

*Lihue – Kapa'a Water System
2024*

Water Quality Report

Covering the period of
January 1, 2023 to December 31, 2023

Produced in accordance with The Safe Drinking Water Act



Also available online at www.kauaiwater.org



This Customer Confidence Report (CCR) is produced by the Kaua'i Department of Water and describes the quality of your drinking water and where it comes from.

Providing safe drinking water is essential to our communities and it is important that our customers are informed that your water is tested on a continuous schedule through our certified laboratories and the State Department of Health.

Based on our test results, we are pleased to report that Kauai's potable water supply meets or exceeds state and federal standards of clean, safe drinking water.

A Source Water Assessment, intended to enable "well-founded, fair and reasonable decisions for the protection and preservation of Hawai'i's drinking water" has been completed by the State Department of Health and the University of Hawai'i. For further information on this assessment, please contact the Department of Water at (808)245-5455.

We welcome your interest in the Department of Water's water systems. Please refer to the directory in this report for the Department's contact numbers. The Board of Water Supply holds a monthly meeting on the fourth Thursday of each month and meetings are open to the public. Please call (808) 245-5406 or visit our website at www.kauaiwater.org for scheduled meeting information.



Tom Shigemoto
Chairperson, Board of Water Supply

Why am I getting this brochure? The Safe Drinking Water Act, a federal law, requires water systems to provide its customers with an annual report of the quality of their drinking water. This brochure is a snapshot of the quality of the water we provided last year. Included are details about where your water comes from, what it contains and how it compares to Environmental Protection Agency (EPA) and state standards.

We are committed to providing you with information because informed customers are our best allies.

Is my drinking water safe?

Yes. The Department of Water regularly conducts microbiological analysis and has contracted for extensive chemical testing to comply with Environmental Protection Agency (EPA) and Hawai'i State standards. The standards are very strict in order to ensure safe drinking water.

Where does my water come from?

Your water comes mostly from ground water (**underground**) sources. Rain that falls in the mountain filters through the ground into formations called aquifers. Wells are drilled into these formations and the water is pumped out. These formations can also be found in the mountains (**still considered ground water**). Tunnels are constructed to tap these sources. The quality of groundwater is very good and requires no treatment except for disinfection (free chlorine). Parts of Lihue and Kapa`a are served water via the Grove Farm Surface Water Treatment Plant (SWTP) which receives water from the upper reaches of the Wailua River (this is considered surface water as it found/flows above the ground). The SWTP utilizes an ultra-filtration system resulting in high quality water. The water is then disinfected with chlorine before entering the distribution system.

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The water supply for the Lihue⁴-Kapa⁴a Water System water system comes from the following sources:

Puhi Area

Puhi Wells No. 3 & 4

Puhi Wells No. 5A & 5B

Lihu⁴e-Hanama⁴ulu Area

Kalepa Ridge Well

Kilohana Wells A, B, & I

Garlinghouse Tunnel

Hanama⁴ulu Well No. 4

Grove Farm Waiahi Surface Water Treatment Plant

Wailua-Kapa⁴a Area

Makaleha Tunnel

Moalepe Tunnel

Kapa⁴a Homesteads Wells No. 1, 2, & 3

Nonou Wells B & C

Wailua Homesteads Wells A & B

All of the water is chlorinated and pumped into the distribution system or stored in the following tanks:

Puhi Area

Puhi 510

1,000,000 gallon tank

KCC

500,000 gallon tank

Lihu⁴e-Hanama⁴ulu Area

Lihu⁴e

1,000,000 gallon tanks @ 2 each

Kalepa

500,000 & 1,000,000 gallon tanks

KCC 393

1,000,000 gallon tank

Nawiliwili

1,000,000 gallon tank

Hanama⁴ulu 510 tank

100,000 gallon tank

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Wailua-Kapa'a Area

Makaleha
1,000,000 gallon tank

Nonou
2,000,000 gallon tank

Ornellas
200,000 gallon tank

Wailua Homesteads
500,000 gallon tank

Pu'upilo
125,000 gallon tank

Kapa'a Homesteads Tank
500,000 gallon tank

Stable Tank
1,000,000 gallon tank



Photo: Department of Water staff and community members participate in water emergency preparedness event at Chiefess Kamakahahelei Middle School.

How do contaminants get into our drinking water?

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.

Therefore, 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.

