

2025 Annual Water Quality Report (for water quality in 2024)



UNITED STATES ARMY GARRISON (USAG) HAWAII

Aliamanu Military Reservation

U.S. Army Garrison Hawaii is providing an annual Consumer Confidence Report (CCR) to the community in conjunction with this Safe Drinking Water Act requirement. CCRs provide drinking water quality information, including information on the origin of the drinking water and any detected contaminants.

How does the CCR work? An essential part of the CCR is the water quality table on page 4 showing the level of each substance detected during 2025. There are three columns on the table which should be given special attention: the maximum contaminant level (MCL), the level detected, and whether a violation occurred. The Environmental Protection Agency (EPA) set MCLs for a number of substances which may be found in drinking water. All of the substances listed in the table are below the MCLs set by the EPA. U.S. Army Garrison (USAG) Hawaii continues to provide some of the cleanest and safest drinking water available in Hawaii.

What is the source of the water? Drinking water for Aliamanu Military Reservation (AMR) is supplied by the Joint Base Pearl Harbor Hickam Water System. Prior to 2021 the drinking water is obtained from one of three ground water sources:

Waiawa Shaft, Red Hill Tunnel, and Halawa Shaft.

The susceptibility of the AMR water system to contamination has been evaluated under the Hawaii Source Water Assessment Program. The results of the Assessment, dated March 2004, are available for review by the Directorate of Public Works, Environmental Division at 520-687-2162.

In order to ensure that tap water is safe to drink, the 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 the contaminants in bottled water, which must provide the same protection for public health as tap water.

Red Hill Information:

In November 2021, a fuel release at the Red Hill Bulk Fuel Storage Facility was reported. In May 2022 the DOH issued a Tier 1 Public Notification Rule Violation related to the Red Hill fuel release that occurred in November 2021. Per HAR 11-20-18(b)(1)(G) a public water system must give Tier 1 public notice for all national primary drinking water regulation violations and other situations as determined by the State. In response to this violation, the U.S. Army Garrison Hawaii is actively working with the Department

of Health and the Navy to improve our public notification processes. **As of March 2022, the DOH has removed all health advisories on the drinking water at Joint Base Pearl Harbor-Hickam and AMR and is considered safe under regulatory guidelines.**

The Navy initiated their long term monitoring plan, and includes continued sampling and monitoring. Along with continued sampling and monitoring, the Red Hill Tunnel and Halawa Shaft have been offline and do not serve as a water source since 2022. Since 2022, the sole water source for AMR is Waiawa Shaft. For more information please go to: <https://home.army.mil/hawaii/index.php/water> or https://jbp-h-safewaters.org/public/administrative_notice_n00_amended_june_30.pdf.

UCMR 5 Information:

Every 5 years, the Environmental Protection Agency (EPA) uses the UCMR to monitor for the highest priority unregulated drinking water contaminants at PWS's across the United States. Occurrence data collected under the fifth Unregulated Contaminant Monitoring Rule (UCMR 5) will be used by EPA as basis for future regulatory determinations and may support additional actions to protect

public health. The UCMR 5 specifies assessment monitoring for PFAS and lithium.

THE FOLLOWING
PAGES WILL DESCRIBE
THE CONTAMINANTS
AND THE RESULTS OF
THE DRINKING WATER
SAMPLING THAT
OCCURRED IN 2024.

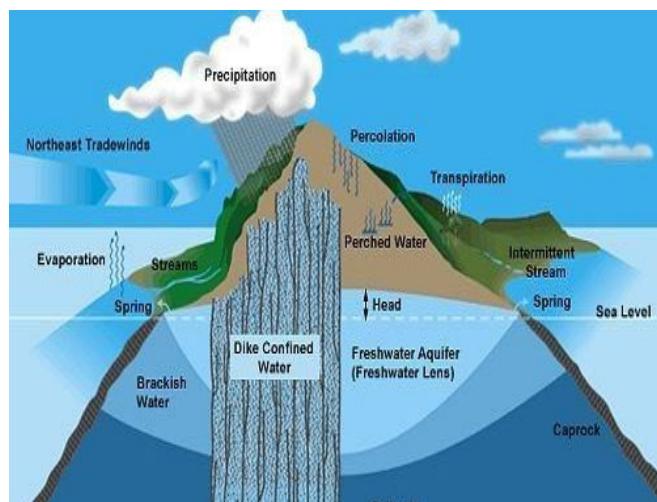
Inside this Report:

