2022 Consumer Confidence Report

Water System Name: **Marine Corps Logistics Base Yermo Annex 3610702**

Report Date: June 2023

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2022 and may include earlier monitoring data.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.

Type of water source(s) in use: YERMO ANNEX: Supplied by three (3) MCLB owned groundwater wells

Name & general location of source(s): YERMO ANNEX: Supplied by three (3) MCLB owned groundwater wells

Drinking Water Source Assessment information: Wellhead Assessment March 2002 a copy can be attained at the Environmental Division Building 196 Nebo Main Base

Time and place of regularly scheduled board meetings for public participation: Meetings on Water Quality issues will be held on request of the Commanding Officer. These meetings are mandatory for all employees. For emergency drinking water issues call the trouble desk at 760-577-6220.

For more information, contact: MCLB S-F Department
Environmental Division
Compliance Branch

Phone: (760) 577-6982

TERMS USED IN THIS REPORT

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

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 are set by the U.S. Environmental Protection Agency (USEPA).

Maximum Residual Disinfectant Level (MRDL): 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.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a 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.

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

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

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

Variances and Exemptions: State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (µg/L)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

uS/cm: one millionth of a Siemen per centimeter (a measure of conductivity)

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 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, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- *Radioactive contaminants*, that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5, 7, and 8 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants (complete if bacteria detected)	**Highest No. of Detections**	**No. of months in violation**	**MCL**	**MCLG**	**Typical Source of Bacteria**
Total Coliform Bacteria	(In a mo.) 0	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or *E. coli*	(In the year) 0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or *E. coli*	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper (complete if lead or copper detected in the last sample set)	**Sample Date**	**No. of samples collected**	**90th percentile level detected**	**No. sites exceeding AL**	**AL**	**PHG**	**Typical Source of Contaminant**
Lead (ppb)	2022	10	5.5	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	2022	10	0.270	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of

							natural deposits; leaching from wood preservatives

The 2017 amendment to domestic water supply permits require K-12 schools to be tested for lead. MCLB Yermo Annex does not contain K-12 schools, therefore does not require this testing.
In 2021 Lead and Copper sampling was performed in October, which is outside of the required monitoring window between June and September. A monitoring violation resulted; however **NO EXCEEDANCES** were observed. The lead and copper sampling was conducted again in 2022 and the results are presented in Table 2.

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	**Sample Date**	**Average Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Sodium (ppm)	2018	74	71 - 79	n/a	n/a	Salt present in the water and is generally naturally occurring
Hardness (ppm)	2018	170	160 - 180	n/a	n/a	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

**Any violation of an MCL or AL is asterisked. Additional information regarding the violation is provided later in this report.*

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	**Sample Date**	**Average Level Detected**	**Range of Detections**	**MCL [MRDL]**	**PHG (MCLG) [MRDLG]**	**Typical Source of Contaminant**
Gross Alpha Particle Activity (pCi/L)	2021	10.16	9.39 – 11.3	15	n/a	Erosion of Natural Deposits
Total Radium (pCi/L)	2020	0.039	0.033–0.050	5	n/a	Erosion of Natural Deposits
Uranium (pCi/L)	2021	8.9	7.8 – 9.6	20	0.43	Erosion of Natural Deposits
Barium (ppm)	2021	ND	0.088–0.099	1	2	Discharge of oil drilling waste and from metal refineries; Erosion of Natural Deposits
Chlorine [CL2] (ppm)	2021	1.3	0.2 – 3.2	[MRDL=4] (as Cl2)	[MRDL=4] (as Cl2)	Drinking water disinfectant added for treatment
Fluoride (ppm)	2021	0.66	0.61 - 0.71	2	1	Erosion of Natural Deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate as N (ppm)	2022	0.95	0.75 - 1.1	10	10	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Total Haloacetic Acids (HAA5) (ppb)	2022	1.1	ND – 2.2	60	n/a	By-product of drinking water disinfection
Total Trihalomethanes (TTHMs) (ppb)	2022	7.35	3.7 - 11	80	n/a	By-product of drinking water disinfection