Contaminants that may be present in source water before we treat it include:

Microbial contaminants: Viruses and bacteria from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Inorganic contaminants: Salts and metals which can be naturally occurring or from other sources, such as urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

Pesticides and herbicides: Variety of sources such as agriculture, urban storm water runoff and residential uses.

Radioactive contaminants: Naturally occurring.

Organic chemical contaminants: Synthetic and volatile organic chemicals, by-products of industrial processes and petroleum production, also from gas stations, urban storm water runoff, and septic systems.

To ensure safe tap water, EPA sets limits on these substances in water provided by public water systems.

Should I take special precautions?

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 healthcare providers.

EPA/CDC (Centers for Disease Control) guidelines on appropriate means to lessen the risk of infection by ***Cryptosporidium*** and other microbial contaminants are available from EPA's Safe Drinking Water Hotline (1-800-426-4791).

More information about contaminants can also be obtained by calling the EPA's Hotline.

Other Frequently Asked Questions:

What is the pH of my water?

The pH of your water in the Lihu'e-Kapa'a area can range from 6.8 to 8.1.

What is the hardness of my water?

The hardness of your water can range from 40 to 140 ppm (Call for your area).

Why do I notice off-odors or taste in my water?

Sometimes if water in your house is not used, the microbes in the pipes can grow and cause odors and funny taste. Flushing the water can resolve this problem. Water should be flushed in the morning or when not used for an extended period of time.

What causes my water to look milky when it comes out of the faucet?

Air trapped in the water lines causes this problem. Let the water sit in a glass. The water becomes clear from the bottom up if air is the cause. The water is safe to drink.

Why is chlorine added to my water?

Chlorine is added to control microbe levels in the water distribution system to keep the water safe. The chlorine level ranges between 0.1 to 0.5 ppm. The small amounts of chlorine in the water do not pose a health hazard. If you want to remove chlorine, either let it sit for a while or filter it through an activated carbon filter.

Water Quality Data

We are required to test your tap water for:

- Different types of chemical contaminants: Regulated contaminants, each with a maximum contaminant level (MCL) and a maximum contaminant level goal (MCLG); and unregulated contaminants, which don't have maximum contaminant levels.
- Coliform bacteria.
- Heavy metals (lead and copper).

Remember that just because these contaminants may be present in your water, it doesn't mean your water has a health risk.

This past year, we tested your water for a wide array of contaminants. Most of them were not found in your water, and only those that we found are reported in the test results section that follows.

Microbiological Contaminants

Total Coliform Bacteria
Fecal Coliform Bacteria

Radioactive Contaminants

Alpha emitters
Beta/photon emitters
Radium

Inorganic Contaminants

Antimony
Arsenic
Asbestos
Barium
Beryllium
Cadmium
Chromium
Copper
Cyanide
Fluoride
Lead
Mercury
Nitrate
Nitrite
Selenium
Thallium

Organic Contaminants

2,4-D
2,4,5-TP[Silvex]
Acrylamide
Alachlor
Atrazine
Benzo(a)pyrene
Carbofuran
Chlordane
Dalapon
Di(2-ethylhexyl) adipate
Di(2-ethylhexyl) phthalate
Dibromochloropropane
Dinoseb
Diquat
Dioxin
Endothal
Endrin
Epichlorohydrin
Ethylene dibromide
Glyphosate
Heptachlor
Heptachlor epoxide
Hexachlorobenzene
Hexachlorocyclopentadiene
Lindane
Methoxychlor
Oxamyl [Vydate]
PCBs [Polychlorinated biphenyls]
Pentachlorophenol
Picloram
Simazine
Toxaphene

Volatile Organic Contaminants

Benzene
Carbon tetrachloride
Chlorobenzene
o-Dichlorobenzene
p-Dichlorobenzene
1,2-Dichloroethane
1,1-Dichloroethylene
Cis-1,2-Dichloroethylene
trans-1,2-Dichloroethylene
Dichloromethane
1,2-Dichloropropane
Ethylbenzene
HAA (Haloacetic Acid)
Styrene
Tetrachloroethylene
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethylene
1,2,3-Trichloropropane
THMs [Total trihalomethanes]
Toluene
Vinyl Chloride
Xylenes

Unregulated Contaminants

2,4,5-T
2,4-DB
Aldicarb
Aldicarb sulfone
Aldicarb sulfoxide
Aldrin
Butachlor
Carbaryl
Dicamba
Dieldrin
3-Hydroxycarbofuran
Methiocarb
Methomyl
Metolachlor
Metribuzin
Molinate
Nickel
Paraquat
Propachlor
Propoxur
Sodium
Sulfate
Thiobencarb

Results:

The following tables list all the drinking water contaminants that were found in the previous year, unless otherwise noted.

