

Water Quality Report

*Annual Consumer
Confidence Report
June 2021*

We are proud to report that the water provided on Joint-Base Elmendorf Richardson meets or exceeds established water quality standards



www.jber.af.mil

Office: 907-384-3985

Public Water System ID# 2211423

The 673d Bioenvironmental Engineering is pleased to present this year's Annual Water Quality Reports (Consumer Confidence Report) in accordance with the Safe Drinking Water Act (SDWA). This report is designated to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality.

This Consumer Confidence Report summarizes drinking water quality for the period between January 1, 2020 and December 31, 2020. In order to conserve natural resources and make it more efficient to distribute, an electronic copy can be downloaded at www.jber.af.mil. Hardcopies are also available upon request by contacting Bioenvironmental Engineering at 907-384-3985.



Water Source & Treatment

JBER's drinking water is obtained from surface-water drainage and three local wells on JBER.

Large debris is removed from the raw surface-water prior to it entering the treatment plant where it undergoes several conventional water treatment processes.

The plant is designed to produce seven million gallons of water per day. During 2020, Doyon Utilities produced over 1 billion gallons of water, making us one of the largest water producers in the state!

All of our treatment processes are controlled and monitored by an interconnected set of computers.

Because groundwater is a very high quality source of raw

water, the only treatment necessary is disinfection. Each well is equipped with its own in-line chlorination equipment to ensure that water enters the distribution system free from any microbial contamination. The finished water is tested several times a day to ensure that pH, chlorine residuals, and fluoride are at appropriate levels.



Upper Ship Creek provides the drinking water for the JBER water system.



Who Are We?

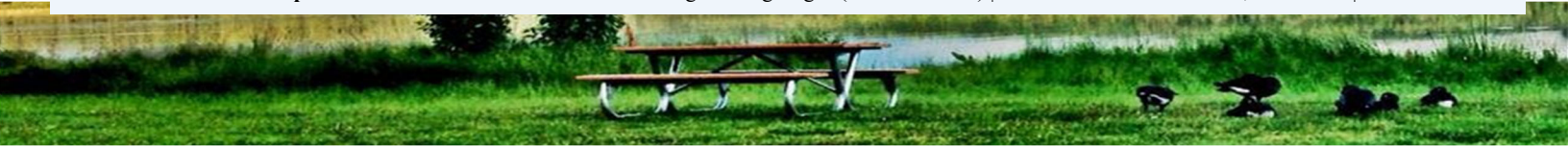
There are two Public Water Systems on JBER, JBER-Richardson and JBER-Elmendorf. This report is for the JBER-Elmendorf water system only.

Doyon Utilities owns and operates utilities located on the Richardson side of JBER. This relationship was initially established through a Utility Privatization Contract with the Army at the former Ft. Richardson and later expanded due to the joint basing action that consolidated Ft. Richardson and Elmendorf AFB to become JBER. As the water purveyor, Doyon manages the water treatment plant as well as the distribution lines on the Richardson side, and conducts a myriad of bacteriological and chemical tests to ensure all quality standards are met.

The 673d Civil Engineer Group manages the distribution lines on the Elmendorf side, and 673d Medical Group, Bioenvironmental Engineering Flight conducts water quality monitoring through bacteriological and chemical testing ensuring quality standards are met.

Testing results from 2020 are included in this report and from the data, you can be confident that we will protect the integrity and quality of your drinking water.

A report for JBER Richardson will be published separately. An electronic copy of the JBER Richardson report can be downloaded at www.doyonutilities.com, or hardcopies are available at Doyon Utilities.



Water Testing and Your Health

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive materials, and can pick up substances resulting from the presence of animals or from human activity.

Contaminates that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, that 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 discharge, oil and gas production, mining, or farming.
- Pesticides and herbicide, 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 storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration



(FDA) regulations establish limits for contaminant in bottled water which must provide the same protection for public health. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

Do I need to take special precautions?

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/Center for Disease Control (CDC) guidelines on appropriate means to lessen risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

We are happy to answer and other questions about our water quality. For general information or for water quality questions call 673d Bioenvironmental Engineering Office at 907-384-3985.

Drinking Water and Wastewater | COVID-19

Is drinking tap water safe?

Yes—EPA recommends that Americans continue to use and drink tap water as usual. The World Health Organization (WHO) has stated that the, “presence of the COVID-19 virus has not been detected in drinking-water supplies and based on current evidence the risk to water supplies is low.” Additionally, according to the Centers for Disease Control and Prevention (CDC), COVID-19 is mainly thought to spread between people who are in close contact with one another. Further, EPA's drinking water regulations require treatment at public water systems to remove or kill pathogens, including viruses.

Do I need to boil my drinking water?

Boiling your water is not required as a precaution against COVID-19.

Is tap water safe to use for hand washing?

