

2023 Annual Consumer Confidence Report

F.E. Warren AFB
PWS I.D. No: WY5680122

Is my water safe?

Yes, our water meets all Environmental Protection Agency's (EPA) health standards in accordance with Title 40, Code of Federal Regulation (CFR) Parts 141 and 142. However, F.E Warren AFB received 3 Notice of Violations due to results not being delivered to the U.S EPA within the timeframe and failing to complete the required monitoring for total coliform and distribution system chlorine residual. Please see attachment 1 in regard to this. In 2023, numerous tests were conducted for contaminants that may be found in drinking water. The 2023 Annual Consumer Confidence Report (CCR) for F.E. Warren AFB is supplemented by the attached 2023 City of Cheyenne Board of Public Utilities (BOPU) CCR. As shown in the City of Cheyenne BOPU CCR, Section 13, there were no violations of any standards in 2023. Included are details about where your water comes from, what it contains, and how it compares to standards set by federal regulatory agencies.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. There are several groups of people at risk for infections. These people include 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 people, and infants, can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. Guidelines from the EPA and Centers for Disease Control (CDC) identifying the appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

Where does my water come from?

Your water comes from the Cheyenne BOPU water system and is a mixture of surface and ground water. We maintain the drinking water distribution system within the base boundaries but do not treat the water in any way. We have limited monitoring requirements to supplement the complete range of sampling already performed by the City of Cheyenne BOPU. The 2023 City of Cheyenne BOPU CCR is included with our report and provides information about the City of Cheyenne's monitoring, additional definitions and required educational information, and the source of our water.

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. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They 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 chemicals are persistent in the environment, and some are persistent in the human body – meaning they do not break down and they can accumulate over time.

Is there a regulation for PFAS in drinking water?

During 2023 there was no established federal water quality regulation for any PFAS compounds. In May 2016, the EPA established a health advisory (HA) level at 70 parts per trillion (ppt) for individual or combined concentrations of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). Both chemicals are types of PFAS. As of April of 2024 the EPA has updated their guidance for PFAS, establishing maximum contaminant levels (MCL), which F.E. Warren is well below.

Out of an abundance of caution for your safety, the Department of Defense's (DoD) PFAS testing, and response actions go beyond EPA Safe Drinking Water Act requirements. In 2020 the DoD promulgated a policy to monitor drinking water for PFAS at all service owned and operated water systems at a minimum of every three years. The DoD policy states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than the 2016 EPA HA level of 70 ppt, water systems would quickly undertake additional sampling to assess the level, scope, and localized source of contamination, and take action to reduce exposure to PFOS or PFOA.

What about the EPA's 2023 interim Health Advisories?

Because the interim Health Advisories for PFOS and PFOA in 2023 were based on draft analyses that were undergoing review by EPA's Science Advisory Board, are below quantifiable limits, and are non-regulatory levels, DoD is instead looking to EPA to promulgate a regulatory drinking water standard, which was laid out as of April 2024. Again, F. E. Warren PFOS and PFOA analysis was below the new established MCL.

Has F. E. Warren AFB tested its water for PFAS?

Yes. In December 2023, samples were collected from building 160.

We are pleased to report that drinking water testing results were below the Method Reporting Limit (MRL) for all 29¹ PFAS compounds covered by the sampling method, 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.

Other Information

If you have questions, please contact 90th Missile Wing Bioenvironmental Engineering at (307) 773-3088 or 90th Missile Wing Water Quality Program Manager at (307) 773-4359.

Abbreviations and Terms Used in This Report

AL	Action Level
RL	Report Limit
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MDL	Method Detection Limit
mg/L	Number of milligrams of substance in one liter of water
µg/L	Number of micrograms of substance in one liter of water
ppm	Parts per million, or milligrams per liter (mg/L): One part per million corresponds to one minute in 2 years or one penny in \$10,000.
ppb	Parts per billion, or micrograms per liter (µg/L): One part per billion corresponds to one minute every 2,000 years or 1 penny in \$10,000,000.
ND	None detected
LRAA	Locational Running Annual Average
TTHM	Total Trihalomethanes
HAA5	Haloacetic Acids
TOC	Total Organic Carbon
PFAS	Per- and Polyfluoroalkyl
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic Acid

Important Drinking Water Definitions

Report Limit (RL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements, which a water system must implement. An action level is different from a Maximum Contaminant Level (MCL), in that while an MCL is a legal limit of contaminant, an action level is a trigger for additional prevention or removal steps.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards for public water-supply systems.

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.

Method Detection Limit (MDL): The lowest level at which the laboratory can detect a contaminant using the prescribed method per the EPA.

¹ Total number of analytes must be validated against your sample results.

Water Quality Data

F.E. Warren AFB does not duplicate sampling conducted by BOPU. Table 1, *Per- and polyfluoroalkyl substances (PFAS)* and Table 2, *Other Sampled Contaminants* below list all the drinking water contaminants that were collected and/or detected during the calendar year of this report or new info on substance was published. Regulatory contaminant sampling frequency is based on the likelihood of changes in concentration; therefore, not all contaminants are sampled for each year.