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	**Sample Date**	**Average Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Alkalinity (ppm)	2018	150	150 - 150	n/a	n/a	
Calcium (ppm)	2018	53	51 - 59	n/a	n/a	
Chloride (ppm)	2018	70.5	63 - 77	500	n/a	Runoff/leaching from natural deposits; seawater influence
Iron (ppb)	2018	170	100 - 170	300	n/a	Leaching from natural deposits; industrial wastes

Magnesium (ppm)	2018	9.0	8.7 – 9.4	n/a	n/a	
pH (pH units)	2018	7.9	7.6 – 7.9	n/a	n/a	
Potassium (ppm)	2018	2.9	2.8 – 3.0	n/a	n/a	
Specific Conductance (uS/cm)	2021	687	650 - 730	1600	n/a	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2018	84	79 - 92	500	n/a	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS) (ppm)	2018	433	410 - 470	1000	n/a	Runoff/leaching from natural deposits
Turbidity (units)	2018	0.018	ND-0.018	5	n/a	Soil runoff
Zinc (ppm)	2018	0.07	0.05 – 0.12	5	n/a	Runoff/leaching from natural deposits; industrial wastes

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	**Sample Date**	**Average Level Detected**	**Range of Detections**	**Notification Level**	**Typical Source of Contaminant**
PFOS (ppt)	2022	ND	ND	70	All detections less than the testing limit of 2.3 ppt. See statements below.
PFOA (ppt)	2022	ND	ND	70	All detections less than the testing limit of 2.3 ppt. See statements below.

What are per- and polyfluoroalkyl substances and where do they come from?

Per- and Polyfluoroalkyl substances (PFAS) refers to a large class of substances, which includes perfluorooctane sulfonate (PFOS) and perfluorooctanic acid (PFOA). DoD's use of PFAS started in the 1970s, with the introduction of aqueous film forming foam (AFFF) for aircraft fuel fire-fighting purposes. AFFF is mission critical because it quickly extinguishes petroleum-based fires, thus minimizing loss of life. DoD is one of many users of AFFF, with other major users including commercial airports, the oil and gas industry, and local fire departments. PFAS are also present in many industrial and consumer products because they increase a product's resistance to heat, stains, water and grease. As such, they are not uniquely attributable to DoD activities.

Is there a regulation for PFAS in drinking water? 1

There is currently no federal drinking water standard or regulation for PFAS. In May 2016, the EPA established drinking water health advisory levels at 70 parts per trillion (ppt) for perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), individually or combined. Both PFOS and PFOA are types of PFAS.

While not a requirement under the Safe Drinking Water Act, DoD proactively issued a policy to monitor drinking water for 18 PFAS at all DoD-owned and operated water systems at a minimum of every three years.

The EPA recommends if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than 70 parts per trillion, water systems should quickly undertake additional sampling to assess the level, scope, and localized source of contamination to inform next steps.

Has MCLBB Yermo Annex tested its water for PFAS?

Yes. In February, August, November, and December 2022 samples were collected from the Yermo Drinking Water Facility building 580.

We are informing you that five of the 18 PFAS compounds covered by the sampling method were detected at or above the method reporting limit (MRL). However, PFOS and PFOA were not detected above the MRL, and the MRL is below the EPA lifetime HA level. The results are provided in Table 6. Consistent with the EPA lifetime HA, since PFOS and PFOA are below the EPA HA levels, no adverse health impacts are expected over a lifetime of drinking this water. In accordance

with DoD policy, MCLBB Yermo Annex will collect quarterly samples for the 18 PFAS for one year and then every two years thereafter as long as the results are below the MRL.

Additional General Information on Drinking Water

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 USEPA's Safe Drinking Water Hotline (1-800-426-4791).

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. USEPA/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 Safe Drinking Water Hotline (1-800-426-4791).

Lead-Specific Language: 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. MCLB YERMO ANNEX 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 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 or at http://www.epa.gov/safewater/lead.

Summary Information for Violation of the Monitoring and Reporting Requirement

TABLE 7 – VIOLATION OF MONITORING REPORTING REQUIREMENT

Violation	Explanation	Duration	Actions Taken to Correct Violation	Health Effects Language