CAMP LEMONNIER, DJIBOUTI (CLDJ)
Annual Drinking Water Consumer Confidence Report
Calendar Year 2024
01 July 2025

Message from the CLDJ Commanding Officer

CLDJ is committed to providing a reliable supply of safe, clean water to our tenants and personnel, 24 hours per day, 7 days per week, 365 days per year. As described below, we continuously add or upgrade treatment to confirm that the water we deliver continues to meet or surpass all standards—because protecting CLDJ tenants' health and safety is our highest priority.

In this system in 2024, we conducted 43,420 tests on 8,940 water samples for 108 constituents. We are pleased to confirm that we met every primary and secondary federal US EPA water quality standard last year. But, our promise to provide quality, service, and value means more than just treating and testing water. It means having expert professionals available to assist with routine services safely and efficiently. It means having personnel available to handle emergencies around the clock. It means maintaining and upgrading the infrastructure needed to transport water from its source through a network of pumps, tanks, and pipes to your tap.

I encourage you to read this year's water quality report, also called your Consumer Confidence Report, as it details any constituents detected in your water supply in 2024 and shows how your water compares to federal US EPA standards. If you have any questions, we are here to help. You can contact the personnel listed on the last page of this report by phone or email.

CLDJ's Tap Water Supply Meets All Federal Health Standards in 2024

The US Navy is committed to providing you with a clean, safe, and stable water supply. Based on the water quality monitoring data collected in 2024 and over many years, CLDJ's drinking water system continues to provide water that is safe and Fit for Human Consumption (FFHC), as stated in the Commanding Officer's Record of Decision dated 05 November 2013.

Our drinking water fully complies with the OEBGD (Overseas Environmental Baseline Guidance Document) and the Navy CNICINST 5090.1B, which are based upon the US Safe Drinking Water Act. To ensure that tap water is safe to drink, this report includes a comprehensive list of sampled analytes with individual associated maximum contaminant levels (MCLs). A detailed list of parameters found in our drinking water is included in this report, along with a comparison to the maximum levels considered safe for the general public by these standards.

Where Does Our Water Come From?

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. CLDJ is in a coastal desert environment that causes the groundwater beneath the camp to be naturally salty with salinities between 0.5% (brackish) to 4.5% (saline, seawater). Currently, drinking water is pumped from multiple groundwater supply wells within the boundaries of Camp Lemonnier and is piped to CLDJ's on-site water treatment plant.

How Do We Make Water Drinkable?

CLDJ provides high-quality drinking water by utilizing proven technology, modern facilities and US Navy-certified operators. Water is treated using several processes, with each process providing additional water quality improvements, creating a robust, reliable, and multilayered treatment system to ensure that the water is effectively treated to meet drinking water standards. At CLDJ, the on-site treatment plant, which is called a Reverse Osmosis Water Purification Unit (ROWPU), consists of four parallel RO treatment trains. The treatment stages in each RO treatment train include:

Filtration: First, water pumped from the supply wells is passed through deep multimedia filtration (MMF) beds to produce water that is crystal clear. Each of the MMF beds are filled with garnet (at the base), sand, and capped with anthracite. Extremely small particles are removed during this process. The CLDJ treatment plant produces water with turbidity (cloudiness) significantly better than drinking water standards, indicating a highly effective treatment process and resulting in high-quality drinking water. MMF beds can also remove constituents that can cause taste and odor issues in the water.

Sorption: Secondly, water is passed through granular activated carbon (GAC) beds to produce water that is free of natural or synthetic organic compounds as well as constituents that can cause taste and odor issues in the water.

Polishing: The third step of water treatment consists of 5-micron filters that further polishes the water by removing very small particles and help extend the life of the last filtration step, reverse osmosis (RO).

