CANNON AIR FORCE BASE DRINKING WATER QUALITY REPORT 2015

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WHO TO CONTACT

For water quality questions, please contact Bioenvironmental Engineering Customer Service at 575-784-4063.

For water system questions, please contact Civil Engineer Squadron Customer Service at 575-784-2001.

Fluoride and dental health questions please contact the Dental Clinic at 575-784-4031.

CAFB Surpasses Water Quality Standards!

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

CAFB Source Water

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 Environmental Protection Agency's (EPA) 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: 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; and radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health. The Cannon AFB water system is well maintained and operated by the Civil Engineer Squadron. The aquifer is protected from potential sources of contamination based on well construction, hydrogeologic settings, and system operations and management.

- Cannon AFB uses groundwater as the source for all potable water supplied to the installation and Chavez housing areas.
- Water is extracted from the Ogallala Aquifer using seven wells located on base property.
- This water is disinfected with chlorine and delivered to the consumer through a distribution system consisting of a network of water towers and underground pipes.
- Based on the size of our system and the number of consumers, the base wells are registered with the NM Environment Department as community water sources.

The susceptibility rank of a water system is based upon the number of potential sources of contamination and how well source water is protected. Cannon AFB's susceptibility rank is Moderate. If you would like to obtain a copy of the Source Water Assessment report or discuss its findings, please contact Bioenvironmental Engineering at 575-784-4063.

What are sources of contamination to drinking water?

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 include: **(A)** ***Microbial contaminants,*** such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; **(B)** ***Inorganic contaminants***, such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; **(C)** ***Pesticides and herbicides,*** which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses; **(D)** ***Organic chemical contaminants***, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems; **(E)** ***Radioactive contaminants,*** which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that your tap water is safe to drink, the US EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (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 and their potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Who needs to take special precautions?

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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

About your drinking water

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below.

Abbreviations Used:

µg/L : Number of micrograms of substance in one liter of water
ppb: parts per billion, or micrograms per liter (µg/L)
NA: not applicable
ND: Not detected
MNR: Monitored Not Regulated
ppm: parts per million, or milligrams per liter (mg/L)
pCi/L: picocuries per liter (a measure of radioactivity)
NR: Monitoring not required, but recommended.
MNR: Monitored Not Regulated

Definitions Used:

- MCLG: Maximum Contaminant Level Goal: 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.
- MCL: Maximum Contaminant Level: 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.
- TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
- AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
- MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- MRDL: Maximum residual disinfectant level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- positive samples/yr: The number of positive samples taken that year

Contaminants	Unit of Measure	MCLG	MCL	Year Sampled	Your Water	Range (Low)	Range (High)	Violation	Possible sources of contamination
Inorganic Contaminants									
Arsenic	ppb	0	10	2015	5.2	3.1	5.2	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium	ppm	2	2	2015	0.04	0.02	0.04	No	Discharges of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Cadmium	ppb	5	5	2015	0.54	N/A	0.54	No	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints
Chromium	ppb	100	100	2015	1.2	N/A	1.2	No	Discharge from steel and pulp mills; Erosion of natural deposits
Selenium	ppb	50	50	2015	21	9.4	21	No	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines
Sodium (optional)	ppm	N/A	N/A	2015	71	71	240	No	Erosion of natural deposits; Leaching
Copper	ppm	1.3	AL=1.3	2013	0.18	N/A	N/A	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	ppb	0	AL=15	2013	0	N/A	N/A	No	Corrosion of household plumbing systems; Erosion of natural deposits
Nitrate (measured as Nitrogen)	ppm	10	10	2015	2.9	1.4	2.9	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion from natural deposits
Fluoride	ppm	4	4	2015	2.9	2	2.9	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Volatile Organic Contaminants									
Trichloroethylene	ppb	5	5	2014	0.4	N/A	N/A	No	Discharge from factories and dry cleaners
Synthetic Organic Contaminants including pesticides and herbicides									
Di (2-ethylhexyl) phthalate	ppb	6	6	2014	0.71	0.68	0.71	No	Discharge from rubber and chemical factories
Residual Disinfectants									
Chlorine (as Cl_2)	ppm	4	4	2015	0.63	0.49	0.79	No	Water additive used to control microbes
Microbiological Contaminants									
Fecal coliform/E. coli - in the distribution system (positive samples)	#Positive	0	0	2015	0	0	0	No	Naturally present in the environment
Radioactive Contaminants									
Alpha emitters	(pCi/L)	0	15	2010	6	3.3	6	No	Erosion of natural deposits
Beta/photon emitters	(pCi/L)	0	50	2010	7.8	6.9	7.8	No	Decay of natural and man-made deposits. The EPA considers 50 pCi/L to be the level of concern for Beta particles.
Radium 226/228	(pCi/L)	0	5	2010	0.76	0.26	0.76	No	Erosion of natural deposits
Uranium	ppb	0	30	2010	6.7	5.8	6.7	No	Erosion of natural deposits
Volatile Organic Chemicals									
TTHMs (Total Trihalomethanes)	ppb	N/A	80	2015	2.7	N/A	N/A	No	By-product of drinking water chlorination
HAA5 (Total Haloacetic Acids)	ppb	N/A	60	2015	2.2	N/A	N/A	No	By-product of drinking water chlorination