SOURCE OF CONTAMINANTS	3
CONTAMINANT CATEGORIES	3
HEALTH INFORMATION	3
LEAD FACTS	3
CROSS CONNECTION INFORMATION	3
WATER QUALITY TABLE	4-6
SUMMARY OF RESULTS	6

2025 Annual Water Quality Report Information

Where Do Potential Ground Water Quality Problems Come From?

As water percolates through the ground, it dissolves naturally-occurring minerals. Substances resulting from the presence of animal or human activity can also be introduced to the ground water or the distribution system. 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline (1-800-426-4791) or submitting a request through their online form at <https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-information>.



<http://www.boardofwatersupply.com/water-resources/the-water-cycle>

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, the water dissolves naturally occurring minerals and, in some cases, radioactive material. The water can also pick up substances resulting from the presence of animals or from human activity as indicated in the contaminant summary below.

Contaminant Categories

Microbial contaminants, such as viruses and bacteria that 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 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.

Important Health Information

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/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791). Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses.) You can do this by posting this notice in a public place or distributing copies by hand or mail.

Water Quality Table for Aliamanu Military Reservation

The tables below list all of the drinking water contaminants detected during calendar year 2024 unless otherwise indicated. The EPA allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or our system is not considered vulnerable to this type of contamination. Some of our data, though representative, are more than one year old. Results of samples in the tables below identify low levels of contaminants detected below EPA limits. The presence of these contaminants does not necessarily indicate that the water poses a health risk. **NAVY detections of fuel are not included in the test result tables below, for additional information and lab results visit the Joint Base Pearl Harbor-Hickam's Safe Waters website at JBPHH-SAFEWATERS.ORG**

Contaminants in the Distribution System (units of measurement)	MCL	MCLG	Average Level Detected	Range of Detection (multiple samples)	Year Sample Collected	Likely Source of Contaminant	Violation
Inorganic							
Copper (ppm)	AL=1.3	1.3	0.179 ^{1,4}	ND - 0.179 ^{2,4}	2023	Corrosion of household plumbing systems; erosion of natural deposits	NO
Lead (ppb)	AL= 10	0	ND ^{1,4}	ND ^{2,4}	2023	Corrosion of household plumbing systems; Erosion of natural deposits	NO
Fluoride ³ (ppm)	4	4	0.48	0 –0.96	2024	Erosion of natural deposits; water additive to promote strong teeth	NO
Disinfectant & Disinfection Byproducts							
Residual Chlorine (ppm)	MRDL= 4	MRDLG =4	0.58	0.30-1.17	2024	Water additive used to control microbes	NO
Total Trihalomethanes (ppb)	80	N/A	1.5	ND - 1.50	2024	By-product of drinking water chlorination	NO

Contaminants in the Plant Water (units of measurement)	MCL	MCLG	Highest Level Detected	Range of Detection (multiple samples)	Year Sample Collected	Likely Source of Contaminant	Violation
Inorganic							
Barium (ppm)	2	2	ND ⁴	ND	2022	Erosion of natural deposits	NO
Chromium (Total) (ppb)	100	100	ND ⁴	ND	2022	Naturally-occurring	NO
Lead (ppb)	10	0	ND ⁴	ND	2022	Corrosion of household plumbing systems; Erosion of natural deposits	NO
Fluoride (ppm)	4	4	0.6	No Range	2024	Erosion of natural deposits; water additive to promote strong teeth	NO
Nitrate (ppm)	10	10	0.54	0.54	2024	Runoff from fertilizer use; erosion of natural deposits	NO
Organic							
Chlordane (ppb)	2	0	ND ⁴	ND	2023	Residue of banned insecticide	NO
Heptachlor epoxide (ppt)	200	0	ND ⁴	ND	2023	Residue of banned insecticide	NO
Unregulated⁵							
Bromide (ppb)	N/A	N/A	765 ⁴	124 - 765	2018	Naturally-occurring	N/A
Chloride (ppm)	250 ⁶	N/A	185	33.8-185	2023	Naturally-occurring	N/A
Dieldrin (ppb)	N/A	N/A	ND ⁴	ND	2022	Residue of banned insecticide	N/A
Sodium (ppm)	N/A	N/A	15 ⁴	15	2023	Naturally-occurring	N/A

Table Definitions, Notes, and Abbreviations located on Page 9.

