

2025 Consumer Confidence Report



Annual Water Quality Report RAF Molesworth United Kingdom



Delivering A Clean Water Supply

This is an annual report on the water quality delivered by Royal Air Force Molesworth (RAFM). Bioenvironmental Engineering samples drinking water quality for many constituents as required by United State (US) regulations. This report provides the results of our monitoring for the period of 1 January ~ 31 December 2025. The US Environmental Protection Agency (EPA) and the Department of the Air Force Instruction (DAFI) 48-144, *Drinking Water Surveillance Program*, require all community water systems to provide their consumers an annual consumer confidence report (CCR). This report provides important information about the source and quality of your drinking water. Our goal is to empower you to make informed decisions regarding your family's health and to highlight the vital role we all play in protecting our water sources.

The Journey of Your Water

The RAFM drinking water system draws water from the local supplier, Anglian Water. This water that is delivered to Huntingdon district comes from Grafham Water Treatment Works which is mainly from the River Great Ouse. This qualifies RAFM water as surface water.

RAFM's water supply is treated with a sodium hypochlorite solution to provide essential chlorination. This process ensures effective disinfection and maintains water safety by preventing bacterial growth throughout the distribution system.

As a water wholesaler, Anglian Water publishes annual Water Quality Reports as well, which are located at:

<https://www.anglianwater.co.uk/global-faq/where-can-i-find-the-drinking-water-report>.

Anglian Water reports are developed in accordance with UK regulations. Consequently, UK requirements differ from those of this CCR, which adheres to US regulatory standards.

WATER SAMPLING FOR COMPLIANCE



About 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained from the US EPA's safe drinking water information website at:

<https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-information>.

The sources of drinking water (both tap water and bottled water) could 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, 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 resulting from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides* that may come from a variety of sources such as agriculture, urban storm water runoff, and septic systems.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals that are byproducts 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 resulting from oil and gas production and mining activities.

Deficiency/Remark

A temporary disruption in contract funding resulted in a missed sampling event for the third quarter of 2025. Following the resolution of this issue, the fourth-quarter sampling was rescheduled and successfully completed in January 2026.



Water Monitoring Results Summary

In order to ensure that tap water is safe to drink, US EPA and the Final Governing Standard for United Kingdom (FGS-UK) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1 ~ 6 list all of the primary drinking water standard contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The FGS-UK requires us to monitor certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one-year old. **NOTE: Terms and abbreviations used in this report are located on the final page.**

TABLE 1 DETECTION OF COLIFORM BACTERIA 1 JAN ~ 31 DEC 2025				
Parameter and Units of Measure	Highest No. of Detection	MCL	Violation	Typical source of Bacteria
Coliform, Total	0	Two or more positive monthly sample	No	Naturally present in the environment
Coliform, Fecal or <i>E.coli</i>	0	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or <i>E. coli</i> positive	No	Human and animal fecal waste

TABLE 2 LEAD AND COPPER SEPTEMBER 2023						
Parameter and Units of Measure	Samples Collected	Highest Level Detected (90th %)	Action Level	MCL	Violation	Typical source of Contaminant
Lead (mg/L)	10	0.006	0.005	0.01	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.
Copper (mg/L)	10	0.33	0.65	1.3	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.

TABLE 3
INORGANIC CONTAMINANTS
1 JAN ~ 31 DEC 2025

Parameter and Units of Measure	Highest Level Detected	Range of Levels Detected	MCL	Violation	Major Sources in Drinking Water
Antimony (mg/L)	0.0033	<0.0033	0.005	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic (mg/L)	0.00087	<0.00087	0.01	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (mg/L)	0.026	0.020 ~ 0.026	2	No	Naturally occurring, discharged from industrial processes.
Boron (mg/L)	0.087	0.069 ~ 0.087	1	No	Released from rocks and soils through weathering
Chromium (mg/L)	0.0012	0.00084 ~ 0.0012	0.05	No	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (mg/L)	0.21	0.16 ~ 0.21	1.5	No	Erosion of natural deposits; water additive; discharge from fertilizer and aluminum plants
Nitrate (as N) (mg/L)	6.1	5.9 ~ 6.1	10	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrite (as N) (mg/L)	<0.048	<0.048	0.5	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits

Additional Information for Nitrate/Nitrite.

