

# Shaw AFB Annual Drinking Water Quality Report

SCDHEC System Number 4310501

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Currently, Shaw AFB drinking water system is safe and meets all standards. The majority of people will be able to drink the water as a part of a healthy diet and lifestyle. We are pleased to provide our consumers with this year's Annual Water Quality Report. This report is designed to inform consumers about the quality of water and services we deliver. This report shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup> 2016. Our constant goal is to provide Shaw AFB residents, workers and guests with a safe and dependable supply of drinking water. If you have any questions or would like additional copies of this report, please contact the Bioenvironmental Engineering Flight, TSgt Brian Lohr (803) 895-6196.

## Where Does My Water Come From?

Shaw AFB receives its water from two different aquifers which are the Upper and Lower Black Creek Aquifers. There are currently five (5) drinking water wells permitted by the South Carolina Department of Health and Environmental Control (SCDHEC), which operate on Shaw AFB. In 2016, SCDHEC conducted a source water sanitary survey for Shaw AFB. If you would like to access a copy of the source water assessment, please contact Bioenvironmental Engineering at (803) 895-6196. For more information from the Water System Operator, contact Civil Engineering at 895-5171.

## 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, 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, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Contaminants that may be present in source water include the following:

- 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 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.

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

**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, those who have undergone organ transplants, those with HIV/AIDS or other immune system disorders, and some elderly and infants can be particularly at risk from infections. Anyone who is or has family members falling into those categories should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control 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 were 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 of South Carolina requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. The 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			
<b>Disinfectants and Disinfection Byproducts</b>								
Chlorine (ppm)	4.0	4.0	1.0	1	1	2016	No	Water additive used to control microbes
<b>Inorganic Contaminants</b>								
Nitrate (measured as nitrogen) ppm	10.0	10.0	1.0	0.45	1.4	2016	No	Runoff from fertilizer use, Leaching from septic tanks, sewage; erosion of natural deposits
Fluoride (F) ppm	4.0	4.0	1.1	0.88	1.1	2016	No	Erosion of natural deposits; Water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
<b>Volatile Organic Compounds</b>								

Trichloroethylene (ppb)	0	5.0	2.00	0	3.13	2016	No	Discharge from metal degreasing sites and other factories
<b>Radiological Analysis</b>								
Alpha particles (picocuries per liter, pCi/L)	0	15.0	12	0	12	2014	No	Erosion of natural deposits
Radium 226 and 228 (combined) (pCi/L)	0	5.0	1.918	0	1.918	2014	No	Erosion of natural deposits

### Lead and Copper:

Shaw AFB last tested for lead in 2014, and lead was found to be below detectable limits. 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. 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 water has been sitting for several hours, consumers can minimize the potential for lead exposure by flushing their 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 (ppm)	AL (ppm)	90 <sup>th</sup> Percentile	Sample Date	# of Samples Exceeding AL	Exceeds AL	Typical Source
<b>Inorganic Contaminants</b>							
Copper – 90 <sup>th</sup> percentile at consumer taps (ppm)	1.3	1.3	0.066	2014	0	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

<b>Unit Descriptions</b>	
Term	Definition
pCi/L	pCi/L: picocuries per liter Unit of measure used to express the results of radioactivity tests in air and water
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

<b>Important Drinking Water Definitions</b>	
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.

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