Consumer Confidence Report (CCR)

2022 Water Quality Report
Marine Corps Installations Pacific
Marine Corps Base Camp S.D. Butler, Camp McTureous
Okinawa, Japan

Introduction
This is an annual report on the quality of tap water delivered to Marine Corps Base (MCB) Camp S.D. Butler, Camp McTureous. The purpose of this report is to provide you, our customers, with general information about the quality of water you drink.

What is a Consumer Confidence Report?
In 1996, Congress amended the Safe Drinking Water Act (SDWA) to require all community water systems in the United States to provide their customers with a brief annual water quality report called a Consumer Confidence Report (CCR). Last year, over 50 different drinking water contaminants were evaluated for compliance. Only contaminants measured in concentrations above their respective analytical methods' detection limits are reported in this CCR.

Safe Drinking Water
Drinking water regulations require that all installation water supply systems are sampled and analyzed for a variety of contaminants in drinking water. Last year (2022), your drinking water met health-based water quality standards contained in the Japan Environmental Governing Standards (JEGS). The primary purpose of the JEGS is to provide environmental compliance criteria and management practices to be used by United States Department of Defense installations in Japan. MCB Camp Butler, G-F, Environmental Affairs Branch (EAB) and 18th Medical Group, Bioenvironmental Engineer (BE) personnel are committed to providing safe drinking water to you and your family. Our routine monitoring program, which follows water quality standards and monitoring requirements set forth in the JEGS, enables us to maintain optimal water quality on Camp McTureous.

Information about Drinking Water Contaminants
All drinking water, including bottled water, may contain small amounts of contaminants dissolved in the water. The presence of trace contaminants in the water does not necessarily indicate that the water poses a health risk. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, naturally-occurring radioactive material, and can pick up substances resulting from the presence of animals or human activity. Microbial contaminants, such as viruses and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. Inorganic contaminants, such as salts and metals, 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 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, are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems. Radioactive contaminants 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 Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. In Japan, the Government of Japan (GOJ) and the US Forces, Japan also regulate the quality of drinking water through the JEGS. Our monitoring program allows us to avoid potential health impacts that may occur if we drink water containing contaminants over long periods of time above the standards set forth in the JEGS.

Do I Need to Take Special Precautions?
Our monitoring program identifies contaminants in drinking water and allows us to avoid potential health impacts that might occur if we consume water containing contaminants over long periods of time above the standards set forth in the JEGS. However, some people may be more vulnerable to contaminants than the general population. For example, immunocompromised individuals such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, persons with HIV/AIDS or other immune system disorders, the elderly, and infants can be particularly at risk from contaminants. These individuals or their caretakers should seek medical advice about drinking water from their health care providers if they have questions.

Camp McTureous Water System Information
The Camp McTureous drinking water system is jointly operated and maintained by the G-F Facilities Maintenance Branch and the 18th Civil Engineer Squadron. The water is distributed from the Ishikawa water treatment plant (WTP) to Camp McTureous. The water supply to this treatment plant is a combination of surface waters from reservoirs and rivers. Ishikawa WTP utilizes conventional water treatment process and ozone as its disinfectant. In addition, chlorine residual is maintained in the distribution system for additional protection as water travels to the tap.

Monitoring of Your Drinking Water
The G-F EAB is responsible for drinking water monitoring of Marine Corps-owned infrastructure including all non-housing areas on Camp McTureous. The BE is responsible for drinking water monitoring of Air Force-managed military family housing on Camp McTureous. Together, the G-F EAB and the BE are committed to providing safe drinking water to you. We use only EPA and GOJ approved laboratory methods to analyze your drinking water. Trained personnel collect water samples from the distribution system and residential taps. Samples are then shipped to an accredited laboratory where a full spectrum of water quality analyses are performed. The BE and contracted personnel collected all required routine monitoring samples in 2022 none of which were at a level higher than the JEGS Maximum Contaminant Level (MCL).

Frequently Asked Questions

Why does the water sometimes look rusty?

Rusty or reddish tinted water may occur because of a sudden change in pressure due to fire hydrant flushing, water main breaks, or other disturbances that result in a change to normal water flow. Iron causes the discoloration and is not a health risk. The normal flow of water will usually clear the mains within two hours or less. Check your water by flushing a commode bowl three times every 15 to 20 minutes. If you live on or near the end of a long distribution line, additional flushing may be required. Galvanized iron pipes or fittings within a home or building may also cause discolored water. Running the water will clear the piping system. If the hot water is rusty, the water heater may need to be flushed.

