Texas have been reconditioned and are currently pumping well water. Well water is being blended with water from the Tom Steed reservoir with the goal of reducing TTHMs below the regulatory limit. Well water contains very little organic material and will also reduce the amount of chorine needed for disinfection. In addition, with the extensive upgrades to their reverse osmosis treatment system, Altus Water treatment plant is currently producing high quality water. Altus AFB is now receiving water that is below the Environmental Protection Agency (EPA) MCL of 0.080mg/L, and is expected to be in annual average compliance by March 2017. BE will continue monitoring these contaminants and keep you informed of any changes.

Fluoride Summary:
The City of Altus Water Treatment Plants has been operating with the fluoride feeder off since March 2013; due to mechanical difficulties. Samples are taken monthly and sent to Accurate Labs to measure the amount of residual fluoride in our water system. The sample results for 2015 were below the recommended fluoride concentration of 0.7 mg/L; which was approved by the US Department of Health and Human Services in April 2015. The recommended level was based on recent scientific assessments that recognize other sources of fluoride (toothpastes, rinses, etc.) increased incidences of mild dental fluorosis and the benefits of fluoride in preventing tooth decay. Fluoride is a mineral that is naturally present in all water sources and has been proven to prevent tooth decay; however, too much fluoride could potentially cause other negative health effects. The EPA has assigned a Maximum Concentration Level (MCL) of 4.0 mg/L for fluoride in the water. There is no regulatory standard for the minimum amount fluoride recommended in our water system.

To supplement your fluoride intake the American Dental Association (ADA) recommends using fluoride containing toothpaste; preferably one displaying the ADA Seal of Acceptance. The ADA also recommends the use of fluoride mouth rinses but not for children under six years of age because they may

swallow the rinse. Please consult your dentist to assess whether you are receiving adequate levels of fluoride for all family members.

For additional information regarding our local water supply, see Attachment 1 for summary sample results for the City of Altus 2015 Consumer Confidence Report. Should you have any questions or concerns regarding your water, please contact the Bioenvironmental Engineering office at (580) 481-5494.

Sincerely,

STEVEN L. HILTON, TSgt, USAF
Bioenvironmental Engineering Flight Chief

2 Attachments:
1. City of Altus Annual Water Quality Report
2. 2nd Quarter 2016 Notice of Violation

City of Altus

Pubic 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 Round Timber Well Field, located in Wilbarger County Texas. This source of water is classified as a “ground water source”. The well field is currently under development and will be ready for use in the very near future.

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

Este informe contiene información muy importante sobre su aqua 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 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 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 2015 Lab Results I.D. # OK1011501 All test results expressed as milligrams per liter (mg/L)						
Contaminant	**Violation Yes/No**	**Highest Level Detected**	**Range Detected**	**MCL**	**MCLG**	**Likely Source of Contamination**
Microbiological Contaminants						
Total Coliform Bacteria	No	0		5 %	0	Naturally present in the environment
Turbidity (NTU)	No	TT=0.18 NTU Less than 0.3 NTU's in 99.9% of monthly samples.	0.03-0.18	TT=5 NTU TT=Less than 0.3 NTU's in 95% of monthly samples	N/A	Soil runoff
Volatile Organic Contaminates						
TTHM (Total trihalomethanes (ppm)	Yes	.189 Highest quarterly avg.	.102-.204	.080	0	By-product of drinking w ater chlorination
THAA5 (Total haloacetic acids) (ppm)	No	.032 Highest quarterly avg.	.008-.053	.060	0	By-product of drinking w ater chlorination
Inorganics Contaminates						
Chlorites (ppm)	yes	1.140	.320-1.140	1.0	0.8	Additive used to control microbes
Fluoride (ppm)	No	.39	0.15-.39	4	4	Erosion of natural deposits, discharge from fertilizer and aluminum factories. Water additive w hich promotes strong teeth.
Nitrate (ppm) (as Nitrogen)	No	.21	.21-.21	10	10	Runoff from fertilizer use, erosion of natural deposits.
Control of DBP precursors TOC (Avg. Yearly Ratio)	Yes	.62	.62-.95	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%.

TTHM/TOC violation
What happened?
The drinking water produced during the past 12 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 due to higher than normal organic carbon levels caused by recent drought conditions. 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 in the near future.

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.

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?

- Lower disinfection levels as practical.
- Intensify surveys 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. Construction is continuing to complete other modifications to the conventional plant. When complete, these modifications will further increase water quality. Recent analyses at various points in our distribution have shown TTHM levels below the maximum contaminate level.

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 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.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Altus Air Force Base Has Violated a Drinking Water Standard

Our water system recently violated a drinking water standard. Even though this was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct the situation.

Testing results we received for **May 2015** through **June 2016** show that our system exceeds the standard or maximum contaminant level (MCL), for total trihalomethanes. The standard or MCL for total trihalomethanes is 0.080 mg/l. It is determined by averaging all the samples collected at each sampling location for the past 12 months. The level of total trihalomethanes averaged at our system's locations was **0.132 and 0.114 mg/L**.

What should I do?

You do not need to boil your water or take other corrective actions. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours. Although the health risks associated with our levels of total trihalomethanes are low, there are steps you can take to reduce these in your own drinking water. The easiest and most cost-effective way to reduce total trihalomethane levels in the drinking water is to treat it with an activated charcoal filter (for example, a Brita faucet-type system). There are many commercial options for these, and they are easy to use. Another more expensive option is to install a reverse osmosis system in your house, which may require landlord approval if you do not own your home.

People that have a severely compromised immune system, have an infant or are elderly may be at increased risk and should seek advice about drinking water from their health care providers.

What does this mean?

This is not an emergency. If it had been, 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 getting cancer.

What is being done?

The City of Altus has completed renovations to the current water treatment system, which has shown improvement in Altus Air Force Base TTHM levels. Current levels are in within EPA parameters; however, due to an annual running average requirement, the water is expected to be in compliance by **March 2017**. We will continue monitoring these contaminants and keep you informed of any changes.

For more information, please contact the Bioenvironmental Engineering office at (580) 481-5494 or 97mdos.sgoj.bioenvironmentalengineering@us.af.mil.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by Altus Air Force Base. State Water System ID#: OK3003303.

Date distributed: 7/12/2016.

MARCIA P. ROBINSON, Capt, USAF, BSC
Bioenvironmental Engineering Flight CC