

Sources of 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.

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, 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.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Source Water Assessment Program

In 2004, the preliminary source water assessment report was released. The purpose of the source water assessment report is to enable the public and decision-makers to make well-founded decisions for the protection and preservation of our drinking water. The source water assessment report identifies the potential contaminating activities for each source of water.

In the report, Kukuiahaele Water System sources are potentially vulnerable to contaminants associated with the following activities: sugarcane, residential parcel, and roads. Atrazine has been detected in this system which is attributed to runoff from herbicide used on row crops. For more information, please contact Keith Okamoto, P.E., at 961-8670.

Is my water safe?

Yes it is. Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) and State drinking water health standards. The Department of Water Supply vigilantly safeguards its water supplies and once again we are proud to report that your system has complied with all drinking water standards.

Why are there contaminants in my drinking water?

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 Environmental Protection Agency's Safe Drinking Water Hotline 1-(800) 426-4791. If you have any questions regarding this Water Quality Report, please call Keith Okamoto, P.E., at 961-8670.

Do I need to 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 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 Safe Drinking Water Hotline at 1-(800) 426-4791 .

How can I get involved?

The Water Board meets the fourth Tuesday of every month. Call for the time and location of the meeting.

You Can Contact Us at the Following Numbers:

Administration/Finance/General.....	(808) 961-8050
Billing/Customer Service.....	(808) 961-8060
Engineering.....	(808) 961-8070
Emergencies & Field Operations.....	(808) 961-8790
Water Quality.....	(808) 961-8670

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County of Hawai'i



Department of
Water Supply

2010
Kukuiahaele
Water System
Annual
Water Quality
Report

Kukuihaele System Water Quality Data Tables

The table below lists the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

Regulated Contaminants											
				Haina Well			Honoka'a Well "B"				
Contaminants	MCL	MCLG	AL	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Violation	Typical Source of Contaminant
Radioactive Contaminants											
Alpha emitters (pCi/L)	15	0	n/a	ND	n/a	2003	4.8	n/a	2009	No	Erosion of natural deposits.
Beta photon/emitters (pCi/L)	50	0	n/a	ND	n/a	2003	5.1	n/a	2009	No	Decay of natural and manmade products.
The EPA considers 50 pCi/L to be the level of concern for Beta particles.											
Inorganic Contaminants											
Barium (ppm)	2	2	n/a	ND	n/a	2008	0.0064	n/a	2010	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium (ppb)	100	100	n/a	ND	n/a	2008	5.4	n/a	2010	No	Discharge from steel and pulp mills; erosion of natural deposits.
Copper - source water (ppm)	n/a	n/a	1.3	ND	n/a	2008	0.0022	n/a	2010	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Fluoride (ppm)	4	4	n/a	ND	n/a	2010	0.059	n/a	2010	No	Erosion of natural deposits; discharge from fertilizer and aluminum factories.
Lead - source water (ppb)	n/a	n/a	15	ND	n/a	2008	0.87	n/a	2010	No	Corrosion of household plumbing systems; erosion of natural deposits.
Nitrate (ppm)	10	10	n/a	0.73	n/a	2010	0.69	n/a	2010	No	Runoff from fertilizer use. Leaching from septic tanks, sewage. Erosion of natural deposits.
Organic Contaminants											
Atrazine (ppb)	3	3	n/a	0.30	n/a	2010	ND	n/a	2009	No	Runoff from herbicide used on row crops.
Disinfection By-Products											
Total Trihalomethanes (TTHMs) (ppb)	80	n/a	n/a	5.3	n/a	2010	ND	n/a	2009	No	Byproduct of drinking water disinfection.
Total Trihalomethanes or "TTHM" means the sum of the concentration of the trihalomethane compounds [trichloromethane (chloroform), dibromochloromethane, bromodichloromethane, and tribromomethane (bromoform)].											

Sodium (Not Regulated by State or Federal Government)

				Haina Well			Honoka'a Well "B"				
Contaminants (units)	MCL	MCLG	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Violation	Typical Source of Contaminant	
Inorganic Contaminants											
Sodium (ppm)	n/a	none	0.48	n/a	2008	n/a	n/a	n/a	No	Erosion of naturally occurring deposits; saltwater intrusion.	

Lead and Copper Rule Compliance

			Kukuihaele Water System					
Contaminant	AL	MCLG	Level Found	# of Sites > AL	Sample Date	Violation	Typical Source of Contaminant	
Copper (ppm)	1.3	1.3	0.01	0/19	2010	No	Corrosion of household plumbing systems; erosion of natural deposits.	

Sodium in drinking water

There is no State or Federal maximum contaminant level for sodium. Although required, monitoring for sodium is performed primarily to gather information for the consumers, the Safe Drinking Water Branch (SDWB), and the Department of Water Supply (DWS).

The EPA Drinking Water Advisory recommends that the sodium concentration in drinking water not exceed a range of 30 to 60 ppm because of the possible adverse effects on taste at higher concentrations. For persons on a sodium-restricted diet, sodium concentrations greater than 120 ppm could be problematic.

If you are on a sodium-restricted diet, you should consult your physician about the level of sodium in the drinking water.

Lead and drinking water

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 and not usually from the source water. The Department of Water Supply 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 choose to have your water tested by contacting private laboratories that are certified by the State for doing drinking water analyses. 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>.

Key definitions of terms used in this report

- MCLG** = Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk for health. MCLGs allow for a margin of safety.
- 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
- ppm** = Parts per million. One ppm corresponds to a single penny in \$10,000 or about one minute in two years.
- ppb** = Parts per billion. One ppb corresponds to a single penny in \$10,000,000 or about one minute in two thousand years.
- pCi/L** = Picocuries per liter. A measure of radioactivity.
- ND** = Not Detected: If a contaminant is not measured at or above its minimum detection limit, it is reported as Not Detected - detection limits are available upon request.
- AL** = Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- n/a** = Not applicable

Where does my water come from?

The normal source of water for the Kukuihaele Water System is Waiulili Spring, which is a groundwater under the influence of surface water source. As of July 20, 2007, the use of Waiulili Spring was temporarily halted because the spring had very low production. Since July 20, 2007 to the present, the Department of Water Supply (DWS) has been hauling treated groundwater from Haina Water System to Kukuihaele Water System.

Haina Well was down for repairs from October 15, 2010 to January 20, 2011. During that time, treated water was provided to Haina Water System from Honoka'a Well "B" and for a short time from South Kohala Water System via hauling. Honoka'a Well "B" data is included in the data tables. If you wish to review the monitoring data for South Kohala Water System, that information is available on our website at www.hawaiidws.org.

In the future, it is conceivable that Waiulili Spring could be placed back into service if there is adequate and sustained spring production. However, to improve the sources of water in this area, the DWS is currently working to resolve the water quality issues with Kukuihaele Well and is currently in construction of a well in Kapulena. The DWS is planning to outfit Kukuihaele Well and use desalination treatment process until the new well in Kapulena is completed. The source(s) of supply may change depending on the supply and demand.