**Draft tables for 2025
Water Quality Reports
(January 1 – December 31, 2024)**

JBP HH Water System

AL	Action Level. The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
DOH	Department of Health.
EAL	Environmental Action Level. Environmental Action Levels are concentrations of contaminants in drinking water and other media (e.g., soil, soil gas, and groundwater) below which the contaminants are assumed to not pose a significant threat to human health or the environment. Exceeding the EAL does not necessarily indicate that contamination at the site poses environmental hazards but generally warrants additional investigation.
ISP	Incident Specific Parameter. The Hawaii DOH uses multiple criteria to assess the safety of the drinking water including maximum contaminant levels (MCLs), previously established action levels (ALs), health advisory levels (HALs), and incident specific parameters (ISPs).
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.

Table Abbreviations:

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

Table Notes:

- Only one sample collected.
- 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 last sample collected is as indicated.
- 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.
- These are Secondary Maximum Contaminant Levels not enforced by EPA.
- Per the Lead and Copper Rule, results are measured as 90th percentile value of samples collected.
- After each quarter, a running average is calculated using the preceding 12 months of data. This value is the highest running average for the year.
- National Secondary Drinking Water Regulations (NSDWRs), or secondary standards, are non-enforceable guidelines regulating contaminants that may cause cosmetic or aesthetic effects in drinking water. EPA recommends secondary standards to water systems but does not require systems to comply with the standard.

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							
Fluoride (ppm)	4	4	0.43	0.27 - 0.43	2024	Erosion of natural deposits; Water additive which promotes strong teeth	No
Copper (ppm)	AL = 1.3	1.3	0.02	0.02 ¹	2024	Corrosion of household plumbing systems; Erosion of natural deposits	No
Nitrate (ppm)	10	10	0.47	0.47 ¹	2024	Runoff from fertilizer use; Erosion of natural deposits	No
Organic Contaminants							
Di(2-ethylhexyl) phthalate (ppb)	6	6	1.4	1.4 ¹	2024	Discharge from rubber and chemical factories	No
Unregulated Contaminants^{4,7}							
Chloride (ppm)	250	n/a	36	36 ¹	2024	Naturally-occurring	n/a
Sodium (ppm)	n/a	n/a	22	22 ¹	2024	Naturally-occurring	n/a
Sulfate (ppm)	250	n/a	6.35	6.35 ¹	2024	Naturally-occurring	n/a
Zinc (ppm)	5	n/a	0.07	0.07 ¹	2024	Naturally-occurring	n/a

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(January 1 – December 31, 2024)**

UMCR5 ³							
Lithium (ppb)	n/a	n/a	nd	nd ²	2023	Naturally occurring metal that may concentrate in brine waters	n/a
Perfluorinated and Polyfluorinated Alkyl Substances in Drinking Water (PFAS)	n/a	n/a	nd	nd ²	2023	Synthetic chemical used in a wide range of consumer products and industrial applications	n/a

Contaminants in the BWS Source Water (Serving Manana Housing)