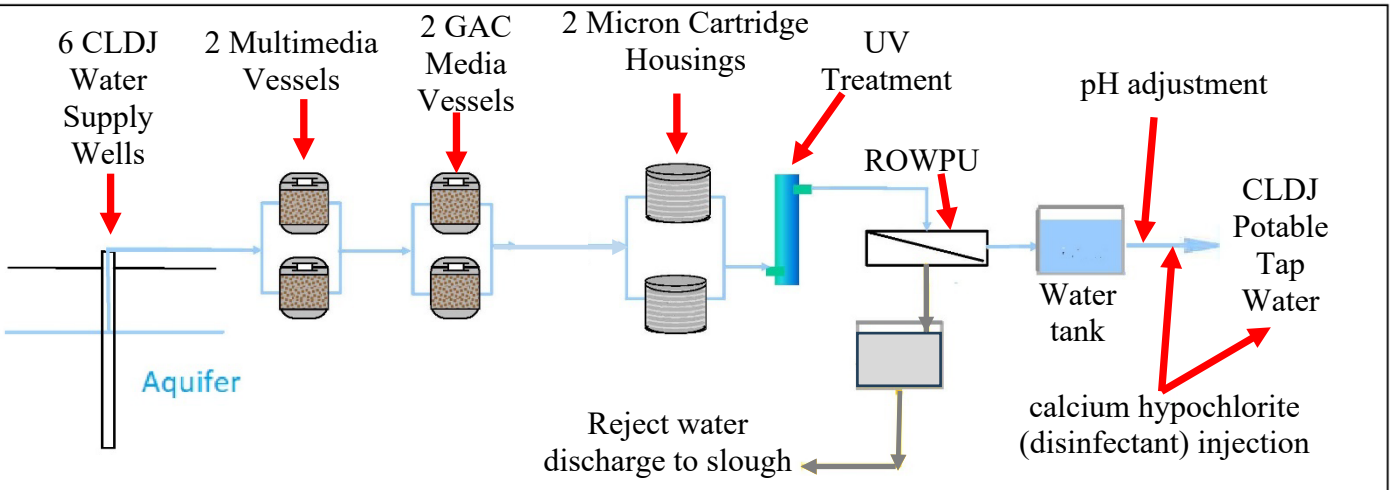
Disinfection: After the 5-micron filters, the water is subject to ultraviolet (UV) disinfection to remove any potential bacteria or viruses in the water.

Reverse osmosis (RO): Only pure water can squeeze through an RO membrane (at a very high pressure) since they have a very small pore size around 0.0001 micron. After water passes through a RO filter, it is essentially pure water. Everything has been removed from the water. In addition to removing all organic molecules and viruses, RO also removes most minerals that are present in the water, this includes salt, which means that it desalinates the water. This ensures that CLDJ's tap water meets all regulatory requirements.

After the RO treatment trains, all the treated water is combined and pumped to a holding tank. After the tank, the water is subjected to two more treatment processes:

Corrosion Control: After RO, the corrosivity of the water is controlled by adjusting the pH using sodium hydroxide.

Disinfection: Addition of calcium hypochlorite is added for disinfection at several points in the water system to help prevent microbial contamination from occurring in the water distribution system.



CLDJ Water Treatment System Generalized Schematic

Capital Investment – Continuous Water Treatment Improvements

As CLDJ continues to grow to meet operational missions, the drinking water treatment must also expand to meet the increased water demand. Also, CLDJ has an ongoing and continuous drinking water improvement process to ensure that the excellent water quality is available at all times in the future. Some of the drinking water treatment system improvements that the US Navy is investing in this upcoming year include:

Automatic Chlorine Disinfectant Monitoring: This project involves installation of devices to provide constant chlorine disinfection monitoring of potable water after it leaves the CLDJ water storage tanks, but before the first customer. This will help demonstrate required compliance with the US EPA Surface Water Treatment Rule. Currently, water operators take these measurements manually on a daily basis.

Additional Cartridge Filtration: This will involve replacing the UV disinfection units with an additional cartridge filter that will also help demonstrate required compliance with the US EPA Surface Water Treatment Rule.

