**DEPARTMENT OF THE NAVY**
NAVAL FACILITIES ENGINEERING COMMAND, HAWAII
400 MARSHALL ROAD
JBPHH, HAWAII 96860-3139

5090
Ser EV1/00355
June 19, 2019

Ms. Molly Koerperich
Community Director
Ohana Military Communities
P.O. Box 63041
Kaneohe, HI 96863

Dear Ms. Koerperich:

SUBJECT: 2019 DRINKING WATER CONSUMER CONFIDENCE REPORT

In September 1998, the U.S. Environmental Protection Agency established the Consumer Confidence Report (CCR) Rule requiring owners of community water systems to deliver an annual water quality report to their customers by July 1st of each year.

In order to reach all customers, we request your assistance to disseminate the report to housing tenants in your area of responsibility. Digital copies of the water quality report for the Joint Base Pearl Harbor-Hickam (JBPHH) Water System, which supplies the drinking water to the Camp Smith and Manana housing areas, are now available online. This notice of availability should be posted with a copy of the water quality report in a conspicuous location(s) for all occupants to view.

Electronic versions of the CCRs are posted on our following water quality web pages:

Navy Region Hawaii:
https://www.cnic.navy.mil/regions/cnrh/om/environmental/water_quality_information.html

NAVFAC Hawaii:
https://www.navfac.navy.mil/navfac_worldwide/pacific/fecs/hawaii/about_us/hawaii_documents/Reports/2019_water_quality_reports.html

A direct link to the 2019 JBPHH Water System CCR is:

https://www.cnic.navy.mil/content/dam/cnic/cnrh/pdfs/om/water_quality_reports/2019_JBPHH_WQRpt_Final-June2019.pdf

Should you have any questions, or would like to request hard copies of the 2019 Navy Water Quality Report, please call the Naval Facilities Engineering Command, Hawaii, Public Affairs Office at (808) 471-7300.

Sincerely,

M. R. DELAO
Captain, CEC, U.S. Navy
Commanding Officer

2019 Annual

# Water Quality Report

## Joint Base Pearl Harbor-Hickam Water System

*(Waiawa, Halawa & Red Hill Sources)*

**This report meets federal and state requirements for Consumer Confidence Reports. This report is updated annually and reflects monitoring data collected up to Dec. 31, 2018.**

**The Navy is pleased to provide you with this year's annual Water Quality Report for the Joint Base Pearl Harbor-Hickam Water System.**

**This pamphlet provides information about the water that has been delivered to you over the past year. It describes where your water comes from, what it contains, and how it compares to standards for safe drinking water.**

**Our goal is, and always has been, to provide you safe and dependable drinking water.**

### Water Provider

The Naval Facilities Engineering Command (NAVFAC) Hawaii owns and operates the water system servicing your area. As the Navy water provider in the state, NAVFAC Hawaii primarily supplies water to military housing and installations.

### Drinking Water Standards

The Environmental Protection Agency (EPA) and State of Hawaii regulations require us to test your water for contaminants on a regular basis, making sure it is safe to drink, and to report our results accordingly.

To ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration does the same for bottled water.

In the latest compliance monitoring period, we conducted tests for over 70 contaminants that have potential for being found in your drinking water. Tables 1-1, 1-2, 1-3, 1-4, 1-5, 1-6, 1-7, and 1-8, show the levels of concentrations of regulated contaminants found in your water. In all cases, the levels measured met both EPA and State requirements for safe drinking water.

We are continually working to protect your drinking water from contaminants. The State of Hawaii's Department of Health completed the Source Water Assessment in 2004. This document identifies the susceptibility of your water supply to contamination. The source water assessment is available for review by contacting NAVFAC Hawaii, Public Affairs, at 808-471-7300.

### Source of Water

Your drinking water comes from three ground water sources: Waiawa, Halawa, and Red Hill. Ground water is naturally filtered as it travels from the surface to the aquifer below ground. The water is pumped up from the aquifer, disinfected, fluoridated, and piped into the distribution system.

For a limited time during 2018:

- The Radford Terrace Eastern Housing area was supplemented with water from the Honolulu Board of Water Supply's (BWS) Kalauao Wells and Punanani Wells.
- The Manana housing area was supplemented with water from the Honolulu Board of Water Supply's (BWS) Pearl City Shaft and Well 1.

### Possible Source of Contaminants

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. It can also pick up other substances resulting from the presence of animals or human activity. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

## Potential Contaminants

**Contaminants that may be present in your 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 by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

**Radionuclide contaminants** – which can be naturally-occurring or be the result of oil and gas production and mining activities.

