Kirtland Air Force Base

A guide to understanding drinking water supplied to you in…

2020

Annual
Consumer Confidence Report
On Drinking Water Quality
(March 2021)

Dear Valued Drinking Water Customer:

Kirtland Air Force Base (KAFB) is pleased to present the annual Consumer Confidence Report (CCR) of our drinking water quality. The CCR summarizes the quality of water delivered by KAFB during calendar year 2020. Our installation is fortunate to have an excellent groundwater source and to have the distribution system monitored and maintained in top condition. **In 2020, there were no primary drinking water contaminants exceeding state or federal standards.**

Please be aware of the efforts continually made by KAFB staff members to provide the highest quality of drinking water by improving the treatment process and protecting the groundwater source. KAFB is committed to supplying you with the best drinking water quality possible.

DAVID S. MILLER, Colonel, USAF
Commander, 377th Air Base Wing
Kirtland Air Force Base

Bioenvironmental Engineering

Under the "CCR Rule" of the federal Safe Drinking Water Act (SDWA), community water systems are required to report water quality information to the consuming public. This report details where our water comes from, what it contains, and the health risks our water testing and treatment procedures prevent. A table is also included to show the specific contaminants that were detected in our drinking water.

The 377th Operational Medical Readiness Squadron, Bioenvironmental Engineering Flight, is pleased to report that **KAFB had no drinking water violations and that our drinking water met all SDWA standards during calendar year 2020.** We encourage our valued customers to be informed about their water. If you have questions or concerns about decisions affecting your drinking water quality or about this report, please feel free to call KAFB's water system administrative contact, Mr. Joe Candaso, at (505) 846-4259 or email joseph.j.candaso.civ@mail.mil

Where does KAFB's drinking water come from?

The drinking water distributed to you is pumped from a groundwater source known as the Albuquerque Basin Regional Aquifer within the Santa Fe Formation. KAFB is capable of drawing its water from six different wells within the Albuquerque Basin Regional Aquifer.

In 2020, a total of 789,057,000 gallons of water was pumped from these wells. The water from the wells are mixed together, chlorinated, stored, and distributed. Chlorination is the treatment process used to prevent bacteria growth while the water is stored and distributed through the system.

Additionally, water pumped and treated by the Albuquerque Bernalillo County Water Utility Authority (ABCWUA) can be distributed throughout the base during high water demands or during alternate water supply needs. KAFB purchased 83,500 gallons of water from ABCWUA during 2020. Information on this water quality can be found in the ABCWUA CCR located at: https://www.abcwua.org/your-drinking-water/.

Family Housing

Since May 2006, ABCWUA has been providing drinking water and maintenance responsibilities of the potable water distribution system in the majority of the KAFB family housing areas. The Maxwell housing area is the only housing site that continues to receive drinking water, monitoring, reporting, and maintenance services from KAFB. KAFB family housing areas that receive drinking water from ABCWUA do not receive the KAFB CCR. For more information on water provided to KAFB family housing by the ABCWUA, call the ABCWUA Information Line at 505-857-8260 or go to their website at: https://www.abcwua.org/. For emergency water system repairs, call the 24-hour ABCWUA Emergency Repair Hotline at 505-857-8250.

Source Water Protection

Through the 1996 reauthorization of the Safe Drinking Water Act, Congress authorized the U.S. Environmental Protection Agency (EPA) to require each state to develop and implement a Source Water Assessment and Protection Program. The New Mexico Source Water Assessment and Protection Program is part of a national effort to gather information on public drinking water source areas and to inform water consumers about any risks to their water supply posed by potential sources of contamination.

The Source Water Assessment of public water systems throughout New Mexico include 1) determining the source water protection area for the community's water system, 2) taking inventory of potential contaminant sources within the source water protection area, 3) determining the susceptibility of the water supply to potential sources of contamination, and 4) making the assessment available to the public.

During 2002, the New Mexico Environment Department - Drinking Water Bureau (NMED-DWB) conducted site visits, collected information on KAFB's production wells, and identified materials used or stored in the areas around KAFB wells that could be potential contaminants. As part of the assessment, wells were ranked on a Susceptibility Scale (see definition). The susceptibilities of KAFB wells range from moderate to moderately low. These rankings are largely influenced by the presence of possible contaminants that exist on an active U.S. Air Force installation as part of normal operations, and are all moderate to moderately low, meaning the wells are not likely to become contaminated.

