

...Water, Our Most Precious Resource...

You may also access your 2016 North Kona Water Quality Report online at:

<http://www.hawaiidws.org/7%20the%20water/ccr/2016/CCRNKonaNKona2016lo.pdf>

Where does my water come from?

The sources of water for the North Kona Water System are Keopu Pu'uhonua Well, Wai'aha Well, Kalaoa Well, Hualālai Well, Honokōhau Well, Keahuolū Well No. 1 (QLI), Hōlualoa Well, Kahalu'u Wells A, B, C, and D, Kahalu'u Shaft, and Palani Well (all of which are groundwater sources). The source(s) may change depending on the supply and demand.

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference - try one today and soon it will become second nature.



- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!

Visit www.epa.gov/watersense for more information

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 20 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.

Source Water Assessment Program

In 2004, the preliminary source water assessment report was released. The report was updated in 2007. 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, North Kona Water System sources are potentially vulnerable to contaminants associated with the following activities: cesspools, residential parcel, SQG Resource Conservation and Recovery Act, roads, septic tanks, cemeteries, utility stations, and diversified agriculture. Note: the list of potential contaminating activities has not necessarily been associated with anything found in the water. For more information, please contact Kawika Uyehara, P.E., at 961-8670.

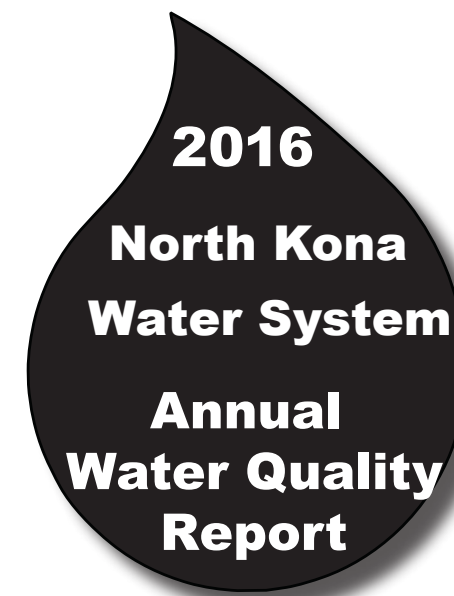
How can I get involved?

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 HAWAII



Department of Water Supply

What is the purpose of the Water Quality Report?

List of Abbreviations:

CCR..... Consumer Confidence Report
CDC Center for Disease Control & Prevention
EPA Environmental Protection Agency
HDWS..... Hawai'i Department of Water Supply
RTCR Revised Total Coliform Rule

What is the purpose of the Water Quality Report?

The EPA is responsible for making sure that public water supplies within the United States are safe. In 1974, Congress passed the Safe Drinking Water Act in order to protect the nation's public drinking water supply. This law gives the EPA authority to set the standards for drinking water quality (to determine what levels of contaminants are safe to have in the water) and to oversee the states and water suppliers who implement these standards.

The EPA requires community water systems to deliver a CCR, also known as an annual drinking Water Quality Report, to their customers. These reports provide information to customers about their drinking water quality for the past year. All water quality reports must contain certain content elements and must be made available each year by July 1st for the preceding year.

The EPA determines what levels of contaminants are safe to have in the water, and the water quality report will show customers how the levels of contaminants in their water source compare to the EPA standard.

The water system must provide the EPA standard in the data table for each regulated contaminant detected. The customer can then compare the level of contaminants in their water to the EPA standard.

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 EPA Safe Drinking Water Hotline 1-(800) 426-4791. If you have any questions regarding this Water Quality Report, please call Kawika Uyehara, P.E., at 961-8670.

Is my water safe?

Yes it is. Last year, as in years past, our tap water met all U.S. EPA and State drinking water health standards. HDWS vigilantly safeguards its water supplies and once again we are proud to report that we have complied with all drinking water standards.

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 EPA Safe Drinking Water Hotline at 1-(800) 426-4791.

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 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.

Revised Total Coliform Rule

This CCR reflects changes in drinking water regulatory requirements during 2016. All water systems were required to comply with the TCR from 1989 to March 31, 2016, and began compliance with a new rule, the RTCR on April 1, 2016. The new rule maintains the purpose to protect public health by ensuring the integrity of the drinking water distribution system and monitoring for the presence of microbial (i.e., total coliform and *E. coli* bacteria). The U.S. EPA anticipates greater public health protection under the new rule, as it requires water systems that are vulnerable to microbial contamination to identify and fix problems. As a result, under the new rule there is no longer a monthly maximum contamination level violation for multiple total coliform detections. Instead, the new rule requires water systems that exceed a specified frequency of total coliform occurrences to conduct an assessment to determine if any sanitary defects exist. If found, these must be corrected by the public water system.

