2025 Drinking Water Quality Annual Consumer Report

Eielson Air Force Base, Alaska

Introduction

Once again, Eielson AFB is pleased to present you with its annual Drinking Water Quality Report for Public Water System (PWSID) 370625.

The 2025 report is about 2024 water quality.

This report is designed to inform you about the high quality water Eielson AFB delivers to you every day.

The U.S. Environmental Protection Agency (EPA) and the State of Alaska Department of Environmental Conservation (ADEC) require all water agencies to produce for its customers an annual report about the previous year's drinking water quality.

Presented in this report is information on the source of our water, the contaminant sampling frequency, and the results for each contaminant found above the laboratory detection limit.

We continually monitor the drinking water for contaminants in accordance with federal, state, and Air Force requirements.

We are proud to report that the water provided by Eielson AFB meets or exceeds established water quality standards set by the EPA and ADEC.

Where Our Water Comes From

Your Eielson AFB main distribution system utilizes ground water from the Tanana Valley Alluvial Aquifer. The public water system for Eielson AFB is a community water system supplied by five groundwater production wells. The groundwater is then delivered to the Eielson AFB Water Treatment Plant where it is treated, disinfected, and prepared for distribution. The treated water is then sent to water faucets on Eielson AFB via a network of water distribution lines. A few outlying areas not connected to the base distribution system receive delivered water stored in tanks.

Source Water Assessment

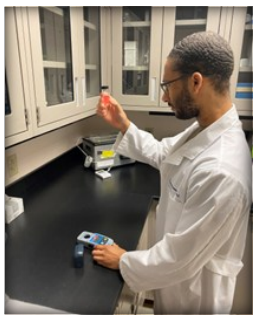
The Alaska Department of Environmental Conservation Source Water Assessment program was implemented to make public water system operators, as well as the public it serves, aware of potential sources of contamination in the vicinity of wells that may impact our water. The initial assessment was conducted in 2004. In 2010, an additional assessment was conducted for a new well on Eielson AFB. The assessment report included a vulnerability ranking, based on a prioritized list of possible contaminating activities. These potential activities of contamination in the area resulted in Eielson AFB's medium to high vulnerability rating. While ADEC has classified our water supplies as having potential vulnerabilities, you can see by the detected contaminants table on page four we do not show any contamination that exceeds regulatory limits for 2024. The Source Water Assessment for Eielson AFB is available for review by contacting the 354th Medical Group, Bioenvironmental Engineering Flight at 907-377-6700 or usaf.eielson.354-mdg.mbx.bioenvironmental@health.mil

Water Quality

Eielson AFB takes weekly routine water quality samples. In addition to the required testing, Eielson AFB takes extra samples from both the distribution system and the source water to safeguard water we supply to our customers.

Be assured that personnel from Bioenvironmental Engineering, the Water Treatment Plant and Utilities Maintenance make every effort to ensure the water provided to Eielson is safe for consumption and that the installation is notified should water quality deteriorate.

Water Testing and Your Health



In order to ensure tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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 EPA's Safe Drinking Water Hotline at 1-800-426-4791 or visiting online at **epa.gov/safewater**.

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 IN DRINKING WATER SOURCES MAY INCLUDE:

- **Microbial contaminants:** viruses and bacteria which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants:** salts and metals that may can be naturally-occurring or may be present as a result of urban storm-water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides:** originate from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **Organic chemical contaminants:** synthetic and volatile organic chemicals produced as by-products of industrial processes and petroleum production, gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants:** naturally occurring or be the result of oil and gas production and mining activities.
- **Lead:** an element commonly found in drinking water from corrosion of household plumbing systems and erosion of natural deposits. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Eielson 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. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at **www.epa.gov/safewater/lead**.
- **Copper:** an essential nutrient that can cause health effects with increased exposure. Some people who drink water containing copper in excess of the action level in a relatively short amount of time, could experience gastrointestinal distress. Copper in excess of the action level over many years may result in liver or kidney damage. Individuals with Wilson's disease should consult their personal doctor for more information.

