

2011 Drinking Water Consumer Confidence Report for Beale AFB, CA

Public Water System Number 5810700- date published by June 30, 2012

(Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.)

Team Beale is very pleased to provide you the 2011 **Annual Water Quality Report**. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is, and always has been, to provide you a safe and dependable supply of drinking water.

A copy of the completed assessment is available at the Environmental Flight Office. You may request a summary of the assessment be sent to you by contacting Mr. Edward Wydra, 9th Civil Engineer Squadron, Environmental Element at (530) 634-2619.

The California Department of Public Health (CDPH) completed an assessment of our drinking water source in April 2001. In addition, in October 2005, Earth Tech, Inc. prepared a "Drinking Water Source Assessment and Protection Plan/Wellhead Protection Plan" for Beale AFB. The Drinking Water Source Assessment Program (SWAP) requires permitted sources to be evaluated for susceptibility to various potential contaminating activities. This evaluation was performed for all of the Base's nine well water sources. The evaluation indicates that the operation of a military installation ranks the highest among the potential contaminating activities.

This report is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards. The 9th Medical Group and the 9th Civil Engineer Squadron are committed to providing you with information because informed water customers are our best allies. We at Beale work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future.

SOURCE OF DRINKING WATER AT BEALE AFB

Beale AFB draws its water from seven deep-water wells. This ground water originates deep in the Sierra Nevada Mountain Range and slowly moves through the layers of the earth until it reaches the well field. The wells in the well field pump the water to reservoirs and tanks through which elevation and gravity provide pressure to the water system. All seven of our wells are located over the same aquifer and every well has distinct characteristics depending on the surrounding rock and soil. Water from each of our wells contain suspended manganese and iron minerals. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As the water travels over the surface of the land and through the ground, it dissolves naturally occurring minerals and materials, and can pick up substances resulting from the presence of animals or human activity. Due to the exceptional quality of this groundwater source, chlorine disinfection is the only treatment process required to produce a safe product for our community. However, the Beale AFB drinking water treatment plant removes the excess manganese and iron from our water through filtration.

TERMS, UNITS OF SAMPLING MEASUREMENTS and ACRONYMS USED IN THIS REPORT:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

N/A: not applicable

ND: not detectable at testing limit

NL: notification level

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (ug/L)

umhos/cm: micromhos per centimeter

Your Drinking Water and Your Health

In order to ensure that tap water is safe to drink, the USEPA and the state Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791). 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. USEPA/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 Drinking Water Hotline (1-800-426-4791).

Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria, which 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*, that 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, gas stations, urban storm water runoff, agricultural application, and septic systems.
- *Radioactive contaminants*, which can be naturally-occurring or be the result of oil and gas production and mining activities.

Beale AFB, CA representatives who prepared or provided the data in this report:

Lt. Col David Torres and SSgt Jeffry Stamm—9 AMDS Bioenvironmental Engineering Flight (BEF) at 634-2045
Mr. Michael O'Donnell—9 Civil Engineer, Chief Infrastructure at 634-2632
Mr. George Albanez—9th Civil Engineer Utilities at 634-3605
Mr. Edward Wydra—9th CES, Environmental Element at 634-2619

Although the base does not hold public meetings on its distribution systems, we are available to address any questions you may have. Please contact Beale's Public Affairs Office at 530-634-8887. We encourage our valued customers to be informed about their water utility. Dormitory residents should contact their building manager.

WE ARE PLEASED TO ANNOUNCE THAT OUR DRINKING WATER MEETS ALL FEDERAL AND STATE REQUIREMENTS!!!

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Tables 1, 2, 3, 4, 5, and 6 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The Department allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA					
Microbiological Contaminants	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	(In a mo.) 0	0	More than 1 sample in a month with a detection	0	Naturally present in the environment and are used as an indicator that other potentially-harmful bacteria may be present.
Fecal Coliform or <i>E. coli</i>	(In the year) 0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER						
Lead and Copper (complete if lead or copper detected in the last sample set)	No. of samples collected Aug 2009	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	20	0.5	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	20	0.106	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS						
Chemical or Constituent (and reporting units)	Sample Date	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	2009	26.9	11-94	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2009	119.4	67-242	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	Sample Date	Average Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Barium (ppm)	2009	0.097	0.035-0.258	1	2	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
*Fluoride (ppm) (treated water)	2011	0.9	0.8-1.2	2	1	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (NO ₃) (ppm)	2010	1.4	ND-5.2	45	45	Runoff/leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Chlorine (distribution system)(ppm)	2011	0.57	0.21-1.02	4	4	Drinking water disinfectant added for treatment
Total Trihalomethanes TTHM (ppb)	2008	18.9	ND-35.4	80	N/A	By-product of drinking water chlorination
Haloacetic Acids HAA5 (ppb)	2008	2	ND-5	60	N/A	By-product of drinking water chlorination

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	Sample Date	Average Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Chloride (ppm)	2009	61.8	ND-294.0	500	none	Runoff/leaching from natural deposits
Sulfate (ppm)	2009	3.8	ND-9	500	none	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2011	190	140-300	1500	none	Runoff/leaching from natural deposits
Specific Conductance (E.C.) (umhos/cm)	2011	310.9	230-431	2200	none	Runoff/leaching from natural deposits

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS					
Chemical or Constituent (and reporting units)	Sample Date	Average Level Detected	Range of Detections	Notification Level	Health Effects Language
Vanadium (ppb)	2007	7	ND-21.0	50	Occurs in carbon containing deposits such as crude oil, coal, oil shale, and tar sands
Boron (ppb)	2007	99.16	ND-888	1000	Runoff/leaching from natural deposits

VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT

* BEALE AFB ADDS FLUORIDE TO THE BASE DRINKING WATER FOR DENTAL HYGIENE