RAFM water currently meets all regulatory limits for nitrate and nitrite, though it has reached an "Action Level" for nitrate. Since levels can change rapidly following rainfall or agricultural activity, we are closely monitoring the system to ensure it remains within all safety standards.

Additional Information for Fluoride.

RAFM does not add fluoride to its drinking water, as UK regulations strictly limit fluoridation practices. Any fluoride detected during testing is naturally occurring within the water supply.

TABLE 4
DISINFECTANTS & DISINFECTION BY PRODUCTS
1 JAN ~ 31 DEC 2025

Parameter and Units of Measure	Highest Level Detected	Range of Levels Detected	MCL	Violation	Major Sources in Drinking Water
TTHMs [Total trihalomethanes] (mg/L)	0.025	0.02 ~ 0.025	0.08	No	By-product of drinking water disinfection
HAA5 [Haloacetic Acids] (mg/L)	0.006	< 0.006	0.06	No	By-product of drinking water disinfection

Additional Information for TTHMs & HAA5.

RAFM drinking water continues to meet all federal safety standards for disinfection byproducts. Specifically, the water does not exceed regulatory limits for Total Trihalomethanes (TTHMs) or Haloacetic Acids (HAA5).

TABLE 5
RADIOACTIVE CONTAMINANTS
1 JAN ~ 31 DEC 2025

Parameter and Units of Measure	Highest Level Detected	Range of Levels Detected	MCL	Violation	Major Sources in Drinking Water
Gross Alpha (pCi/L)	2.27	<2.27	15	No	Erosion of natural deposits
Gross Beta (pCi/L)	12	<12	27	No	Erosion of natural deposits
Uranium (ug/L)	0.83	0.83 ~ 0.63	30	No	Erosion of natural deposits

TABLE 6
SYNTHETIC ORGANIC CONTAMINANTS
1 JAN – 31 DEC 2024

Parameter and Units of Measure	Highest Level Detected	Range of Levels Detected	MCL	Violation	Major Sources in Drinking Water
Pesticides, total (calculated) (mg/L)	0	0	0.0005	No	Leeching from farm land

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 industrial and consumer products around the globe, including in the U.S., since the 1940s. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, food packaging, and cookware. They are also contained in some fire-fighting foams such as aqueous film-forming foam, or AFFF, used for fighting petroleum fires.

Is there a federal regulation for PFAS in drinking water?

Yes. On April 26, 2024, the Environmental Protection Agency (EPA) published a final National Primary Drinking Water Regulation for certain per- and polyfluoroalkyl substances (PFAS) under the Safe Drinking Water Act (SDWA). This rule went into effect on June 25, 2024 with a compliance deadline of April 26, 2029, five years from the date of publication. While the rule requires routine sampling for certain PFAS by no later than 2027, the DoW has been sampling drinking water for PFAS compounds at all DoW-owned and operated water systems since 2017. Under the new rule, the following limits, called Maximum Contaminant Levels (MCL), were established, and DoW water systems will need to meet these levels by April 2029.

For systems where the DoW provides drinking water, the Department is collecting the necessary sampling information and is taking actions to ensure compliance within the required 5-year timeframe. Currently, the DoW is finalizing a policy on how to apply the EPA rule OCONUS.

TABLE 6 PER- AND POLYFLUOROALKYL SUBSTANCES 1 JAN ~ 31 DEC 2025				
Parameter and Units of Measure	Highest Level Detected	MCL	Violation	Major Sources in Drinking Water
Perfluorooctanoic Acid [PFOA] (ppt)	4.4	4	Yes	Man-made chemicals used in various products and contained in foams for fighting petroleum fires.
Perfluorooctanesulfonic Acid [PFOS] (ppt)	6.3	4	Yes	Man-made chemicals used in various products and contained in foams for fighting petroleum fires.
Perfluorononanoic acid [PFNA] (ppt)	0.56	10	No	Man-made chemicals used in various products and contained in foams for fighting petroleum fires.
Perfluorohexanesulfonic Acid [PFHxS] (ppt)	3.6	10	No	Man-made chemicals used in various products and contained in foams for fighting petroleum fires.
Hexafluoropropylene oxide dimer acid [HFPO-DA/GenX] (ppt)	0	10	No	Man-made chemicals used in various products and contained in foams for fighting petroleum fires.
Hazard Index [HI]	0.4215	1	No	The Hazard Index (HI) is made up of a sum of fractions. Each fraction compares the level of each PFAS measured in the water to the highest level determined not to have risk of health effects

Has RAF Molesworth tested its water for PFAS?

