Consumer Confidence Report

Marine Corps Air Station Iwakuni
Main Base, Atago & Monzen
Drinking Water System

This report reflects monitoring data collected in July 2024 - December 2024 and will be updated biannually.

Marine Corps Air Station (MCAS) Iwakuni is pleased to provide you with this Consumer Confidence Report (CCR) for the Drinking Water System which supports MCAS Iwakuni, Japan. The purpose of this report is to provide information to installation personnel and their dependents about the potable water delivered to MCAS Iwakuni from January-June 2024.

Our goal is to provide safe and dependable drinking water. During this monitoring period, drinking water at MCAS Iwakuni met all Japan Environmental Governing Standards (JEGS) drinking water quality health standards.

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 CCR. Although this law does not apply overseas, the 2024 JEGS specifically requires an annual water quality report to be developed and made available to the population served by the water system.

Source of Water

The source of the drinking water at MCAS Iwakuni is the Nishiki River. The raw water is treated at the Nishimi Water Purification Plant, operated by the Iwakuni City Waterworks, and then conveyed via pipelines to MCAS Iwakuni. The plant employs conventional water treatment including chemical coagulation, flocculation, sedimentation, filtration, and disinfection (chlorination). The Nishimi Water Purification Plant provides MCAS Iwakuni data on the raw water processed by the plant, as well as the finished water it sends to the installation for human consumption. Pump stations on the North, South, Monzen, and Atago areas of the base distribute the water throughout MCAS Iwakuni.

Drinking Water Standards

Our drinking water is required to meet the water quality standards established in the JEGS. The JEGS are Department of Defense (DoD) governing standards intended to ensure DoD activities and installations in Japan protect human health and the environment, and to ensure safe drinking water is provided to all DoD personnel and their families.

To continually ensure that our water is safe to drink, the JEGS require all installation water supply systems to be sampled and analyzed for a variety of contaminants. Our routine monitoring program, which follows water quality standards and monitoring requirements set forth by the JEGS, enables us to ensure optimal water quality at MCAS Iwakuni.

Possible Source of Contaminants

All drinking water, including bottled water, may contain trace amounts of dissolved contaminants. 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. 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 (FDA) 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. 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.

More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline (800-426-4791) or visiting the EPA website at: https://www.epa.gov/dwstandardsregulations.

Potential Contaminants in Drinking Water

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which 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 discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, 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.

Other Potential Contaminants (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. MCAS Iwakuni routinely monitors and tests the water but cannot control the variety of materials used in plumbing components. When your water has been sitting in the pipes and unused 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. If you are concerned about lead in your water, information on lead in drinking water, and steps you can take to minimize exposure is available at *https://www.epa.gov/safewater/lead.*

Special Health Considerations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those 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 and Prevention guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industries and consumer products around the globe, including in the U.S., since the 1940s. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams (aqueous film-forming foam or AFFF) currently used for fighting petroleum fires at airfields and in industrial fire suppression processes. PFAS chemicals are persistent in the environment, and some are persistent in the human body – meaning they do not break down and they can accumulate over time.

Is there a regulation for PFAS in drinking water?

On April 26, 2024, the United States Environmental Protection Agency (EPA) published a National Primary Drinking Water Regulation (NPDWR) final rule on drinking water standards for six PFAS under the Safe Drinking Water Act (SDWA). The rule establishes the following maximum contaminant levels (MCLs):

Compound	Final MCLG	Final MCL (enforceable levels)
PFOA	Zero	4.0 parts per trillion (ppt) (also expressed as ng/L)
PFOS	Zero	4.0 ppt
PFHxS	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
HFPO-DA (commonly known as GenX Chemicals)	10 ppt	10 ppt
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index	1 (unitless) Hazard Index

MCLGs - Maximum Contaminant Level Goals

Under the NPDWR, regulated public water systems (PWS) are required to complete initial monitoring by April 26, 2027. Beginning April 26, 2027, regulated PWSs will conduct ongoing compliance monitoring in accordance with the frequency dictated by the rule and as determined by the initial compliance monitoring results. Regulated PWSs must demonstrate compliance with the Maximum Contaminant Levels (MCLs) by April 26, 2029.

In order to provide safe drinking water to all Department of Defense (DoD) personnel, OSD policy extends this requirement to all DoD systems which provide drinking water for human consumption, regardless of size of the drinking water system. In addition to the six regulated compounds, DoD-owned systems are required by DoD policy to monitor for all 25 compounds detected when using EPA Method 533.

Protecting the health of our personnel, their families, and the communities in which we serve is a priority for the Department. DoD is committed to complying with requirements of the NPDWR and the continued provision of safe drinking water to those that work and live on DoD installations.

