Consumer Confidence Report
Drinking Water Systems 2023
Commander, Fleet Activities Yokosuka

Issued per Commander, Navy Installations Command (CNIC) Instruction 5090.1B, 15 Mar 2021.
This report reflects monitoring data collected in 2023 and is updated annually.

The Navy is pleased to provide you with this annual Consumer Confidence Report (CCR) of the Drinking Water System that supports *Main Base, Ikego Housing Area, Hakozaki Fuel Terminal, Tsurumi Fuel Terminal OU-1 & OU-2, Fleet Mail Center and Urago Ordnance Storage Area*. This report provides information about the water delivered to Commander, Fleet Activities (FLEACT) Yokosuka area of responsibility in 2023. It describes where our water comes from, what it contains, and how it compares to standards for safe drinking water. **The drinking water at FLEACT Yokosuka is safe to drink. Our goal is, and always has been, to provide safe and dependable drinking water.**

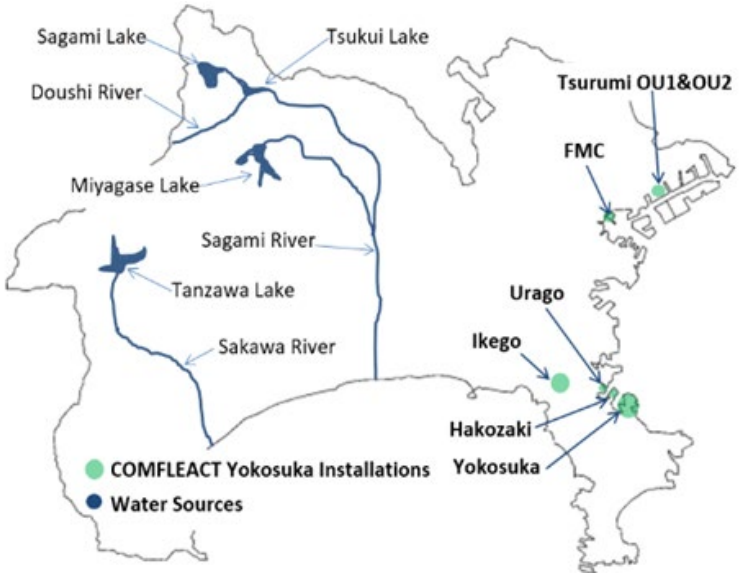
Source of Water

Yokosuka Main Base • Hakozaki Fuel Terminal • Urago Ordinance Storage Area

Drinking water at Yokosuka Main Base, Hakozaki Fuel Terminal, and Urago Ordnance Storage Area is combined surface water from the Sagami River and the Sakawa River purchased from the Yokosuka City Waterworks and Sewerage Bureau. The supplier filters and chlorinates the drinking water with a conventional rapid sand filtration system before providing to Yokosuka Main Base.

Ikego Housing Area

Drinking water at Ikego Housing Area is surface water from the Sagami River purchased from the Kanagawa Prefectural Waterworks. The supplier filters and chlorinates the drinking water with a conventional rapid sand filtration system before providing to Ikego Housing Area.



Fleet Mail Center (FMC) •
Tsurumi Fuel Terminal OU-1 & OU-2

Drinking water at FMC and Tsurumi is surface water from the Sagami River purchased from the Yokohama Waterworks Bureau. The supplier filters and chlorinates the drinking water with a conventional rapid sand filtration system before providing to FMC and Tsurumi OU-1 & OU-2.

Water Distribution Systems

Commander, FLEACT Yokosuka Public Works Department (PWD) operates the water distribution system. In Yokosuka Main Base, Ikego Housing Area, and Hakozaki Fuel Terminal, purchased water is temporarily stored in tanks, and the water provided to housing areas is fluoridated prior to distribution.

Purchased water is directly distributed throughout FMC, Tsurumi OU-1 & OU-2, and Urago without any treatment by the PWD.

Compliance with Drinking Water Requirements

U.S. Navy overseas installations are required to meet or exceed National Primary Drinking Water regulations promulgated under the Safe Drinking Water Act of 1974, which were adopted by CNIC Instruction 5090.1B and are the same standards used in the U.S. to ensure safe drinking water. Commander, FLEACT Yokosuka is also required to meet all criteria established in the most recent Japan Environmental Governing Standards (JEGS), intended to ensure Department of Defense (DoD) activities and installations in Japan protect human health and the natural environment through the promulgation of specific environmental compliance criteria.

