



Consumer Confidence Report 2020

Yokosuka Main Base Drinking Water System



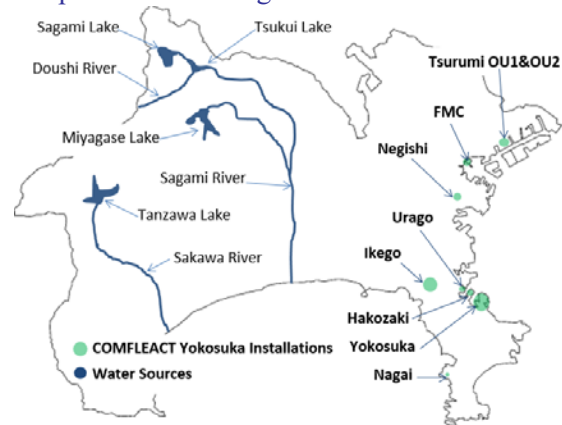
Commander, Fleet Activities Yokosuka

Issued in accordance with Commander, Navy Installations Command Instruction 5090.1B, N4, 15 Mar 2021.
This report reflects monitoring data collected in 2020 and will be updated annually.

The Navy is pleased to provide you with this annual Consumer Confidence Report (CCR) of the Drinking Water System that supports Yokosuka Main Base. This report provides information about the water delivered to Yokosuka Main Base in 2020. It describes where our water comes from, what it contains, and how it compares to standards for safe drinking water. The drinking water at Yokosuka is safe to drink. Our goal is, and always has been, to provide safe and dependable drinking water.

Source of Water

Drinking water at Yokosuka Main Base 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.



Water Distribution Systems

Commander, Fleet Activities (COMFLEACT) Yokosuka Public Works Department (PWD) operates the water distribution system servicing our area. In Yokosuka, purchased water is temporarily stored in tanks, and the water provided to the housing areas is fluoridated prior to distribution.

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 was adopted by Commander, Navy Installations Command (CNIC) Instruction 5090.1B and are the same standards used in the U.S. to ensure safe drinking water. COMFLEACT, Yokosuka is also required to meet all criteria established in the latest Japan Environmental Governing Standards (JEGS), intended to ensure 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 there is 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 COMFLEACT Yokosuka a Conditional Certificate To Operate (CTO) for its water systems. COMFLEACT Yokosuka is expected to receive a Full CTO when all significant deficiencies identified during the Sanitary Survey are corrected. All deficiencies have either been corrected or are in the process of implementing corrective actions.

Source Water Assessment

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, Public Works Department regularly conducts environmental audits to verify compliance. FLEACT Yokosuka is continually improving the drinking water system based on the recommendations in the report. The next comprehensive sanitary survey is scheduled for August 2021.

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 health care providers. U.S. Environmental Protection Agency (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.

Variance and Exemptions

U.S. Navy overseas drinking water (ODW) systems are required to use accredited laboratories that use U.S. Environmental Protection Agency (EPA) approved analytical methods. The Japanese contracted laboratory, which FLEACT Yokosuka used for Drinking water monitoring for coliform and nitrate/nitrite analyses was not accredited in accordance with WQOC policy. Instead of U.S. EPA method standards, the laboratory used equivalent Japanese methods to conduct analysis. In May 2020, the WQOC Laboratory authority granted a variance that the Japanese laboratory successfully demonstrates additional quality control measures into their analysis to meet U.S. EPA method standards. As of January 2021, the FLEACT Yokosuka Japanese contracted laboratory is accredited and has been validated in accordance with WQOC policy.

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>

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. 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, or 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 be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, USEPA and the 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.

The U.S. Environmental Protection Agency (EPA) established a three tier public notification plan for drinking water, which is summarized in Table 1 below. We follow this outline to ensure that you are notified in a timely manner if notifications are necessary.

Table 1. The 3 Tiers of Public Notification*		
	Required Distribution Time	Required Distribution Time
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.	Should a Tier 1 notification be necessary, we will notify you via an All Hands E-mail message and Facebook.
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 doesn't 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.	We will notify you of a Tier 2 concern through an All Hands E-mail message and Facebook.
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.	Tier 3 notifications are published annually in this document, the Consumer Confidence Report.

