
2012 Annual Drinking Water Quality Report

For
Holloman AFB

(Public Water System Identification (PWSID) NM3562719)

This report is an annual snapshot of the drinking water quality delivered by Holloman AFB. Under the “Consumer Confidence Reporting Rule” of the Environmental Protection Agency’s Safe Drinking Water Act (SDWA), community water systems are required to report this water quality information to the consuming public. Presented in this report is information on the source of our water and where it comes from, what it contains, how it compares to state and federal standards, and the health risks associated with any contaminants. We are committed to providing you with information because customers are our best allies.

I. PUBLIC WATER SYSTEM INFORMATION

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Water System Improvements:

Our water system is routinely inspected by the Civil Engineering Utilities Shop and Bioenvironmental Engineering (BE) of the 49th Medical Group. Civil Engineering Utilities inspects our system for its technical, financial and managerial capacity to provide safe drinking water to you. To ensure that we provide the highest quality of water available, our water system is operated by Holloman certified operators who oversee the routine operations of our system. All improvements forthcoming will be addressed by the appropriate personnel.

II. YOUR DRINKING WATER SOURCE

Holloman AFB normally relies on surface water (40 percent) and groundwater (60 percent) for potable water, but due to the 2012 Little Bear Forest fire there will be no surface source water available for some period of time. Holloman AFB can be provided potable water by the City of Alamogordo, but will be relying on various wells located 12 to 35 miles southeast of the base near the foothills of the Sacramento Mountains for the next 3 to 5 years.

Surface water from Bonito Lake, when it recovers from the fire, and natural springs located in Fresnel, Alamo, and La Luz Canyons is transported through pipelines to reservoirs at the City of Alamogordo’s La Luz water treatment plant. The La Luz water treatment facility transports treated water from the La Luz facility, which is pipelined to a connection point with our new Prather pipeline. The Prather pipeline transports the water to a connection with the main pipelines that supply water to HAFB. Three tanks are designated for potable water storage on Holloman AFB: Eagle Tower with a capacity of 0.3 million gallons (MG) (0.9 acre-feet); Challenger Tank with a capacity of 0.4 MG (1.2 acre-feet); North Area Tower with a capacity of

0.25 MG (0.8 acre-feet), having a total capacity of 0.95 MG (2.9 acre-feet). These three tanks also serve to keep pressure on water in pipelines serving the base and are constantly being filled by water pumped via pipeline from two main storage tanks of 1.0 MG and 1.5 MG located at the CE Water Treatment Plant. Groundwater is drawn from a total of 16 wells with an average depth of 450 to 550 feet from five well fields consisting of the Boles, Escondido, San Andres, Frenchy, and Douglas well fields. Some of the installation's wells have been installed to depths of 1,000 feet below ground surface (bgs). Groundwater extracted from the well fields is transported via pipeline to two ground level storage tanks located in Boles and San Andres well fields, with a total capacity of 0.9 MG (U.S. Air Force 2006). These water storage tanks are constantly being filled to prevent water deficits from occurring on-base. Ten years ago, average daily water demand on-base was approximately 2.1 million gallons per day (MGD) (6.4 acre-feet) or 751.4 MG per year. The average current usage for 2012 has been 1.2 MGD.

III. SUBSTANCES FOUND IN TAP WATER

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 -which may come from a variety of sources such as agricultural or 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.

Radioactive contaminants - can be naturally occurring or be the result of oil and gas production and mining activities.

IV.

WATER QUALITY TESTING RESULTS

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. The EPA and State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Table 1. Holloman AFB 2012 Sampling Results

Contaminant	Regulated Limit	Your Water	Units	Sample Year	Violation
Nitrate [measured as Nitrogen]	10*	0.95	mg/L	2012	No
Nitrite [measured as Nitrogen]	1*	<0.01	mg/L	2012	No
Fluoride	4*	0.74	mg/L	2012	No
Sulfate	250^	260	mg/L	2012	No
Cyanide, Total	0.2*	<0.02	mg/L	2012	No
2,4-D	70*	<0.1	ug/L	2012	No
Dalapon	200*	<1.0	ug/L	2012	No
Pentachlorophenol	1*	0.04	ug/L	2012	No
Picloram	500*	0.1	ug/L	2012	No
2,4,5-TP (Silvex)	50*	0.1	ug/L	2012	No
2,3,7,8-Tetrachlorodibenzo-p-Dioxin	30*	<5.0	pg/L	2012	No
Chlordane	2*	0.1	ug/L	2012	No
Toxaphene	3*	0.1	ug/L	2012	No

