

Shaw AFB Annual Drinking Water Quality Report (SCDHEC #4310501)

Consumer Confidence Report 2018

Is my water safe?

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.

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 Water Drinking Hotline (800-426-4791).

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 January 2019, 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 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. 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. 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.

How can I get involved?

Water Conservation Tips

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.

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.

- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community or visit the Watershed Information Network's How to Start a Watershed Team.
- Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Additional Information for Lead

Shaw AFB last tested for lead in August 2017, and lead was found to be below Action Level. 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, SCDHEC Water System 431051, 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>.

Water Quality Data Table

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 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 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 the table.

WATER QUALITY DATA TABLE

Chemical and Radionuclide Constituents

| Contaminants (unit of measure) | MCLG or MRDLG | MCL, TT, or MRDL | Detect in Your Water | Range | Violation (Yes or No) | Sample Date | Typical Source |
|---|---------------------|------------------------|----------------------------|------------|-----------------------------|----------------|---|
| Chromium (ppb) | 100 | 100 | 39 | 0-39 | No | 2015 | Discharge from steel and pulp mills; Erosion of natural deposits. |
| Nitrate (measured as nitrogen) ppm | 10.0 | 10.0 | 0.6 | 0.44 – 0.6 | No | 2017 | 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 | No | 2015 | Erosion of natural deposits; Water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Sodium (ppm) | NA | NA | 30 | 4-30 | No | 2015 | Erosion of natural deposits. |
| Trichloroethylene (ppb) | 0 | 5.0 | 4.62 | 0-4.62 | No | 2018 | Discharge from metal degreasing sites and other factories |
| Alpha particles (picocuries per liter, pCi/L) | NA | 15.0 | 12.0 | 0 – 12.0 | No | 2014 | Erosion of natural deposits. |
| Radium 226 and 228 (combined, pCi/L) | 0 | 5.0 | 1.0 | 0 – 1.0 | No | 2014 | Erosion of natural deposits. |
| Beta (pCi/L) | 0 | 50* | 41.7 | 0 – 41.7 | No | 2014 | Erosion of natural deposits. |

*The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles. Because the beta particle results were below 50 pCi/L, no testing for individual beta particle constituents was required.

Lead and Copper – Inorganic Contaminants

| Contaminants (unit of measure) | MCLG or MRDLG | AL | Your Water | # Samples Exceeding AL | Exceeds AL (Yes/No) | Sample Date | Typical Source |
|--|---------------|-----|------------|------------------------|---------------------|-------------|---|
| Copper-action level at consumer taps (ppm) | 1.3 | 1.3 | 0.20 | 0 | No | 2017 | Corrosion of household plumbing systems. Erosion of natural deposits. |
| Lead-action level at consumer taps (ppb) | 0 | 15 | 1.3 | 0 | No | 2017 | Corrosion of household plumbing systems. Erosion of natural deposits. |

Bacteriological Contaminants

| Contaminants | MCLG | MCL / TT | Value | Date | Violation? | Typical Source |
|----------------|------|----------|----------|---------------|------------|--------------------------------------|
| Total Coliform | TT | 1 LV1A | Negative | December 2018 | No | Naturally present in the environment |

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

During the past year we were required to conduct one (1) Level 1 assessment. One (1) Level 1 assessment was completed. In addition, we were required to take two (2) corrective actions and we completed two (2) of these actions. We chlorinated the well and flushed the system thoroughly and replaced a leaky sample tap. These corrective actions were completed in June 2018. Further monitoring for the remainder of the year resulted in clean samples.

Disinfection & Disinfection By-Products

There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

| Contaminants (unit of measure) | MCLG or MRDLG | MCL, TT, or MRDL | Detect in Your Water | Range | Violation (Yes or No) | Sample Date | Typical Source |
|--------------------------------|---------------|------------------|----------------------|------------|-----------------------|-------------|--|
| Chlorine (ppm) | 4 | 4 | 1.0 RAA | 0.7 – 1.35 | No | 2018 | Water Additive used to control microbes. |

Tables for Unit Descriptions and Important Drinking Water Definitions

| 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) |
| 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 and 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 |

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