



2023 Annual
**WATER QUALITY
REPORT**

Fort Leavenworth
PWS ID: KS2010311

**QUALITY. ONE MORE WAY
WE KEEP LIFE FLOWING.**



AMERICAN WATER

Military Services

WE KEEP LIFE FLOWING™

What is a Consumer Confidence Report (CCR)



Each year, American Water Fort Leavenworth, operated by American Water Military Services Group, produces a Water Quality Report. For more information about this report, please contact Fort Leavenworth at (913) 758-9272

Once again, we proudly present our Annual Water Quality Report, also referred to as a Consumer Confidence Report (CCR). CCRs let consumers know what contaminants, if any, were detected in their drinking water as well as related potential health effects. CCRs also include details about where your water comes from and how it is treated. Additionally, they educate customers on what it takes to deliver safe drinking water and highlight the need to protect drinking water sources.

ATTENTION: Landlords and Apartment Owners

Please share a copy of this notice with your tenants. It includes important information about their drinking water quality.

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A message from American Water- Military Services Group's President



Sean Wheatley

President, American
Water - Military Services
Group

American Water's Military Services Group owns and operates water and wastewater utilities under the Utilities Privatization program and proudly provides water and wastewater services to military communities around the country, including yours. Our Company's Vision – "We Keep Life Flowing" - drives everything we do for you, our customers. To reinforce our vision and maintain your trust, it's important that we share with you information about our commitment to providing high-quality water service.

I am pleased to provide you with the 2023 Annual Water Quality Report with detailed information about the source and quality of your drinking water. We have prepared this report using the data from water quality testing conducted for your local water system from January through December 2023.

With equal importance, we place a strong focus on acting as stewards of our environment. In all the communities we serve, we work closely with the local directorates of public works, civil engineering squadrons, local environmental departments, and state regulatory agencies to protect environmental quality, educate customers on how to use water wisely, and ensure the high quality of your drinking water every day.

At American Water, our values – safety, trust, environmental leadership, teamwork, and high performance – mean more than simply making water available "on-demand". It means every employee working to deliver a key resource for public health, fire protection, mission assurance, the economy, and the overall quality of life we all enjoy. For more information or for additional copies of this report, visit us online at www.amwater.com.

Sean Wheatley
Military Services Group
American Water



ATTENTION: Landlords and Apartment Owners

Please share a copy of this notice with your tenants. It includes important information about their drinking water quality.



About Your Drinking Water Supply

The Fort Leavenworth Water Treatment Plant was constructed in 1934 and treats water from five operating groundwater wells, providing water to the installation. An upgrade to the water treatment plant in 2022 added granular activated carbon (GAC) for PFAS removal to the process. The maximum capacity of the plant is 5.3 million gallons per day (MGD), but the average daily water treated is only 1 MGD. The water is treated with the following processes: Aeration, Lime softening, Coagulant aid, settling basins, CO2, pre-filter chlorination, filtration, GAC, post-GAC chlorination, ammonia for monochloramines, and fluoridation.



Fort Leavenworth (PWS: KS2010311) Water System Source Information				
KDHE Source	Water Type	Source Type	Depth (ft)	Source Use
Well 05	GW	Well	92.6	Permanent
Well 06	GW	Well	106.6	Permanent
Well 07	GW	Well	106.6	Permanent
Well 08	GW	Well	101	Permanent
Well 09	GW	Well	101	Permanent

GW = Groundwater



What are the Sources of Contaminants?

To provide tap water that is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration (FDA) 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 Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, aquifers and/or groundwater. 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.

SPECIAL HEALTH INFORMATION

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control and Prevention (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 (800-426-4791).

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 may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
Organic Chemical 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 stormwater runoff, and septic systems.
Radioactive Contaminants	which can be naturally occurring or be the result of oil and gas production and mining activities.

About Lead

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. American Water 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 or at <http://www.epa.gov/safewater/lead>.

UTILITY-OWNED VS. CUSTOMER-OWNED PORTION OF THE SERVICE LINE



Please note: This diagram is a generic representation. Variations may apply.

The most common source of lead in tap water is from the customer's plumbing and their service line.

The utility-owned water mains are not made of lead; however, the water service line that carries the water from the water main in the street to your home could be. Homeowners' service lines may be made of lead, copper, galvanized steel or plastic. You can assess your service line material where it enters your home, typically in your basement, crawl space or garage, near the inlet valve.

MINIMIZING YOUR POTENTIAL EXPOSURE

You cannot see, smell or taste lead, and boiling water will not remove lead. Here are steps you can take to reduce your potential exposure if lead exists in your home plumbing.