Table 1-2

Contaminants (units)	MCL (Allowed)	MCLG (Goal)	Highest Average Level Detected	Range of Detection	Year of Sample	Typical Sources of Contaminants	Violation
Inorganic Contaminants							
1,2,3-Trichloropropane (ppb)	0.6	0	0.048	0.028 – 0.057	2024	Fumigant previously used in agriculture	No
Barium (ppm)	2	2	0.004	0.003 – 0.004	2023	Erosion of natural deposits	No
Chromium (ppb)	100	100	0.975	nd – 1.200	2022	Naturally-occurring	No
Fluoride (ppm)	4	4	0.075	0.061 – 0.075	2024	Erosion of natural deposits; Water additive which promotes strong teeth	No
Nitrate (ppm)	10	10	0.770	0.700 – 0.770	2024	Runoff from fertilizer use; Erosion of natural deposits	No
Unregulated Contaminants^{3,7}							
Chlorate ⁷ (ppb)	210	n/a	71.000	30.000 – 71.000	2024	Byproduct of the disinfection process	n/a
Chloride (ppm)	250 ⁴	n/a	69.000	37.000 – 69.000	2024	Naturally-occurring	n/a
Chromium, hexavalent ⁷ (ppb)	13.000	n/a	1.300	1.100 – 1.300	2023	Naturally-occurring	n/a
Dieldrin (ppb)	0.200	n/a	0.008	nd – 0.014	2024	Residue of banned pesticide	n/a
Sodium (ppm)	60.000	n/a	37.000	29.000 – 37.000	2023	Naturally-occurring	n/a
Strontium ⁷ (ppb)	4000.000	n/a	81.000	62.000 – 81.000	2022	Naturally-occurring	n/a
Sulfate (ppm)	250 ⁴	n/a	13.000	9.200 – 13.000	2024	Naturally-occurring	n/a
Vanadium ⁷ (ppb)	21.000	n/a	10.000	9.300 – 10.000	2022	Naturally-occurring	n/a

Contaminants in the Distribution System

Table 1-3

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	0.139 ⁵	nd – 0.164	2024	Corrosion of household plumbing systems; Erosion of natural deposits	No
Fluoride (ppm)	4	4	0.54	0.13 - 0.54	2024	Erosion of natural deposits; Water additive which promotes strong teeth	No

Disinfection Agent

Table 1-4

Contaminants (units)	MRDL (Allowed)	MRDL G (Goal)	Highest Average Level Detected	Range of Individual Detections	Year of Sample	Typical Sources of Contaminants	Violation
Residual Chlorine (ppm)	4	4	0.55 ⁶	0.2 – 1.4	2024	Water additive used to control microbes	No

Disinfection Byproducts

Table 1-5

Contaminants (units)	MCL (Allowed)	MCLG (Goal)	Highest Level Detected	Range of Detection	Year of Sample	Typical Sources of Contaminants	Violation
Total Trihalomethanes (TTHM) (ppb)	80	n/a	nd—1.5	1.5 ¹	2024 ²	Byproduct of drinking water disinfection	No

Navy – Internal Monitoring of DCP at Waiawa

Table 1-6

Contaminants (units)	MCL (Allowed)	MCLG (Goal)	Highest Level Detected	Range of Detection	Year of Sample	Typical Sources of Contaminants	Violation
1,2-Dichloropropane (DCP)	5	0	nd	nd ¹	2024	Discharge from industrial chemical factories	No

**Draft tables for 2025
Water Quality Reports
(January 1 – December 31, 2024)**

2024 Contaminant Detections in Distribution System/Residences

Table 1-7

Monitoring Program Name (Duration)	Contaminants (units)	MCL (Allowed)	Highest Level Detected	Corrective Actions
Drinking Water Long-Term Monitoring Plan (JAN – MAR)	Antimony (ppb)	6	0.2	n/a
	Barium (ppm)	2	0.013	n/a
	Chromium (ppb)	100	8.4	n/a
	Copper (ppm)	AL = 1.3	0.293	n/a
	Lead (ppb)	AL = 10	82.7	As recommended by the EPA, the fixture was flushed, and the resampling results showed no detection of lead. The issue was resolved and closed.
	Selenium (ppb)	50	3.8	n/a
	Mercury (ppb)	2	0.23	n/a
	Total Trihalomethanes (ppb)	80	20.5	n/a
	Total Petroleum Hydrocarbons (diesel) (ppb)	ISP= 266	174	n/a
	Total Petroleum Hydrocarbons (gasoline) (ppb)	ISP= 266	31	n/a
	Total Petroleum Hydrocarbons (oil) (ppb)	ISP= 266	262	Due to a sampling error at Hickam Elementary School, the initial results were inaccurate. Resampling results confirmed there was no detection of oil. The issue was resolved and closed.
Extended Drinking Water Monitoring Plan (APR – DEC)	Copper (ppm)	AL = 1.3	0.388	n/a
	Lead (ppb)	AL = 10	44.2	As part of routine maintenance, the hydrant was flushed and resampled, indicating it was below the action level (AL). The issue was resolved and closed.
	Mercury (ppb)	2	0.11	n/a
	Total Trihalomethanes (ppb)	80	42.9	n/a
	Total Petroleum Hydrocarbons (diesel) (ppb)	Corrective action is required at any detection.	1460	The analysis identified food-grade lubricating oil as the source, commonly used to lubricate fire hydrants. The issue was resolved and closed.
	Total Petroleum Hydrocarbons (gasoline) (ppb)	Corrective action is required at any detection.	143	The analysis identified isopropyl alcohol, which was from wipes used to clean the sampling point prior to sampling. The fixture was not properly flushed. The issue was resolved and closed.
	Total Petroleum Hydrocarbons (oil) (ppb)	Corrective action is required at any detection.	245	The analysis detected fatty acids from when the sample accidentally had skin contact. The issue was resolved and closed.