CONSUMERS WITH SPECIAL HEALTH CONCERNS

Some populations may be more vulnerable to contaminants in drinking water. Immuno-compromised persons that are undergoing chemotherapy, organ transplants, or diagnoses of HIV/AIDS are at increased risk of infection. Those diagnosed with immune disorders, the elderly, and infants may also be at risk. These individuals should seek advice about drinking water from their health care providers.

Guidelines from the EPA and Centers for Disease Control and Prevention (CDC) about 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.

Testing Our Water

At Eielson AFB, Bioenvironmental Engineering and the Water Treatment Plant monitor for more than 80 contaminants using EPA-approved methods.

The Detected Contaminant Table on page four shows substances that are regulated by the U.S., EPA, and ADEC and that were detected in our water. All of the substances were below the established Maximum Contaminant Level (MCL). Eielson AFB tests for many other substances, but because they were not detected, they are not reported here.

How To Read The Water Quality Table

Starting on the far left, read across:

- Tested Date is usually in 2024 or years prior.
- Units are the means of measurement.
- MCLG is the goal level for that substance.
- MCL shows the highest level of substance allowed.
- Results are the laboratory analytical result for a contaminant.
- Range Detected represents the lowest to highest measured amount.
- Violation is the substance exceeded the government requirements.
- Typical Sources in Drinking Water tells where the substance usually originates.

Contaminant	Tested	Unit	MCLG	MCL	Results RAA/LRAA	Range	Violation	Typical Sources
DISINFECTANTS								
Chlorine Residual Distribution Lines	2024	mg/L	MRDLG 4	MRDL 4	0.5	0.01-2.00	No	Water additive used to control microbes

Acronyms & Terms Used In This Report

Below is a listing of acronyms and terms (with explanations) used in this Drinking Water Quality Report.

EPA
Environmental Protection Agency

ADEC
Alaska Department of Environmental Conservation

SDWA
Safe Drinking Water Act; the federal law which sets forth drinking water regulations.

MCL
Maximum Contaminant Level; the highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG
Maximum Contaminant Level Goal; the level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

AL
Action Level; the concentration of a contaminant that, if exceeded, triggers treatment or other requirements a water system must follow.

MRDL
Maximum Residual Disinfectant Level; 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.

MRDLG
Maximum Residual Disinfectant Level Goal; 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 contamination.

RESULTS
Laboratory analytical result for a contaminant; this value is evaluated against an MCL or AL to determine compliance.

90th Percentile
90% of all sample results fall below this level (40 sites throughout base housing are tested for lead and copper). This level is compared to the AL for compliance.

ppm or mg/L
Parts per million or milligrams per liter. One part per million corresponds to one minute in two years or one penny in $10,000.

ppb or ug/L
Parts per billion or micrograms per liter. One part per billion corresponds to one minute in 2,000 years or one penny in $10,000,000.

ppt or ng/L
Parts per trillion or nanogram per liter. One part per trillion corresponds to one grain of sand in an Olympic-size swimming pool or one second in 33,333 years.

pCi/L
Picocuries Per Liter

LRAA
Locational Running Annual Average

RAA
Running Annual Average

WTP
Water Treatment Plant

LHAL
EPA's Lifetime Health Advisory Level. A lifetime health advisory level is the amount below which no harm is expected from these chemicals. The EPA publishes LHALs to offer a margin of protection against adverse health effects to the most sensitive populations.

Detected Contaminants Results Table

The following table presents the results of our water monitoring for **2024 and earlier.**

The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Therefore, some of our reported data is more than one year old.

We listed only those contaminants that the laboratory actually detected; all of the contaminants are below the established Maximum Contaminant Level (MCL) and the Maximum Contaminant Level Goal (MCLG).