Has MCAS Iwakuni tested its water for PFAS in 2024?

Yes. In August 2024 samples were collected from B177 (Main Base), B929 (Monzen Housing Area) and B160 (Atago Housing Area). We are pleased to report that none of the 25 PFAS chemicals covered by the sampling method, including the six regulated PFAS, were detected in the drinking water system.

What is next?

MCAS Iwakuni will continue to monitor for PFAS in accordance with the EPA regulation and DoD policy. Once required initial monitoring information is available, we will calculate the Running Annual Averages (RAA) for the regulated PFAS and will compare those numbers to the MCL and Hazard

Index (HI) trigger levels. This will determine what our continuing monitoring requirements will be beginning in 2027, and if needed, we will plan operational or infrastructure changes to ensure our water complies with the PFAS MCLs and HI by April 2029 in accordance with the SDWA.

Lead in Priority Areas (LIPA)

In an effort to reduce children's potential exposure to lead, drinking water in priority area facilities was tested in 2014 to establish a baseline at all DoD Schools, Child Development Centers (CDCs) and Youth Centers (YCs) and to conduct follow up sampling every five years. In June 2019, a new LIPA policy was issued that lowered the lead screening level from 20 parts per billion (ppb) to 15 ppb. Recently, the EPA updated a rule to lower this threshold to 10 ppb.

In July 2024 LIPA sampling was conducted at the School Aged Care Facility (B9540) and no lead exceedances were found.

In Oct 2024 LIPA sampling was conducted at the Child Development Center (B635, B636 and B637) and the Teen Center (B410). Of the one hundred water outlets sampled at the CDC four outlets were found to have lead levels at or above the new 10 parts per billion (ppb) threshold. All four affected outlets were immediately secured, cordoned off, and marked with signage to prohibit their use. Further investigation revealed that all four outlets were handwashing stations that were infrequently used. Resampling completed in Nov 2024 confirmed that three of the four outlets still exceeded the 10 ppb threshold. The four outlets remain out of service. As a corrective action, these water outlets will be replaced with new fixtures and follow up testing will be completed to ensure that water quality standards are met. In accordance with USMC Installation Command policy, a direct lead exceedance notification letter was generated and distributed to the parents via the CDC.

Abbreviations and Definitions:

AL: Action Level. The concentration of a contaminant in water that establishes the appropriate treatment for a water system.

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

HA (Health Advisory): 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.

DBP: Disinfection by-products are chemicals that can be formed when chlorine is used for disinfecting drinking water to prevent disease.

LHAL: Lifetime Health Advisory Level

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

MRDL (Maximum Residual Disinfectant Level): The level of a disinfectant added for water treatment measured at the consumer's tap, which may not be exceeded without the unacceptable possibility of adverse health effects.

MREM: Millirem, or milli roentgen equivalent man. It is one thousandth of a rem, and is used for the dosages encountered regarding radiation received from various sources.

MRL (Method Reporting Limit): The smallest concentration of a chemical that can be reported by a laboratory for a given test method.

ND: Not Detected.

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

pCi/L: Picocuries per liter. Radioactivity results are usually shown in picocuries (pCi). A picocurie is one trillionth of a curie. The higher the number, the more radiation released by the material.

ppb: Parts per billion or micrograms per liter. One ppb is the equivalent of one drop of impurity in 500 barrels of water or 1 cent out of $10 million (Navy PFAS Regulatory Framework).

ppt: Parts per trillion or nanograms per liter. One ppt is the equivalent of one drop of impurity in 500,000 barrels of water (Navy PFAS Regulatory Framework).

ppm: parts per million or milligrams per liter. Analogous to putting four drops of ink in a 55-gallon barrel of water and mixing it thoroughly. This procedure would produce an ink concentration of 1 ppm. (National Oceanic and Atmospheric Administration-NOAA).

RAA: Running Annual Average. A moving average smooths out any irregularities (peaks and valleys) from data to easily recognize trends.

TOC: Total Organic Carbon. Represents the concentration of organic carbon in a sample and is a non-specific indicator of water quality.

Water Quality Data Table

The following table lists all the drinking water contaminants detected at MCAS Iwakuni during this reporting period. The presence of contaminants does not necessarily indicate that the water poses a health risk. All substances detected in MCAS Iwakuni's drinking water meet DoD JEGS requirements.