Water Quality Table for Aliamanu Military Reservation

UCMR 5 PFAS (units of measurement)	MCL (ppt)	MCGL (ppt)	Average Level Detected	Range of Detection (multiple samples)	Year Sample Collected	Likely Source of Contaminant	Violation
UCMR5:							
Perfluorooctanoic acid (PFOA)	4	0	ND	ND	2023	Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities	N/A
Perfluorooctanesulfonic acid (PFOS)	4	0	ND	ND	2023	Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities	N/A
Perfluorobutanesulfonic acid (PFBS)	N/A	N/A	ND	ND	2023	Synthetic chemical used in a wide range of consumer products and industrial applications	N/A
Perfluoroheptanoic acid (PFHpA)	N/A	N/A	ND	ND	2023	Synthetic chemical used in a wide range of consumer products and industrial applications	N/A
Perfluorohexanesulfonic acid (PFHxS)	10	10	ND	ND	2023	Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities	N/A
Perfluorononanoic acid (PFNA)	10	10	ND	ND	2023	Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities	N/A
Perfluorodecanoic acid (PFDA)	N/A	N/A	ND	ND	2023	Synthetic chemical used in a wide range of consumer products and industrial applications	N/A
Perfluorohexanoic acid (PFHxA)	N/A	N/A	ND	ND	2023	Synthetic chemical used in a wide range of consumer products and industrial applications	N/A
Perfluorododecanoic acid (PFDoA)	N/A	N/A	ND	ND	2023	Synthetic chemical used in a wide range of consumer products and industrial applications	N/A
Perfluorotridecanoic acid (PFTDA)	N/A	N/A	ND	ND	2023	Synthetic chemical used in a wide range of consumer products and industrial applications	N/A
Perfluoroundecanoic acid (PFUnA)	N/A	N/A	ND	ND	2023	Synthetic chemical used in a wide range of consumer products and industrial applications	N/A
N-ethyl perfluorooctanesulfonamidoacetic acid	N/A	N/A	ND	ND	2023	Synthetic chemical used in a wide range of consumer products and industrial applications	N/A
N-methyl perfluorooctanesulfonamidoacetic acid	N/A	N/A	ND	ND	2023	Synthetic chemical used in a wide range of consumer products and industrial applications	N/A
Hexafluoropropylene oxide dimer acid (HFPO-DA) (GenX)	10	10	ND	ND	2023	Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities	N/A
4,8-dioxo-3H-perfluorononanoic acid (ADONA)	N/A	N/A	ND	ND	2023	Synthetic chemical used in a wide range of consumer products and industrial applications	N/A
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	N/A	N/A	ND	ND	2023	Synthetic chemical used in a wide range of consumer products and industrial applications	N/A
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	N/A	N/A	ND	ND	2023	Synthetic chemical used in a wide range of consumer products and industrial applications	N/A
Perfluorotetradecanoic acid (PFTA)	N/A	N/A	ND	ND	2023	Synthetic chemical used in a wide range of consumer products and industrial applications	N/A
1H,1H, 2H, 2H-perfluorodecane sulfonic acid (8:2FTS)	N/A	N/A	ND	ND	2023	Synthetic chemical used in a wide range of consumer products and industrial applications	N/A