What is a Boil Water Notice?

Any time a drop in pressure occurs from a water main break or system maintenance, the G-F EAB and/or the BE will issue a Boil Water Notice and immediate sampling requirements go into effect. Boil Water Notices in these cases are precautionary and do NOT necessarily mean that contamination has been detected or is suspected. In other cases, if total coliform bacteria are detected as part of our routine sampling program, a Boil Water Notice will also go into effect as a precaution while corrective measures are taken. In this case, resampling continues until the corrective measures are completed.

Is it okay to drink from a garden hose?

The water that supplies the water hose is safe but a garden hose may be treated with chemicals and can contain bacteria and other substances. Drinking from a garden hose is highly discouraged.

Will using a home water filter make the water safer or healthier?

Most filters improve the taste, smell and appearance of water, but they do not necessarily make the water safer or healthier. If you use filters, please keep in mind that they require regular maintenance and replacement or the filter itself can impact water quality.

What can I do to improve the quality of my drinking water?

Running the cold water tap for 30 seconds prior to use helps to flush out small amounts of metals that may leach into water that has been sitting in metal pipes overnight. Water used for consumption should always come from the cold water tap. Hot water has more potential to leach metals into the water.

How will I know if my water is not safe to drink?

Your water supplier must notify you if your water does not meet standards or if there is a waterborne disease emergency. The notice will describe any precautions you need to take, such as boiling your water.

I don't like the taste/smell/appearance of my tap water? What's wrong with it?

Even when water meets standards, you may still object to its taste, smell, or appearance. Taste, smell and appearance are also known as aesthetic characteristics and do not pose adverse health effects. Common complaints about water aesthetics include: temporary cloudiness (typically caused by air bubbles) or chlorine taste (which can be improved by letting the water stand exposed to the air).

Does the water system have a lead problem?

The JEGS state that 90% of samples must be below the action level, and the water system met that criterion in 2022. The water system will continue to be sampled for lead, and the next samples will be taken between May and September 2023. 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. 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 the water for drinking or cooking.

What is PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that includes PFOS and PFOA. PFAS have been manufactured and used in a variety of industries around the globe, including in the United States since the 1940s. PFAS are found in everyday consumer items, from nonstick cookware to water-resistant clothing. They are also found in certain firefighting foam (AFFF). PFOS and PFOA have been the most extensively produced and studied of the PFAS chemicals.

In May 2016, the EPA issued SDWA lifetime Health Advisories (HA) recommending the individual or combined levels of PFOS and PFOA in drinking water be at or below 70 parts per trillion; this advisory level was in effect during the CY 2022 water quality monitoring effort. This HA offers a margin of protection from adverse health effects over a lifetime of exposure to PFOS and PFOA in drinking water.

Additional information about PFAS and proposed updates to existing EPA guidelines can be found at https://www.epa.gov/pfas.

Is a Japanese translation of the CCR available?

All sections of the CCR are written in English. Please contact the G-F EAB at 645-5197 for a Japanese translation.

CCR の全てが英文の文書です。日本語訳希望者は施設技術部環境保全課までご連絡下さい。基地内： 645-5197 基地外から：098-970-5197.

Where can I go for additional information?

This CCR will be posted on the MCIPAC web page at https://www.mcipac.marines.mil/News-Center/Consumer-Confidence-Reports/.

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Terms Used in this Report

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

Calendar Year (CY): Period of time from January through December. Data reported in the consumer confidence report were for samples collected in the reported calendar year unless otherwise stated.

Health Advisory (HA): The concentration of an unregulated contaminant in drinking water which, if exceeded over a lifetime, may have associated health risks. These levels are non-enforceable and non-regulatory.

Maximum Contaminant Level (MCL): The highest level of a contaminant allowed in drinking water.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water.

Microgram per liter (µg/L): Unit of concentration often used to express the concentration of a contaminant in drinking water.

Milligram per liter (mg/L): Unit of concentration often used to express the concentration of a contaminant in drinking water.

Milli-roentgen equivalent man per year (mrem/year): Unit of dose to express radiation exposure.

Nanogram per liter (ng/L): Unit of concentration often used to express the concentration of a contaminant in drinking water.