*Definitions taken 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 annually. 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

In an effort to reduce children's potential exposure to lead, priority areas facility's drinking water was tested to establish a baseline in 2014 to include all Department of Defense Schools, Child Development Centers and Youth Centers. All drinking water outlets are re-tested every five years or whenever outlets are added or replaced. In 2018, five year recurring sampling continued at Yokosuka Main Base and drinking water samples were collected from water outlets at all DoD schools and youth and child program facilities.

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 at 15 ppb or greater. Data from the last five-year recurring sampling at Yokosuka Main Base and Ikego Housing Area was reviewed to determine if outlets needed to be replaced. All drinking water outlets exceeding the EPA recommended screening level of 15 ppb were immediately taken out of service. Corrective actions are currently in progress for those outlets that do not meet the latest screening level. They will remain out of service until permanent corrective actions are complete and confirmation of lead level by follow up testing.

In 2020, initial LIPA sampling was conducted at the Community Readiness Center (Bldg.3365) and the newly constructed Child Development Center (Bldg. 4477). The latest test results are available at the following link:

https://www.cnrc.navy.mil/regions/cnrj/installations/cfa_yokosuka/om/environmental/water-quality-information/cfay-lead-in-priority-area-sampling-program.html.

Per- and Polyfluoroalkyl 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 United States, 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 processes because they rapidly extinguish fires, saving lives and protecting property. 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?

There is currently no established federal water quality regulation for any PFAS compounds. In May 2016, the EPA established a health advisory (HA) level at 70 parts per trillion (ppt) for individual or combined

concentrations of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). Both chemicals are types of PFAS.

Out of an abundance of caution for your safety, the Department of Defense’s (DoD) PFAS testing and response actions go beyond EPA Safe Drinking Water Act requirements. In 2020 the DoD promulgated a policy to obtain drinking water results for PFAS at all purchased water systems.

The EPA’s health advisory states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than 70 ppt, water systems should quickly undertake additional sampling to assess the level, scope, and localized source of contamination to inform next steps. Japan promulgated a water quality safety guideline of 50 ppt for PFAS in drinking water in April 2020 applicable to our host nation suppliers.

Has COMFLEACT Yokosuka tested its water for PFAS?

Yes. In November 2020 samples were collected from buildings C-3, J209, 1516.

We are informing you that 6 of the 18 PFAS compounds covered by the sampling method of the water provided by Yokosuka City Water Works were detected above the method reporting limit (MRL). PFOA and PFOS were below the EPA HA level. The results are provided in Table 2. As PFOA and PFOS were below the EPA HA, there is no immediate cause for concern.

Table 2: PFAS Results Constituent (ppt)	Health Advisory Level (HA)	Locations sampled on 11/30/2020		
		Bldg. C3	Bldg. J209	Bldg. 1516
1 Hexafluoropropylene oxide dimer acid (GenX)	NA	ND	ND	ND
2 N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	NA	ND	ND	ND
3 N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	NA	ND	ND	ND
4 Perfluoro-1-butane sulfonic acid (PFBS)	NA	0.39	0.43	0.44
5 Perfluoro-n-decanoic acid (PFDA)	NA	ND	ND	ND
6 Perfluoro-n-dodecanoic acid (PFDoA)	NA	ND	ND	ND
7 Perfluoro-n-heptanoic acid (PFHpA)	NA	0.66	0.63	0.7
8 Perfluorohexane sulfonic acid (PFHxS)	NA	1.3	1.7	1.5
9 Perfluoro-n-hexanoic acid (PFHxA)	NA	1.3	1.3	1.6
10 Perfluoro-n-nonanoic acid (PFNA)	NA	ND	ND	0.75
11 Perfluorooctane sulfonic acid (PFOS)	50	2.5	2.8	2.8
12 Perfluoro-n-octanoic acid (PFOA)	50	1.6	1.6	1.6
13 Perfluoro-n-tetradecanoic acid (PFTeDA)	NA	ND	ND	ND
14 Perfluoro-n-tridecanoic acid (PFTTrDA)	NA	ND	ND	ND
15 Perfluoro-n-undecanoic acid (PFUdA)	NA	ND	ND	ND
16 11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CL-PF3OUdS)	NA	ND	ND	ND
17 9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	NA	ND	ND	ND
18 4,8-dioxa-3H-perfluorononanoic acid (ADONA)	NA	ND	ND	ND

https://www.enic.navy.mil/om/base_support/environmental/water_quality/Testing_for_Perfluorochemicals.html