**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. NAVFAC Hawaii is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at: ***http://www.epa.gov/safewater/lead.***

## Navy Water Requirements

**In accordance with Navy policy, we add chlorine and fluoride to your water supply. These items are added to your drinking water after it is pumped from the ground. We try to maintain the Navy's recommended concentration of approximately 0.7 ppm for fluoride and 0.2 ppm for chlorine throughout the distribution system.**

## 2018 Voluntary Testing - Red Hill Shaft

**In January 2014, a fuel release from Tank #5 at the Red Hill Underground Fuel Storage Facility was reported. As a proactive measure, we have been conducting testing at the Red Hill Drinking Water Shaft above what is required by regulation for several years. Table 1-8 shows the levels of concentrations that were detected at the Red Hill Drinking Water Shaft and groundwater monitoring well for 2018. All concentrations are below applicable EPA and State regulatory and action levels. We continue to conduct this voluntary testing and our data will be included in future Water Quality Reports.**

## 2018 Violations

**The Navy violated the Stage 2 Disinfectants and Disinfection Byproducts Rule in 2018. Sampling for Total Trihalomethanes (TTHM) and Total Haloacetic Acids (HAA5) was not conducted during the specified month of February 2018.**

**Two (2) makeup samples were collected in March 2018. In May 2018, four (4) samples were also tested in accordance with drinking water monitoring requirements. Results from the March and May 2018 samples met drinking water standards and are consistent with prior year's results. A public notice was sent to JBPHH Water System customers and tenant commands in September 2018.**

## Concerns / Additional Copies

**NAVFAC Hawaii does not have routine meetings about the water system. For questions, information about the water system, or additional copies, please contact the NAVFAC Hawaii Public Affairs (808-471-7300).**

***Please share this information with all other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, schools, and businesses).***

## Owner of Water System

**Naval Facilities Engineering Command, Hawaii**
**400 Marshall Road, JBPHH HI 96860-3139**

**June 2019**

# Water Quality Data Table

**The following tables list contaminants which were detected during the latest round of sampling required by EPA and State of Hawaii regulations. The water samples were collected from either the source water or distribution system and analyzed by the State, BWS and/or NAVFAC Hawaii. The presence of contaminants does not necessarily indicate that the water poses a health risk. You may obtain more information about contaminants and potential health effects by calling the EPA's Safe Drinking Water Hotline 1-800-426-4791 or the State of Hawaii's Department of Health at 808-586-4258.**

**Contaminants in the Navy's Source Water** **Table 1-1**

| Contaminants (units) | MCL (Allowed) | MCLG (Goal) | Highest Level Detected | Range of Detection | Year of Sample | Typical Sources of Contaminants | Violation |
|---|---|---|---|---|---|---|---|
| **Inorganic Contaminants** | | | | | | | |
| Barium (ppm) | 2 | 2 | 0.02 | nd – 0.02 | 2017[1] | Erosion of natural deposits | No |
| Chromium (total) (ppb) | 100 | 100 | 2.1 | nd – 2.1 | 2017[1] | Naturally-occurring | No |
| Fluoride (ppm) | 4 | 4 | 0.87 | nd – 0.87 | 2018 | Erosion of natural deposits; water additive which promotes strong teeth | No |
| Nitrate (ppm) | 10 | 10 | 1.8 | 0.55 – 1.8 | 2018 | Runoff from fertilizer use; Erosion of natural deposits | No |
| **Organic Contaminants** | | | | | | | |
| Chlordane (ppb) | 2 | 0 | 0.36 | nd – 0.36 | 2017[1] | Residue of banned termiticide | No |
| Heptachlor epoxide (ppt) | 200 | 0 | 20 | nd – 20 | 2017[1] | Breakdown of heptachlor (banned pesticide) | No |
| **Unregulated Contaminants**[2] | | | | | | | |
| 1,4-dioxane (ppb) | n/a | n/a | 0.35 | nd – 0.35 | 2013[1] | Synthetic industrial chemical | n/a |
| Bromide (ppb) | n/a | n/a | 765 | 124 - 765 | 2018 | Naturally-occurring | n/a |
| Chlorate (ppb) | n/a | n/a | 37 | nd - 37 | 2013[1] | Byproduct of drinking water disinfection | n/a |
| Chloride (ppm) | 250[3] | n/a | 230 | 10 - 230 | 2018 | Naturally-occurring | n/a |
| Chromium-6 (ppb) | n/a | n/a | 2.3 | 0.93 – 2.3 | 2013[1] | Naturally-occurring | n/a |
| Dieldrin (ppb) | n/a | n/a | 0.05 | nd – 0.05 | 2017[1] | Residue of banned insecticide | n/a |
| Manganese (ppb) | n/a | n/a | 1.20 | nd – 1.20 | 2018 | Naturally-occurring | n/a |
| Sodium (ppm) | n/a | n/a | 124 | 26 – 124 | 2017[1] | Naturally-occurring | n/a |
| Strontium (ppb) | n/a | n/a | 260 | 40 - 260 | 2013[1] | Naturally-occurring | n/a |
| Sulfate (ppm) | 250[3] | n/a | 47 | nd - 47 | 2018 | Naturally-occurring | n/a |
| Vanadium (ppb) | n/a | n/a | 32 | 14 – 32 | 2013[1] | Naturally-occurring | n/a |

