

Robins Drinking Water Is Safe!



WATER QUALITY REPORT 2018

Robins Air Force Base Water System Permit No. 1530042

Robins AFB Drinking Water Program

This Water Quality Report summarizes the quality of your drinking water during calendar year 2018. Robins Air Force Base (Robins AFB) met all parameters set by the Georgia Environmental Protection Division (EPD) and the US Environmental Protection Agency (EPA) for 2018. However, there were two violations. See details in the table below.

This report also provides detailed accounts of the detected water monitoring and testing results gathered from January to December 2018 for the Robins AFB Public Water System. Details about where your water originates, what it contains and how it compares to standards set by regulatory agencies is included. The purpose of this report is to advise consumers about drinking water quality and heighten awareness of the need to protect precious water resources. The report reflects the hard work and dedication of the 78th Civil Engineer Squadron, who operates and maintains the water distribution and treatment systems and the 78th Medical Group, who tests the drinking water for safety and quality.

To comply with the Consumer Confidence Reporting Rule of the Federal Safe Drinking Water Act, the 78th Medical Group Bioenvironmental Engineering Flight issues this report on drinking water monitoring results annually. For additional information about this report or to provide input regarding the Robins AFB public water system, contact the Bioenvironmental Engineering Flight at 478-327-7555. Base organizations who manage the water system have an open door policy with our residents.



Our Raw Water Source

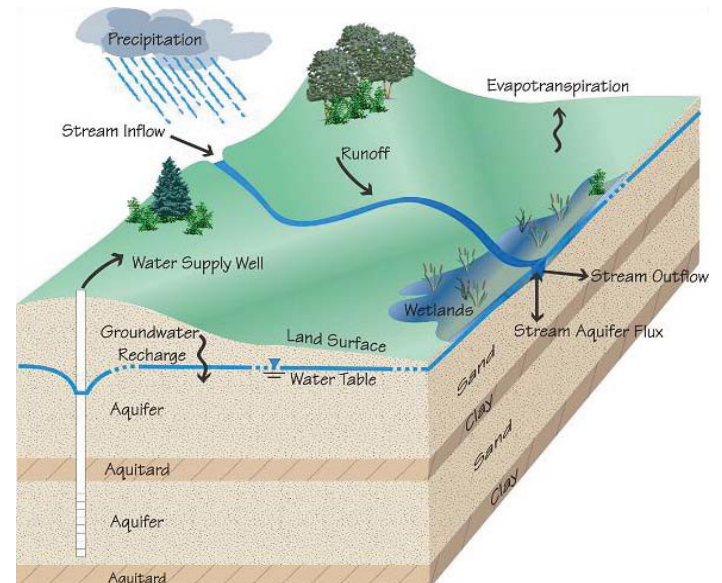
Our drinking water is drawn from the Blufftown Aquifer, one of many groundwater sources in the State. This is a safe and reliable source that provides high-quality water that is free of microorganisms, such as Giardia and Cryptosporidium that are sometimes found in rivers and lakes.

Rain water percolates down into the Blufftown Aquifer through layers of soil and sand, which act as natural cleansing filters to remove impurities. At Robins AFB, the drinking water aquifer is located over 300 feet below the ground surface and is separated from surface water by several thick clay layers. Robins AFB is permitted to withdraw water through the six water supply wells located throughout the base.

Public water systems are required to develop a Source Water Assessment Plan (SWAP) to identify potential contamination sources and review the controls to mitigate potential impacts. Management strategies to control current and future potential contamination sources have been identified and implemented. These controls are designated as adequately to protect our drinking water supply. Contact Bioenvironmental Engineering Flight at 478-327-7555 if you have questions regarding the SWAP.

Reduced Monitoring Approved

The Source Water Assessment and Vulnerability Assessment show the Robins AFB water system's raw water is not in a high potential pollution risk status. GA EPD has authorized reduced monitoring requirements for certain contaminants in our system to less than once per year because their concentrations have been very stable over many years and the history of testing has shown no levels of concern. Reduced monitoring requirements, called waivers, have been issued to our drinking water system for arsenic, asbestos, cyanide, lead and copper, as well as 31 synthetic organic compounds, effective 1 January 2014 to 31 December 2018. Please contact the Bioenvironmental Engineering Flight at 478-327-7555 if you have questions about drinking water waivers or wish to receive a copy.



Our Treatment System

A variety of techniques are used to treat your tap water, including chlorination disinfection as well as fluoridation to protect children's teeth. The water also goes through a softening process by adding a corrosion inhibitor and soda ash. The water treatment operation is staffed by highly trained, state-licensed water treatment plant operators. Our water system has storage capacity of over 2 million gallons, a pumping capacity of 10.4 million gallons per day and uses advanced technology to monitor and control drinking water distribution 24 hours per day. During 2018, nearly 580 million gallons of water was distributed to Robins AFB consumers. Our operations staff work diligently 365 days per year to ensure our water is safe, available and is meeting strict standards set by State and Federal agencies.

Who needs to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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/CDC (Environmental Protection Agency/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 at 1-800-426-4791.

Complaints regarding color, taste, or odor?
Please call The 78 Civil Engineer Service Desk at 478-926-5657.

If you have questions concerning the contents of this report,
please contact 78 AMDS/SGPB (Bioenvironmental Engineering) at 478-327-7555.

Information About Total Coliforms

Coliforms are bacteria that are naturally present in the environment and used as an indicator that other, potentially harmful, bacteria may be present. Fecal coliform and *E. coli* are bacteria whose presence indicates that water may be contaminated by human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

In addition to the required monthly total coliform sampling, the Bioenvironmental Engineering Flight conducts in-house total coliform monitoring at 25 locations, analyzing over 300 samples per year to ensure the water is safe to drink on Robins AFB.

