



2018 Annual Water Quality Report

Fort Leavenworth
PWS ID: KS2010311



This report contains important information about your drinking water. If you do not understand it, please have someone explain or translate it for you.

Este informe contiene información muy importante sobre su agua potable. Si no lo comprende, favor acudir a alguien que se lo pueda traducir o explicar.

Continuing Our Commitment

A Message From Military Services Group President Mark K McDonough

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 2018 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 2018. You'll find that we supply water that surpasses or meets all federal and state water quality regulations.

With equal importance, we place a strong focus on acting as stewards of our environment. In all of 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, the economy and the overall quality of life we enjoy – We Keep Life Flowing. For more information or for additional copies of this report, visit us online at www.amwater.com

Sincerely,

Mark K McDonough

President – American Water's Military Services Group

Special Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC (Centers for Disease Control and Prevention) 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) or by calling our Customer Service Center at (800) 685-8660.

Water Information Sources

The Military Services Group of American Water provides water and wastewater contract services to military installations across the country as part of the federal government's Utility Privatization Program. It operates and maintains the water and/or wastewater assets at Fort A.P. Hill, VA., Fort Sill, OK., Fort Leavenworth, KS., Scott Air Force Base, Ill., Fort Rucker, AL., Fort Meade, MD., Fort Belvoir, VA., Fort Hood, TX, Fort Polk, LA., Picatinny Arsenal, NJ., Hill Air Force Base, UT and Vandenberg Air Force Base, CA., Wright-Patterson Air Force Base, OH and Fort Leonard Wood, MO.

Fort Leavenworth American Water Enterprises Military Services Group (AWE-MSG) provides water service to approximately 12,934 customers at the Fort Leavenworth Military Post located in Leavenworth County, Kansas. Fort Leavenworth AWE-MSG is part of American Water. With a history dating back to 1886, American Water is the largest and most geographically diverse U.S. publicly traded water and wastewater utility company. The company employs more than 7,100 dedicated professionals who provide regulated and market-based drinking water, wastewater and other related services to more than 14 million people in 46 states and Ontario, Canada. American Water provides safe, clean, affordable and reliable water services to our customers to make sure we keep their lives flowing. For more information, visit amwater.com and follow American Water on Twitter, Facebook and LinkedIn.

The web sites of US EPA Office of Water, the Centers for Disease Control and Prevention, and Kansas Department of Health and Environment (KDHE) provide a substantial amount of information on many issues relating to water resources, water conservation and public health. You may visit these sites as well as American Water's website at the following addresses:

United States Environmental Protection Agency

www.epa.gov/safewater

Kansas Department of Health and Environment

www.kdheks.gov

American Water

www.amwater.com

American Water Works Association

www.awwa.org

Safe Drinking Water Hotline: (800) 426-4791

WHAT IS A WATER QUALITY REPORT?

To comply with Kansas Department of Health and Environment (KDHE) and the U.S. Environmental Protection Agency (EPA) regulations, American Water issues a report annually describing the quality of your drinking water. The purpose of this report is to provide you an overview of last year's (2018) drinking water quality. It includes details about where your water comes from and what it contains. We hope the report will raise your understanding of drinking water issues and awareness of the need to protect your drinking water sources. For more information, please contact Edwin Winton at 913-758-9272.

HOW IS YOUR WATER TREATED?

Your water is treated to remove several contaminants and a disinfectant is added to protect you against microbial contaminants. The Safe Drinking Water Act (SDWA) required states to develop a Source Water Assessment (SWA) for each public water supply that treats and distributes water in order to identify potential contamination sources. The state has completed an assessment of our source water. For results of the assessment, please contact us or view on-line @ <http://165.201.142.59:8080/DWW/JSP/WaterSystemDetail.jsp>

Share This Report - You are encouraged to share this important information with water users who are not customers of Fort Leavenworth American Water and therefore do not receive this report directly.

WATER CONSERVATION TIPS

Conservation measures you can use inside your home include:

- Fix leaking faucets, pipes, toilets, etc.
- Replace old fixtures; install water-saving devices in faucets, toilets and appliances.
- Wash only full loads of laundry.
- Do not use the toilet for trash disposal.
- Take shorter showers.
- Do not let the water run while shaving or brushing teeth.
- Soak dishes before washing.
- Run the dishwasher only when full.

You can conserve outdoors as well:

- Water the lawn and garden in the early morning or evening.
- Use mulch around plants and shrubs.
- Repair leaks in faucets and hoses.
- Use water-saving nozzles.
- Use water from a bucket to wash your car, and save the hose for rinsing.

WHERE DOES THE MY WATER COME FROM?