Lead Educational Information

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Cannon AFB Public Water System is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Arsenic Educational Information

While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Fluoride Educational Information

Our water has a naturally occurring level of 2.0 to 2.9 ppm, exceeding New Mexico's legally required notification limit of 2.0 ppm. This does not mean Cannon AFB's water is unsafe or unhealthy; however, there is a small risk of fluorosis in children under 9 years old. Fluorosis is cosmetic staining, pitting, or spotting of teeth.

While New Mexico sets the enforceable fluoride levels, the Department of Health and Human services and the American Dental Association both recommend a fluoride level of 0.7 ppm. In addition, the Department of Defense (DoD) and the Air Force have mandated that installations provide water with a fluoride concentration from 0.7 ppm to 1.2 ppm.

To mitigate the risk of fluorosis and to comply with DoD and Air Force mandates, Cannon AFB provides no-cost low-fluoride water (0.7 to 1.2 ppm) at the Child Development Centers and at the following self-service locations.

- The Water Plant (Bldg. 336)
- Doc Stewart Community Center in Chavez (Bldg. 9982)
- Airman's Attic (Bldg. 76)
- The Shoppette on the southeast side of base (Bldg. 4623).

To reduce fluoride intake, use water from these locations to drink and where water is integral to the food (e.g. cake, baby formula). Boiling or steaming water will concentrate fluoride, but will not add it to cooked foods such as pasta. Lastly, home filtration systems will not remove fluoride from water.

"Boil Water" Notifications

A **Precautionary Boil Water Advisory** is a public statement advising customers to boil tap water before consuming it. Precautionary advisories are issued by Cannon AFB when an event has occurred that may allow the water distribution system to become contaminated, such as a loss in pressure or a water main break. A precautionary advisory does not mean that the water is contaminated. However, the water quality may be compromised and customers should assume the water is unsafe to drink and take appropriate precautions.

A **Boil Water Notice** is issued through the Cannon AFB Command Post when contamination is **confirmed** in the water system by sampling. When an advisory or notice is issued, testing is initiated by Bioenvironmental Engineering. Testing continues until samples indicate the system is free of contamination.

During a Precautionary Advisory or Boil Water Notice, boil tap water **vigorously for one full minute** prior to using it for drinking or cooking until the advisory is lifted.

Opportunities to Participate

For information on the operation and maintenance of the Cannon AFB water system, please contact Civil Engineering Customer Service at 575-784-2001. For information on water quality, call Bioenvironmental Engineering at 575-784-4063.

Share this report with anyone interested in Cannon AFB's water quality!

Pollution prevention and water conservation tips:

- Always use a nozzle on a garden hose, do not let water flow freely. Water during cooler parts of the day or at night.
- Minimize use of hazardous chemicals, including fertilizers and pesticides, and use per manufacturer direction. Dispose of unused quantities properly.
- Pick up after pets. Do not dispose waste where water drains
- Sweep up dirt and debris, do not use a hose.
- Maintain vehicles, keep machinery and equipment leak free.

A closing message from Colonel Maitre

An important part of our day-to-day operations is to provide high-quality, safe, reliable drinking water to our Air Commandos, their families, and our guests. In 2015 the water that Cannon AFB provided met or surpassed all federal and state primary drinking water regulations. We take pride in ensuring that we take care of you and your water supply. This report summarizes the results of sampling by Bioenvironmental Engineering and the on-going operations by the Civil Engineer Squadron and is our way of showing you the results of these efforts. Please, read this report and if you have any questions contact Bioenvironmental Engineering at 575-784-4063.

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