2018 Annual Water Quality Report

Hill Air Force Base – Main Base
PWSID: UTAH06024

AMERICAN WATER
Military Services

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.

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.

Hill Air Force Base American Water Enterprises Military Services Group (AWE-MSG) provides water service to approximately 25,163 total customers at five locations. Hill Air Force Base located in Davis County, Utah; Lakeside Range located in Box Elder County, Utah; Little Mountain Test Facility in Weber County, Utah; Carter Creek in Summit County, Utah; and Boulder Pinedale Seismic Research Facility in Sublette County, Wyoming.

The web sites of the web sites of US EPA Office of Water, the Centers for Disease Control and Prevention, and Utah Department of Environmental Quality (Division of Drinking Water) 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

Utah Department of Environmental Quality
www.deq.utah.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 the Utah Department of Environmental Quality (UDEQ) Division of Drinking Water 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 Colby Goodliffe at 801-695-9786

How is Your Water Treated?

Your water is treated to remove several contaminants and a disinfectant is added to protect you against microbial contaminants. AWE-MSG at Hill Air Force Base – Main Base also treats with Fluoride per the Davis County requirement and phosphate to provide soft water. 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.

Share This Report

You are encouraged to share this important information with water users who are not customers of AWE-MSG at Hill Air Force Base – Main Base 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 My Water Come From?

The source of water supply for Hill Air Force Base consists of five (5) groundwater wells located on base and from one (1) Weber Basin Water Source (the Weber River water that is treated at the Weber Basin Water Treatment Plant east of the Base on HWY 193).

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 25 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 are 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 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 also 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?

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. AWE-MSG at Hill Air Force Base – Main Base is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. We take steps to reduce the potential for lead to leach from your pipes into the water. This is accomplished by adding a corrosion inhibitor to the water leaving our treatment facilities. There are steps that you can take to reduce your household's exposure to lead in drinking water.

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 Data 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, UDEQ 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 has not been established by the government.

Table Definitions and Abbreviations

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

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.

mrem/year (millirems per year): a measure of radiation absorbed by the body.

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. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms.

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

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 AWE-MSG Hill Air Force Base – Main Base water utility are pleased to report that the water provided to you during the past year (2018) met all the State and Federal standards set for drinking water. The 1996 amendments to the Federal Safe Drinking Water Act require that Hill Air Force Base – Main Base deliver a brief annual water quality report to all customers. AWE-MSG at Hill Air Force Base treats water from five (5) groundwater wells and one (1) Weber Basin Conservancy District Water source, which provide safe drinking water to your residence through the Hill Air Force Base distribution system, which includes pump stations, ground storage tanks and distribution piping.