The source of water supply for Fort Leavenworth consists of (5) groundwater wells located in the Missouri River bottoms northeast of the water treatment plant. The wells pump water from the alluvial aquifer of the Missouri River Valley. Additionally, water is supplied to the post through an Emergency Consecutive Connection (CC) between Leavenworth Water Works distribution system and Ft Leavenworth water distribution system.

| Buyer Name | Seller Name |
|---|------------------------------|
| UNITED STATES ARMY, FORT LEAVENWORTH, KS and DISTRIBUTED by AMERICAN WATER ENT LLC | LEAVENWORTH WATER DEPARTMENT |

SUBSTANCES EXPECTED TO BE IN DRINKING WATER

To ensure that tap water is of high quality, U.S. Environmental Protection Agency prescribes regulations limiting the amount of certain substances in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Our water system tested a minimum of 15 samples per month in accordance with the Total Coliform Rule for microbiological contaminants. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria is found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public.

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 (800-426-4791). The Fort Leavenworth (AWE-MSG) water treatment processes are designed to reduce any such substances to levels well below any health concern.

The source of drinking water (both tap water and bottled water) includes 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, or wildlife.

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban storm water 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 may come from gas stations, urban storm water runoff, and septic systems.

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities. For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

INFORMATION ABOUT LEAD

Is there lead in my water?

We take steps to reduce the potential for lead to leach from your pipes into the water. This is accomplished by maintaining the quality of your water leaving our treatment facilities. There are steps that you can take to reduce your household's exposure to lead in drinking water. Although we regularly test lead levels in your drinking water, it is possible that lead and/or copper levels at your home are higher because of materials used in your plumbing. If present, elevated levels of lead can cause serious 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. Fort Leavenworth 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 and copper 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 at 1-800-426-4791 or <http://www.epa.gov/safewater/lead>.

HOW TO READ THE TABLES

American Water Enterprises-Military Service Group (AWE-MSG) conducts extensive monitoring to ensure that your water meets all water quality standards. The results of our monitoring are reported in the following tables. While monitoring was conducted in 2018, KDHE requires us to monitor for 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. For help with interpreting this table, see the "Table Definitions" section. **The bottom line is that the water that is provided to you is safe.**

Starting with a **Substance**, read across. **Year Sampled** is usually in 2018 or year prior. **MCL** shows the highest level of substance (contaminant) allowed. **MCLG** is the goal level for that substance (this may be lower than what is allowed). **Highest Value** represents the highest measured amount. **Range** tells the highest and lowest amounts measured. A **Yes** under **Compliance Achieved** means the amount of the substance met government requirements. **Typical Source** tells where the substance usually originates.

Unregulated substances are measured, but maximum allowed contaminant levels have not been established by the government.

TABLE DEFINITIONS AND ABBREVIATIONS

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): The highest level of disinfectant routinely allowed in drinking water. Addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of 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.

MFL (Million Fibers per Liter): a measure of the presence of asbestos fibers that are longer than 10 micrometers.

NA: Not applicable.

ND: Not detected.

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

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

µmhos/cm (micromhos per centimeter): These are the units for electrical conductivity

ug/L: One Micro gram per Liter is equivalent to .001 parts per million

mg/L: One Milligram per Liter is equivalent to 1 part per million

pH: A measurement of acidity, 7.0 being neutral.

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

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

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

RAA (Running Annual Average): average results for the most recent four quarters.

SMCL (Secondary Maximum Contaminant Level): recommended level for a contaminant that is not regulated and has no MCL.

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

WATER QUALITY STATEMENT

The staff and management of the Fort Leavenworth - American Water Enterprises, LLC water utility are pleased to report that the water provided to you during the past year met all the State and Federal standards set for drinking water. The 1996 amendments to the Federal Safe Drinking Water Act require that Ft. Leavenworth deliver a brief annual water quality report to all customers. Ft. Leavenworth treats water from five ground water wells and provides safe drinking water to your residence through the Ft. Leavenworth distribution system include pump stations, elevated ground storage tanks, and water lines.

REGULATED PARAMETERS

Testing Results for: FORT LEAVENWORTH AMERICAN WATER ENT LLC

| Disinfection Byproducts | Monitoring Period | Highest RAA | Range (low/high) | Unit | MCL | MCLG | Typical Source |
|-------------------------------|-------------------|-------------|------------------|------|-----|------|---|
| TOTAL HALOACETIC ACIDS (HAA5) | 2018 | 19 | 8.7 - 25 | ppb | 60 | 0 | By-product of drinking water disinfection |
| TTHM | 2018 | 40 | 23 - 53 | ppb | 80 | 0 | By-product of drinking water chlorination |

| Lead and Copper | Monitoring Period | 90 th Percentile | Range (low/high) | Unit | AL | Sites Over AL | Typical Source |
|-----------------|-------------------|-----------------------------|------------------|------|-----|---------------|---------------------------------|
| COPPER, FREE | 2015 - 2017 | 0.11 | 0.0012 - 0.19 | ppm | 1.3 | 0 | Corrosion of household plumbing |
| LEAD | 2015 - 2017 | 2.5 | 1 - 6.5 | ppb | 15 | 0 | Corrosion of household plumbing |

During the 2018 calendar year, American Water had no violation(s) of drinking water regulations.

