



CAMP LEMONNIER, DJIBOUTI (CLDJ) 2022 DRINKING WATER CONSUMER CONFIDENCE REPORT



01 July 2023

Is our water safe to drink?

Yes! The Camp Lemonnier, Djibouti (CLDJ) drinking water system continues to provide water that is safe and Fit for Human Consumption, as stated in the Commanding Officer's Record of Decision dated 05 November 2013. Extensive sampling and testing takes place routinely (daily, monthly, quarterly, yearly, and more) as required by applicable regulations to ensure CLDJ's drinking water meets the highest standards. The annual Consumer Confidence Report (CCR) for calendar year 2022 includes general and mandatory information on CLDJ's water sources, treatment processes, standard requirements, and more to help demonstrate that CLDJ water is safe to drink.

CLDJ's drinking water fully complies with the drinking water requirements specified in the DoD Overseas Environmental Baseline Guidance Document (OEBGD), which is a document derived from the U.S. Environmental Protection Agency (EPA) drinking water standards and ensures the same technical criteria are met. A detailed list of contaminants tested for in drinking water is included in this report, along with a comparison to the maximum levels considered safe for the general public. The annual CCR is required by the CNIC M-5090.1A, and is mandatory for all overseas installations operating drinking water systems.

Where does our water come from and how is it treated?

The CLDJ water supply comes from groundwater pumped from aquifers under the camp through wells located on site. An aquifer is a body of permeable rock which can contain or transmit groundwater. Groundwater has to migrate through spaces within rock and sediment to move through an aquifer. There are two aquifers underlying CLDJ. Currently, drinking water is pumped from multiple groundwater wells at Camp Lemonnier and is piped to CLDJ's on-site treatment plant.

At CLDJ, pumped groundwater enters a treatment process consisting of several different technologies: filtration, ultraviolet (UV) disinfection, reverse osmosis (RO) and chemical disinfection. The on-site treatment plant, which is called a Reverse Osmosis Water Purification Unit (ROWPU), consists of eight multimedia filters, eight granular activated carbon filters, eight cartridge filters and four parallel RO treatment trains to ensure that CLDJ's tap water meets all regulatory requirements throughout the water distribution system.

Why are there contaminants in drinking water?

Drinking water, including bottled water, may contain small amounts of contaminants. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and may pick up other substances from the presence of animals or human activity. As a result, some contaminants may be present in source drinking water. Contaminants may include:

- **Microbial contaminants**, such as viruses and bacteria, that may come from wildlife, sewage treatment plants, septic systems, and livestock;
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses;
- **Inorganic contaminants**, naturally occurring 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;
- **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; and
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.



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The presence of contaminants does not necessarily indicate that water poses a health risk. In order to ensure that tap water is safe to drink, regulations limit the amount of certain contaminants in water provided by public water systems. Regular sampling is conducted to detect the level of contaminants in the water system. If the results are above regulatory limits, you will be notified by Public Notification. You can learn more about contaminants and any potential health effects by visiting the EPA's Drinking Water Standards web site:

<https://www.epa.gov/ground-water-and-drinking-water>

Water System Assessments

In September 2021, the Naval Facilities Engineering Command (NAVFAC) together with the Navy and Marine Corps Public Health Center (NMCPHC) conducted a comprehensive Sanitary Survey of CLDJ's drinking water system. Sanitary Surveys are conducted every three years, and provide an evaluation of the adequacy of the drinking water source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water. NAVFAC continually improves the drinking water system based on recommendations in the report.

Some people must use special precautions

There are people who may be more sensitive 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 (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the EPA's Safe Drinking Water website <http://www.epa.gov/safewater>.

Additional information for 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. CLDJ Public Works is responsible for providing high-quality drinking water at CLDJ and has direct control over the materials used in plumbing components on the facility. This ensures that no lead service lines or components are used on the drinking water system. As a general safety practice, whenever - and wherever - you plan to use tap water for drinking or cooking, you can minimize the potential for lead exposure by flushing the tap for 30 seconds to 2 minutes prior to use. Information on lead in drinking water and steps you can take to minimize exposure is available from the USEPA Safe Drinking Water webpage www.epa.gov/safewater/lead.