The Installation Commanding Officer has established an Installation Water Quality Board (IWQB) tasked with ensuring a reliable supply of drinking water for all persons using FLEACT Yokosuka facilities. IWQB is currently taking steps to meet all requirements of the Navy's Overseas Drinking Water (ODW) program, and the Regional Water Quality Board granted Commander, FLEACT Yokosuka Conditional Certificate to Operate (CTO) for its water systems. Commander, FLEACT Yokosuka is expected to receive a Full CTO when all significant deficiencies identified during the sanitary survey are corrected. All deficiencies either have been corrected or are in the process of implementing corrective actions.

Source Water Assessment

Sanitary Survey

The Navy Water Quality Oversight Council (WQOC) conducts a comprehensive sanitary survey of the FLEACT Yokosuka drinking water systems every three years. This survey provides an evaluation of the adequacy of the drinking water source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water. In addition to sanitary surveys, PWD regularly conducts environmental audits to verify compliance. The next comprehensive sanitary survey will be conducted in August 2024. FLEACT Yokosuka is continually improving the drinking water system based on recommendations in the report.

Surface Water Treatment Rule (SWTR)

CNIC Instruction 5090.1B, Navy ODW Program Ashore policy document, 15 March 2021 and CNIC M-5090.1A, Navy ODW Program Ashore Manual, 15 March 2021 adopted the U.S. Environmental Protection Agency (EPA) SWTR. However, in situations where the U.S. Government has no control of the off-base water treatment systems that supply water to Navy installations overseas, full compliance with U.S. EPA SWTR for Navy ODW systems is not always feasible.
CNIC issued the Navy ODW Program Ashore Manual, which provided alternative SWTR compliance requirements for overseas installations. CNIC has acknowledged that alternative compliance in lieu of full U.S. EPA SWTR compliance could provide a similar level of protection of human health. An initial compliance assessment was developed in 2021, which provided a pathway for alternative compliance, if information on source monitoring and treatment processes is available. In 2024 an engineering site-specific case study for compliance will be conducted to identify and evaluate SWTR compliance gaps. The case study will consist of inspections and interviews with local waterworks authorities to evaluate water treatment methods. If any compliance gaps are determined, FLEACT Yokosuka will implement corrective actions to mitigate any public health risks, as required. A final report will be provided to Water Quality Oversight Council (WQOC) for concurrence with SWTR requirements. SWTR compliance will be reviewed and confirmed with each future sanitary survey at FLEACT Yokosuka.

Important Health Information

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 healthcare providers. U.S. EPA and 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 at 1-800-426-4791.

Possible Source Contaminants

Drinking water, including bottled water, may reasonably be expected to contain trace 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 EPA Safe Drinking Water Hotline at 1-800-426-4791 or visiting the EPA website at https://www.epa.gov/dwstandardsregulations/drinking-water-contaminant-human-health-effects-information

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. It can also pick up other contaminants resulting from the presence of animals or human activity. 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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming.
- **Pesticides and herbicides**, which 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, which are byproducts of industrial processes and petroleum production. They can also come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA and JEGS prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in US-sourced bottled water which must provide the same protection for public health.

EPA established a three-tier public notification plan for drinking water, summarized in **Table 1**. FLEACT Yokosuka follows this outline to ensure you are notified in a timely manner, when necessary.

Table 1: Three Tiers of Public Notification*		
	Required Distribution Time	Distribution Method
Tier 1: Immediate Notice	Any time a situation occurs where there is the potential for human health to be immediately impacted, water suppliers have 24 hours to notify people who may drink the water of the situation	All Hands E-mail message and Facebook post
Tier 2: Notice as Soon as Possible	Any time a water system provides water with levels of a contaminant that exceed EPA or state standards or that hasn't been treated properly, but that does not pose an immediate risk to human health, the water system must notify its customers as soon as possible, but within 30 days of the violation	All Hands E-mail message and Facebook post
Tier 3: Annual Notice	When water systems violate a drinking water standard that does not have a direct impact on human health (for example, failing to take a required sample on time), the water supplier has up to a year to provide a notice of this situation to its customers	Published annually in this document, the Consumer Confidence Report

*Definitions from EPA website.
See http://water.epa.gov/lawsregs/rulesregs/sdwa/publicnotification/basicinformation.cfm for more information.