Water Quality Table for Aliamanu Military Installation

UCMR 5 PFAS (units of measurement)	MCL	EPA Proposed MCL (ppt)*	Average Level Detected	Range of Detection (multiple samples)	Year Sam- ple Collec- ed	Likely Source of Contaminant	Viola- tion
UCMR5*							
1H,1H, 2H, 2H-perfluorohexane sulfonic acid (4:2FTS)	N/A	N/A	ND	ND	2023	By-product of drinking water	N/A
1H,1H, 2H, 2H-perfluorooctane sulfonic acid (6:2FTS)	N/A	N/A	ND	ND	2023	By-product of drinking water	N/A
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	N/A	N/A	ND	ND	2023	By-product of drinking water	N/A
Perfluoro (2-ethoxyethane) sulfonic acid (PFESA)	N/A	N/A	ND	ND	2023	By-product of drinking water	N/A
Perfluoro-3-methoxypropanoic acid (PFMPA)	N/A	N/A	ND	ND	2023	By-product of drinking water	N/A
Perfluoro-4-methoxybutanoic acid (PFMBA)	N/A	N/A	ND	ND	2023	By-product of drinking water	N/A
Perfluorobutanoic acid (PFBA)	N/A	N/A	ND	ND	2023	By-product of drinking water	N/A
Perfluoroheptanesulfonic acid (PFHpS)	N/A	N/A	ND	ND	2023	By-product of drinking water	N/A
perfluoropentanesulfonic acid (PFPeS)	N/A	N/A	ND	ND	2023	By-product of drinking water	N/A
Perfluoropentanoic acid (PFPeA)	N/A	N/A	ND	ND	2023	By-product of drinking water	N/A
Lithium	N/A	N/A	ND	ND	2023	By-product of drinking water	N/A

Table Definitions, Abbreviations, and Notes Continued

Table Definitions:

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

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.

* - EPA/HDOH interim proposed Health Advisory (HA). Final MCL's effective 4/10/2024, replace HA.

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.

Summary of Results

A number of different water samples re-collected and analyzed for various contaminants throughout the year. The number and frequency of sampling events depends upon federal and state requirements. The water quality table on page 3 lists all of the drinking water contaminants detected during calendar year 2024. All of the substances listed in the table are below the MCLs set by the EPA. Contaminants not present in the drinking water or analyzed below detection limits are not included in the table. Remember, the presence of contaminants does not necessarily indicate that the water poses a health risk.

Table Definitions, Abbreviations, and Notes

Table Definitions:

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

EAL Environmental Action Level (EAL) - Environmental Action Levels are concentrations of contaminants in drinking water and other media (e.g., soil, soil gas, and groundwater) below which the contaminants are assumed to not pose a significant threat to human health or the environment. Exceeding the EAL does not necessarily indicate that contamination at the site poses environmental hazards but generally warrants additional investigation.

Table Abbreviations:

ppb -parts per billion or micrograms per liter (µg/L)

ppm - parts per million or milligrams per liter (mg/L)

N/A - not applicable.

ND - not detected at testing limits.

Potential health effects from long-exposure above the MCL and EAL

Beryllium: Intestinal lesions

Cadmium: Kidney damage

Dichloromethane: Liver problems; increased risk of cancer

Di(n-butyl)phthalate: This chemical appears to have relatively low acute (short-term) and chronic (long-term) toxicity. No information is available regarding the effects in humans from inhalation or oral exposure to dibutyl phthalate, and only minimal effects have been noted in animals exposed by inhalation. No studies are available on the reproductive, developmental, or carcinogenic effects of dibutyl phthalate in humans. Animal studies have reported developmental and reproductive effects from oral exposure. EPA has classified dibutyl phthalate as not classifiable as to human carcinogenicity.

Lead: Delays in physical or mental development in infants and children; children could show slight deficits in attention span and learning abilities; Adults can develop kidney problems and/or high blood pressure.

Total Organic Carbon: A form of disinfection byproduct precursors and has no health effects.