Dicamba	NA	<0.1	ug/L	2012	No
Dinoseb	7*	<0.1	ug/L	2012	No
1,2 DBCP	0.2*	<0.01	ug/L	2012	No
1,2 EDB	0.05*	<0.01	ug/L	2012	No
Alachlor	2*	<0.1	ug/L	2012	No
Aroclor 1016	NA	<0.08	ug/L	2012	No
Aroclor 1221	NA	<0.19	ug/L	2012	No
Aroclor 1242	NA	<0.26	ug/L	2012	No
Aroclor 1248	NA	<0.1	ug/L	2012	No
Aroclor 1254	NA	<0.1	ug/L	2012	No
Aroclor 1260	NA	<0.2	ug/L	2012	No
Aroclor	2	<0.1	ug/L	2012	No
Aldrin	NA	<0.1	ug/L	2012	No
Atrazine	3*	<0.1	ug/L	2012	No
Benzo(a)pyrene	0.2*	<0.02	ug/L	2012	No
Gamma-BHC(Lindane)	0.2*	<0.02	ug/L	2012	No
Butachlor	NA	<0.1	ug/L	2012	No
Dieldrin	NA	<0.1	ug/L	2012	No

Di(2-ethylhexyl)adipate	400*	<0.6	ug/L	2012	No
Di(2-ethylhexyl)phthalate	6*	<0.6	ug/L	2012	No
Endrin	2*	<0.1	ug/L	2012	No
Heptachlor	0.4*	<0.04	ug/L	2012	No
Heptachlor epoxide	0.2*	<0.2	ug/L	2012	No
Hexachlorobenzene	1*	<0.1	ug/L	2012	No
Hexachlorocyclopentadiene	50*	<0.1	ug/L	2012	No
Methoxychlor	40*	<0.1	ug/L	2012	No
Metolachlor	NA	<0.1	ug/L	2012	No
Metribuzin	NA	<0.1	ug/L	2012	No
Propachlor	NA	<0.1	ug/L	2012	No
Simazine	4*	<0.07	ug/L	2012	No
Aldicarb	NA	<0.5	ug/L	2012	No
Aldicarb sulfone	NA	<0.7	ug/L	2012	No
Aldicarb sulfoxide	NA	<0.5	ug/L	2012	No
Carbaryl	NA	<0.5	ug/L	2012	No
Carbofuran	40*	<0.9	ug/L	2012	No
3-Hydroxycarbofuran	NA	<0.5	ug/L	2012	No

Methomyl	NA	<0.5	ug/L	2012	No
Oxamyl	200*	<1.0	ug/L	2012	No
Glyphosate	700*	<6.0	ug/L	2012	No
Endothall	100*	<9.0	ug/L	2012	No
Diquat	20*	<0.4	ug/L	2012	No
METALS					
Iron	0.3^	0.048	mg/L	2012	No
Sodium	NA	45	mg/L	2012	No
Antimony	6*	<0.1	ug/L	2012	No
Arsenic	10*	<2.0	ug/L	2012	No
Barium	2000*	22	ug/L	2012	No
Beryllium	4*	<0.3	ug/L	2012	No
Cadmium	5*	<1.0	ug/L	2012	No
Chromium	100*	<2.0	ug/L	2012	No
Copper	1300!	8.8	ug/L	2012	No
Lead	15!	3.9	ug/L	2012	No
Manganese	50^	<2.0	ug/L	2012	No
Nickel	NA	3.4	ug/L	2012	No