Yes. RAFM has been sampling PFAS since 2023 in the water pump house. The most recent samples were collected in the fourth quarter of 2025.

As provided in **Table 6**, PFAS compounds covered by the EPA PFAS drinking water rule were detected and over the MCL. RAFA has been studying treatment alternatives to remove PFAS, and will take action as required by the DoW OCONUS drinking water policy. **Additional sampling and its frequency, if needed, will also be determined once the DoW PFAS Policy for OCONUS installations has been finalized.** RAFA will be in compliance with the EPA PFAS drinking water MCL by the required deadline of April 2029. For more information on PFAS, please see <https://www.epa.gov/pfas>.

Regulated PFAS Information

PFOA. Some people who drink water containing PFOA in excess of the MCL over many years may have increased health risks such as cardiovascular, immune, and liver effects, as well as increased incidence of certain types of cancers including kidney and testicular cancer. In addition, there may be increased risks of developmental and immune effects for people who drink water containing PFOA in excess of the MCL following repeated exposure during pregnancy and/or childhood.

PFOS. Some people who drink water containing PFOS in excess of the MCL over many years may have increased health risks such as cardiovascular, immune, and liver effects, as well as increased incidence of certain types of cancers including liver cancer. In addition, there may be increased risks of developmental and immune effects for people who drink water containing PFOS in excess of the MCL following repeated exposure during pregnancy and/or childhood.

PFNA. Some people who drink water containing PFNA in excess of the MCL over many years may have increased health risks such as elevated cholesterol levels, immune effects, and liver effects. In addition, there may be increased risks of developmental effects for people who drink water containing PFNA in excess of the MCL following repeated exposure during pregnancy and/or childhood.

PFHxS. Some people who drink water containing PFHxS in excess of the MCL over many years may have increased health risks such as immune, thyroid, and liver effects. In addition, there may be increased risks of developmental effects for people who drink water containing PFHxS in excess of the MCL following repeated exposure during pregnancy and/or childhood.

HFPO-DA. Some people who drink water containing HFPO-DA in excess of the MCL over many years may have increased health risks such as immune, liver, and kidney effects. There is also a potential concern for cancer associated with HFPO-DA exposure. In addition, there may be increased risks of developmental effects for people who drink water containing HFPO-DA in excess of the MCL following repeated exposure during pregnancy and/or childhood.

Hazard Index. Per- and polyfluoroalkyl substances (PFAS) can persist in the human body and exposure may lead to increased risk of adverse health effects. Low levels of multiple PFAS that individually would not likely result in increased risk of adverse health effects may result in adverse health effects when combined in a mixture. Some people who consume drinking water containing mixtures of PFAS in excess of the Hazard Index (HI) MCL may have increased health risks such as liver, immune, and thyroid effects following exposure over many years and developmental and thyroid effects following repeated exposure during pregnancy and/or childhood.

For Customers with Special Health Concerns

Some populations may be at greater risk from contaminants in drinking water than the general public. This group includes infants, some elderly residents, and immuno-compromised individuals such as those with immune system disorders or those undergoing cancer or transplant treatments.

For more information please contact the 423rd Medical Squadron,
Bioenvironmental Engineering at
USAF RAF Alconbury 423 ABG Mailbox Bioenvironmental
<usaf.alconbury.423-abg.mbx.bioenvironmental@health.mil>



TERMS USED IN THIS REPORT

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water.

ppm: parts per million

ppt: parts per trillion

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

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

90th Percentile Level: The level of lead and copper at which 90% of drinking water samples taken in a system are below. Action level are exceeded based on the 90th percentile level. (e.g., 10 samples x 0.9 =9; thus, use 9th highest sample result to compare the action level). This mean 90% of results in the test set were below this level.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

FGS-UK: Final Governing Standards for the United Kingdom - The governing environmental regulation for US military bases in the UK.

Health Advisory (HA): USEPA limit that establishes when actions should be taken to reduce exposure.