Emerging Contaminants (PFOS/PFOA)

Chemicals that are recognized as a potential threat to human health or the environment but lack a published health standard are known as "emerging contaminants." Perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) are two perfluorinated chemicals (PFCs) that have been produced in large quantities in the United States and known to have been present in firefighting foam used on Robins AFB. These organic compounds are very persistent in the environment and resistant to degradation. This means that once introduced in the groundwater, they will not naturally degrade quickly and require active treatment for removal. The Department of Defense performed drinking water source monitoring in 2016 and results for all drinking water wells were below detection limits. Additionally, Robins AFB has transitioned from the legacy Aqueous Film Forming Foam used in firefighting vehicles and aircraft hangars to a new type of approved foam (C-6).

Contaminant	Units	MCL	MCLG	AL	Highest Level Detected	Range	Year Sampled	Violation	Typical Source
Inorganics									
Chlorine	ppm	MRDL=4	MRDLG=4	N/A	1.14	0 -1.14	2018	No	Water additive used to control microbes
Fluoride	ppm	4	4	N/A	1.3	0.77-1.3	2018	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Combined Radium (226/228)	pCi/L	5	0	N/A	4.42	1.66-4.42	2017 ^c	No	Erosion of natural deposits
Nitrate/Nitrite	ppm	10	10	N/A	1.0	0.2-1.0	2018	No	Runoff from fertilizer use; leaching from septic tank sewage; erosion of natural deposits.
Copper	ppm	N/A	1.3	1.3	90th Percentile 0.24	0-0.24	2016 ^a	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	ppb	N/A	0	15	90th Percentile 1.4	0-1.4	2016 ^a	No	Corrosion of household plumbing systems; Erosion of natural deposits.
Volatile Organics									
Tetrachloroethylene	ppb	5	0	N/A	0.61	0-0.61	2018	No	Discharge from metal degreasing sites and other factories
Unregulated By-Products									
Perfluorooctane Sul-fonate/Perfluooctanic Acid (PFOS/PFOA)	ng/L	N/A	70 ppt	N/A	ND	N/A	2016 ^c	No	Used in the production of carpet, clothing, paper packaging and firefighting foam
Disinfection By-Products									
Haloacetic Acids (HAA5)	ppb	60	No set goal	N/A	1.0	0-1.1	2018	No	By-product of drinking water disinfection
Total Trihalomethanes	ppb	80	No set goal	N/A	3.9	2.2-3.9	2018	No	
Total Coliform									
Maximum Contaminant goal	Total Coliform Maximum Contamination Level		Average	MCLG	Fecal Coliform or E.coli Maximum Contaminant Level		Violation		Typical Source
0	1 ^b positive sample/month		2 Positive Samples	0	N/A		Yes		Naturally present in the environment
Notice of Violations									
Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects cramps nausea head-aches or other symptoms. They may pose a special health risk for infants young children and people with severely compromised immune systems.									
Violation Type		Violation Received			Violation Ended		Violation Explanation		
Ground Water Rule triggered additional major sampling		08/24/2018			2018– pending publication of this report.		Failure to collect follow-up samples within 24 hours of learning of the total coliform-positive sample in March 2018. These needed to be tested for fecal indicators from all sources that were being used at the time the positive sample was collected. This was an administrative finding and resultant sampling did not identify exceedances. Checklists have been established as a corrective measure.		
Ground Water Rule triggered additional major sampling		08/29/2018			2018– pending publication of this report.		Failure to collect follow-up samples within 24 hours of learning of the total coliform-positive sample in July 2018. These needed to be tested for fecal indicators from all sources that were being used at the time the positive sample was collected. This was an administrative finding and resultant sampling did not identify exceedances. Checklists have been established as a corrective measure.		

a. Georgia EPD has reduced the monitoring requirements for lead and copper, sampling was last performed in 2016 and met all applicable standards. These samples represent the 90th per-centile for the Robins Air Force Base water system. New sampling will be conducted in 2019.

b. The MCL for total coliform bacteria is based on the presence or absence of total coliforms in a sample.

c. The water quality information presented in the table(s) is from the most recent round of testing done according to the regulations. All data shown were collected during the last calendar year unless noted in the table(s).

Table Definitions

Maximum Contaminant Level (MCL): 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.

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 allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): 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.

Maximum Residual Disinfectant Level Goal (MRDLG): 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.

Non-Detect (ND): Contaminant concentration below laboratory detection limits.

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

ppm: parts per million

ppb: parts per billion

ppt: parts per trillion

pCi/L: picocuries per liter (a measure of radioactivity)

N/A: not applicable

ND: None Detected

ng/L: nanograms per liter

Required Consumer Confidence Report Statement Addressing Lead in Drinking Water

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. Robins 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 (1-800-426-4791), or at <http://www.epa.gov/safe water/lead>.

Required Consumer Confidence Report Statement Addressing Persistence of Contaminants

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 USEPA’s Safe Drinking Water Hotline (1-800-426-4791).

Notes About Contaminants

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, naturally occurring radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in any source water BEFORE it is treated include:

- **Microorganisms 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, that 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, or residential uses.
- **Organic chemicals 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, agricultural application, and septic systems.
- **Radioactive contaminants**, which may be naturally-occurring, or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which 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.

Drinking water, including bottle 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 US EPA’s Safe Drinking Water Hotline at 1-800-426-4791.