Water Quality Report Online

This year, you are likely reading the report online, rather than the traditional paper copy sent by mail. The EPA recently changed the requirements to allow utilities to communicate this important information digitally.

Customers are still able to request a paper copy and can do so by the following methods. (Please provide us with your account number, phone number, mailing or email address, and water system name so that we can provide you with the correct report.):

- Call us at (808) 961-8670
- Email us at dws@hawaiiidws.org
- Write to us at:

Department of Water Supply/Micro Lab
889 Leilani Street
Hilo, HI 96720

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. HDWS 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 EPA Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>. You can also contact the National Lead Information Center at 1-800-424-LEAD (5323) which provides the general public and professionals with information about lead, lead hazards, and their prevention.

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, and HDWS.

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.

North Kona 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																											
				Kalaoa Well/Hualālai Well/Palani Well			Kalaoa Well/Keahuolū Well No.1/Honokōhau Well			Keahuolū Well No. 1/Keopu Pu'uhonua Well			Keahuolū Well No. 1/Keopu Pu'uhonua Well/Honokōhau Well			Wai'aha Well/Hōlualoa Well			Hōlualoa Well			Kahalu'u Shaft/ Kahalu'u Well Nos. A, B, C, D					
Contaminants (units)	MCL	MCLG	AL	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Violation	Typical Source of Contaminant	
Radioactive Contaminants																											
Beta/Photon emitters (pCi/L)	50	0	n/a	4.2	3.3 - 4.2	2016	4.2	ND - 4.2	2016	3.1	none	2016	3.1	ND - 3.1	2016	4.5	ND - 5.9	2016	5.9	none	2016	7.0	5.4 - 8.6	2016	No	Decay of natural and manmade products. The EPA considers 50 pCi/L to be the level of concern for Beta particles. The MCL for Beta particles is 4 mrem/year.	
Inorganic Contaminants																											
Barium (ppm)	2	2	n/a	0.0039	none	2015	ND	ND - ND	2014	ND	ND - ND	2014	0.0039	none	2015	ND	ND - ND	2014	ND	none	2014	0.011	ND - 0.011	2014	No	Discharge of drilling wastes; erosion of natural deposits.	
Copper-source water (ppm)	n/a	n/a	1.3	0.0051	none	2015	ND	ND - ND	2014	ND	ND - ND	2014	ND	ND - ND	2014	ND	ND - ND	2014	ND	none	2014	ND	ND - ND	2014	No	Corrosion of household plumbing systems; erosion of natural deposits.	
Chromium (ppb)	100	100	n/a	2.2	none	2015	3.0	2.2 - 3.0	2014	2.5	2.2 - 2.5	2014	2.5	2.2 - 2.5	2014	2.1	2.0 - 2.1	2014	2.1	none	2014	2.1	ND - 2.1	2014	No	Erosion of natural deposits.	
Fluoride (ppm)	4	4	n/a	0.45	0.42 - 0.48	2016	0.42	0.27 - 0.42	2016	0.27	0.24 - 0.27	2016	0.28	0.24 - 0.28	2016	0.25	0.24 - 0.25	2016	0.24	none	2016	0.23	0.21 - 0.23	2016	No	Erosion of natural deposits.	
Nitrate (ppm)	10	10	n/a	0.92	0.88 - 0.97	2016	1.10	0.92 - 1.10	2016	1.05	0.99 - 1.10	2016	1.06	0.99 - 1.10	2016	0.96	0.92 - 1.00	2016	0.92	none	2016	1.10	1.10 - 1.10	2016	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.	
Disinfection By-Products																											
Total Trihalomethanes (TTHMs) (ppb)	80	n/a	n/a	<i>North Kona Water System Distribution Results for TTHMs:</i>						Level Found = 2.8						Range of Detections = 1.0 - 2.8						Sample Date = 2016			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)].																											

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 to 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.

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

•**pCi/L** = picocuries per liter.

•**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.

•**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.

•**n/a** = not applicable

Lead and Copper Rule Compliance							
North Kona Water System							
Contaminant (units)	AL	MCLG	Level Found	# of Sites > AL	Sample Date	Violation	Typical Source of Contaminant
Copper (ppm)	1.3	0	0.05	0/34	2016	No	Corrosion of household plumbing systems; erosion of natural deposits.
The 90th percentile of copper is reported as the level found.							

