# WATER QUALITY REPORT 2024

Robins Air Force Base Water System Permit No. 1530042

- *Complaints regarding color, taste or odor? Please call 78 Civil Engineer Service Desk at (478) 926-5657 (POC Mr. Lee Glover)*
- *For questions about the contents of this report, please contact 78 Bioenvironmental Engineering at (478) 327-7555 (POC Maj Schafer)*

## About Your Drinking Water

This Water Quality Report summarizes the quality of your drinking water during calendar year 2024.

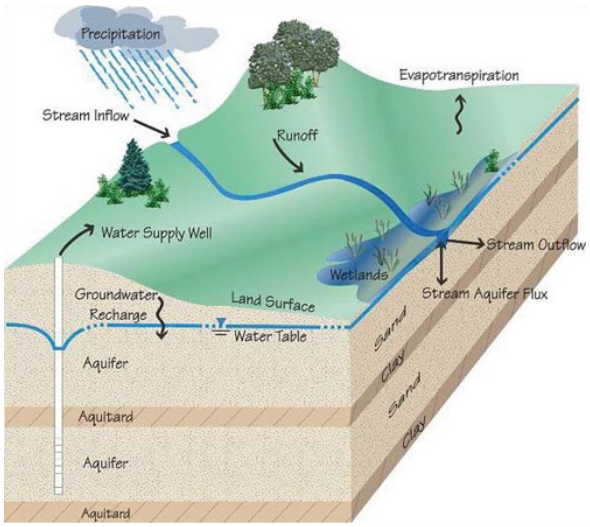
The purpose of this report is to provide Robins Air Force Base (RAFB) consumers with specific information about the drinking water, how sampling results impact water quality, and heighten awareness of the need to protect precious water resources. This report reflects the hard work and dedication of the 78th Civil Engineer (CE) Group, which operates and maintains the water distribution and treatment systems, and the 78th Medical Group (MDG), which routinely tests the drinking water for health impacts and quality. Included in this report are the specific levels of all water monitoring analytes[1] detected in the RAFB Public Water System (PWS) between January 1 and December 31, 2024. Also included are the most current results for analytes monitored less frequently than on an annual basis. Finally, this report describes the natural ground water source of RAFB drinking water, what minerals and chemicals the water contains, and how it compares to standards set by regulatory agencies.

The 78th MDG Bioenvironmental Engineering (BE) Flight issues this report annually in compliance with the Consumer Confidence Reporting (CCR) Rule of the Safe Drinking Water Act (SDWA). For additional information about this report or to provide input regarding RAFB drinking water, contact the BE Flight at (478) 327-7555 or the 78th CE Service Desk at (478) 926-5657. Base organizations that manage the water system are eager to address concerns or answer any questions you may have regarding water quality.

## 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 free of micro-organisms, such as Giardia and Cryptosporidium, which are sometimes found in rivers and lakes. Rainwater filters down into the Blufftown Aquifer through layers of soil and sand, which naturally scrub the water and remove impurities. When the aquifer reaches RAFB, it is over 300 feet below ground and separated from surface water by several thick clay layers. RAFB is permitted to draw 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 to water quality. The SWAP ensures the raw ground water used to distribute drinking water to consumers on RAFB is not at risk from pollution. Then, management strategies are identified and implemented to control potential contamination of the raw ground water to adequately protect your drinking water supply.




## Your Treatment System

Chlorination disinfection is the primary method used to treat RAFB drinking water. The drinking water also goes through a softening process whereby a corrosion inhibitor and soda ash are added and is mildly fluorinated to promote oral/dental health. The RAFB PWS has a storage capacity of two million gallons, a pumping capacity of eight million gallons per day out of the aquifer, and advanced technology that monitors and controls drinking water distribution 24 hours per day. During 2024, 650 million gallons of water were distributed to RAFB consumers. Water management staff work diligently 365 days per year to ensure your water is safe, remains available, and meets all standards set by State and Federal agencies.

## Water Quality Monitoring and Compliance

Due to consistent analyses resulting in negligible contamination over an extended period, the Georgia Environmental Protection Department (EPD) has authorized reduced monitoring requirements with frequencies less than once per year for certain contaminants. Reduced monitoring applies to the RAFB drinking water system for 12 inorganic chemicals, 31 synthetic organic compounds, lead, and copper. Please

[1] An analyte is a substance or chemical constituent that is of interest in an analytical procedure.

contact the BE Flight at (478) 327-7555 if you have questions about water quality monitoring compliance.

