



WATER QUALITY REPORT 2021

Robins Air Force Base Water System Permit No. 1530042

Your Drinking Water Meets All State and Federal Regulations

This Water Quality Report summarizes the quality of your drinking water during calendar year 2021. 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 2021.

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 Group, who operates and maintains the water distribution and treatment systems and the 78th Medical Group, who tests the drinking water for safety and quality. This report also provides detailed accounts of the detected water monitoring and testing results gathered from January to December 2021 for the Robins AFB Public Water System. Additionally, details about where your drinking water originates, what it contains and how it compares to standards set by regulatory agencies is included.

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 annually. For additional information about this report or to provide input regarding the Robins AFB drinking water, contact the Bioenvironmental Engineering Flight at 478-327-7555. Base organizations who manage the water system have an open door policy with base personnel.



Your Raw Water Source

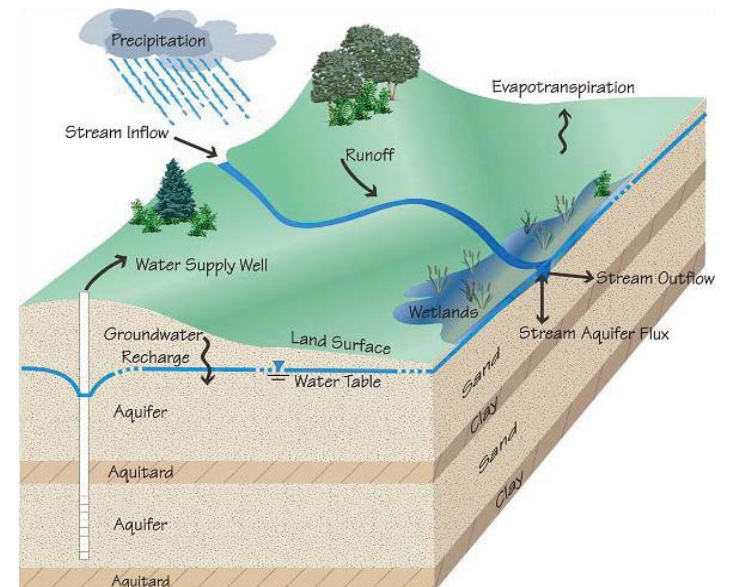
Your drinking water is drawn from the Blufftown Aquifer, one of many groundwater sources in the State. This is a safe and reliable source that provides high quality water that is free of microorganisms, such as Giardia and Cryptosporidium that are sometimes found in rivers and lakes.

Rain water percolates (filters) down into the Blufftown Aquifer through layers of soil and sand, which scrubs the water to remove impurities. When the aquifer reaches Robins AFB, it is 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 adequate to protect your drinking water supply. Contact Bioenvironmental Engineering Flight at 478-327-7555 if you have questions regarding the SWAP.

Water Quality Monitoring Compliance

The Source Water Assessment and Vulnerability Assessment show the Robins AFB water system's raw water is not at risk to pollution. The Georgia Environmental Protection Department (GA EPD) has authorized reduced monitoring requirements for select contaminants to less than once per year because the concentrations of these contaminants have been negligible for several years. Reduced monitoring has been granted to our drinking water system for 12 inorganic chemicals, 31 synthetic organic compounds, 3 radioisotopes, as well as lead and copper. Please contact the Bioenvironmental Engineering Flight at 478-327-7555 if you have questions about water quality monitoring compliance.



Your Treatment System

Chlorination disinfection is the primary method used to treat your drinking water. Your drinking water also goes through a softening process by adding a corrosion inhibitor and soda ash. Additionally, your water is mildly fluorinated to protect children's teeth. The water treatment operation is staffed by highly trained, state-licensed water treatment plant operators. Our water system has storage capacity of 1.5 million gallons, a pumping capacity of 8 million gallons per day and uses advanced technology to monitor and control drinking water distribution 24 hours per day. During 2021, nearly 532 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 individuals with cancer undergoing chemotherapy, who have undergone organ transplants, 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 OMRS/SGXB (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.