Total Petroleum Hydrocarbons (gasoline, diesel, oil): Consumption can cause upset stomach, stomach cramping, nausea, vomiting, and diarrhea. Your throat and mouth may also get irritated. Petroleum hydrocarbons can irritate the skin (dermal exposure). Continuous exposure can cause itchy rash with red and peeling skin. Breathing petroleum vapors (also called inhalational exposure) can cause headaches, dizziness, tiredness and respiratory problems like cough and difficulty breathing. Nosebleeds are possible. Evaluation of the possibility of long-term health effects is ongoing. Based on current information, people exposed to contaminated drinking water from the Joint Base Pearl Harbor-Hickam Drinking Water System in this incident are not expected to experience long-term health effects.

Corrective Actions Taken for Contaminant Exceedances

High-volume flushing of the AMR drinking water distribution system (all water mains/laterals/buildings) with 3 to 5 volumes of clean water from the Waiawa Shaft was conducted to restore safe drinking water to all Navy Water System users. Extensive testing to confirm that flushing worked was conducted. Actions taken to address exceedances included re-flushing and re-sampling. Additional testing efforts are ongoing as part of the Long Term Monitoring Plan to ensure that the Navy's drinking water system continues to be safe and fit for consumption.

Water Quality Table for Aliamanu Military Installation

Summary of Results

A number of different water samples re-collected and analyzed for various contaminants throughout the year. The number and frequency of sampling events depends upon federal and state requirements. The water quality table on page 3 lists all of the drinking water contaminants detected during calendar year 2024. All of the substances listed in the table are below the MCLs set by the EPA. Contaminants not present in the drinking water or analyzed below detection limits are not included in the table. Remember, the presence of contaminants does not necessarily indicate that the water poses a health risk.

Table Definitions, Abbreviations, and Notes

Table Definitions:

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

EAL Environmental Action Level (EAL) - Environmental Action Levels are concentrations of contaminants in drinking water and other media (e.g., soil, soil gas, and groundwater) below which the contaminants are assumed to not pose a significant threat to human health or the environment. Exceeding the EAL does not necessarily indicate

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.

* - EPA/HDOH interim proposed Health Advisory (HA). Final MCL's effective 4/10/2024, replace HA.

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.

Table Notes:

1. In accordance with EPA and State regulations, this number represents the 90th percentile value of the samples collected.
2. The number of samples above the action level.
3. Fluoride is added to the water system to help promote healthy teeth in children. The target level is 0.7 ppm.
4. The state and EPA require water systems to monitor certain contaminants less than once per year because the concentration is not expected to vary significantly from year to year. The date of the last sample collected is as indicated.
5. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.
6. This is a Secondary Maximum Contaminant Level (SMCL). It is not enforced by the EPA and is not considered a risk to human health at SMCL.

Table Abbreviations:

ppb -parts per billion or micrograms per liter (µg/L)

ppm - parts per million or milligrams per liter (mg/L)

ND - not detected at testing limits.

ppt - parts per trillion or nanograms per liter (ng/L)

N/A - not applicable.

NQ - not quantifiable at test limits.

Potential health effects from long-exposure above the MCL and EAL

Beryllium: Intestinal lesions

Cadmium: Kidney damage

Dichloromethane: Liver problems; increased risk of cancer

Di(n-butyl)phthalate: This chemical appears to have relatively low acute (short-term) and chronic (long-term) toxicity. No information is available regarding the effects in humans from inhalation or oral exposure to dibutyl phthalate, and only minimal effects have been noted in animals exposed by inhalation. No studies are available on the reproductive, developmental, or carcinogenic effects of dibutyl phthalate in humans. Animal studies have reported developmental and reproductive effects from oral exposure. EPA has classified dibutyl phthalate as not classifiable as to human carcinogenicity.

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Potential health effects from long-exposure above the MCL and EAL

High-volume flushing of the AMR drinking water distribution system (all water mains/laterals/buildings) with 3 to 5 volumes of clean water from the Waiawa Shaft was conducted to restore safe drinking water to all Navy Water Systems users. Extensive testing to confirm that flushing worked was conducted. Actions taken to address exceedances include re-flushing and re-sampling. Additional testing efforts are ongoing as part of the Long Term Monitoring Plan and Extended Drinking Water Monitoring Plan to ensure that the Navy's drinking water system continues to be safe for consumption.