Hill Air Force Base – Main Base

REGULATED PARAMETERS

Substance (units)	Year Sampled	MCL	MCLG	Highest Value	Range	Compliance Achieved	Typical Source
Inorganic Compounds							
Asbestos (mfl)	2012	7	7	ND	ND	Yes	Decay of asbestos cement water mains; Erosion of natural deposits.
Barium (ppm)	2017	2	2	0.241	0.182-0.241	Yes	Discharge of drilling waters; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2018	4	4	1.56	0.08-1.56	Yes	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Sodium (ppm)	2017	No Limit	NA	30.2	14.1- 30.2	Yes	Erosion of natural deposits; Leaching
Nitrate (ppm)	2018	10	10	1.6	0.0-1.6	Yes	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Radiological Contaminants							
Gross Alpha (pCi/L)	2018	15	0	3.6	3.3-3.6	Yes	Erosion of Natural Deposits.
Gross Beta (pCi/L)	2018	50	0	4.0	3.2-4.0	Yes	Erosion of Natural Deposits.
Radium 228 (pCi/L)	2018	5	0	.69	0.52 – .69	Yes	Erosion of Natural Deposits.
Disinfectant By-Products							
Chlorine[1]	2018	4	4	1.98	0.00-1.98	Yes	Water additive used to control microbes.
Haloacetic Adids (HAA5) (ppb)	2018	60	60	10.6	0.0-10.6	Yes	By-product of drinking water disinfection.
Total Trihalomethanes (TTHMs) (ppm)	2018	80	80	18.6	0.0-18.6	Yes	By-product of drinking water disinfection.
Volatile Organic Compounds							
Benzene	2018	0.005	0.005	ND	ND	Yes	Discharge from factories; leaching from gas storage tanks and landfills
Ethylbeneze	2018	0.70	0.70	ND	ND	Yes	Discharge from petroleum refineries
Styrene	2018	0.10	0.10	ND	ND	Yes	Discharge from rubber and plastic factories; leaching from landfills
Toluene	2018	1.0	1.0	ND	ND	Yes	Discharge from petroleum factories
Chlorobenzene	2018	0.1	0.1	ND	ND	Yes	Discharge from chemical and agricultural chemical factories
Tetrachloroethylene	2018	0.005	0.005	ND	ND	Yes	Discharge from factories and dry cleaners
1,1,2–Trichloroethane	2018	0.005	0.005	ND	ND	Yes	Discharge from industrial chemical factories
Trichloroethylene	2018	0.005	0.005	ND	ND	Yes	Discharge from metal degreasing sites and other factories
1,2-Dichloropropane	2018	0.005	0.005	ND	ND	Yes	Discharge from industrial chemical factories
Carbon Tetrachloride	2018	0.005	0.005	ND	ND	Yes	Discharge from chemical plants and other industrial activities
1,1,1-Trichloroethane	2018	0.20	0.20	ND	ND	Yes	Discharge from metal degreasing sites and other factories
1,2-Dichloroethane	2018	0.005	0.005	ND	ND	Yes	Discharge from industrial chemical factories
Trans-1,2-Dichloroethylene	2018	0.10	0.10	ND	ND	Yes	Discharge from industrial chemical factories
1,1-Dichloroethylene	2018	0.007	0.007	ND	ND	Yes	Discharge from industrial chemical factories
Vinyl Chloride	2018	0.002	0.002	ND	ND	Yes	Leaching from PVC pipes; discharge from plastic factories
p-Dichlorobenzene	2018	0.075	0.075	ND	ND	Yes	Discharge from industrial chemical factories
o-Dichlorobenzene	2018	0.60	0.60	ND	ND	Yes	Discharge from industrial chemical factories
Dichloromethane	2018	0.005	0.005	ND	ND	Yes	Discharge from drug and chemical factories
Chlordane	2018	0.002	0	ND	ND	Yes	Residue of banned termiticide
Xylenes	2018	10	10	ND	ND	Yes	Discharge from petroleum factories; discharge from chemical factories

1. The chlorine low range occurs when a source has not been in operation. This low range is not a result of the chlorine residual in the distribution system.

Microbiological Contaminants							
Substance (units)	Year Sampled	MCL	MCLG	Highest Value	Range	Compliance Achieved	Typical Source
Coliform, Total (TCR)	2018	No more than one positive monthly sample.	0	1		Yes	Naturally present in the environment.
E. Coli (P/A)	2018	No more than one positive monthly sample.	0	0		Yes	Naturally present in the environment.

Lead and Copper								
Substance (units)	Year Sampled	AL	MCLG	Range	90th Percentile	Sites Above AL	Compliance Achieved	Typical Source
Lead (ppm)	2018	0.015	0	0.0-0.0096	.0002	0	Yes	Corrosion of household plumbing
Copper (ppm)	2018	1.3	0	0.136-2.202	1.37	11	No*	Corrosion of household plumbing

**American Water is required by the Utah Department of Environmental Quality to routinely sample water at consumers' taps for copper. During May 2018, American Water analyzed 60 samples to test for the presence of copper. The action level for copper is 1.30 mg/L. The results of monitoring in May 2018 showed a 90th percentile of 1.37 mg/L for copper. During Oct 2018, American Water analyzed 60 samples to test for the presence of copper. The action level for copper is 1.30 mg/L. The results of monitoring in Oct 2018 showed a 90th percentile of .95 mg/L for copper. There is nothing you need to do at this time. American Water at Hill Air Force Base is required to collect 60 copper samples that will be taken every 6 months: one set of 60 samples from January 1 to June 30, and another set of 60 samples from July 1 to December 31 if necesaary. A corrosion control system is in place, per State requirements. .*

SECONDARY CONTAMINANTS

Substance (units)	Year Sampled	Highest Value	Range	SMCL
Alkalinity, Total (ppm)	2018	317	127 – 317	300
pH (std unit)	2018	8.23	6.99 - 8.23	8.5
Sodium (ppm)	2017	30.2	14.1-30.2	100
Sulfate (ppm)	2017	26	7-26	250
Total Dissolved Solids (ppm)	2017	388	208-388	500