EPA recommends that Americans continue to use and drink tap water as usual. According to the CDC, washing your hands often with soap and water for at least 20 seconds helps prevent the spread of COVID-19. Follow CDC's handwashing guidance at www.cdc.gov/handwashing/index.html.

What should I do if I'm concerned about my drinking water?

Homeowners that receive their water from a public water utility may contact their provider to learn more about treatments being used. Treatments could include filtration and disinfectants such as chlorine that remove or kill pathogens before they reach the tap.

Homeowners with private wells who are concerned about pathogens such as viruses in drinking water may consider approaches that remove bacteria, viruses, and other pathogens, including certified home treatment devices.

For more information on COVID-19 and Drinking Water, visit the US EPA COVID-19 website at www.epa.gov/coronavirus.



JBER-Elmendorf Drinking Water Test Results

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 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 1-800-426-4791.

The table lists the Regulated Contaminants required to be monitored by the EPA that were detected in your water. While most monitoring is required annually, some contaminants are sampled less frequently. The Stage 2 Disinfection By-Product Rule requires testing for trihalomethanes and haloacetic acids at locations in the distribution system that produces the highest concentration of these two categories of compounds. This sampling was done quarterly in 2020.

All the substances found were present in quantities less than the EPA's limits for safe drinking water. If you would like to view a complete listing of test results, please call 673d Bioenvironmental Engineering at 907-384-3985.

Contaminants	Sample Date	Violation/ Exceeds AL	Detected Results	MCL, TT, or MRDL	MCLG or MRDLG	Typical Source
Microbiological Contaminants						
Total Coliform (RTCR)	Monthly 2020	No	All Samples ND	TT	NA	Naturally Present in the environment
Inorganic Contaminants						
Asbestos (MFL)	Every 9 years November 2014	No	<0.119 µm	7 MFL	7 MFL	Decay of asbestos-cement water mains; Erosion of natural deposits
Free Residual Chlorine	Daily 2020	No	0.2 - 1.4 ppm	4 ppm	4 ppm	Water additive used to control microbes
Copper ¹	Every 3 years June 2019	No	90th Percentile 0.128 ppm	AL=1.3 ppm	1.3 ppm	Corrosion of household plumbing systems; Erosion of natural deposits
Lead ¹	Every 3 years June 2019	No	90th Percentile 0.393 ppb	AL=15 ppb	0	Corrosion of household plumbing systems; Erosion of natural deposits
Disinfection and Disinfection By-Products <i>(There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)</i>						
Haloacetic Acids (HAA5)						
Bldg 18220 (381st Intel)	Quarterly 2020	No	Average = 11.3 ppb	60 ppm	NA	By-product of drinking water chlorination
Bldg 5091 (Family CC)			Range = 7.2 - 24 ppb			
Total Trihalomethanes (TTHM)						
Bldg 18220 (381st Intel)	Quarterly 2020	No	Average = 17.4 ppb	80 ppm	NA	By-product of drinking water disinfection
Bldg 5091 (Family CC)			Range = 2.4 -17 ppb			

¹ Samples were obtained from numerous locations, the 90th percentile for lead and copper were below EPA actions levels (AL). For a complete list of sites contact Bioenvironmental Engineering at 907-384-3985

Terms and Abbreviations Used:

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

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.

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 a margin of safety.

Maximum Residual Disinfection 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 Disinfection Level Goal (MRDLG): 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.

MFL: Million fibers per liter, used to measure asbestos concentrations

Not Applicable (NA): When NA is used in the range column, only one sample was taken, therefore, no range exists

Not Detected (ND): The contaminant is below the detectable limits of the testing method.

Parts per billion (ppb): equal to microgram per liter (µg/L);

Parts per million (ppm): equal to milligram per liter (mg/L);

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



Additional Drinking Water Test Results

In November 2020, the Bioenvironmental Engineering Flight collected water samples at 7 locations across Joint Base Elmendorf-Richardson for additional chemicals of interest to the Air Force: Perfluorooctane sulfonate (PFOS) and Perfluorooctanoic acid (PFOA). These locations include wells that supplement our water from the Ship Creek treatment plant, 673d Medical Group, recreational areas, and reservoirs.

PFOS and PFOA have been used in the production of carpets and became part of clothing, fabrics for furniture, paper packaging for food and other materials (e.g., cookware) that are resistant to water, grease, or stains. They are also used for firefighting at airfields as part of aqueous film forming foam (AFFF) fire extinguishing agent and in a number of industrial processes.

Because these chemicals have been used in an array of consumer products, most peo-

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

The EPA has established drinking water lifetime Health Advisories (HAs) for PFOS and PFOA based on the agency's assessment of the latest peer-reviewed science. EPA states its intent is to provide U.S. drinking water system operators, and U.S. state, tribal and local officials who have the primary responsibility for over-

seeing these systems, with information on the potential health risks of these chemicals, so the purveyor can make informed decisions and take appropriate actions to protect populations served. The HA level for PFOS is 70 parts per trillion (ppt) and the HA level for PFOA is 70 ppt, and when both PFOS and PFOA are found in drinking water, the HA level remains at 70 ppt with their combined concentrations not to exceed 70 ppt. The HAs are not enforceable. However, the DoD and AF, as concerned consumers, are committed to protecting human health and have mandated the testing of drinking water for PFOS and PFOA.