## What Should I Expect?

Drinking water, including bottled water, may reasonably be expected to contain 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 Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (1-800-426-4791).

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.

Contaminants that may be present in source water include:

- 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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which come from sources such as agriculture, urban stormwater runoff, and residential use.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production; organic chemicals can also come from gas stations, urban stormwater runoff, and septic systems.
- 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, the EPA prescribes regulations to limit the amounts of certain contaminants in water provided by a PWS. The Food and Drug Administration promulgates regulations that establish limits for contaminants in bottled water, which must provide the same protection for public health.

## 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, 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 individuals should seek advice about drinking water from their health care providers. The 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 at 1-800-426-4791.

Other people may have Service Lines containing lead. Lead can cause serious health effects in people of all ages, especially pregnant people, infants (both formula-fed and breastfed), and young children. Lead in drinking water is primarily from materials and parts used in service lines and in home plumbing. RAFB is responsible for providing high quality drinking water and removing lead pipes but cannot control the variety of materials used in the plumbing in your home. Because lead levels may vary over time, lead exposure is possible even when your tap sampling results do not detect lead at one point in time. You can help protect yourself and your family by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Using a filter, certified by an American National Standards Institute (ANSI) accredited certifier to reduce lead, is effective in reducing lead exposures. Follow the instructions provided with the filter to ensure the filter is used properly. Use only cold water for drinking, cooking, and making baby formula. Boiling water does not remove lead from water. Before using tap water for drinking, cooking, or making baby formula, flush your pipes for several minutes. You can do this by running your tap, taking a shower, doing laundry or a load of dishes. If you have a lead service line (LSL) or galvanized requiring replacement (GRR) service line, you may need to flush your pipes for a longer period. If you are concerned about lead in your water and wish to have it tested, contact the BE Flight at (478) 327-7555. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at https://www.epa.gov/safewater/lead.

### What is a Service Line Inventory?

A service line is a pipe that connects a building or a home to a water main. A service line inventory is a listing of the service lines connected to a PWS and whether they are made of lead (LSL), GRR, unknown, or not. For detailed information on RAFB's lead service line inventory and replacement plan, contact Civil Engineering Environmental Management at DSN: 468-1176, COMM: (478) 926-1176 or 78ceg.cev.frontofc@us.af.mil.

### What are per- and polyfluoroalkyl substances and where do they come from?

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industries and consumer products around the globe, including in the U.S., since the 1940s to make coatings and products that are commonly used, such as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. PFAS are also contained in some foams (aqueous film-forming foam or AFFF) used for fighting petroleum fires at airfields and in industrial fire suppression processes because they rapidly extinguish fires, saving lives and protecting property. PFAS compounds are persistent in the environment, and some are persistent in the human body, meaning they do not break down and can accumulate over time.

### Has Robins AFB tested its water for PFAS?

Yes. In April and October 2023, samples were collected from all six drinking water wells on the installation.

RAFB is pleased to report that drinking water test results were below the Minimum Reporting Limit (MRL) for all 29 PFAS compounds covered by the sampling methods, including PFOA and PFOS. This means that PFAS were not detected in your water system. In accordance with DoD policy, the water system will be resampled every three years for your continued protection.

### Radionuclides in Drinking Water & Health Effects

Uranium and radium naturally present in underground rocks that serve as aquifers may dissolve and enter groundwater used for drinking water. Most drinking water sources, including RAFB, have very low levels of radioactive contaminants (radionuclides) and are not considered to be a public health concern. Some people who drink water containing radium-226 or -228 in excess of the Maximum Contaminant Level (MCL)[2] over many years may have an increased risk of getting cancer.

[2] The MCL is set by the EPA for a specific contaminant in drinking water

# 2024 Annual Water Quality Data

*See definitions on page 5.

