

Shaw AFB Annual Drinking Water Quality Report

SCDHEC System Number 4310501

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We're very pleased to provide you with this year's Annual Water Quality Report. This report is designed to inform you about the quality of water and services we deliver to you every day. This report shows the results of our monitoring for the period of January 1st to December 31st 2010. This report shows our water quality and what it means. Our constant goal is to provide Shaw AFB residents, workers and guests with a safe and dependable supply of drinking water.

Where does my water come from?

Our well water sources are the Upper and Lower Black Creek Aquifers. There are currently five (5) wells permitted by the South Carolina Department of Health and Environmental Control (SCDHEC) that operate on Shaw AFB. In 2003, SCDHEC conducted a source water assessment for Shaw AFB. If you would like to access a copy of the source water assessment, please contact Maj. Brian Hughes at (803) 895-6196.

Why are there contaminants in my drinking 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. 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.

Do I need 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 Drinking Water Hotline (800-426-4791).

Water Quality Data Table

The tables below list 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. 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 change frequently. EPA maximum contaminant levels (MCL) are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Contaminants	MCLG Or MRDLG	MCL, TT, or MRDL	Highest Level Detected	Range		Sample Date	Violation	Typical Source
				Low	High			
Disinfectants and Disinfection Byproducts								
Haloacetic Acids (HAA5) ppb	NA	60	0.0	0.0	0.0	2010	No	Byproduct of drinking water chlorination
Total Trihalomethanes (TTHM) ppb	NA	80	0.0	0.0	0.0	2010	No	Byproduct of drinking water disinfection
Inorganic Contaminants								
Nitrate (measured as nitrogen) ppm	10.0	10.0	1.6	0.4	1.6	2010	No	Runoff from fertilizer use, Leaching from septic tanks, sewage; erosion of natural deposits
Fluoride (F1) ppm	4.0	4.0	1.2	0.2	1.2	2010	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Chlorine (ppm)	4.0	4.0	1.2	0.07	1.2	2010	No	Water additive used to control microbes
Volatile Organic Compounds								
Trichloroethylene (ppb)	5.0	5.0	2.4	0.0	2.4	2010	No	Discharge from metal degreasing sites and other factories
Radiological Analysis								
Alpha particles (picocuries per liter, pCi/L)	0	15.0 pCi/L	1.7 pCi/L	1.7 pCi/L	1.7 pCi/L	2007	No	Erosion of natural deposits
Beta/photon emitters (pCi/L)	0	4.0 mrem/yr	3.2 pCi/L	0.19 pCi/L	3.2 pCi/L	2007	No	Decay of natural and man-made deposits
Radium 226 and 228 (combined) (pCi/L)	0	5.0 pCi/L	1.3 pCi/L	1.3 pCi/L	1.3 pCi/L	2007	No	Erosion of natural deposits

Lead and Copper:

Shaw AFB treats our drinking water to control lead and copper levels. Sampling indicates that our treatment is effective in controlling these contaminants. 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. Shaw AFB is responsible for providing high quality drinking water, but cannot control devices connected by housing residents to their individual water taps (i.e filters/purification devices). 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 drinking 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>.

Contaminants	MCLG	AL	Your Water	Sample Date	# of Samples Exceeding AL	Exceeds AL	Typical Source
Inorganic Contaminants							
Copper – 90 th percentile at consumer taps (ppm)	1.3	1.3	0.87	2008	0	No	Corrosion of household plumbing systems, erosion of natural deposits
Lead – 90 th percentile at consumer taps (ppb)	0	15	15	2008	2	No	Corrosion of household plumbing systems, erosion of natural deposits

Unit Descriptions	
Term	Definition
ppm	ppm: parts per million or milligrams per liter (mg/L), equivalent to one minute in two years
ppb	ppb: parts per billion or micrograms per liter (µg/L), equivalent to one minute in 2,000 years
NA	NA: not applicable
ND	ND: not detected
NR	NR: monitoring not required, but recommended

Important Drinking Water Definitions	
Term	Definition
MCLG	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	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	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variances & Exemptions	Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	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	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.

MNR	MNR: Monitored Not Regulated
MPL	MPL: State Assigned Maximum Permissible Level

Questions?

If you have any questions or would like additional copies of this report, please contact the Bioenvironmental Engineering Flight, Maj Brian Hughes or Capt Douglas Schneekloth (803) 895-6196.