Selenium	50*	<2.0	ug/L	2012	No
Thallium	2*	<0.4	ug/L	2012	No
Zinc	5000^	33	ug/L	2012	No
Mercury	2*	<0.1	ug/L	2012	No
Radioactive Cotaminants					
Radium (combined 226/228) (pCi/L)	5*	0.31	pCi/L	2011	No
Volatile Organic Compounds					
Benzene	5*	<0.5	ug/L	2012	No
Bromobenzene	NA	<0.5	ug/L	2012	No
Bromochloromethane	NA	<0.5	ug/L	2012	No
Bromodichloromethane	NA	<0.5	ug/L	2012	No
Bromoform	NA	<0.5	ug/L	2012	No
n-Butylbenzene	NA	<0.5	ug/L	2012	No
sec- Butylbenzene	NA	<0.5	ug/L	2012	No
tert- Butylbenzene	NA	<0.5	ug/L	2012	No
Carbon tetrachloride	5*	<0.5	ug/L	2012	No
chlorobenzene	100*	<0.5	ug/L	2012	No
chloroform	NA	<0.5	ug/L	2012	No

2-Chlorotoluene	NA	<0.5	ug/L	2012	No
4- Chlorotoluene	NA	<0.5	ug/L	2012	No
Dibromochloromethane	NA	<0.5	ug/L	2012	No
1,2- Dibromo-3-chloropropane (DBCP)	0.2*	<0.01	ug/L	2012	No
Dibromomethane	NA	<0.5	ug/L	2012	No
1,2- Dichlorobenzene	600*	<0.5	ug/L	2012	No
1,3- Dichlorobenzene	NA	<0.5	ug/L	2012	No
1,4- Dichlorobenzene	75*	<0.5	ug/L	2012	No
Dichlorodifluoromethane	NA	<0.5	ug/L	2012	No
1,1- Dichloroethane	NA	<0.5	ug/L	2012	No
1,2- Dichloroethane	5*	<0.5	ug/L	2012	No
1,1- Dichloroethylene	7*	<0.5	ug/L	2012	No
cis-1,2- Dichloroethylene	70*	<0.5	ug/L	2012	No
trans-1,2- Dichloroethylene	100*	<0.5	ug/L	2012	No
1,2- Dibromoethane	0.05*	<0.01	ug/L	2012	No
Dichloromethane	5*	<0.5	ug/L	2012	No
1,2- Dichloropropane	5*	<0.5	ug/L	2012	No
1,3- Dichloropropane	NA	<0.5	ug/L	2012	No

2,2- Dichloropropane	NA	<0.5	ug/L	2012	No
1,1- Dichloropropylene	NA	<0.5	ug/L	2012	No
cis-1,3- Dichloropropylene	NA	<0.5	ug/L	2012	No
trans-1,3-Dichloropropylene	NA	<0.5	ug/L	2012	No
1,3-Dichloropropylene, cis & trans	NA	<0.5	ug/L	2012	No
Ethylbenzene	700*	<0.5	ug/L	2012	No
Hexachlorobutadiene	NA	<0.5	ug/L	2012	No
Isopropylbenzene	NA	<0.5	ug/L	2012	No
4- Isopropyltoluene	NA	<0.5	ug/L	2012	No
Methyl-t-butyl ether (MTBE)	NA	<0.5	ug/L	2012	No
Naphthalene	NA	<0.5	ug/L	2012	No
n- Propylbenzene	NA	<0.5	ug/L	2012	No
Styrene	100*	<0.5	ug/L	2012	No
1,1,1,2-Tetrachloroethane	NA	<0.5	ug/L	2012	No
1,1,2,2- Tetrachloroethane	NA	<0.5	ug/L	2012	No
Tetrachloroethylene	5*	<0.5	ug/L	2012	No
Toluene	1000*	<0.5	ug/L	2012	No
1,2,3- Trichlorobenzene	NA	<0.5	ug/L	2012	No