Contaminant	Tested	Unit	MCLG	MCL	Results RAA/LRAA (PWSID 370625)	Range	Violation	Typical Sources
DISINFECTANTS								
Chlorine Residual Distribution Lines	2024	mg/L	MRDLG 4	MRDL 4	0.56 RAA	0.1-2.0	No	Water additive used to control microbes
*During routine water sampling one sample collected from bldg. 3426 tested positive for Total Coliform on 17 December 2024.								
ORGANIC CONTAMINANTS								
Total Trihalomethanes								
Bldg 1346	9/04/2024	ug/L	NA	80	67	NA	No	By-product of drinking water disinfection
Bldg 3349	10/31/2024	ug/L	NA	80	9.36	NA	No	By-product of drinking water disinfection
Haloacetic Acids								
Bldg 1346	9/04/2024	ug/L	NA	60	26.1	NA	No	By-product of drinking water disinfection
Bldg 3349	10/31/2024	ug/L	NA	60	4.5	NA	No	By-product of drinking water disinfection
LEAD AND COPPER – Tested at customer's taps.								
Copper 90th percentile of 20 samples taken	6/16/2023	ppb	1.3	AL 1.3	0.45 (90%)	0.066-2.96	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead 90th percentile of 20 samples taken	6/16/2023	ppb	0	AL 15	0.57 (90%)	0.000-0.0095	No	Corrosion of household plumbing systems; erosion of natural deposits
Copper: 20 samples: 1 exceeded AL Lead: 20 Samples 0 exceeded AL								
INORGANIC CONTAMINANTS								
Nitrate (WTP)	9/04/2024	mg/L	10	10	ND	NA	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Fluoride (WTP) Fluoride (From Distribution Lines)	2024 2024	ppm	4	4	0.832 mg/L 0.64 RAA	NA NA	No	Erosion of natural deposits; Water additive which promotes strong teeth
VOLATILE ORGANIC CONTAMINANTS								
Cis– 1,2 Dichloroethylene (Well B)	9/04/24	ug/L	0.5	70	ND	NA	No	Discharge from petroleum factories
Trichloroethylene (Well B)	9/04/24	ug/L	0.5	5	ND	NA	No	Discharge from petroleum factories
RADIOLOGICAL CONTAMINANTS								
Gross Alpha	2021	pCi/L	0	15	0.21	NA	No	Erosion of Natural Deposits
Beta Particle & Photon Emitters	2021	pCi/L	0	50*	1.7	NA	No	Decay of natural and manmade deposits
Combined Radium 226/228	2021	pCi/L	0	5	2.02	NA	No	Erosion of natural deposits
* The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles. **Results were less than background radiation.								
UNREGULATED CONTAMINANTS - PERFLUOROALKYL SUBSTANCES (PFAS)								
Perfluorooctanoic Acid (PFOA)	2024	ppt	0	4	ND	NA	No	Firefighting foams; Industrial chemicals; Consumer goods
Perfluorooctane Sulfonate (PFOS)	2024	ppt	0	4	ND	NA	No	Firefighting foams; Industrial chemicals; Consumer goods

Important Information About Your Water

As we have reported in the previous years' consumer water reports, Eielson AFB began sampling for the unregulated contaminants Perfluorooctane sulfonate (PFOS) and Perflurooctanoic acid (PFOA) in March 2015. PFOS and PFOA have been used in the production of carpets, clothing, fabrics for furniture, paper packaging, resistant cookware, and many other materials. They are also used in various industrial processes and were widely found in aqueous film forming foam (AFFF) as a fire suppression agent at airfields.

Because these chemicals have been used in an array of consumer products, most people have been exposed to them. Between 2000 and 2002, PFOS was voluntarily phased out of production in the U.S. by its primary manufacturer. In 2006, eight major companies voluntarily agreed to phase out their global production of PFOA and PFOA-related chemicals, although there are a limited number of ongoing uses. While consumer products and food prepared in nonstick pans are a source of exposure, drinking water can be a primary concern in the small percentage of communities where these chemicals are present in water supplies.

The EPA has established drinking water Lifetime Health Advisories (LHAs) for PFOS and PFOA based on the agency's assessment of the latest peer-reviewed science. EPA states its intent to provide U.S. drinking water system operators, and U.S. state, tribal and local officials with information on the potential health risks of these chemicals to ensure the purveyor makes informed decisions to take appropriate actions when protecting the population served. When both PFOS and PFOA are found in drinking water, the LHA level for their combined concentrations is 70 parts per trillion. The LHA is not enforceable; however, the DoD and AF, are committed to protecting human health and have mandated the testing of drinking water for PFOS and PFOA.