**Contaminants in the BWS' Source Water (serving Radford Terrace)** **Table 1-2**

| Contaminants (units) | MCL (Allowed) | MCLG (Goal) | Highest Average | Range of Detection | Year of Sample | Typical Sources of Contaminants | Violation |
|---|---|---|---|---|---|---|---|
| **Regulated Contaminants** | | | | | | | |
| Barium (ppm) | 2 | 2 | 0.011 | 0.009 – 0.011 | 2017 | Erosion of natural deposits | No |
| Chromium (ppb) | 100 | 100 | 1.5 | 1.1 – 1.6 | 2017 | Naturally-occurring | No |
| Fluoride (ppm) | 4 | 4 | 0.059 | 0.059 – 0.059 | 2017 | Erosion of natural deposits; water additive which promotes strong teeth | No |
| Nitrate (ppm) | 10 | 10 | 0.48 | 0.38 – 0.48 | 2018 | Runoff from fertilizer use; Erosion of natural deposits | No |
| **Unregulated Contaminants**[2] | | | | | | | |
| Chlorate (ppb) | n/a | n/a | 40 | 37 – 40 | 2017 | Byproduct of the disinfection process | n/a |
| Chloride (ppm) | 250[3] | n/a | 120 | 86 - 120 | 2018 | Naturally-occurring | n/a |
| Chromium, hexavalent (ppb) | n/a | n/a | 1.5 | 1.3 – 1.5 | 2017 | Naturally-occurring | n/a |
| Manganese (ppb) | n/a | n/a | 0.64 | 0.47 – 0.81 | 2018 | Naturally-occurring | n/a |
| Sodium (ppm) | n/a | n/a | 34 | 33 – 34 | 2017 | Naturally-occurring | n/a |
| Strontium (ppb) | n/a | n/a | 140 | 140 – 140 | 2017 | Naturally-occurring | n/a |
| Sulfate (ppm) | 250[3] | n/a | 15 | 11 - 15 | 2018 | Naturally-occurring | n/a |
| Vanadium (ppb) | n/a | n/a | 12 | 10 – 12 | 2017 | Naturally-occurring | n/a |

**Contaminants in the BWS' Source Water (serving Manana Housing)** **Table 1-3**

| Contaminants (units) | MCL (Allowed) | MCLG (Goal) | Highest Average | Range of Detection | Year of Sample | Typical Sources of Contaminants | Violation |
|---|---|---|---|---|---|---|---|
| **Regulated Contaminants** | | | | | | | |
| 1,2,3-Trichloropropane (ppb) | 0.6 | 0 | 0.050 | 0.048 – 0.056 | 2018 | Fumigant previously used in agriculture. | No |
| Barium (ppm) | 2 | 2 | 0.004 | 0.004 – 0.004 | 2017 | Erosion of natural deposits | No |
| Chromium (ppb) | 100 | 100 | 1.350 | 1.2 – 1.5 | 2017 | Naturally-occurring | No |
| Fluoride (ppm) | 4 | 4 | 0.067 | 0.058 – 0.067 | 2018 | Erosion of natural deposits; water additive which promotes strong teeth | No |
| Nitrate (ppm) | 10 | 10 | 0.860 | 0.660 – 0.860 | 2018 | Runoff from fertilizer use; Erosion of natural deposits | No |
| **Unregulated Contaminants**[2] | | | | | | | |
| Chlorate (ppb) | n/a | n/a | 33 | 22 – 33 | 2017 | Byproduct of the disinfection process | n/a |
| Chloride (ppm) | 250[3] | n/a | 61 | 37 - 61 | 2018 | Naturally-occurring | n/a |
| Chromium, hexavalent (ppb) | n/a | n/a | 1.3 | 1.2 – 1.3 | 2017 | Naturally-occurring | n/a |
| Dieldrin (ppb) | n/a | n/a | 0.003 | nd – 0.012 | 2018 | Residue of banned pesticide | n/a |
| Sodium (ppm) | n/a | n/a | 40 | 40 - 40 | 2017 | Naturally-occurring | n/a |
| Strontium (ppb) | n/a | n/a | 85 | 58 – 85 | 2017 | Naturally-occurring | n/a |
| Sulfate (ppm) | 250[3] | n/a | 12 | 8.6 - 12 | 2018 | Naturally-occurring | n/a |
| Vanadium (ppb) | n/a | n/a | 15 | 14 – 15 | 2017 | Naturally-occurring | n/a |