UCMR3 - Unregulated Contaminant Monitoring Rule [UCMR] (Not Regulated by State or Federal Government)																									
Kalaoa Well/Hualālai Well/Palani Well				Kalaoa Well/Keahuolū Well No.1/Honokōhau Well			Keahuolū Well No. 1/Keopu Pu'uhonua Well			Keahuolū Well No. 1/Keopu Pu'uhonua Well/Honokōhau Well			Wai'aha Well/Hōlualoa Well			Hōlualoa Well			Kahalu'u Shaft/ Kahalu'u Well Nos. A, B, C, D						
Contaminants (units)	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Violation	Typical Source of Contaminant		
Unregulated Contaminants																									
Total Chromium (ppb)*	2.7	2.4 - 2.8	2014	2.5	2.0 - 2.8	2014	2.2	2.0 - 2.3	2014	2.2	2.0 - 2.3	2014	1.9	1.8 - 2.1	2014	1.9	1.9 - 2.0	2014	2.0	1.9 - 2.1	2014	No	Erosion of natural deposits.		
Hexavalent Chromium [Chromium-6] (ppb)	2.7	2.5 - 2.9	2014	2.4	2.0 - 2.9	2014	2.3	2.2 - 2.3	2014	2.3	2.0 - 2.5	2014	2.0	1.9 - 2.1	2014	2.0	1.9 - 2.1	2014	1.9	none	2015	No	Naturally occurring element.		
Molybdenum (ppb)	3.9	2.9 - 4.5	2014	3.2	1.6 - 4.5	2014	2.1	1.7 - 3.5	2014	2.2	1.6 - 3.6	2014	1.5	1.2 - 1.6	2014	1.4	1.2 - 1.5	2014	1.6	1.4 - 2.1	2014	No	Naturally occurring element.		
Strontium (ppb)	29.0	28.0 - 30.0	2014	61.2	27.0 - 260.0	2014	32.0	26.0 - 55.0	2014	56.2	26.0 - 260.0	2014	45.1	24.0 - 160.0	2014	72.0	28.0 - 160.0	2014	188.3	140.0 - 270.0	2014	No	Naturally occurring element.		
Vanadium (ppb)	79.5	62.0 - 98.0	2014	73.0	59.0 - 98.0	2014	62.8	56.0 - 79.0	2014	59.9	58.0 - 56.0	2014	53.3	40.0 - 64.0	2014	57.7	40.0 - 58.0	2014	46.5	43.0 - 53.0	2014	No	Naturally occurring elemental metal.		
The 1996 Safe Drinking Water Act (SDWA) amendments require that once every five years the EPA issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems (PWSs). UCMR3 was published on May 2, 2012 and is the third list of contaminants. These unregulated contaminants do not have health-based standards, MCLs, or MCLGs set under the Safe Drinking Water Act (SDWA). UCMR benefits public health and the environment by providing the Environmental Protection Agency (EPA) and other interested parties with scientifically valid data on the occurrence of these contaminants in the drinking water. This permits assessment of the population being exposed and the levels of exposure. This data set is one of the primary sources of occurrence and exposure information the EPA uses to develop regulatory decisions for emerging contaminants. More information can be found at: https://www.epa.gov/dwucmr . *Total Chromium is a regulated contaminant and also one of the contaminants tested in UCMR3. The MCL and MCLG for Total Chromium is 100 ppb.																									

Sodium (Not Regulated by State or Federal Government)																									
Kalaoa Well/Hualālai Well/Palani Well				Kalaoa Well/Keahuolū Well No. 1/Honokōhau Well			Keahuolū Well No. 1/Keopu Pu'uhonua Well			Keahuolū Well No. 1/Keopu Pu'uhonua Well/Honokōhau Well			Wai'aha Well/Hōlualoa Well			Hōlualoa Well			Kahalu'u Shaft/ Kahalu'u Well Nos. A, B, C, D						
Contaminants (units)	MCL	MCLG	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Level Found	Range of Detections	Sample Date	Violation	Typical Source of Contaminant
Inorganic Contaminants																									
Sodium (ppm)	none	none	27.0	none	2015	24.2	16.0 - 32.0	2014	16.0	15.0 - 17.0	2014	19.0	15.0 - 26.0	2014	50.8	13.0 - 130.0	2014	87.7	13.0 - 130.0	2014	112.7	64.0 - 200.0	2014	No	Erosion of natural deposits; saltwater intrusion.