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. When your water has been sitting for several hours, you can further minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using the water for drinking or cooking. Drinking water samples are collected from consumer taps, including family housing units, to analyze for lead every three years. FLEACT Yokosuka lead sampling results meet the requirements for drinking water set forth in the JEGS and the EPA Lead and Copper Rule. 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

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). In March 2019, the WQOC issued a new LIPA policy that lowered the lead screening level from 20 parts per billion (ppb) to 15 ppb. Effective April 2019, the policy required corrective actions for any outlets that previously tested greater than 15 ppb.

In 2020, the U.S. EPA required, for the first time, testing for lead in drinking water in schools and daycare centers. Navy leadership has adopted the U.S. EPA guidelines for sampling and testing for lead in schools and childcare facilities as policy. This proactive approach to the identification and elimination of potential sources of lead in facilities that cater to children shows our commitment to the safety and well-being of our Navy families. FLEACT Yokosuka samples all drinking water faucets for Lead in Priority Areas every five years in an effort to reduce children's potential exposure, as required by Navy policy.

In May 2022, LIPA sampling was conducted at Ikego Housing Area facilities including Ikego Elementary School, Ikego CDC, Ikego Youth Center and the Ikego School Age Care Center. Five year sampling was

conducted at Yokosuka Main Base priority area facilities including Sullivans Elementary (March 2023), Yokosuka Middle School (February 2023) and Kinnick High School (February 2023). In April 2023 sampling was conducted at Gridley CDC, Duncan CDC, Yokosuka School Age Care Centers and the Youth Sports Center. All corrective actions have been completed and results are below the 15 ppb lead screening level. Results are available on the CNIC website:

https://cnrj.cnic.navy.mil/Operations-and-Management/Water-Quality-Information/Lead-in-Priority-Area-Sampling-Program/

STEPS TO IMPROVE WATER QUALITY AND MINIMIZE POTENTIAL LEAD EXPOSURE

1. FLUSH ALL DRINKING WATER OUTLETS.

Before using any water for drinking or cooking, flush the cold water faucet to remove stagnate water by allowing the water to run. Flushing can be a tool to improve water quality, especially after long holidays or weekends.

2. USE ONLY COLD WATER FOR COOKING AND DRINKING

Hot water dissolves lead more quickly than cold water and is therefore more likely to contain greater amounts of lead. If hot water is needed, it should be taken from the cold water faucet and heated on a stove or in a microwave oven

3. CLEAN DEBRIS OUT OF ALL WATER OUTLET SCREENS ON A REGULAR BASIS.

Small screens on the end of a faucet (aerators) can trap sediment containing lead.

Faucet Aerator

4. MAINTAIN POINT OF USE FILTER

Follow the manufacturer's instructions for filter use and replacement.

Per- and Polyfluoralkyl Substances

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) used for fighting petroleum fires at airfields and in industrial fire suppression systems. 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 10, 2024, the U.S. EPA established maximum contaminant level (MCLs) for a subset of PFAS chemicals. EPA requires implementation of sampling in accordance with the new MCLs within three years of the publication date and implementation of any required treatment within five years.

These limits did not apply for the 2023 calendar year because they had not been published. However, the DoD proactively promulgated policies to monitor drinking water for PFAS at all service owned and operated water systems at a minimum of every two years. The DoD policy states that if water sampling results confirm that drinking water contains PFOA and/or PFOS (two individual types of PFAS) at individual or combined concentrations greater than the 2016 EPA health advisory (HA) level of 70 ppt, water systems must take immediate action to reduce exposure to PFOA and/or PFOS. For levels less than 70 ppt but above the 4 ppt level (draft limit at the time of policy publication), DoD committed to planning for implementation of the levels once EPA's published MCLs take effect.

Has FLEACT Yokosuka tested its water for PFAS in 2023?

Yes. In November 2023, samples were collected from Main Base (Bldg. C3), Ikego Housing Area (Bldg. 657), Hakozaki (Bldg. 8600378), FMC (Bldg. 106), Tsurumi OU1 (Bldg. 33), and Urago (Bldg. 8700800).

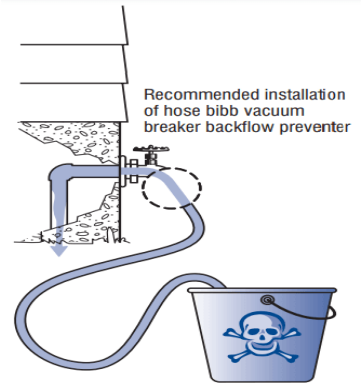
Was PFAS detected, but below the new PFAS MCLs?