**Contaminants in the Distribution System** **Table 1-4**

| Contaminants (units) | MCL (Allowed) | MCLG (Goal) | Highest Level Detected | Range of Detection | Year of Sample | Typical Sources of Contaminants | Violation |
|---|---|---|---|---|---|---|---|
| Copper (ppm) | AL = 1.3 | 1.3 | 0.09[4] | 0[5] | 2016[1] | Corrosion of household plumbing systems; erosion of natural deposits | No |
| Fluoride (ppm) | 4 | 4 | 1.2 | nd – 1.2 | 2018 | Erosion of natural deposits; water additive which promotes strong teeth | No |

**Microbial Contaminants** **Table 1-5**

| Contaminants (units) | MCL (Allowed) | MCLG (Goal) | Highest Level Detected | Range of Detection | Year of Sample | Typical Sources of Contaminants | Violation |
|---|---|---|---|---|---|---|---|
| Total Coliform Bacteria | 5% | 0 | 1.4% | n/a | 2018 | Naturally present in the environment | No |

**Disinfection Agent** **Table 1-6**

| Contaminants (units) | MRDL (Allowed) | MRDLG (Goal) | Highest Average | Range of Detection | Year of Sample | Typical Sources of Contaminants | Violation |
|---|---|---|---|---|---|---|---|
| Residual Chlorine (ppm) | 4 | 4 | 0.4[6] | 0.2 – 0.6 | 2018 | Water additive used to control microbes | No |

**Disinfection Byproducts** **Table 1-7**

| Contaminants (units) | MCL (Allowed) | MCLG (Goal) | Highest Level Detected | Range of Detection | Year of Sample | Typical Sources of Contaminants | Violation |
|---|---|---|---|---|---|---|---|
| Total Haloacetic Acids (ppb) | 60 | n/a | 1 | nd – 1 | 2018 | By-product of drinking water disinfection | No |
| Total Trihalomethanes (ppb) | 80 | n/a | 7.9 | nd – 7.9 | 2018 | By-product of drinking water disinfection | No |

**2018 Voluntary Testing – Red Hill Shaft** **Table 1-8**

| Contaminants (units) | MCL (Allowed) | MCLG (Goal) | DOH EAL | Highest Level Detected | Range of Detection | Violation |
|---|---|---|---|---|---|---|
| Ethylbenzene (ppb) | 700 | 700 | 30 | 1 | nd - 1 | No |
| Lead (ppb) | AL = 15 | 0 | 15 | 1.2 | nd – 1.2 | No |
| Toluene (ppb) | 1,000 | 1,000 | 40 | 0.24 J | nd – 0.24 J | No |
| Xylenes (ppb) | 10,000 | 10,000 | 20 | 0.81 J | nd – 0.81 J | No |

## Table Definitions:

**AL** **Action Level.** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
**DOH EAL** **Department of Health Environmental Action Level.** Risk-based levels published by DOH for compounds that do not have promulgated MCL values.
**J** Estimated Value
**MCL** **Maximum Contaminant Level.** The highest level of a contaminant that is 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 a 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 Disinfectant 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 contamination.
**TPH-d** Total Petroleum Hydrocarbons as diesel fuel.

## Table Abbreviations:

**n/a** not applicable.
**nd** not detectable at testing limits.
**ppb** parts per billion or micrograms per liter.
**ppm** parts per million or milligrams per liter.
**ppt** parts per trillion or nanograms per liter.

## Table Notes:

1. The State and EPA require us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. The date of the oldest sample collected is as indicated.
2. These results are for informational purposes. There are no set standards. EPA will use this data to help determine where certain contaminants occur and whether it needs to regulate these contaminants. At this time, these contaminants do not have MCLs or MCLGs.
3. These are Secondary Maximum Contaminant Levels not enforced by EPA.
4. 90$^{th}$ percentile value of the samples collected.
5. Number of samples above the action level.
6. After each quarter, a running average is calculated using the preceding 12 months of data. The posted amount is the highest running average for the year.

**Note: Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline 1-800-426-4791.**