CHECK YOUR PLUMBING AND SERVICE LINE

If you live in an older home, consider having a housing check your plumbing for lead.



1. Flush your taps. The longer the water lies dormant in your home's plumbing, the more lead it might contain. If the water in your faucet has gone unused for more than six hours, flush the tap with cold water for 30 seconds to two minutes before drinking or using it to cook. To conserve water, catch the running water and use it to water your plants.



2. Use cold water for drinking and cooking. Hot water has the potential to contain more lead than cold water. If hot water is needed for cooking, heat cold water on the stove or in the microwave.



3. Routinely remove and clean all faucet aerators.



4. Look for the "Lead Free" label when replacing or installing plumbing fixtures.



5. Follow manufacturer's instructions for replacing water filters in household appliances, such as refrigerators and ice makers, as well as home water treatment units and pitchers. Look for NSF 53 certified filters.



6. Flush after plumbing changes. Changes to your service line, meter, or interior plumbing may result in sediment, possibly containing lead, in your water supply. Remove the strainers from each faucet and run the water for 3 to 5 minutes.

Important Information About **Drinking Water**

CHLORAMINES

Chloramines are a Kansas and federally approved alternative to free chlorine for water disinfection. Chloramines can reduce disinfection by-product formation and may help reduce concerns related to taste. Chloramines are also used by many American Water systems and many other water utilities nationally.

Chloramines have the same effect as chlorine for typical water uses with the exception that chloramines must be removed from water used in kidney dialysis and fish tanks or aquariums.

Treatments to remove chloramines are different than treatments for removing chlorine. Please contact your physician or dialysis specialist for questions pertaining to kidney dialysis water treatment. Contact your pet store or veterinarian for questions regarding water used for fish and other aquatic life.

NITRATES

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

FLUORIDE

Fluoride is a naturally occurring substance. It can be present in drinking water from two sources:

1. **By nature** when groundwater comes into contact with fluoride-containing minerals naturally present in the earth; or
2. **By a water purveyor** through addition of fluoride to the water they are providing in the distribution system.

The Fort Leavenworth System has naturally-occurring fluoride in the groundwater and also fluoridates the water.



Important Information About **Drinking Water**



PFAS

Per- and polyfluoroalkyl substances (PFAS) are manufactured chemicals used in many household products including nonstick cookware (e.g., Teflon™), stain repellants (e.g., Scotchgard™), and waterproofing (e.g., GORE-TEX™). They are also used in industrial applications such as in firefighting foams and electronics production. There are thousands of PFAS chemicals, and they persist in the environment. Two well-known PFAS chemicals are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). These were phased out of production in the United States and replaced by hexafluoropropylene oxide-dimer acid (commonly known as GenX), perfluorobutane sulfonic acid (PFBS) and others.

American Water's Military Services Group has performed voluntary sampling to better understand occurrence of certain PFAS in drinking water sources. This sampling allows us to be better prepared as U.S. EPA recently announced drinking water standards for six PFAS chemicals – PFOA (4 ppt), PFOS (4 ppt), HFPO-DA/GenX (10 ppt), PFNA (10 ppt), and PFHxS (10 ppt). The EPA is also regulating mixtures of four PFAS – PFHxS, PFNA, HFPO-DA, and PFBS through a Hazard Index calculation (1 unitless). For more information on the proposed PFAS drinking water standards, please visit <https://www.epa.gov/pfas>. Additionally, in 2022, Fort Leavenworth brought a new Granular Activated Carbon treatment process online to remove PFAS from the drinking water. All tests have shown a non-detectable result for the six PFAS chemicals listed above, well below the EPAs proposed drinking water standards.

The science and regulation of PFAS and other contaminants is always evolving, and American Water's Military Services Group strives to be a leader in research and development. PFAS contamination is one of the most rapidly changing areas in the drinking water field. We have invested in our own independent research, as well as engaging with other experts in the field to understand PFAS occurrence in the environment. We are also actively assessing treatment technologies that can effectively remove PFAS from drinking water, because we believe that investment in research is critically important to addressing this issue.



American Water has a history of leading research to understand contaminants that can make their way through the environment. Our dedicated scientists work with leaders in the water community to develop methods to detect, sample, measure and address these contaminants. Because investment in research is critical to address PFAS, American Water actively assesses treatment technologies that can effectively remove PFAS from drinking water.

Lauren A. Weinrich, Ph.D.
Principal Scientist



Water Quality Results

WATER QUALITY STATEMENT

We are pleased to report that during calendar year 2023, the results of testing of your drinking water complied with all state and federal drinking water requirements.