Zero (0) of the 29 PFAS compounds covered by the sampling method were detected above the method reporting limit (MRL). The results are provided in **Table 2.** EPA does not have a HA or MCL for all of these compounds at this time. Gen X was not detected. PFOA, PFOS, PFNA, PFHxS and PFBS were detected but below the new MCL. As the regulated chemicals were below the new MCLs, there is no immediate cause for concern, but we will continue to monitor the drinking water closely.

Cross-connection and Backflow Prevention

Did you know that any connection between a public drinking water system and a separate source of questionable quality is considered a cross-connection?

For example, an ordinary garden hose submerged in a bucket of water, car radiator, or swimming pool can result in backflow contamination. To protect our water supply, a simple screw-on vacuum breaker must always be attached to the faucet when a garden hose is used.



VACUUM BREAKER

Analyte Name (Method 533)	MRL (ppt)	EPA MCL (ppt)	Table 2: CFAY PFAS Results (ppt)					
			Main Base Bldg. C3	**Ikego** Bldg. 657	**Hakozaki** Bldg. 8600378	**FMC** Bldg. 106	**Tsurumi OU1** Bldg. 33	**Urago** Bldg. 8700800
1. 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	5	-	ND	ND	ND	ND	ND	ND
2. 1H, 1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	3	-	ND	ND	ND	ND	ND	ND
3. 1H, 1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	5	-	ND	ND	ND	ND	ND	ND
4. 1H, 1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	5	-	ND	ND	ND	ND	ND	ND
5. 9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	2	-	ND	ND	ND	ND	ND	ND
6. 4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	3	-	ND	ND	ND	ND	ND	ND
7. Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	5	10	ND	ND	ND	ND	ND	ND
8. Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	20	-	**0.35**	ND	ND	ND	ND	ND
9. Perfluorobutanesulfonic acid (PFBS)	3	-	ND	**0.96**	ND	ND	ND	ND
10. Perfluorodecanoic acid (PFDA)	3	-	ND	ND	ND	ND	ND	ND
11. Perfluorohexanoic acid (PFHxA)	3	-	**1**	**0.98**	**0.94**	**0.84**	ND	**1**
12. Perfluorobutanoic acid (PFBA)	5	-	**2**	**2.4**	**2.0**	**2.0**	ND	**2.3**
13. Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	3	-	ND	ND	ND	ND	ND	ND
14. Perfluoroheptane sulfonic acid (PFHpS)	3	-	ND	ND	ND	ND	ND	ND
15. Perfluoro-4-methoxybutanoic acid (PFMBA)	3	-	ND	ND	ND	ND	ND	ND
16. Perfluoro-3-methoxypropanoic acid (PFMPA)	4	-	ND	ND	ND	ND	ND	ND
17. Perfluoropentanoic acid (PFPeA)	3	-	**0.94**	**1**	**0.92**	**0.94**	ND	**1.1**
18. Perfluoropentanesulfonic acid (PFPeS)	4	-	ND	ND	ND	ND	ND	ND
19. Perfluorododecanoic acid (PFDoA)	3	-	ND	ND	ND	ND	ND	ND
20. Perfluoroheptanoic acid (PFHpA)	3	-	**0.64**	**0.67**	**0.75**	**0.71**	ND	**0.6**
21. Perfluorohexane sulfonic acid (PFHxS)	3	10	**1.2**	**1.3**	**1.6**	**0.56**	ND	**1.4**
22. Perfluorononanoic acid (PFNA)	4	10	**0.87**	**0.73**	**0.84**	**0.96**	ND	**0.98**
23. Perfluorooctane sulfonic acid (PFOS)	4	4	**2.8**	**2.4**	**2.3**	**1.7**	ND	**2.6**
24. Perfluoro-octanoic acid (PFOA)	4	4	**1.7**	**1.9**	**2**	**1.8**	ND	**1.9**
25. Perfluoroundecanoic acid (PFUnDA)	2	-	ND	ND	ND	ND	ND	ND
26. N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5	-	ND	ND	ND	ND	ND	ND
27. N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	6	-	ND	ND	ND	ND	ND	ND
28. perfluorotetradecanoic acid (PFTA)	8	-	ND	ND	ND	ND	ND	ND
29. perfluorotridecanoic acid (PFTrDA)	7		ND	ND	ND	ND	ND	ND

Drinking Water Monitoring

FLEACT Yokosuka uses Japanese and U.S. EPA approved laboratory methods to analyze and monitor drinking water. **Table 3** lists the contaminants and required sampling frequency.