Source Water Susceptibility

A water system's susceptibility is a combination of 1) the sensitivity of the water source to contamination due to the characteristics of the source area and of the wells, and 2) the vulnerability of the water source to contamination due to prevalence and proximity of possible contaminants in the areas around the wells. As a

result of industrial operations and materials in a well area, the well's vulnerability may be somewhat higher. The NMED-DWB evaluation is presented in an August 22, 2002 report titled, "Source Water Assessment of Kirtland Air Force Base Water System-Public Water supply System #NM3567701." The 2002 report remains applicable to the KAFB water supply system today.

The KAFB Environmental Management Section manages a comprehensive program to ensure that base facilities comply with environmental laws and regulations. The program includes air, water, petroleum storage tank, hazardous material/waste, and solid waste compliance activities. Environmental restoration activities including investigations, monitoring, and cleanup are performed by the Air Force Civil Engineering Center/Environmental Management (AFCEC/CZ). Even though potential sources of contaminants exist around KAFB's water supply wells, these potential sources of contamination are closely managed and monitored under AFCEC/CZ.

The SDWA requires the results of the source water assessment to be available to water consumers. To meet this requirement, NMED-DWB will provide copies of this report to the public upon request. To obtain a copy of KAFB's Source Water Assessment, contact the NMED-DWB in Santa Fe, New Mexico, toll free at 877-654-8720.

Bulk Fuels Facility Cleanup Project

In November 1999, the Air Force detected evidence of a fuel leak in an underground pipeline at the Bulk Fuels Facility on KAFB, New Mexico. Through a unique partnership between the Air Force, regulators, and the Albuquerque community, significant progress has been made to clean up the fuel plume and to ensure drinking water supply wells continue to provide safe, clean drinking water to KAFB consumers. To date, no fuel contaminants from the leak have been detected in KAFB's drinking water. For more information on the progress of the cleanup operation, please visit: https://www.kirtland.af.mil/Home/BFF/

Information on Water Contaminants

In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. However, Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health. This CCR does not identify or address the quality of bottled drinking water.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. The presence of contaminants does not necessarily indicate the 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 800-426-4791.

The sources of drinking water (both tap 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 and human activity. Contaminants that may be present in source water include:

·Microbial contamination 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 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 that are byproducts of industrial processes and petroleum production. Organic chemical contaminants also can come from urban storm water runoff and septic systems.

·Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities.

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, persons 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. The EPA/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 at 800-426-4791.

Information on Coliform Bacteria

Coliforms are bacteria that are naturally present in the environment and used as an indicator that other, potentially harmful bacteria may be present. Coliform bacteria are generally not harmful themselves. During 2020, KAFB did not detect any coliform bacteria during monthly drinking water samples.

Additional Information for Arsenic

KAFB water does not exceed regulatory levels for arsenic. However, consumers often inquire about these compounds so the following information is provided.

While your drinking water meets the EPA's standard for arsenic, it does contain low levels of arsenic. The EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The EPA continues to research the health effects of low-level arsenic, which is a mineral known to cause cancer in humans at high concentrations and linked to other health effects such as skin damage and circulatory problems.

While drinking water samples from one of the six wells has previously shown elevated levels of arsenic, this source water is blended with water from the five other wells in a 2-million gallon blending tank. The results of this blending means the drinking water provided to you, the consumer, contains levels of arsenic well below the Maximum Contaminant Level (MCL). The blending tank was connected to the water distribution system in 2006 to assist in the long-term solution of maintaining compliance with the arsenic MCL of 10 ppb. These improvements continue to support KAFB's compliance with the drinking water standard for arsenic.

Additional Information for Lead

KAFB water does not exceed regulatory levels for lead and copper. Lead and copper rarely occur naturally in drinking water at levels above national standards; however, elevated levels of these compounds can cause serious health problems, especially for pregnant women and young children. Too much lead in the human body can cause negative health effects including serious damage to the brain, kidneys, nervous system, and red blood cells. Long-term exposure to high levels of copper can result in stomach and intestinal problems. Lead and copper are most commonly found in household drinking water when the plumbing system has corroded. This is not usually a concern in older homes (built before 1982), because a protective mineral layer has built up inside the pipes. A significant source of lead in household water is from lead solder used to join pipes.

The use of lead solder discontinued in New Mexico in 1987. KAFB drinking water sampling for lead and copper has not indicated levels exceeding the applicable MCL. KAFB 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 the 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 EPA's Safe Drinking Water Hotline at 800-426-4791 or at: https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water

In 2018, lead and copper compliance samples were collected from residences within the Maxwell housing area. Lead and copper results from this sampling event were within EPA standards. KAFB does not conduct lead and copper sampling in those military housing areas where the drinking water is supplied by ABCWUA.