For your information, we have compiled a list in the table below showing the testing of your drinking water during 2023. The Kansas Department of Health and Environment allows us to monitor for some contaminants less than once per year because the concentration of the contaminants does not change frequently. Some of our data, though representative, are more than one year old.

Definition of Terms

These are terms that may appear in your report.

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

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

LRAA: Locational Running Annual Average

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. See also Secondary Maximum Contaminant Level (SMCL).

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 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.

MFL: Million fibers per liter.

micromhos per centimeter ($\mu\text{mhos/cm}$): A measure of electrical conductance.

NA: Not applicable

ND: Not detected

Nephelometric Turbidity Units (NTU): Measurement of the clarity, or turbidity, of the water.

pH: A measurement of acidity, 7.0 being neutral.

picocuries per liter (pCi/L): Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).

parts per billion (ppb): One part substance per billion parts water, or micrograms per liter.

parts per million (ppm): One part substance per million parts water, or milligrams per liter.

parts per trillion (ppt): One part substance per trillion parts water, or nanograms per liter.

Secondary Maximum Contaminant Level (SMCL): Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

TON: Threshold Odor Number

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

%: Percent

MEASUREMENTS

Parts Per Million



in a 10 gallon fish tank

Parts Per Billion



in a 10,000 gallon swimming pool

Parts Per Trillion



in 35 junior size Olympic pools

Water Quality Results

American Water’s Military Services Group conducts extensive monitoring to determine if your water meets all water quality standards. The detections of our monitoring are reported in the following tables. While most monitoring was conducted in 2023, certain substances are monitored less than once per year because the levels do not change frequently. For help with interpreting the tables below, see the “Definition of Terms” on the previous page. Some unregulated substances are measured, but maximum contaminant levels have not been established by the government. These contaminants are shown for your information.

NOTE: Regulated contaminants not listed in this table were not found in the treated water supply.

LEAD AND COPPER MONITORING PROGRAM - At least 30 tap water samples collected at customers’ taps every 3 years								
Substance (with units)	Year Sampled	Compliance Achieved	MCLG	Action Level (AL)	90 th Percentile	No. of Premises Sampled	Premises Above Action Level	Typical Source
Lead (ppb)	2023	Yes	0	15	2.6	30	1	Corrosion of household plumbing systems.
Copper (ppm)	2023	Yes	1.3	1.3	0.110	30	0	Corrosion of household plumbing systems.

REVISED TOTAL COLIFORM RULE - At least 15 samples collected each month in the distribution system						
Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Total % of Positive Samples	Typical Source
Total Coliform ¹	2023	Yes	0	*TT = Less than 5%	0.6%	Naturally present in the environment.
E. Coli ²	2023	Yes	0	TT = No confirmed samples	0%	Human and animal fecal waste.

NOTE: Coliforms are bacteria that are naturally present in the environment and are used as an indicator of the general bacteriological quality of the water. We are reporting the highest percentage of positive samples / highest number of positive samples in any month.

¹ The Treatment Technique for Total Coliforms requires that if the maximum percentage OR number of total coliform positive samples are exceeded, a system assessment must be conducted, any sanitary defects identified, and corrective actions completed. Additional Level 1 Assessments or Level 2 Assessments are required depending on the circumstances.

² The Treatment Technique for E. Coli requires that for any routine sample that is positive for total coliform where either the original sample or one of the repeat check samples is also positive for E. Coli, a Level 2 Assessment must be conducted, any sanitary defects identified, and corrective actions completed.

³ The E. Coli MCL is exceeded if routine and repeat samples are total coliform-positive and either is E. coli-positive, or the system fails to take repeat samples following an E. coli-positive routine sample, or the system fails to analyze total coliform-positive repeat samples for E. coli.

DISINFECTION BYPRODUCTS - Collected in the Distribution System

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest LRAA	Range Detected	Typical Source
Total Trihalomethanes (TTHMs) (ppb)	2023	Yes	0	80	21	0 to 5.7	By-product of drinking water disinfection.
Haloacetic Acids (HAA5s) (ppb)	2023	Yes	0	60	5	0 to 3	By-product of drinking water disinfection.

NOTE: Compliance is based on the running annual average at each location (LRAA). The Highest LRAA reflects the highest average at any location and the Range Detected reflects all samples used to calculate the running annual averages.

DISINFECTANTS - Collected at the Treatment Plant

Substance (with units)	Year Sampled	Compliance Achieved	MRDLG	MRDL	Monitoring Period Average Residual	Running Annual Average	Typical Source
Entry Point Chlorine Residual (ppm)	2023	Yes	4	4	3.00	2.50	Water additive used to control microbes.

