

2012 Annual Water Quality Report (for water quality in 2011)



U. S. A R M Y G A R R I S O N — H A W A I I

Aliamanu Military Reservation



The Safe Drinking Water Act requires all community water systems to provide an annual Consumer Confidence Report (CCR) to their customers. CCRs provide drinking water quality information, including information on the origin of the drinking water and any detected contaminants.

U.S. Army Garrison-Hawaii is providing this report as a service to the community in conjunction with this requirement.

How does the CCR work? An essential part of the CCR is the water quality table on page 3 showing the level of each substance detected during 2011. 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-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 Pearl Harbor Water System. The drinking water is obtained from three ground water sources: Waiawa Shaft, Red Hill Tunnel, and Halawa Shaft.

The ground water filters naturally as it travels from the surface to an aquifer located below the ground. Once the water is pumped back up from the aquifer, it is chlorinated and fluoridated. Both additives are required under Army standards. Chlorine is used as

a disinfectant and fluoride is used to promote strong teeth in children. The water is then piped into the distribution system.

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 contacting the Directorate of Public Works, Environmental Division at (808) 656-3104.

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.

Special points of interest:

- THE FOLLOWING PAGES WILL DESCRIBE THE CONTAMINANTS AND THE RESULTS OF THE DRINKING WATER SAMPLING THAT OCCURRED IN 2011.

Inside this Report

SOURCE OF CONTAMINANTS	2
CONTAMINANT CATEGORIES	2
LEAD FACTS	2
HEALTH INFORMATION	2
WATER QUALITY TABLE	3
SUMMARY OF RESULTS	4
WATER CONSERVATION	4

2012 Annual Water Quality Report (for water quality in 2011)

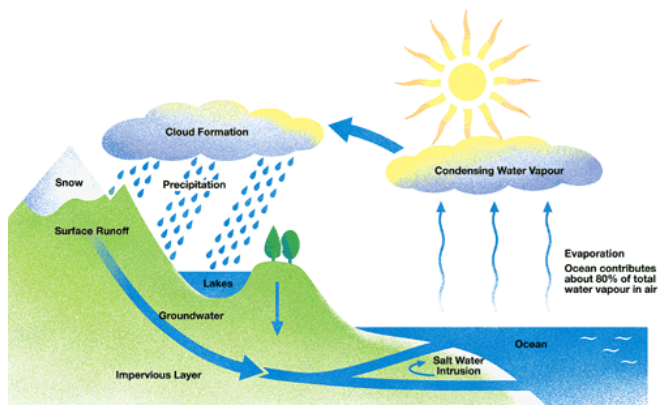
Where Do Potential Ground Water Quality Problems Come From?

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 Drink-

ing Water Hotline (1-800-426-4791).

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, and can pick up substances resulting from the presence of animals or from human activity as indicated in the contaminant summary below.



<http://www.sawater.com.au/SAWater/Education/OurWaterSystems/The+Water+Cycle.htm>

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 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

Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities

Lead Facts

Note: 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. The Aliamanu water system 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 2 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>.

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 2011 unless otherwise indicated. 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.

Contaminants in the Distribution System (units of measurement)	MCL	MCLG	Average Level Detected	Range of Detection (multiple samples only)	Likely Source of Contaminant	Violation
Inorganic						
Copper(ppm)	AL=1.3	1.3	0.07 ²	0 ³	Corrosion of household plumbing systems; erosion of natural deposits	NO
Fluoride ⁴ (ppm)	4	4	0.72	0.48-0.89	Water additive, which promotes strong teeth	NO
Organic						
Residual Chlorine (ppm)	MRDL=4	MRDLG=4	0.60	0.05-1.1	Water additive used to control microbes	NO
Total Haloacetic Acids ¹ (ppb)	60	N/A	1.1 (2009)	No Range (2009)	By-product of drinking water chlorination	NO
Total Trihalomethanes ¹ (ppb)	80	N/A	1.6 (2009)	No Range (2009)	By-product of drinking water disinfection	NO

Contaminants in the Source Water (units of measurement)	MCL	MCLG	Average Level Detected	Range of Detection (multiple samples only)	Likely Source of Contaminant	Violation
Inorganic						
Barium ¹ (ppm)	2	2	0.0065* (2009)	ND-0.0065 (2009)	Erosion of natural deposits	NO
Chromium ¹ (ppb)	100	100	4.9*	1.4-4.9	Erosion of natural deposits	NO
Fluoride ^{1,4} (ppm)	4	4	0.81* (2010)	0.36-0.81 (2010)	Water additive, which promotes strong teeth	NO
Nitrate (ppm)	10	10	1.2*	0.60-1.2	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	NO
Unregulated⁵						
Sodium ¹ (ppm)	N/A	N/A	53* (2010)	28-53 (2010)	Naturally-occurring	N/A

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

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:

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

Table Notes:

- The state and EPA require water systems to monitor certain contaminants less than once per year because the concentrations are not expected to vary significantly from year to year. The date of the last sample collected is as indicated.

- In accordance with EPA and State regulations, this number represents the 90th percentile value of the samples collected.
- The number of samples above the action level.
- Fluoride is added to the water system to help promote healthy teeth in children. The target level is 0.6-0.8.
- 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.
- * Represents the highest level detected and not the average

THE DIRECTORATE OF PUBLIC WORKS DOES NOT HAVE ROUTINE PUBLIC MEETINGS ABOUT THE WATER SYSTEM. IF YOU HAVE QUESTIONS REGARDING THE WATER SYSTEM OR WATER QUALITY PLEASE CONTACT MICHELLE LYMAN, DPW'S ENVIRONMENTAL DIVISION, AT (808) 656-3104.

Summary of Results

Many different water samples are 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 2011. 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 this table. Remember, the presence of contaminants does not necessarily indicate that the water poses a health risk.

United States Army Garrison – Hawaii

DPW Environmental Division
(IMPC-HI-PWE)
947 Wright Avenue, Wheeler
Army Airfield
Schofield Barracks, HI 96857
(808) 656-3104

Tripler Army Medical Center

Preventive Medicine
1 Jarrett White Road
Honolulu, Hawaii 96859-5000
(808) 433-9938

This CCR is posted on the web at: <http://www.garrison.hawaii.army.mil/sustainability/DrinkingWater.aspx>

Water Conservation

As the population in Hawaii grows, more and more freshwater is used for everyday activities like drinking, taking showers, washing clothes, etc. Help us conserve the island's fresh water resource for future generations by following some of these helpful tips from the EPA.

Fix That Leak!

Challenge: Leaky faucets that drip at the rate of one drip per second can waste more than 3,000 gallons of water each year.

Solution: If you're unsure whether you have a leak, read your water meter before and after a two-hour period when no water is being used. If the meter does not read exactly the same, you probably have a leak.

Shower Power!

Challenge: A full bath tub requires about 70 gallons of water, while taking a five-minute shower uses 10 to 25 gallons.

Solution: If you take a bath, stopper the drain immediately and adjust the temperature as you fill the tub.

Make It a Full Load!

Challenge: The average washing machine uses about 41 gallons of water per load.

Solution: High-efficiency washing machines use less than 28 gallons of water per load. To achieve even greater savings, wash only full loads of laundry or use the appropriate load size selection on the washing machine.

To See other helpful tips visit the EPA's website: http://www.epa.gov/watersense/our_water/be_the_change.html#tabs-1.