Table 3: Monitoring Frequency						
Constituent	**Main Base**	**Ikego**	**Hakozaki**	**Tsurumi**	**FMC**	**Urago**
pH, Residual Chlorine, Turbidity	Hourly	Hourly	Monthly	Hourly	Hourly	Monthly
Total Coliform	Monthly					
Fluoride	Daily/Monthly[1]		N/A			
Disinfection Byproducts	Quarterly		Annually			
Lead and Copper	Triennial					
Inorganic Chemicals	Annually / Quarterly[2]					
Toluene (Increase monitoring)	Quarterly					N/A
Volatile Organic Compounds	Annually					
Synthetic Organic Compounds	Once every 3 years					
Radionuclides	Once every 4 years		N/A			
Asbestos	Once every 9 years					
PFAS	Once Every 2 Years[3]					

Notes:

1. Fluoride is analyzed and collected on a monthly basis in conjunction with bacteriological (Total Coliform) samples.
2. Surface water baseline monitoring frequency for Total Nitrate/Nitrite.
3. PFAS sampling conducted in 2022 (Method 573.1) and in 2023 (Method 533). Next sampling (Method 533 and 537.1) scheduled October 2024.

Water Quality Data

FLEACT Yokosuka conducts extensive monitoring to ensure your water meets all water quality standards. The results of the monitoring are reported on the following tables:

Table 4: Constituents Detected in 2023 (Yokosuka Main Base)
Table 5: Constituents Detected in 2023 (Ikego Housing Area)
Table 6: Constituents Detected in 2023 (Hakozaki)
Table 7: Constituents Detected in 2023 (Tsurumi)
Table 8: Constituents Detected in 2023 (FMC)
Table 9: Constituents Detected in 2023 (Urago)

The tables only list the results of constituents detected. The presence of a contaminant does not necessarily indicate the water poses a health risk. As such, FLEACT Yokosuka's drinking water is safe and fit for human consumption.

Table 4: Constituents Detected in 2023 (Yokosuka Main Base)							
Contaminant	**Unit of Measurement**	**Level Detected**		**Standard**		**Violation**	**Typical Source**
		Low	**High**	**Ideal Goal (MCLG or MRDLG)**	**Highest Level Allowed (MCL, TT, or MRDL)**		
DISINFECTANTS & DISINFECTION BY-PRODUCTS							
Residual Chlorine	ppm	0.18	1.1	4	4[1]	No[2]	Disinfectant water additive to control microbes
Haloacetic Acids (HAA5)	ppb	9.1	19	N/A	60	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs)	ppb	12	42	N/A	80	No	By-product of drinking water disinfection
INORGANIC CHEMICALS							
Barium	ppm	ND	0.0025	N/A	2.0	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	ppm	ND	0.79	4	4	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	ppm	0.91	1.1	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium	ppm	7.6	8.1	N/A	N/A	No	Erosion of natural deposits; Leaching

Notes:

1. Residual Chlorine - Maximum Residual Disinfectant Level.
2. Chlorine residual should be maintained to ensure against bacteriological growth in the distribution system. No bacteria has ever been detected in the drinking water.

Contaminant	**Ideal Goal (MCLG)**	**Action Level (AL)**	**90th percentile**	**Sample Date**	**# Samples Exceeding AL**	**Exceeds AL**	**Typical Source**
Copper (ppm)[3]	1.3	1.3	0.022	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)[3]	0	15	2.4	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Notes:

3. Lead and Copper (LCR) is conducted Triennial (every 3 years).

Table 5: Constituents Detected in 2023 (Ikego Housing Area)							
Contaminant	**Unit of Measurement**	**Level Detected**		**Standard**		**Violation**	**Typical Source**
		Low	**High**	**Ideal Goal (MCLG or MRDLG)**	**Highest Level Allowed (MCL, TT, or MRDL)**		
DISINFECTANTS & DISINFECTION BY-PRODUCTS							
Residual Chlorine	ppm	0.3	0.76	4	4[1]	No[2]	Disinfectant water additive to control microbes
Haloacetic Acids (HAA5)	ppb	9.4	19	N/A	60	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs)	ppb	11	23	N/A	80	No	By-product of drinking water disinfection
INORGANIC CHEMICALS							
Barium	ppm	N/A[3]	0.0023	N/A	2.0	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	ppm	0.67	0.86	4	4	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	ppm	0.94	1	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium	ppm	N/A[3]	8.2	N/A	N/A	No	Erosion of natural deposits; Leaching

Notes:

1. Residual Chlorine - Maximum Residual Disinfectant Level.
2. Chlorine residual should be maintained to ensure against bacteriological growth in the distribution system. No bacteria has ever been detected in the drinking water.
3. A single sample was used to determine compliance and no range is reported.