Replace three leaking water storage tanks: This project will help save water.

Corrosion Control Treatment Upgrades: CLDJ will replace the existing corrosion control feed systems and with a lime feed system, which will improve the total hardness (make it less soft and increase mineral content) and improve corrosivity (which will the increase service life of metal piping and faucets by reducing corrosion) of the drinking water.

Replace CALA Water Piping: The water line to East CALA is too large for limited water use in that area. CLDJ will replace the water line to East CALA to improve water quality.

Important Health Information *(The statements in this section are mandatory and are required to be included in this report by the US EPA and the US Navy*

Why are there contaminants in drinking water?

Drinking water, including bottled water, may reasonably be expected to contain at least some small amounts of contaminants. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels 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. The presence of contaminants does not necessarily indicate that water poses a health risk.

Due to this, contaminants may be present in the source of drinking water, to include:

- **Microbial contaminants,** such as viruses and bacteria, that may come from wildlife, sewage treatment plants, septic systems, and livestock**;**
- **Disinfection by-products,** such as trihalomethanes (TTHM) disinfection by-products commonly produced during the chlorination of water;
- **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 the result of oil and gas production and mining activities.

Lead, enters drinking water when plumbing materials that contain lead corrode, especially where the water has high acidity or low mineral content that corrodes pipes and fixtures. The most common sources of lead in drinking water are lead pipes, faucets, and fixtures. **There are no Lead Service lines at CLDJ.**

The health effects of Lead are as follows:
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 is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact the CLDJ points of contact listed at end of this report. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at http://www.epa.gov/safewater/lead <http://www.epa.gov/safewater/lead>.

To ensure that tap water is safe to drink, the US Environmental Protection Agency (US EPA) has regulations that 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 levels, you will be notified by e-mail and Public Notification. You can learn more about contaminants and potential health effects by visiting the EPA Drinking Water Standards web site: http://permanent.access.gpo.gov/lps21800/www.epa.gov/safewater/standards.html.

Water Quality Data Tables

How to Read the Tables: The following tables provide the results of the water quality testing for calendar year 2024. 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 US EPA Maximum Contaminant Level (MCL) allowed by the OEBGD and US EPA applicable requirements.

Term	Definition
mg/L	number of milligrams of substance in one liter of water
ppm	parts per million, or milligrams per liter
pCi/L	picocuries per liter (a measure of radioactivity)
ND	not detected
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water systems must follow.
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.

Table 1: CLDJ Drinking Water System Total Nitrate and Nitrite Results

Contaminant	US EPA MCL (ppm)	US EPA MCLG (ppm)	Highest Sample Result (ppm)	Range of Test Results (ppm)	Violation	Typical Source
Total Nitrate & Nitrite*	10	10	1.3	1 - 1.3	no	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrate*	10	10	1.3	1 - 1.3	no	

*as Nitrogen.

Table 2a: Disinfection By-Products Parameters - Bldg. C200 (CLU ABC321)

TOTAL TRIHALOMETHANES (TTHMs) & HALOACETIC ACIDS						
Contaminant	US EPA MCL (Highest Level allowed) in ppm	US EPA MCLG (Ideal Goal) in ppm[1i]	Annual average (ppm)	Range of Test results (ppm)	Violation	Typical Source
TTHMs	0.080	NA	0.023	0.008 - 0.046	no	Disinfection by-product
Haloacetic Acids (HAA5)	0.060	NA	0.031	0.024 - 0.038	no	

[1] Although there is no collective MCLG for TTHMs and HAA5, there are individual MCLGs for some of the individual TTHMs and HAA5s: For TTHMs, the individual MCLGs are as follows: bromodichloromethane (zero); bromoform (zero); dibromochloromethane (0.06 ppm); and chloroform (0.07 ppm). For HAA5: dichloroacetic acid (zero); trichloroacetic acid (0.02 ppm); and monochloroacetic acid (0.07 ppm). Bromoacetic acid and dibromoacetic acid are also regulated as HAA5s but have no MCLGs.