Non-detect (ND): Concentration of contaminant below the detection limit of analytical method.

Not Applicable (N/A): Not applicable for this contaminant.

2022 Water Quality Table

Camp McTureous						
Inorganics	**Violation? Yes/No**	**Units**	**Highest Level Detected**	**MCL**	**AL**	**Likely Source of Contamination**
Arsenic	No	mg/L	0.001	0.010	N/A	Erosion of natural deposits
Barium	No	mg/L	0.0064	2.0		
Fluoride[1]	No	mg/L	4.0	ND		
Selenium	No	mg/L	0.008	0.05		
Sodium	No	mg/L	17	N/A[2]		
Nitrate (as N)	No	mg/L	0.1	10		Runoff from fertilizer use; leaching septic tanks/sewage; erosion of natural deposits
Total Nitrate/Nitrite (as N)	No	mg/L	0.1	10		
Bacteriological	**Violation? Yes/No**	**Units**	**Highest Level Detected**	**MCL[3]**	**AL**	**Likely Source of Contamination**
Total Coliform Bacteria	No	N/A	0	>1 positive sample per month, or any repeat sample is positive	N/A	Naturally present in the environment
Synthetic Organic Compounds/Volatile Organic Compounds[4]	**Violation? Yes/No**	**Units**	**Highest Level Detected**	**MCL**	**AL**	**Likely Source of Contamination**
Various	No	µg/L	ND	Various	N/A	Manmade compounds
Radionuclides[5]	**Violation? Yes/No**	**Units**	**Highest Level Detected**	**MCL**	**AL**	**Likely Source of Contamination**
Beta Particle and Photon Radioactivity	No	mrem/year	0.16 ± 0.12	4.0	N/A	Decay of natural and manmade deposits
Disinfectant/Disinfection Byproducts	**Violation? Yes/No**	**Units**	**Highest Running Annual Average**	**MRDL/MCL**	**AL**	**Likely Source of Contamination**
Free Chlorine	No	mg/L	0.43	4.0[6]	N/A	Drinking water disinfectant for treatment
Total Trihalomethane	No	mg/L	0.053	0.08[7]	N/A	By-products of drinking water chlorination
Haloacetic Acids	No	mg/L	0.014	0.06[7]		
Per- and polyfluoroalkyl substance (PFAS)[8]	**Violation? Yes/No**	**Units**	**Highest Level Detected**	**HA**	**AL**	**Likely Source of Contamination**
Sampling not required in CY 2022 due to non-detect concentration in initial sampling in CY 2020.						
Ishikawa Water Treatment Plant[9]						
Parameter	**Violation? Yes/No**	**Units**	**Highest Level Detected**	**MCL**	**AL**	**Likely Source of Contamination**
Free Chlorine Residual	N/A	mg/L	Range: 1.0 – 1.1	N/A	N/A	Drinking water disinfectant for treatment
Standard Plate Count Bacteria	N/A	#/mL	0	N/A	N/A	Naturally present in the environment
Turbidity	N/A	degree	< 0.1	N/A	N/A	Soil runoff

Notes:

1. Fluoride was resampled in CY 23 due to due to quality control issues while in transit to the U.S. lab. Results were ND.
2. No MCL established for Sodium. Monitoring is required so that concentration levels can be made available upon request.
3. This is the total coliform-related operational evaluation level (OEL). The MCL for *E. coli* is exceeded when routine and repeat samples for total coliform are positive or when a system fails to take repeat samples following positive samples. Some samples were not collected due to operational constraints, and corrective actions have been taken. All other routine samples were negative for total coliform, and the public water system continued to meet all water quality standards.
4. 8 Synthetic Organic Compounds were resampled in CY 23 due to quality control issues while in transit to the U.S. lab. Results were ND.
5. Radionuclide samples collected at the entry point to Camp Courtney as a representative sample of water from Ishikawa WTP.
6. The MRDL for Free Chlorine is based on a running annual average of monthly averages.
7. The MCL for Total Trihalomethanes and Haloacetic Acids is based on a locational running annual average.
8. CY 20 PFAS samples collected at the entry point to Camp Courtney as a representative sample of water from Ishikawa WTP PFAS monitoring will be conducted again in CY 23 in accordance with DoD policy.
9. Water quality data regarding Ishikawa Water Treatment Plant obtained from the Okinawa Prefectural Enterprise Bureau website.