Contaminant	**Ideal Goal (MCLG)**	**Action Level (AL)**	**90th percentile**	**Sample Date**	**# Samples Exceeding AL**	**Exceeds AL**	**Typical Source**
Copper (ppm)[4]	1.3	1.3	0.015	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)[4]	0	15	0	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Notes:

4. Lead and Copper (LCR) is conducted Triennial (every 3 years).

Table 6: Constituents Detected in 2023 (Hakozaki Fuel Terminal)							
Contaminant	**Unit of Measurement**	**Level Detected**		**Standard**		**Violation**	**Typical Source**
		Low	**High**	**Ideal Goal (MCLG or MRDLG)**	**Highest Level Allowed (MCL, TT, or MRDL)**		
DISINFECTANTS & DISINFECTION BY-PRODUCTS							
Residual Chlorine	ppm	0.3	0.66	4	4[1]	No[2]	Disinfectant water additive to control microbes
Haloacetic Acids (HAA5)	ppb	NA[3]	12	N/A	60	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs)	ppb	NA[3]	27	N/A	80	No	By-product of drinking water disinfection
INORGANIC CHEMICALS							
Barium	ppm	NA[3]	0.0023	N/A	2.0	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	ppm	NA[3]	0.069	4	4	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	ppm	0.91	1.1	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium	ppm	NA[3]	7.7	N/A	N/A	No	Erosion of natural deposits; Leaching

Notes:

1. Residual Chlorine - Maximum Residual Disinfectant Level.
2. Chlorine residual should be maintained to ensure against bacteriological growth in the distribution system. No bacteria has ever been detected in the drinking water.
3. A single sample was used to determine compliance and no range is reported.

Contaminant	**Ideal Goal (MCLG)**	**Action Level (AL)**	**90th percentile**	**Sample Date**	**# Samples Exceeding AL**	**Exceeds AL**	**Typical Source**
Copper (ppm)[4]	1.3	1.3	0.006	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)[4]	0	15	0.9	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Notes:

4. Lead and Copper (LCR) is conducted Triennial (every 3 years).

Table 7: Constituents Detected in 2023 (Tsurumi OU-1 & 2)							
Contaminant	**Unit of Measurement**	**Level Detected**		**Standard**		**Violation**	**Typical Source**
		Low	**High**	**Ideal Goal (MCLG or MRDLG)**	**Highest Level Allowed (MCL, TT, or MRDL)**		
DISINFECTANTS & DISINFECTION BY-PRODUCTS							
Residual Chlorine	ppm	0.34	0.80	4	4[1]	No[2]	Disinfectant water additive to control microbes
Haloacetic Acids (HAA5)	ppb	NA[3]	14	N/A	60	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs)	ppb	NA[3]	26	N/A	80	No	By-product of drinking water disinfection
INORGANIC CHEMICALS							
Fluoride	ppm	NA[3]	0.072	4	4	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	ppm	0.92	1.1	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium	ppm	NA[3]	7.6	N/A	N/A	No	Erosion of natural deposits; Leaching

Notes:

1. Residual Chlorine - Maximum Residual Disinfectant Level.
2. Chlorine residual should be maintained to ensure against bacteriological growth in the distribution system. No bacteria has ever been detected in the drinking water.
3. A single sample was used to determine compliance and no range is reported.