On 10 April 2024, the EPA announced the final National Primary Drinking Water Regulation for six PFAS, which established legally enforceable maximum contaminant levels (MCLs). Public water systems have five years (by 2029) to implement solutions that reduce these PFAS if monitoring shows that drinking water levels exceed these MCLs.

Eielson AFB Water Treatment Plant Granular Activated Carbon system.

Eielson AFB is fully committed to providing safe and reliable drinking water to our community. In December 2017, Eielson AFB completed a project to add six granular activated carbon (GAC) vessels to the water treatment plant for the removal of PFOS and PFOA from the base groundwater. The table on page four shows the GAC system at the WTP is maintaining the PFOS and PFOA levels below the EPA LHA as we continue to monitor levels through quarterly water sampling.

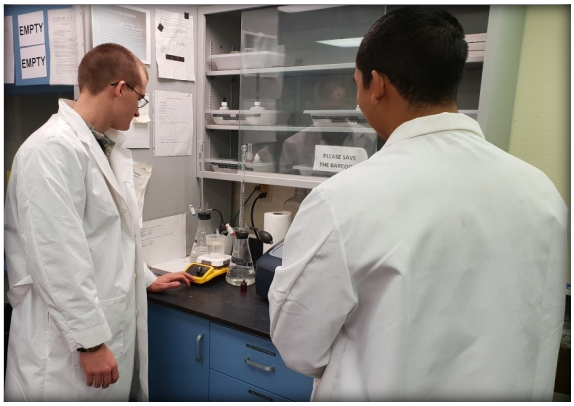
If you would like additional information on PFOS and PFOA visit the following web sites:

Alaska Environmental Public Health Program
http://dhss.alaska.gov/dph/Epi/eph/Pages/PFAS.aspx

Agency for Toxic Substances and Disease Registry
https://www.atsdr.cdc.gov/pfas/index.html

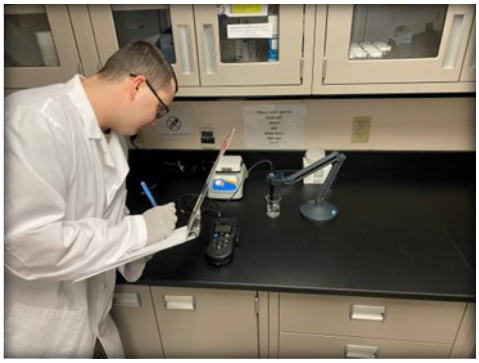
EPA
https://www.epa.gov/pfas

National Toxicology Program
https://ntp.niehs.nih.gov/pubhealth/hat/noms/pfoa/index.html



Water Treatment Plant personnel testing the finished water throughout the day.

Utilities Maintenance personnel performing routine fire hydrant flushing.



Bioenvironmental Engineering personnel testing the base water weekly at various sites throughout Eielson AFB.

You can have the utmost confidence in the team of professionals from the 354 CES Water Treatment Plant, 354 CES Utilities Maintenance, and 354 MDG Bioenvironmental Engineering who are dedicated and committed to providing Eielson AFB with clean safe water.

Public Involvement

Consumers who have questions about this report or concerns over their drinking water may contact **Public Affairs at 907-377-2116.** Based on public interest, this report may be the topic of a future 354 FW Town Hall Meeting to provide an opportunity for public participation in decisions that affect drinking water quality.

An electronic copy of this report is available on the Eielson Web Site at:
https://www.eielson.af.mil/General-Information/Environmental/

Eielson Air Force Base Drinking Water Violations

- Annual sample for disinfection byproducts were not collected in the correct month. Samples were collected on 31 October 2024 to return the system to compliance.
- System did not complete lead service line inventory by due date. The system can return to compliance to by submitting a complete lead service line inventory.
- System did not complete a initial lead service line inventory form by due date. Returned to compliance on 11 March 2025 with the submission of the initial lead service line inventory form.

A Lead Service Line Inventory (LSI) has been drafted, submitted to ADEC, and is currently under review. The status of the service lines is technically unknown at this time but will be updated in the near future when the systems LSI has been finalized. To learn more about out lead service line inventory, contact the 354th Medical Group, Bioenvironmental Engineering Flight at 907-377-6700 or usaf.eielson.354-mdg.mbx.bioenvironmental@health.mil.