TABLE 1: Per- and polyfluoroalkyl substances (PFAS)

Contaminants	Violation Yes/No	MDL	RL	Levels Detected (ng/L)	Sample Date	# Samples Exceeding AL
PFOS	No	0.02 ng/L	2 ng/L	ND	Dec 2023	0
PFOA	No	0.4 ng/L	2 ng/L	ND	Dec 2023	0

Table 2 lists the results of the chlorine and bacteria sampling. The outcome for Total Coliform Bacteria resulted in a Non-Detect (ND) meaning no bacteria was detected, with chlorine ranging from 0.02 to 2.0 mg/L. All levels are under the MCL.

TABLE 2: Other Sampled Contaminants

Contaminants	Violation Yes/No	Levels Detected (mg/L)	MCLG	MCL	Sample Dates	Typical Sources/Comments
Chlorine (mg/L)	No	Min: 0.00 Max: 1.90 Avg: 0.45	4.0	4.0	Jan –Dec 2023	Water additive to control microbes.
Total Coliform Bacteria	No	Presence/Absence Testing ND			Jan – Dec 2023	Naturally present in the Environment
TTHM (µg/L) Total Trihalomethanes (Sum of the 4 compounds: Chloroform, Bromoform, Bromodichloromethane, Dibromochloromethane)	No	<u>Bldg. 1152</u> Min: 30.7 Max: 53.1 Avg: 43.03 <u>Bldg. 665</u> Min: 27.1 Max: 46.3 Avg: 37.23	0	80	Jan – Dec 2023	By-product of drinking water chlorination.
HAA5 (µg/L) Haloacetic Acids (Sum of the 5 compounds: Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Monobromoacetic Acid, Dibromoacetic Acid)	No	<u>Bldg. 1152</u> Min: 15.3 Max: 23.0 Avg: 20.3 <u>Bldg. 665</u> Min: 2.0 Max: 18.3 Avg: 12.73	0	60	Jan – Dec 2023	By-product of drinking water chlorination.

Attachment 1

Important Information About Your Drinking Water

Monitoring Requirements Not Met For USAF F.E Warren Air Force Base (Public Water System Name)

Our water system violated several drinking water regulations over the compliance period shown below. Even though these were not emergencies, as our customers, you have a right to know what happened and what we did to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are indicators of whether your drinking water meets health standards. During the first quarter of 2023, we did monitor for Total Trihalomethane (TTHM) & Haloacetic Acids (HAA5), however, the results were not delivered to the U.S EPA within the required timeframe. All results confirmed the drinking water was within required standards and safe for public consumption. Additionally, F.E. Warren AFB has failed to complete the required monitoring for total coliform bacteria and distribution system chlorine residual during April 2023 (minimum of 6 samples per month).

What should I do?

There is nothing you need to do at this time.

The table below lists the contaminant(s) we did not properly test for during the compliance period, how often we are supposed to sample and how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were taken.

Contaminant	Required sampling frequency	Number of samples taken	When samples should have been taken	When samples were taken
TTHM	Quarterly	6 per Quarter	February 6, 2023	February 6, 2023
HAA5	Quarterly	2 per Quarter	February 6, 2023	February 6, 2023
Total coliform bacteria	Monthly	8 per Month	April 3, 2023	May 1, 2023
Chlorine residual	Monthly	8 per Month	April 3, 2023	May 1, 2023

What happened? What is being done?

Attached is a memorandum detailing violations and corrective actions.



DEPARTMENT OF THE AIR FORCE
90TH MISSILE WING (AFGSC)

MEMORANDUM FOR RECORD

FROM: 90 OMRS/SGXB

SUBJECT: Notice of Violation – National Primary Drinking Water Regulations (NPDWR)

1. The following is memorandum for record regarding three violations of drinking water regulations. Even though these were not emergencies, the public has a right to know what happened and what we did to correct these situations. Corrective action for all violations was taken in a timely manner to ensure our drinking water meets health standards. Subsequent water samples have been analyzed safe. There is nothing you need to do at this time.

2. Violation one is due to failure to conduct required monitoring for the disinfection byproducts (DBPs) by taking a set of Total Trihalomethane (TTHM) and Haloacetic Acids five (HAA5) samples every 90 days. The U.S. Environmental Protection Agency (EPA) did not receive any TTHM/HAA5 sampling results collected in February during the first quarter of the year 2023. This is a violation of 40 Code of Federal Regulation (CFR) §141.621 and §141.134 of the NPDWR. Samples were collected on time, but results were not received by the U.S. EPA within the required timeframe. All results confirmed the drinking water was within required standards and safe for public consumption.

3. Violation two and violation three are due to failure to conduct required monitoring for total coliform bacteria and distribution system chlorine residual during the month of April 2023 as required by 40 CFR §141.854-141.858 and §141.74(c)(3)(i) of the NPDWR. The monitoring results were not received by the U.S. EPA on time, as required by CFR §141.31(a), constituting another violation of the NPDWR. Required samples were collected 1 May 2023 and negative results were reported on 2 May 2023, confirming the drinking water safety. To prevent this from happening in the future, all water samples will be collected within the first 21 days of the month.

4. Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

5. Bioenvironmental Engineering remains confident that the installation has clean and safe drinking water. If you have any questions please contact Bioenvironmental Engineering, 90 OMRS/SGXB, F.E. Warren AFB at (307) 773-3088.

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