Contaminant	**Ideal Goal (MCLG)**	**Action Level (AL)**	**90th percentile**	**Sample Date**	**# Samples Exceeding AL**	**Exceeds AL**	**Typical Source**
Copper (ppm)[4]	1.3	1.3	0.036	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)[4]	0	15	1.3	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Notes:

4. Lead and Copper (LCR) is conducted Triennial (every 3 years).

Table 8: Constituents Detected in 2023 (FMC)							
Contaminant	**Unit of Measurement**	**Level Detected**		**Standard**		**Violation**	**Typical Source**
		Low	**High**	**Ideal Goal (MCLG or MRDLG)**	**Highest Level Allowed (MCL, TT, or MRDL)**		
DISINFECTANTS & DISINFECTION BY-PRODUCTS							
Residual Chlorine	ppm	0.57	0.67	4	4[1]	No[2]	Disinfectant water additive to control microbes
Haloacetic Acids (HAA5)	ppb	NA[3]	14	N/A	60	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs)	ppb	NA[3]	27	N/A	80	No	By-product of drinking water disinfection
INORGANIC CHEMICALS							
Barium	ppm	NA[3]	0.0025	N/A	2.0	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	ppm	NA[3]	0.079	4	4	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	ppm	0.85	1.1	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium	ppm	NA[3]	7.6	N/A	N/A	No	Erosion of natural deposits; Leaching
VOLATILE ORGANIC CHEMICALS							
Toluene	ppm	ND	0.00057	1	1	No	Discharge from petroleum factories

Notes:

1. Residual Chlorine - Maximum Residual Disinfectant Level.
2. Chlorine residual should be maintained to ensure against bacteriological growth in the distribution system. No bacteria has ever been detected in the drinking water.
3. A single sample was used to determine compliance and no range is reported.

Contaminant	**Ideal Goal (MCLG)**	**Action Level (AL)**	**90th percentile**	**Sample Date**	**# Samples Exceeding AL**	**Exceeds AL**	**Typical Source**
Copper (ppm)[4]	1.3	1.3	0.038	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)[4]	0	15	2.4	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Notes:

4. Lead and Copper (LCR) is conducted Triennial (every 3 years).

Table 9: Constituents Detected in 2023 (Urago Ordnance Storage Area)							
Contaminant	**Unit of Measurement**	**Level Detected**		**Standard**		**Violation**	**Typical Source**
		Low	**High**	**Ideal Goal (MCLG or MRDLG)**	**Highest Level Allowed (MCL, TT, or MRDL)**		
DISINFECTANTS & DISINFECTION BY-PRODUCTS							
Residual Chlorine	ppm	0.38	0.78	4	4[1]	No[2]	Disinfectant water additive to control microbes
Haloacetic Acids (HAA5)	ppb	NA[3]	18	N/A	60	No	By-product of drinking water chlorination
Total Trihalomethanes (TTHMs)	ppb	NA[3]	29	N/A	80	No	By-product of drinking water disinfection
INORGANIC CHEMICALS							
Barium	ppm	NA[3]	0.0026	N/A	2.0	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	ppm	NA[3]	0.071	4	4	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate	ppm	0.93	1	10	10	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium	ppm	NA[3]	7.7	N/A	N/A	No	Erosion of natural deposits; Leaching

Notes:

1. Residual Chlorine - Maximum Residual Disinfectant Level.
2. Chlorine residual should be maintained to ensure against bacteriological growth in the distribution system. No bacteria has ever been detected in the drinking water.
3. A single sample was used to determine compliance and no range is reported.

Contaminant	**Ideal Goal (MCLG)**	**Action Level (AL)**	**90th percentile**	**Sample Date**	**# Samples Exceeding AL**	**Exceeds AL**	**Typical Source**
Copper (ppm)[4]	1.3	1.3	0.057	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)[4]	0	15	3.6	2023	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

Notes:

4. Lead and Copper (LCR) is conducted Triennial (every 3 years).

Monitoring Violations

No violations to report.

Abbreviations and Definitions

AL: Action Level. The concentration of a contaminant in water that establishes the appropriate treatment for a water system. AL is based on a 90th percentile value.

MCL: Maximum Contaminant Level. The highest level of a contaminant allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal. The level of contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL: Maximum Residual Disinfectant Level. 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.

MRDLG: Maximum Residual Disinfection Level Goal. 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.

NA: Not Applicable.

ND: Not Detected.

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

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

ppt: parts per trillion ppt (ng/L).

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

90th percentile: Represents the highest value found out of 90 percent of the samples taken. If the 90th percentile value is greater than the AL, a treatment evaluation and/or mitigation actions must be conducted on the water system.

Point of Contact

For additional information or questions please contact FLEACT Yokosuka Public Affairs Office at CFAY-N00P-PublicAffairs@us.navy.mil or PWD Environmental at DSN 315-243-3814.