Additional Information for Fluoride

KAFB does not fluoridate its drinking water. The average naturally occurring fluoride level at KAFB is approximately 0.44 ppm compared to the EPA's standard of 4 ppm. The Centers for Disease Control and Prevention recommends that children 3-16 years of age who drink community water with fluoride levels between 0.3 ppm and 0.6 ppm receive fluoride supplements. If you have questions about whether you or your dependents may need fluoride supplements, you should call your pediatric caregiver.

Additional Information for Nitrate

KAFB water does not exceed regulatory levels for nitrate. 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 for advice from your health care provider.

Water Quality Table of Detected Compounds

KAFB staff use EPA-approved sampling and laboratory methods to monitor your drinking water. Bioenvironmental Engineering staff collect water samples from the entry points of the water distribution system, from the residents' taps, and from other representative points throughout the distribution system. These samples are provided to a certified laboratory where all the required water quality analysis is performed.

The table below provides information about those contaminants that were detected in KAFB's water supply in 2020. The table lists only those compounds that were detected at levels equal to or greater than laboratory method detection limits. All detected compounds were at concentrations below any primary Maximum Contaminant Level (MCL). Many other compounds were analyzed in 2018, but were not present or were below the detection limits of laboratory equipment. Sampling for these compounds will be conducted in calendar year 2021.

Key To Table Definitions

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

LRAA: Locational Running Annual Average over the previous four quarters.

MCL: Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. MCLs are as close as possible to the MCLG.

MCLG : Maximum Contaminant Level Goal. The level of contaminant of drinking water below which there is no known or expected risk to health. MCLGs have a built-in margin of safety.

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 Disinfection 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 contaminants.

NA: Not Applicable. MCL, AL, or MCLG has not been established for his contaminant.

ND: Not Detected. The compound is not present at a level above the detection limit of laboratory instruments.

pCi/L: Picocuries per liter. A measure of radioactivity in water.

ppb: Parts per billion. A unit of measure equivalent to a single penny in $10,000,000.

ppm: Parts per million. A unit of measure equivalent to a single penny in $10,000.

Range: The range represents the actual detected concentrations of a contaminant from the lowest to the highest analytical values reported during the sampling period. No range is reported for contaminants where one sampling event is required per year for compliance reporting.

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

Table Notes

(1) This value represents the most recent round of sampling.

(2) This value represents the 90th percentile value used for compliance reporting. Ninety percent of results in the test set were below this level.

(3) The EPA considers 50 pCi/L to be the level of concern for beta particles.

(4) This represents the annual average of monthly test results, the value. used for compliance reporting.

(5) Although there is no collective MCLG for this contaminant group, there are individual MCLGs for some of the individual contaminants that make up the contaminant group. The lowest individual MCLG within the group is zero.

(6) National secondary drinking water regulations are non-enforceable guidelines regulating contaminants that may cause cosmetic or aesthetic effects.

Primary Regulated Contaminant	Unit	MCL (or AL)	MCLG	Highest Level Detected	Range of Level	Sample Dates	Violation	Likely Source of Contamination
Lead and Copper								
Copper	ppm	1.3 (AL)	1.3	0.032[1, 2]	0 sites over AL	2018	**No**	Erosion from natural deposits; Corrosion of plumbing systems; Leaching from wood preservatives.
Lead	ppb	15 (AL)	0	0.76[1, 2]	0 sites over AL	2018	**No**	Erosion from natural deposits; Corrosion of plumbing systems.
Disinfectants and Disinfection By-Products								
Chlorine	ppm	MRDL=4	MRDLG=4	2.2	0.1-2.2	2020	**No**	Water additive to control microbes.
Haloacetic Acids (HAA5s)	ppb	60	N/A[5]	4[4]	ND-4.5	2020	**No**	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	ppb	80	N/A[5]	36[4]	ND-51.9	2020	**No**	By-product of drinking water disinfection.
Inorganic Chemicals								
Arsenic	ppb	10	0	3.7[1]	3.7-3.7	2018	**No**	Erosion from natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	ppm	2	2	0.12[1]	0.12-0.12	2018	**No**	Discharge from drilling wastes or metal refineries; Erosion of natural deposits.
Fluoride	ppm	4	4	0.44[1]	0.44-0.44	2018	**No**	Erosion of natural deposits; water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Selenium	ppb	50	50	2.5[1]	2.5-2.5	2018	**No**	Erosion of natural deposits; Discharge from mines or metal refineries and petroleum refineries.
Radioactive Contaminants								
Uranium	ppb	30	0	3[1]	3-3	2018	**No**	Erosion from natural deposits.
Gross Alpha (Excluding Radon and Uranium)	pCi/L	15	0	5.2[1]	3-5.2	2018	**No**	Erosion from natural deposits.
Beta/Photon Emitters	pCi/L	50[3]	0	4.52[1]	4.52	2018	**No**	Erosion from natural and man-made deposits.