1,2,4- Trichlorobenzene	70*	<0.5	ug/L	2012	No
1,1,1- Trichloroethane	200*	<0.5	ug/L	2012	No
1,1,2- Trichloroethane	5*	<0.5	ug/L	2012	No
Trichloroethylene	5*	<0.5	ug/L	2012	No
Trichlorofluoromethane	NA	<0.5	ug/L	2012	No
1,2,3- Trichloropropane	NA	<0.5	ug/L	2012	No
1,2,4- Trimethylbenzene	NA	<0.5	ug/L	2012	No
1,2,5- Trimethylbenzene	NA	<0.5	ug/L	2012	No
Vinyl Chloride	2*	<0.2	ug/L	2012	No
1,2- Xylene	NA	<0.5	ug/L	2012	No
1,3+1,4- Xylene	NA	<0.5	ug/L	2012	No
Xylenes, Total	10000*	<0.5	ug/L	2012	No
Diquat	20*	<0.4	ug/L	2012	No
Disinfection By-Products					
Bromodichloromethane	NA	4.7	ug/L	2012	No
Bromoform	NA	2.7	ug/L	2012	No
Chloroform	NA	3.6	ug/L	2012	No
Dibromochloromethane	NA	6.5	ug/L	2012	No

Total Trihalomethanes	80*	12.8	ug/L	2012	No
Dibromoacetic acid	NA	2.6	ug/L	2012	No
Dichloroacetic acid	NA	2.6	ug/L	2012	No
Monobromoacetic acid	NA	<1.0	ug/L	2012	No
Monochloroacetic acid	NA	<2.0	ug/L	2012	No
Total HAA5	60*	5	ug/L	2012	No
Inorganic Contaminants					
Copper	1.3*	.32	ug/L	2010	No
Lead	15*	3.7	ug/L	2010	No

Note: *MCL, ^SMCL, !AL, pg/L-picograms per liter, ug/L- micrograms per liter, mg/L- milligrams per liter, pCi/L- picoCuries per liter

Unit Descriptions	
Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
MFL	MFL: million fibers per liter, used to measure asbestos
positive samples/month	positive samples/month: Number of samples taken monthly that were found to be positive
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.

Important Drinking Water Definitions	
Term	Definition

MCL	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.
SMCL	SMCL: Secondary Maximum Contaminant Levels: Guidelines, not enforceable limits, that identify acceptable concentrations of contaminants which cause unpleasant tastes, odors, or colors in the water. SMCLs are for contaminants that will not cause adverse health effects.
AL	AL: Action Level: The level of concentration at which an undesirable or toxic component is considered dangerous.

V. **EDUCATIONAL INFORMATION**

Q. How would I know about a problem with the water supply?

A. BE and Water Utilities regularly test and inspect the water supply and the distribution system. If a problem was found, all affected people would be notified through leaflets, email, and the base newspaper.

Q. My water tastes and smells funny. Is it safe to drink?

A. According to the EPA, you can safely drink and cook with the water. Algae can cause water to have a “funny” smell and odor. Algae are normal, harmless plants that appear in the reservoirs at certain times of the year. On occasion, customers may also taste or smell the low levels of chlorine compounds added to disinfect the water. Fill a jug with tap water and put it in the refrigerator to get rid of the taste and odor.

Q. My water is cloudy sometimes but then clears up. Can I drink it?

A. You can safely drink and cook with the water. Water travels under pressure throughout the system.

Occasionally, air can become trapped in the water in tiny bubbles, causing water to look cloudy. This is only temporary and the water clears up in a short time.

Q. My water is discolored sometimes. Can I drink it?

A. According to EPA, you can safely drink and cook with the water. Old iron pipes in your area can cause a red, brown, or yellow color in the water. A yellow color is from iron that is absorbed by water that has been sitting in pipes for a long time. A red or brown color is caused by very small specks of iron. These specks of iron can enter the water if there is quick change in water speed or direction in your local pipes. Such changes can result from valve repair, flushing the system or the testing or use of fire hydrants. Flushing the water in your pipes sometimes will clear this up.

Q. Do I need to take special precautions?

A. Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people, such as people with cancer undergoing chemotherapy, people 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).

Q: How is my water being treated?

A: Your water is treated by disinfection. Disinfection involves the addition of chlorine or other disinfectant to kill dangerous bacteria and microorganisms that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century.

Q: How Can I help?

A: Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense for more information.

Additional Information About Lead

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. Holloman AFB 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>.