Unregulated Contaminants Monitoring Rule (UCMR4)

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

Substance (units)	Average	Highest Level Detected	Range of Detection	Typical Source
Manganese (ppb)	6.975	18	2.9 - 18	Naturally occurring element; used in making steel and other alloys
Dichloroacetic Acid (ppb)	.76	1.4	ND – 1.4	By-product of drinking water disinfection.
Trichloroacetic Acid (ppb)	.135	.54	ND - .54	By-product of drinking water disinfection.
Bromochloroacetic Acid (ppb)	.65	1.3	ND – 1.3	By-product of drinking water disinfection.
Dibromoacetic Acid (ppb)	.4525	.93	ND - .93	By-product of drinking water disinfection.
Bromodichloroacetic Acid (ppb)	.16	.64	ND – .64	By-product of drinking water disinfection.
Chlorodibromoacetic Acid (ppb)	.285	.65	ND - .65	By-product of drinking water disinfection.

Weber Basin Water Conservancy District

Weber Basin CENTRAL – This data is derived from samples collected from 2012 through 2018

		RANGE				
Substance (units)	Average	Low	High	MCL	MCLG	Typical Source
Inorganic Compounds						
Antimony (ppb)	ND	ND	ND	6	6	Discharge from petroleum refineries, fire retardants, ceramics, electronics, solder
Arsenic	0.6	ND	1.2	10	NA	Erosion of natural deposits, runoff from orchards
Barium (ppm)	0.15	0.09	0.27	2	2	Discharge of drilling waters; Erosion of natural deposits
Fluoride[1]* (ppm)	0.65	0.06	1.7	4	4	Erosion of natural deposits
Nitrate (ppm)	0.7	0.1	1.6	10	10	Runoff from fertilizer use, Erosion of natural deposits
Selenium (ppb)	1.1	0.00 06	2.1	50	50	Erosion of natural deposits
Sodium (ppm)	35.3	19.6	47.1	NA[2]	NA	Erosion of natural deposits
Sulfate (ppm)	32.7	25	42	1,000[3]	NA	Erosion of natural deposits
Thallium (ppb)	ND	ND	ND	2	0.5	Leaching from ore processing sites; Discharge from electronics, glass and drug factories
Total Dissolved Solids (ppm)	360	315	412	2,000[3]	NA	Erosion of natural deposits

1. Fluoride levels in Davis County have been adjusted to an optimal level of 0.7 ppm
2. The State of Utah requires monitoring for sodium even though no MCL has been established
3. The MCL for sulfate and total dissolved solids is established under the State of Utah

*The District does not add fluoride to water delivered to Weber County

Weber Basin CENTRAL – This data is derived from samples collected in 2017-2018

Disinfectant Byproducts						
		RANGE[1]				
Substance (units)	LRAA[2]	Low	High	MCL	MCLG	Typical Source
Total Trihalomethanes (ppb)	18.0	10.9	27.4	80	NA	By-product of drinking water disinfection
Haloacetic Acids (ppb)	10.0	4.0	16.2	60	NA	By-product of drinking water disinfection

1. Values in the "Range" columns are actual concentrations measured in ppb and reflect the range of detected levels.
2. This value represents the maximum location running annual average at the end of 2017

Weber Basin CENTRAL – This data is derived from samples collected from 2013 through 2018

Radiological Chemicals						
		RANGE				
Substance (units)	Average	Low	High	MCL	MCLG	Typical Source
Gross Alpha Particles (pCi/L)	0.9	0	2.6	15	0	Erosion of natural deposits
Combined Radium (pCi/L)	0.4	0.4	.5	5	0	Erosion of natural deposits

Microbiological Contaminants				
Substance (units)	Percentage[1]	Average	High[3]	MCL
Turbidity (Weber South WTP)	100 %[2]	0.02 NTU	0.07 NTU	0.3 NTU
Turbidity (Davis North WTP)	100 %	0.04 NTU	0.16 NTU	0.3 NTU

1. This value represents the highest percentage of positive samples collected within the distribution system in any one month during 2016.
2. This value represents the lowest monthly percentage of combined filter readings meeting less than 0.3 NTU in at least 95% of the measurements taken each month during 2016.
3. This value represents the highest single measurement of combined filter readings taken every four hours during 2016.