Table 2b: Disinfection By-Products Parameters - Bldg. 1020 (1030) CALA

TTHMs & HALOACETIC ACIDS						
Contaminant	US EPA MCL (Highest Level allowed) in ppm	US EPA MCLG (Ideal Goal) in ppm	Annual average (ppm)	Range of test results (ppm)	Violation	Typical Source
TTHMs	0.080	NA	0.032	0.016 - 0.042	no	Disinfection by-product
HAA5	0.060	NA	0.009	0.006 - 0.011	no	

Table 2c: Disinfection By-Products Parameters - Bldg. 102(101 Combat Café)

TTHMs & HALOACETIC ACIDS						
Contaminant	US EPA MCL (Highest Level allowed) in ppm	US EPA MCLG (Ideal Goal) in ppm	Annual average (ppm)	Range of test results (ppm)	Violation	Typical Source
TTHMs	0.080	NA	0.030	0.015 - 0.040	no	Disinfection by-product
HAA5	0.060	NA	0.035	0.031 - 0.046	no	

Table 2d: Disinfection By-Products Parameters - Bldg. 700/310 Galley

TTHMs & HALOACETIC ACIDS						
Contaminant	US EPA MCL (Highest Level allowed) in ppm	US EPA MCLG (Ideal Goal) in ppm	Annual average (ppm)	Range of test results (ppm)	Violation	Typical Source
TTHMs	0.080	NA	0.011	0.008 - 0.018	no	Disinfection by-product
HAA5	0.060	NA	0.030	0.019 - 0.039	no	

Table 2e: Disinfection By-Products Parameters - Bldg. 1020 CALA

TTHMs & HALOACETIC ACIDS						
Contaminant	US EPA MCL (Highest Level allowed) in ppm	US EPA MCLG (Ideal Goal) in ppm	Annual average (ppm)	Range of test results (ppm)	Violation	Typical Source
TTHMs	0.080	NA	0.032	0.016 - 0.042	no	Disinfection by-product
HAA5	0.060	NA	0.034	0.022 - 0.045	no	

Table 2f: Disinfection By-Products Parameters – Bldg. 700 BOSC Office

TTHMs & HALOACETIC ACIDS						
Contaminant	US EPA MCL (Highest Level allowed) in ppm	US EPA MCLG (Ideal Goal) in ppm	Annual average (ppm)	Range of test results (ppm)	Violation	Typical Source
TTHMs	0.080	NA	0.015	0.008 - 0.018	no	Disinfection by-product
HAA5	0.060	NA	0.038	0.030 - 0.049	no	

Table 3: Lead and Copper results

Contaminant	EPA Action Level (AL) in ppm	Range of Tap Sample Results in ppm	Number of taps sampled in CY24	Number of Test Results With Levels Above EPA's Action Level	Violation	Typical Source
Copper	1.3	ND (<0.005) to 0.320	20	0	no	Corrosion of household plumbing systems
Lead	0.010	ND (<0.005) to 0.006	20	0	no	

Table 4: CLDJ Drinking Water System Aesthetic and Other Results

Contaminant	**US EPA MCL (ppm)**	**US EPA Secondary MCL (ppm)**	**Highest Sample Result (ppm)**	**Range of Test Results (ppm)**	**Typical Source**
Total Dissolved Solids	None	500	481	180 - 481	Runoff/leaching from natural deposits
Total Hardness (as $CaCO_3$)*	None	None	23	ND - 23	
Sodium**	None	None	64	64	

* There is no MCL, MCLG, or secondary MCL for total hardness. With the range of total hardness found in the water at CLDJ, it is considered "soft water".
** Only one sample collected in CY24.

VIOLATIONS, EXCEEDANCES, or MISSED SAMPLING EVENTS

CLDJ had **NO** exceedances of an action level (AL) or Maximum Contamination Level (MCL) in 2024.