OTHER REGULATED SUBSTANCES - Collected in the Distribution System and at the Treatment Plant

Substance (with units)	Year Sampled	Compliance Achieved	MCLG	MCL	Highest Compliance Result	Range Detected	Typical Source
Barium (ppm)	2022	Yes	2	2	0.03	0.03	Discharge from metal refineries
Chromium (ppb)	2022	Yes	100	100	1.2	1.2	Discharge from steel and pulp mills
Fluoride (ppm)	2023	NA	4	4	0.83	0 to 0.83	Natural deposits; Water additive which promotes strong teeth

Secondary Contaminants

Substance (with units)	Date Sampled	Highest Value	Range Low-High	SMCL ²
Alkalinity (ppm)	2022	110	110	300
Calcium (ppm)	2022	25	25	200
Chloride (ppm)	2022	23	23	250
Conductivity @ 25C UMHOS/CM	2022	360	360	1500
Hardness, Total (As CaCO3) (ppm)	2022	140	140	400
Magnesium (ppm)	2022	20	20	150
Nickel (ppm)	2022	0.0013	0.0013	0.1
pH	2022	8.6	8.6	8.5
Potassium (ppm)	2022	5.8	5.8	100
Silica (ppm)	2022	23	23	50
Sodium (ppm) ¹	2022	30	30	100
Sulfate (ppm)	2022	62	62	250
TDS (ppm)	2022	260	260	500

1 - For healthy individuals the sodium intake from water is not important because a much greater intake of sodium takes place from salt in the diet. However, sodium levels above the recommended upper limit may be of concern to individuals on a sodium restricted diet.

2 - Substances with Secondary MCLs do not have MCLGs; these limits are primarily established to address aesthetic concerns.



About Us

American Water (NYSE: AWK) is the largest regulated water and wastewater utility company in the United States. With a history dating back to 1886, We Keep Life Flowing® by providing safe, clean, reliable and affordable drinking water and wastewater services to more than 14 million people with regulated operations in 14 states and on 18 military installations. American Water's 6,500 talented professionals leverage their significant expertise and the company's national size and scale to achieve excellent outcomes for the benefit of customers, employees, investors and other stakeholders.

American Water's Military Services Group, a subsidiary of American Water, owns, operates and maintains water and/or wastewater assets at 18 military installations. For more information, visit amwater.com/militaryservices.



MILITARY SERVICES SITE LOCATIONS

ALABAMA

Fort Novosel

CALIFORNIA

Vandenberg Space Force Base

FLORIDA

Naval Station Mayport

ILLINOIS

Scott Air Force Base

KANSAS

Fort Leavenworth

LOUISIANA

Fort Johnson

MARYLAND

Fort Meade

MISSOURI

Fort Leonard Wood

NEW JERSEY

Picatinny Arsenal

NEW YORK

U.S. Army Garrison West Point

OHIO

Wright-Patterson Air Force Base

OKLAHOMA

Fort Sill

TEXAS

Fort Cavazos
Joint Base San Antonio

UTAH

Hill Air Force Base

VIRGINIA

Fort Walker
Fort Belvoir

WASHINGTON

Joint Base Lewis-McChord

How to Contact Us

If you have any questions about this report, your drinking water, or service, please contact Fort Leavenworth at (913) 758-9272



WATER INFORMATION SOURCES

United States Environmental Protection Agency (USEPA):
www.epa.gov/safewater

Safe Drinking Water Hotline: (800) 426-4791

Centers for Disease Control and Prevention: www.cdc.gov

American Water Works Association: www.awwa.org

Water Quality Association: www.wqa.org

National Library of Medicine/National Institute of Health:
www.nlm.nih.gov/medlineplus/drinkingwater.html

This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

Este informe contiene información importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Ntawm no yog daim ntawv tshaj qhia uas muaj cov ntaub ntawv tseem ceeb hais txog koj cov dej haus. Txhais nws, los sis tham nrog ib tus neeg uas nkag siab txog nws.

這是關於您的水質的十分重要的資訊。翻譯此資訊或和了解此資訊的人通話。

इस रिपोर्ट में आपके पीने के पानी के बारे में महत्वपूर्ण जानकारी है। इसका अनुवाद करें, या इसे समझने वाले किसी व्यक्ति से बात करें।

Этот отчет содержит важную информацию о Вашей питьевой воде. Переведите его или обратитесь к кому-либо, кто понимает ее.

Ang ulat na ito ay may taglay na mahalagang impormasyon tungkol sa inyong inuming tubig. Isalin ito sa ibang wika, o makipag-usap sa isang tao na naiintindihan ito.

Đây là thông tin rất quan trọng về chất lượng nước của quý vị. Xin quý vị dịch ra hoặc nhờ ai đó có thể hiểu được thông tin này.