PURCHASED WATER FROM LEAVENWORTH WATER WORKS

REGULATED PARAMETERS

Some or all of our drinking water during 2018 was supplied by another water system. The table below lists all of the drinking water contaminants detected in water purchased and supplied by Leavenworth Water Works during the 2018 calendar year.

| Regulated Contaminants | Collection Date | Water System | Highest Value | Range (low/high) | Unit | MCL | MCLG | Typical Source |
|------------------------|-----------------|------------------------------|---------------|------------------|------|-----|------|---|
| ARSENIC | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 1.3 | 1.3 | ppb | 10 | 0 | Erosion of natural deposits |
| ATRAZINE | 6/5/2018 | LEAVENWORTH WATER DEPARTMENT | 0.71 | 0.71 | ppb | 3 | 3 | Runoff from herbicide used on row crops |
| BARIUM | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 0.032 | 0.024 - 0.032 | ppm | 2 | 2 | Discharge from metal refineries |
| FLUORIDE | 1/9/2018 | LEAVENWORTH WATER DEPARTMENT | 0.86 | 0.27 - 0.86 | ppm | 4 | 4 | Natural deposits; Water additive which promotes strong teeth. |
| NITRATE | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 3.1 | 0.39 - 3.1 | ppm | 10 | 10 | Runoff from fertilizer use |
| NITRATE-NITRITE | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 0.99 | 0.99 | ppm | 10 | 10 | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| NITRITE | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 0.14 | 0.14 | ppm | 1 | 1 | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| SELENIUM | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 3.3 | 3.3 | ppb | 50 | 50 | Erosion of natural deposits |

| Secondary Contaminants | Collection Date | Water System | Highest Value | Range (low/high) | Unit | SMCL |
|------------------------------|-----------------|------------------------------|---------------|------------------|---------|------|
| ACETOCHLOR | 6/5/2018 | LEAVENWORTH WATER DEPARTMENT | 0.16 | 0.16 | UG/L | |
| ALKALINITY, TOTAL | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 70 | 59 - 70 | MG/L | 300 |
| ALUMINUM | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 0.16 | 0.011 - 0.16 | MG/L | 0.05 |
| CALCIUM | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 48 | 11 - 48 | MG/L | 200 |
| CHLORIDE | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 29 | 19 - 29 | MG/L | 250 |
| CONDUCTIVITY @ 25 C UMHOS/CM | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 590 | 450 - 590 | UMHO/CM | 1500 |
| CORROSIVITY | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 1.1 | 0.7 - 1.1 | LANG | 0 |
| HARDNESS, TOTAL (AS CaCO3) | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 170 | 120 - 170 | MG/L | 400 |
| MAGNESIUM | 1/2/2018 | LEAVENWORTH WATER DEPARTMENT | 27 | 3.1 - 27 | MG/L | 150 |
| METOLACHLOR | 6/5/2018 | LEAVENWORTH WATER DEPARTMENT | 0.46 | 0.46 | ppb | |
| PH | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 9.4 | 9.2 - 9.4 | PH | 8.5 |
| PHOSPHORUS, TOTAL | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 0.16 | 0.1 - 0.16 | MG/L | 5 |
| POTASSIUM | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 8 | 5.9 - 8 | MG/L | 100 |
| SILICA | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 14 | 13 - 14 | MG/L | 50 |
| SODIUM | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 47 | 41 - 47 | MG/L | 100 |
| SULFATE | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 150 | 34 - 150 | MG/L | 250 |
| TDS | 4/10/2018 | LEAVENWORTH WATER DEPARTMENT | 360 | 350 - 360 | MG/L | 500 |

Please Note: Because of sampling schedules, results may be older than 1 year.

During the 2018 calendar year, the water systems that we purchase water from (Leavenworth Water Works) had the noted violation(s) of drinking water regulations listed below.

| Water System | Type | Category | Analyze | Compliance Period |
|------------------------------|----------------------------|----------|--------------------|-------------------------|
| LEAVENWORTH WATER DEPARTMENT | LEAD CONSUMER NOTICE (LCR) | RPT | LEAD & COPPER RULE | 12/30/2017 - 10/23/2018 |