| Detected Contaminant | Units | MCL[3] | MCLG[3] | Highest Detected | Range Detected | Violation | Typical Source |
|---|---|---|---|---|---|---|---|
| **Inorganic Compounds – sample data from 2024** | | | | | | | |
| Barium | ppm | 2 | 2 | 0.0116 | 0.00332-0.0116 | No | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Beryllium | ppb | 4 | 4 | 0.517 | 0-0.517 | No | Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries. |
| Cadmium | ppb | 5 | 5 | 0.194 | 0-0.194 | No | Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; runoff from waste batteries and paints. |
| Chromium | ppb | 100 | 100 | 0.823 | 0.41- 0.823 | No | Discharge from steel and pulp mills; erosion of natural deposits |
| Fluoride | ppm | 4 | 4 | 0.631 | 0.493 – 0.631 | No | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Nitrate [measured as Nitrogen] | ppm | 10 | 10 | 1 | 0.0139-1 | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| Thallium | ppb | 2 | 0.5 | 0.413 | 0.0153 – 0.413 | No | Discharge from electronics, glass, and leaching from ore processing sites; drug factories |
| **Radionuclides – sample data from 2024** | | | | | | | |
| Combined Radium (226/228) | pCi/L | 5 | 0 | 3.8 | 2.9-3.8 | No | Erosion of natural deposits |
| Gross Alpha Excluding Radon and Uranium | pCi/L | 15 | 0 | 2.3 | 1.6-2.3 | No | Erosion of natural deposits of certain radioactive minerals may emit a form of radiation known as alpha radiation. |
| Uranium | pCi/L | 20 | 0 | 0.447 | 0.149-0.447 | No | Erosion of natural deposits |
| **Disinfection By-Products – sample data from 2024** | | | | | | | |
| Chlorine | ppm | 4 | 4 | 1 | 1 -1 | No | Water additive used to control microbes |

## Lead and Copper – sample data from 2022

| Detected Contaminant | Units | AL | MCLG | 90th Percentile | Range | Violation | Typical Source |
|---|---|---|---|---|---|---|---|
| Lead[4] | ppb | 15 | 0 | 0.465 | 0 - 3.45 | No | Corrosion of household plumbing systems; Erosion of natural deposits. |
| | Zero out of 30 sampling sites were found to have lead levels more than the AL of 15 ppb. | | | | | | |
| Copper | ppm | 1.3 | 1.3 | 0.296 | 0 - 0.426 | No | Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems. |
| | Zero out of 30 sampling sites were found to have copper levels more than the AL of 1.3 ppm. | | | | | | |

***3.*** *See definitions on page 5.*

***4.*** *GA EPD has reduced the monitoring requirements for lead and copper. Sampling was conducted within 30 residences in 2022 and met all applicable standards. These samples represent the 90th percentile for Robins AFB water system.*

*To access all individual Lead Tap Sample results for RAFB, please contact Bioenvironmental Engineering at 497-7555 or (478) 327-7555.*

## Fifth Unregulated Contaminant Monitoring Rule (UCMR 5) - sample data from 2023[5]

| Name | UCMR MRLs (ppb) | Average | Range | |
|---|---|---|---|---|
| | | | Low | High |
| **METALS** | | | | |
| Lithium | 9 | ND | ND | ND |
| **PFAS by EPA 533[6]** | | | | |
| Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX chemicals) | 0.005 | ND | ND | ND |
| Perfluorobutanesulfonic acid (PFBS) | 0.003 | ND | ND | ND |
| Perfluorooctanesulfonic acid (PFOS) | 0.004 | ND | ND | ND |
| Perfluorooctanoic acid (PFOA) | 0.004 | ND | ND | ND |
| Perfluorohexanesulfonic acid (PFHxS) | 0.003 | ND | ND | ND |
| Perfluorononanoic acid (PFNA) | 0.004 | ND | ND | ND |
| **PFAS by EPA 573.1** | | | | |
| N-Ethylperfluorooctanesulfonamidoacetic Acid | 0.005 | ND | ND | ND |
| N-Methylperfluorooctanesulfonamidoacetic Acid | 0.006 | ND | ND | ND |
| Perfluorotetradecanoic Acid (PFTeA) | 0.007 | ND | ND | ND |
| Perfluorotridecanoic Acid (PFTriA) | 0.006 | ND | ND | ND |

***5.*** *The UCMR 5 sample data results from two periods in Apr and Oct 2023 from all drinking water wells at RAFB, except for well 8 in period 2 because the well was out of service and remains, with no scheduled repair date. The monitoring data will help the EPA make determinations about future regulations and other actions to protect public health.*

***6.*** *There are 25 PFAS chemicals that fall under EPA's 533 analytical method. All analytes resulted in ND and below the MRLs.*

# Definitions

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

**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.

**Minimum Reporting Levels (MRLs)**: The lowest concentrations reported to the EPA.

**N/A:** not applicable

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

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

**ppb:** micrograms per liter or parts per billion – or one ounce in 7,350,000 gallons of water

**ppm:** milligrams per liter or parts per million – or one ounce in 7,350 gallons of water