Please contact JBER Bioenvironmental Engineering at 907-384-3985 for more information, to include specific sample site locations.

Contaminants	Sample Date	Violation/ Exceeds AL	Detected Results	MCL, TT, or MRDL	MCLG or MRDLG	Typical Source
Perfluorooctane Sulfonate (PFOS)	November 2020	No	All Samples ND	Combined 70 ppt	NA	Consumer products
			<2.0 ppt	Health Advisory		Fire extinguishing agents
Perfluorooctanoic acid (PFOA)	November 2020	No	All Samples ND	Combined 70 ppt	NA	Consumer products
			<2.0 ppt	Health Advisory		Fire extinguishing agents

Important Information About Your Water: Violations and Exceedances

Failure to Met Bacteriologic Monitoring Requirements for E. coli (January 2020)

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not drinking water meet health standards. During January 2020 we did not complete all monitoring or testing for E.coli, and therefore cannot be sure of the drinking water quality during that time.

Monitoring for E.coli on JBER-Elmendorf is achieved through analysis of water samples collected by Bioenvironmental Engineering. Regulators require the collection of 20 samples monthly for analysis for the JBER-Elmendorf drinking water system. In January 2020, Bioenvironmental Engineering missed one of the required samples. This action was corrected by ensuring all 20 samples were taken in February, returning our sampling program to compliance at that time.

E.coli bacteria can cause short-term health effects. Since the rest the January samples on JBER-Elmendorf were negative for E.coli there is no concern for increased health risk to costumers at this time.

Even though this was not an emergency, as our customers, you have the right to know what happened and what we did to correct this situation. For more information please contact Bioenvironmental Engineering at 907-384-3985.

Failure to Address Survey Deficiency for JBER-Elmendorf (July 2020)

We are required to conduct sanitary surveys of the water system on a routine basis. Sanitary surveys are a proactive public health measure and an important component of the SDWA public water system supervision program.

During the Summer 2019 Sanitary Survey conducted by the Alaska Department of Environmental Conservation a deficiency was received for bulk fuel storage within 60 feet of an alternate water source for the Medical Group and no waiver on file with the State. As of July 2020 this deficiency was yet to be resolved.

Actions to correct the deficiency are being taken with routine updates to Alaska Department of Environmental Conservation. As sanitary surveys are a proactive public health measure and the deficiency was regarding an alternate drinking water source for the Medical Group, this did not effect the drinking water quality during that time.

Even though this was not an emergency, as our costumers, you have the right to know what happened and what we are doing to correct this situation. For more information please contact Bioenvironmental Engineering at 907-384-3985.



Educational Information

Lead/Copper in Drinking Water

The EPA Safe Drinking Water Act requires public water systems to test water samples from its customers to determine lead and copper levels. If present, elevated levels of lead can cause serious health problems, especially in pregnant women and young children.

Lead and Copper samples were collected at numerous locations during June 2019. During both sampling events the 90th percentiles were below the EPA Action Levels.

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. There is nothing in the treatment process that would introduce lead into the water; therefore, the water is tested at the individual service locations. If abnormal levels of lead or copper are detected in the water supply, residents will be notified and JBER will initiate action to correct the problem.

One method to minimize the risk of lead or copper contamination is to let the tap water run for at least 30 seconds to flush any water that has been sitting for several hours.

It is important to use this approach for drinking water or cooking water. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline 1-800-426-4791 or at <http://www.epa.gov/safewater/lead>.



Water System Condition and Maintenance

During times of maintenance, the water may appear hazy or have a slight color at the consumer tap. Likewise, earthquakes, rapid changes in water velocity, and firefighting activities may also cause discolored water events. If this condition occurs, run several faucets until the water is clear. Additionally, maintenance activities may result in lower than normal pressure. This usually occurs during fire hydrant flow testing and water main flushing. Larger, more complex system maintenance, or repair activities may require the utility to lower all pressure within small areas of the water distribution network. As a result, utilities may issue a boil water notice to the affected area. These notices are usually issued out of an abundance of caution by the water supplier to ensure the public health is protected. It is important for the customer to read and follow the directions within the boil water notice. Contact JBER Bioenvironmental Engineering office at 907-384-3985 for any questions.

Water Conservation Tips:

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference - try one today and soon it will become second nature.

- ◆ Take short showers - a 5 minute shower uses 4-5 gallons of water compared to up to 50 gallons for a bath.
- ◆ Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- ◆ Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- ◆ Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- ◆ Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- ◆ Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- ◆ Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!