During 3rd Quarter sampling for Organoclorine pesticides/Polychlorinated biphenyls including Dinoseb, 2,4-D, Dalapon, Picloram, 2,4,5TP(Silver) and Pentachlorophenol, the analytical laboratory exceeded sample holding time for analysis. The samples were kept refrigerated until analysis and there were no detectable levels of these compounds in these samples, although these results are officially considered invalid. There were no detections of these compounds in the first, second, and fourth quarter 2024 fully valid sampling events or any previous sampling events either. None of these compounds are known to be used in Djibouti and there is no reason to

suspect that these compounds occur in the either the source water or drinking water at CLDJ. Nevertheless, sampling for these parameters is required.

The Water Quality Oversight Council (WQOC) Sanitary Survey Report (Jan 2024) identified several monitoring deficiencies that occurred in 2023. Specifically:

1. A few of the third-party drinking water quality compliance laboratory (Alhoty) report levels were greater than the US EPA and OEBGD mandated detection levels for ten regulated compounds (antimony, arsenic, asbestos, barium, beryllium, fluoride, mercury, nitrate, nitrite, and selenium). Corrective action taken: CLDJ is working with the contract laboratory to adjust their analytical methods to meet the required detection limits by the end of FY25. All current contract laboratory detection limits are much lower than the drinking water MCLs. The drinking water treatment system at CLDJ can also remove these contaminants, if present.

2-Source water Cryptosporidium sampling schedule was not in accordance with the applicable regulation. Corrective action taken: Cryptosporidium has never been detected in the source water for CLDJ and the drinking water treatment system at CDJ is designed to remove Cryptosporidium if ever present. In addition, CLDJ will be collecting Cryptosporidium in accordance with the required schedule in FY27.

3-Bacteriological sampling locations did not fully represent the entire distribution system (i.e., Combat Aircraft Loading Area [CALA] not represented). Chlorine was not measured at the same time and location as bacteriological samples from approximately March to August 2023. Corrective action taken: On 16 April 2024, CALA sampling locations were added, and the BOSC/EMF started and continues to measure chlorine each time bacteria samples are taken. Chlorine measurements have always been collected throughout the CLDJ drinking water system, just not at the same time the bacteria samples were collected. Frequent monitoring of the chlorine levels in the water system at CLDJ ensures that chlorine is kept at the appropriate level throughout the water system.

4-Quarterly disinfectant and disinfection byproduct (D/DBP) monitoring was not conducted at exactly 90-day intervals. Corrective action taken: CLDJ has met and will continue to attempt to meet a 90±2 days sampling frequency requirement for all D/DBP sampling events. D/DBP concentrations have always been below the MCL, no matter what the sampling frequency is.

5-Radionuclide samples were not collected at quarterly intervals in 2022/2023 in accordance with the applicable regulation. Corrective action taken: CLDJ is planning on conducting quarterly monitoring for radionuclides during the next scheduled monitoring year, starting fourth quarter calendar year 2026. No radionuclides have been detected in drinking water at CLDJ.

The majority of the deficiencies are related to when and how frequently CLDJ collects certain types of samples and not if CLDJ collects these types of samples. **No matter when or what frequency of sampling is used, the results always show that CLDJ water is compliant and safe.** All these potential contaminants can be removed by the CLDJ drinking water treatment system. None of these water quality monitoring deficiencies identified during the 2024 sanitary survey have impacted the quality of the water we consume on a daily basis. All these deficiencies are part of an ongoing and continuous drinking water improvement process conducted by an independent third-party auditor that ensures that our drinking water is always clean, safe, and stable.

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-COLD (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..
- 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 (email: Leonard.d.sinfield.civ@us.navy.mil)
311-824-5523

Environmental Health Officer
DSN: 311-824-4526

A copy of this CCR and previous year reports are available at:
https://cnreurafcent.cnic.navy.mil/Operations-and-Management/Water-Quality-Information/

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