Drinking Water Monitoring

In Calendar Year 2022, CLDJ's drinking water was monitored and analyzed (analyzing agency shown in *italics*) for the following constituents at the frequencies shown below:

Daily (*Onsite laboratory*) – pH, Turbidity, Residual Chlorine, Temperature, and Conductivity

Monthly (*offsite Certified Laboratory*) – Total Coliform

Quarterly (*Offsite Certified Laboratory*) – Inorganic Chemicals, Nitrate/Nitrite, PCBs, Herbicides, Pesticides, Organic Chemicals, Radionuclides, Disinfection By-Products (TTHM and HAA5)

Semi-annually (*Offsite Certified Laboratory*) – Lead and Copper

Annually (*Offsite Certified Laboratory*) – Corrosion Control



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The following table provides the results of the above testing for calendar year 2022 (unless otherwise noted). CLDJ carries out testing for many more chemicals than are shown in this table, and only those contaminants detected in the water are presented in the table. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. All contaminants detected in CLDJ drinking water are below the maximum Contaminant Level (MCL) allowed by OEBGD and EPA applicable requirements.

Water Quality Data Table

Contaminant	Typical Sources	Unit of Measure	Regulatory Criteria – OEBGD & CNICINST 5090.1		Laboratory Results			
			MCLG or MRDLG	MCL, TT or MRDL	Result Range		Violation	
					Low	High		
Copper	Corrosion of household plumbing systems; erosion of natural deposits.	mg/L	1.3	1.3 based on 90 th percentile results exceeding AL	ND	0.0287	No	
Chlorine	Water additive used to control microbes	mg/L as Cl ₂	4	4	0.2	3	No	
Organic Chemical	Toluene	Discharge from petroleum factories	mg/L	1	1	N/A	0.0009	No
Microbiological	Total Coliform Bacteria	Naturally present in the environment	No unit: Either positive or negative	0	0	negative	negative	No
Inorganics	Total Nitrite & Nitrate	Run off from fertilizer use	mg/L (As Nitrogen)	Nitrate 10.0 Nitrite 1.0	Nitrate 10.0 Nitrite 1.0	ND	Nitrate 4.0 Nitrite ND	EHT
Disinfectant Byproducts	Total Trihalomethanes	By product of drinking water disinfection	mg/L	0.08	0.08	0.019	0.05	No
Disinfectant Byproducts	Halo acetic acids (five)	By product of drinking water disinfection	mg/L	0.06	0.06	0.019	0.052	No



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Data Table Key: Unit Descriptions

mg/L	mg/L: number of milligrams of substance in one liter of water
ppm	ppm: parts per million, or milligrams per liter
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
ND	ND: not detected

Important Drinking Water Acronyms / Definitions

AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water systems must follow.
EHT	Samples Exceeded Holding Time
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.
MCL	Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available treatment technology.
MRDLG	Maximum Residual Disinfectant Level Goal: The level of a drinking water disinfectant below which there is no known or expected risk to health (4 mg/L of chlorine). MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL	Maximum Residual Disinfectant Level: The highest level of a disinfectant allowed in drinking water (4 mg/L of chlorine). There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.

Violations and Exceedances:

There were no Maximum Contaminant Level (MCL) exceedances for any regulated contaminants during CY 2022. However, nitrate and nitrite samples exceeded the required holding time due to logistical issues. In addition, the on-site laboratory was not certified.



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CLDJ Water Conservation is Everyone's Responsibility



Lastly, the desert environment we live and work in requires that we practice water conservation. Saving water is simple and inexpensive. Practicing the following tips can make a big difference in conserving this precious resource:

- For repair of any water leaks anywhere and at any time; e.g., faucets and toilets, water line breaks. Call DSN: 824-2653 – the Base Operations Control Center (OCC) immediately!
- Take shorter showers - a 3-minute shower uses 7-8 gallons of water versus a 10-minute shower which uses 25 gallons.
- Shut off water while brushing your teeth, washing your hair and shaving can save up to 500 gallons a month.
- Run the clothes washer on a full load. No extra rinse is needed at CLDJ.
- Visit www.epa.gov/watersense for more information.

Points of Contact

If you have any questions or concerns regarding this report or about the drinking water processes, please contact any of the following CLDJ Installation Water Quality Board (IWQB) members below:

Public Works Officer
DSN: 311-824-4064

Installation Environmental Program Director
311-824-5523

Environmental Health Officer
DSN: 311-824-4526