The Bioenvironmental Engineering Flight conducts required monthly total coliform sampling which is then analyzed by state certified professionals at the 802nd MXSS analytical laboratory.

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 previously used on Robins AFB. These organic compounds are 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 for PFCs in 2016 and again in 2020; the results for all drinking water wells were below detection limits both years tested. The detection limit for PFOS/PFOA is 2 parts per trillion. To put that in perspective, 1 part per trillion is a single drop of water in an Olympic sized swimming pool. 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).

Water Quality Data 2021

Contaminant	Units	MCL	MCLG	Highest Level Detected	Range Detected	Year Sampled	Violation	Typical Source
Inorganics								
Chlorine	ppm	MRDL=4	MRDLG=4	2	0.2-2	2021	No	Water additive used to control microbes
Fluoride	ppm	4	4	0.902	0.05-0.902	2021	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Radionuclides								
Combined Radium (226/228)	pCi/L	5	0	2	0.5-2	2021	No	Erosion of natural deposits
Gross Alpha Excluding Radon and Uranium	pCi/L	15	0	3.4	1.5-3.4	2021	No	Erosion of natural deposits
Uranium	ug/L	30	0	0.596	0.298-0.596	2021	No	Erosion of natural deposits
Nitrate/Nitrite								
Nitrite/Nitrate	ppm	10	10	0.711	0.029-0.711	2021	No	Runoff from fertilizer use; leaching from septic tank sewage; erosion of natural deposits.
Inorganic Compounds								
Barium	ppm	2	2	0.00845	0.00383-0.00845	2021	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium	ppb	100	100	5.84	0-5.84	2021	No	Discharge from steel and pulp mills; erosion of natural deposits
Nickel	ug/L	N/A	N/A	20.6	2.81-20.6	2021	No	Leaching from metals in contact with drinking water, such as pipes and fittings.
Thallium	ppb	2	0.5	0.0633	0-0.0633	2021	No	Discharge from electronics, glass, and Leaching from ore processing sites; drug factories
Lead	ppb	Action Level= 15	0	90 th Percentile 2.9	ND-37	2019	No	Corrosion of household plumbing systems; Erosion of natural deposits.
One out of 30 samples was found to have lead levels in excess of the Action Level of 15 ppb.								
Copper	ppm	Action Level=1.3	1.3	90 th Percentile 0.37	0.013-0.55	2019	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Zero out of 30 samples was found to have copper levels in excess of the Action Level of 1.3 ppm.								
Disinfection By-products								
Bromodichloromethane	ug/L	80	N/A	0.54	0-0.54	2021	No	Byproduct of drinking water disinfection
Chloroform	ug/L	80	N/A	2.48	0.490-2.48	2021	No	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM)	ppb	80	N/A	3	0.49-3	2021	No	Byproduct of drinking water disinfection
Volatile Organic Compounds								
None of the 68 volatile organic compounds sampled were detected in the water system.								
Microbiological Contaminants								
Total Coliform		1 ^b positive sample per month	0	0	N/A	2021	No	Naturally present in the environment
Emerging Contaminants								
Perfluorooctanoic Acid	ppt	N/A ^c	0	ND	ND	2020	No	Formerly found in firefighting foam
Perfluorooctanoic Sulfonate	ppt	N/A ^c	0	ND	ND	2020	No	Formerly found in firefighting foam

a. Georgia EPD has reduced the monitoring requirements for lead and copper. Sampling was conducted within 30 residences in 2019 and met all applicable standards. These samples represent the 90th percentile for the Robins Air Force Base water system.

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

c. There is no legally binding maximum contamination limit for emerging contaminants.

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.

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

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

ppm: parts per million

ppb: parts per billion

ppt: parts per trillion

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

ug/L: microgram per liter

N/A: not applicable

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/safewater/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.