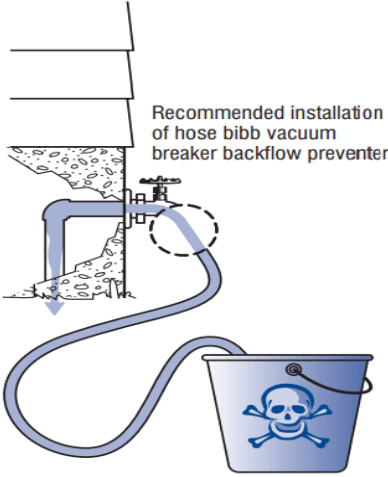
Drinking Water Monitoring

COMFLEACT, Yokosuka uses Japanese and EPA approved laboratory methods to analyze our drinking water, and monitors drinking water for the following constituents. Table 3 lists the contaminant and required sampling frequency.

Table 3: Monitoring Frequency	
Constituent	Frequency
pH, Residual Chlorine, Turbidity	Hourly
Fluoride	Daily/Monthly ¹
Total Coliform	Monthly
Disinfection Byproducts (Total Trihalomethanes and Haloacetic Acids)	Quarterly
Lead and Copper	Annually/Triennial ²
Inorganic Chemicals	Annually / Quarterly ³
Volatile Organic Compounds	Annually ⁴
Synthetic Organic Compounds	Once every 3 years
Radionuclides	Once every 4 years
Asbestos	Once every 9 years

Notes:


1. As of January 2021, Fluoride is analyzed and collected on a monthly basis in conjunction with bacteriological (Total Coliform) samples.
2. Lead and Copper monitoring frequency reduced from annually to once every 3 years.
3. Surface water baseline monitoring frequency for Total Nitrate/Nitrite.
4. Increased monitoring frequency for Toluene.



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

Water Quality Data

The following section lists constituents detected during the latest round of required sampling. Only those constituents detected are listed in Table 4. The presence of a contaminant does not necessarily indicate the water poses a health risk. As such, Yokosuka Main Base's drinking water is safe and fit for human consumption.

Table 4: Constituents Detected							
Contaminants	MCLG or MRDL G	MCL, TT, or MRDL	Range		Sample Date	Violation	Typical Source
			Low	High			
Disinfectants & Disinfection By-Products							
Residual Chlorine (ppm)	4	4 ¹	0.14	0.83	2020	No ²	Disinfectant water additive to control microbes
Haloacetic Acids (HAA5) (ppb)	NA	60	8.6	19.0	2020	No	By-product of drinking water chlorination
TTHMs (Total Trihalomethanes) (ppb)	NA	80	12	42	2020	No	By-product of drinking water disinfection
Inorganic Contaminants							
Fluoride (ppm)	4	4	0.2	0.74	2020	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] (ppm)	10	10	0.84	1	2020	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm)	NA	NA	6.5	7.4	2020	No	Erosion of natural deposits; Leaching
Volatile Organic Contaminants							
Toluene (ppm)	1	1	ND	0.00037	2020	No	Discharge from petroleum factories
Microbiological contaminants							
Total coliform	0	More than one positive	Negative	Positive	2020	No ³	Naturally present in the environment
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. One (1) of our samples showed the presence of total coliform bacteria in September 2020. The standard is that no more than one (1) sample per month may do so. Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed, and this was a warning of potential problems. Public Works Department completed follow-up testing to see if other bacteria of greater concern, such as fecal coliform or E. coli, are present. We did not find any of these bacteria in our subsequent testing confirming the problem has been resolved.							
Contaminants	MCLG	AL	90 th percentile	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Inorganic Contaminants							
Copper (ppm)	1.3	1.3	0.061	2020	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	0	15	3.8	2020	1	No	Corrosion of household plumbing systems; Erosion of natural deposits

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.

Monitoring Violations

This section provides the Tier 3 notification in accordance with EPA procedures. Tier 3 notifications do not have an impact on human health but are required by the EPA (See Table 1).

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. Prior to June 2020 we monitored Nitrate and Nitrite annually instead of quarterly. Although the results of annual monitoring were below the Maximum Contaminant Level (MCL), we cannot be sure of the quality of your drinking water during each quarter.

On 29 June 2020, we began monitoring Nitrate and Nitrite on a quarterly basis. There were no exceedances and all results were below the MCL. Our drinking water monitoring schedule and plans have been updated to include the correct monitoring frequency requirements.

Point of Contact

Contact PWD Environmental for additional information or questions:
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