Inorganic Contaminants	Violation? Yes/No	Units	Highest Level Detected	MCL	AL	Typical Source of Contamination
Barium	No	mg/L	0.0092	2	N/A	Erosion of Natural Deposits
Fluoride	No	mg/L	0.13	4		
Sodium	No	mg/L	6	N/A		
Total Nitrate / Nitrite	No	mg/L	0.43	10		Runoff from fertilizer use; leaching septic tanks/sewage;erosion of natural deposits
Microbial Contaminants	**Violation? Yes/No**	**Units**	**Highest Level Detected**	**MCL**	**AL**	**Typical Source of Contamination**
Total Coliform Bacteria	No	N/A	ND	<1 positive sampled per month, or any repeat	N/A	Naturally present in the environment
Synthetic Organic Chemicals	**Violation? Yes/No**	**Units**	**Highest Level Detected**	**MCL**	**AL**	**Typical Source of Contamination**
No exceedances during reporting period.	No	mg/L	ND	Ranges from .00003 - 700	N/A	Byproducts of industrial processes and petroleum production, urban stormwater runoff and septic systems
Residual Disinfectants	**Violation? Yes/No**	**Units**	**Highest Level Detected**	**MRDL**	**AL**	**Typical Source of Contamination**
Free Chlorine	No	mg/L	0.84	4	N/A	Water additive used to control microbes
Disinfectant / Disinfection Byproducts	**Violation? Yes/No**	**Units**	**Annual Average**	**MCL**	**AL**	**Typical Source of Contamination**
Total Trihalomethanes	No	mg/L	0.0212	0.08	N/A	By-products of drinking water chlorination
Haloacetic Acids (HAA5)	No	mg/L	0.0071	0.06		
DBP Precursor Total Organic Carbon (TOC)	No	mg/L	0.4	N/A		Not a contaminant, TOC may be used as a non-
DBP Precursor Alkalinity	No	mg/L	29	N/A		Not a contaminant, it is the capacity of water to
PFAS	**Violation? Yes/No**	**Units**	**Highest Level Detected**	**MCL**	**AL**	**Typical Source of Contamination**
PFOS	No	ng/L	ND	4	N/A	Runoff from industrial use (chrome plating, electronic manufacturing and fire supression) and consumer products.
PFOA	No	ng/L	ND	4		
PFHxS	No	ng/L	ND	10		
HFPO-DA (GenX)	No	ng/L	ND	10		
PFNA	No	ng/L	ND	10		
PFBS	No	ng/L	ND	n/a		
PFAS (mixture)	**Violation? Yes/No**	**Units**	**Highest Level Detected**	**Hazard Index**	**AL**	**Typical Source of Contamination**
Mixture of two or more: PFHxS, PFNA, HFPO-DA, and PFBS	No	ng/L	ND	1 (unitless)	N/A	Runoff from industrial use (chrome plating, electronic manufacturing and fire supression) and consumer products.
Lead and Copper (Main Base Housing)	**Violation? Yes/No**	**Units**	**90th Percentile Value**	**Sites Exceeding Action Level / # of sites**	**AL**	**Typical Source of Contamination**
Lead	No	mg/l	0.00075	0/38	0.01	Corrosion of plumbing products containing lead and erosion of natural deposits
Copper	No	mg/l	0.028	0/38	1.3	Corrosion of plumbing products containing lead and erosion of natural deposits

Notes: Water Quality Table is for DETECTED contaminants only.

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 a Boil Water Notice will be issued 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 failure to replace 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 states 90% of water samples must be below the action level. The installation’s water system meets that criterion. The water system will continue to be sampled for lead, and the next samples will be taken this summer. 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.

Water Quality Sampling Frequency

Constituent	Frequency
pH, conductivity, turbidity, chlorine residual, water temperature, and water pressure	Twice daily Monday-Friday by MCAS Iwakuni staff. Twice monthly by contractor.
Turbidity	Daily
Disinfection byproducts (Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5)	Quarterly
Total coliform	Monthly
Inorganic chemicals	Annually
Lead and Copper Rule (housing)	Once every 3 years
Lead in Priority Areas (LIPA)	Once every 5 years
Nitrate and Nitrite	Quarterly
Synthetic Organic Chemicals	Four consecutive quarterly samples every 3 years
Volatile Organic Compounds	Annually
Polychlorinated biphenyls (PCBs), Herbicides, and Pesticides	Once every 3 years
Radionuclides	Once every 4 years
Asbestos	Once every 9 years
Per- and polyfluoroalkyl substances (PFAS)	Once every 2 years

The table shows constituents detected during July 2024 - December 2024 water sampling. Only those constituents detected are listed. The presence of a contaminant does not necessarily indicate the water poses a health risk. As such, MCAS Iwakuni's drinking water is deemed fit for human consumption. For more information on this report or water quality in general, please contact the MCAS Iwakuni Environmental Division, Water Program Manager at 253-5388 or via email at Hoeft.christopher@usmc.mil