The State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary from year to year. Thus, some of the data, though representative of the water quality, is more than one year old.

Terms and abbreviations used below:

Maximum Contaminant Level Goal (MCLG): is 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.

Maximum Contaminant Level (MCL): 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.

Action Level (AL): the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.

n/a: not applicable.

nd: not detectable at testing limit.

ppm: parts per million or milligrams per liter
(corresponds to one penny in \$10,000).

ppb: parts per billion or micrograms per liter
(corresponds to one penny in \$10,000,000).

pCi/L: picocuries per liter
(a measure of radiation).

mrem/year: millirems per year
(a measure of radiation exposure).

Microbiological Contaminants:

Substance	Highest Level Allowed (MCL)	EPA MCLG	Highest Monthly # of Positive Samples	Date	Violation	Source of Contaminant
None Detected						

Inorganic Contaminants:

Substance	Highest Level Allowed (MCL)	EPA MCLG	Highest Level Detected	Detection Range	Date	Violation	Source of Contaminant
Barium (ppm)	2	2	0.02	ND-0.02	2022	No	Erosion of natural deposits
Chromium (ppb)	100	100	7	ND-7	2022	No	Erosion of natural deposits
Nitrate (ppm)	10	10	1.5	ND-1.7	2023	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits

Lead and Copper Rule Compliance:

Substance	Action Level	EPA MCLG	90th Percentile Value	Detection Range	# of Sites Found Above AL	Date	Source of Contaminant
Lead (ppb)	15	0	<2.5	ND	0/30	2021	Corrosion of household plumbing systems
Copper (ppm)	1.3	1.3	0.21	ND-0.28	0/30	2021	Corrosion of household plumbing systems

The Lihu'e-Kapa'a system is in compliance with the Lead and Copper Rule Requirements and is on a reduced monitoring schedule. Samples for lead and copper will be taken and analyzed every three years from residential customers.

Organic Contaminants:

Substance	Highest Level Allowed (MCL)	EPA MCLG	Highest Level Detected	Detection Range	Date	Violation	Source of Contaminant
1,2,3,- Trichloro-propane (ppb)	0.6	NA	0.1	ND-0.1	2023	No	Contaminant in pesticides used in soil fumigation
2,4-D (ppb)	70	70	0.4	ND-0.4	2022	No	Runoff from pesticides
TTHMs (Total trihalo-methanes) (ppb)	80	NA	36*	4.6-44	2023	No	By-Product of drinking water chlorination
HAA (Haloacetic Acid) (ppb)	60	NA	6.6*	ND-7	2023	No	By-Product of drinking water chlorination

*Reported as the highest locational running annual average (LRAA) site.

Radioactive Contaminants:

Substance	Highest Level Allowed (MCL)	EPA MCLG	Highest Level Detected	Detection Range	Date	Violation	Source of Contaminant
None Detected							

*The MCL for beta emitters is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta emitters.

Unregulated Contaminants:

Substance	Highest Level Allowed (MCL)	EPA MCLG	Highest Level Detected	Detection Range	Date	Violation	Source of Contaminant
Bromide (ppb)	-	-	48	17-48	2020	No	Erosion of natural deposits
Manganese (ppb)	50	-	4.2	ND-4.2	2020	No	Erosion of natural deposits
Silica (ppm)	-	-	28	-	2020	No	Erosion of natural deposits
Sodium (ppm)	-	-	57	9-57	2022	No	Erosion of natural deposits
Sulfate (ppm)	250	-	26	ND-32	2023	No	Erosion of natural deposits



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 Department of Water 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>.

For more information:

Who	About	Number
Kaua'i Dept. of Water	General Inquiries Water Quality Report	(808) 245-5400
State Dept. of Health	Contaminants, health effects	(808) 586-4258
EPA Safe Drinking Water Hotline	Contaminants, health effects	1-800-426-4791

*This report is updated annually and is available online at
www.kauaiwater.org*

