

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

You may also access your 2016 South Kohala Water Quality Report online at:

<http://www.hawaiidws.org/7%20the%20water/ccr/2016/CCRSKohalaSKohala2016lo.pdf>

Where does my water come from?

The normal sources of water for South Kohala Water System are Waikoloa and Kohākōhau Streams (which are surface water sources). The water is collected and stored in three (3) fifty million-gallon reservoirs. The water is then transmitted to Waimea Treatment Plant where it is processed. The Parker Ranch Well 1 and Waimea Well are utilized to supplement the water for South Kohala, when needed. The source(s) of supply 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.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 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.



- 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

Source Water Assessment Program

In 2004, the preliminary source water assessment report was released. The report was updated in 2005 and 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, South Kohala Water System sources are potentially vulnerable to contaminants associated with the following activities: feral animals, grazing, cultivated agriculture, cemetery, residential parcels, roads, recorded spill, septic tanks, and cesspools. Atrazine has been detected in this system which is attributed to runoff from herbicide used on row crops. Carbon tetrachloride, which is attributed to discharge from chemical plants and other industrial activities has also been detected in this system. For more information, please contact Kawika Uyehara, P.E., at 961-8670.

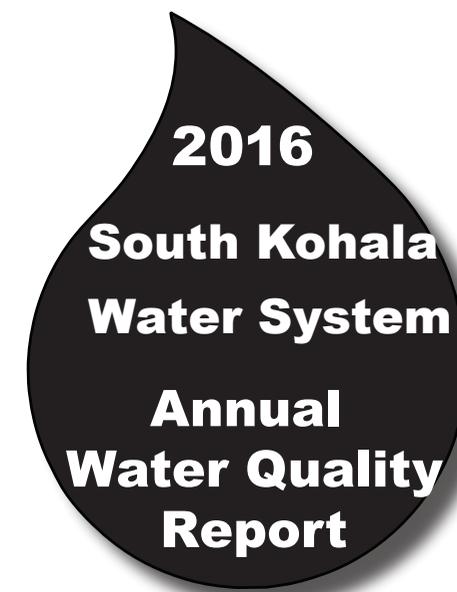
How can I get involved?

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.

South Kohala 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																	
Contaminants (units)	MCL	MCLG	Waimea Treatment Plant			Waimea Treatment Plant/ Waimea Well			Waimea Treatment Plant/ Parker Ranch Well 1			Waimea Treatment Plant/ Waimea Well/Parker Ranch Well 1			Violation	Typical Source of Contaminant	
			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			
Microbiological Contaminants																	
Turbidity (NTU)	TT = maximum of 1 NTU		0	0.27	none	2016	0.27	none	2016	0.27	none	2016	0.27	none	2016	No	Soil runoff.
	TT = percentage of samples ≤ 0.3 NTU in at least 95% of measurements taken each month			100	none	2016	100	none	2016	100	none	2016	100	none	2016	No	
Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.																	
Disinfection By-Products																	
Haloacetic acids (HAA5) (ppb)	60	n/a	15.5	3.7 - 9.4	2016	15.5	3.7 - 9.4	2016	15.5	3.7 - 9.4	2016	15.5	3.7 - 9.4	2016	No	Byproduct of drinking water disinfection.	
Total Trihalomethanes (TTHMs) (ppb)	80	n/a	15.5	2.8 - 6.3	2016	15.5	2.8 - 6.3	2016	15.5	2.8 - 6.3	2016	15.5	2.8 - 6.3	2016	No	Byproduct of drinking water disinfection.	
Haloacetic Acids or "HAA5" means the sum of the concentration of the haloacetic acids (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid). Total Trihalomethanes or "TTHM" means the sum of the concentration of the trihalomethane compounds [trichloromethane (chloroform), dibromochloromethane, bromodichloromethane, and tribromomethane (bromoform)]. *Not required.																	

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.

Lead and Copper Rule Compliance							
Contaminant (units)	AL	MCLG	South Kohala Water System			Violation	Typical Source of Contaminant
			Level Found	# of Sites > AL	Sample Date		
Copper (ppm)	1.3	1.3	0.1658	0/22	2015	No	Corrosion of household plumbing systems; erosion of natural deposits.
The 90th percentile value of copper is reported as the level found.							

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

UCMR3 - Unregulated Contaminant Monitoring Rule [UCMR] (Not Regulated by State or Federal Government)																
Contaminants (units)	Waimea Treatment Plant			Waimea Treatment Plant/ Waimea Well			Waimea Treatment Plant/ Parker Ranch Well 1			Waimea Treatment Plant/ Waimea Well/Parker Ranch Well 1			Violation	Typical Source of Contaminant		
	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				
Unregulated Contaminants																
Total Chromium (ppb)**	0.61	0.50 - 0.84	2014	0.61	0.50 - 0.84	2014	0.61	0.50 - 0.84	2014	0.61	0.50 - 0.84	2014	No	Erosion of natural deposits.		
Hexavalent Chromium [Chromium-6] (ppb)	0.56	0.46 - 0.72	2014	0.56	0.46 - 0.72	2014	0.56	0.46 - 0.72	2014	0.56	0.46 - 0.72	2014	No	Naturally occurring element.		
Strontium (ppb)	74.0	61.0 - 82.0	2014	74.0	61.0 - 82.0	2014	74.0	61.0 - 82.0	2014	74.0	61.0 - 82.0	2014	No	Naturally occurring element.		
Vanadium (ppb)	5.7	5.0 - 7.0	2014	5.7	5.0 - 7.0	2014	5.7	5.0 - 7.0	2014	5.7	5.0 - 7.0	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). UCMR 3 was published on May 2, 2012 and is the third list of contaminants. These 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 data set is one of the primary sources of occurrence and exposure information the EPA uses to develop future regulatory decisions and actions to protect public health. **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.																

- TT** = Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
- NTU** = Nephelometric Turbidity Units: This is a measure of the suspended material in water.

Sodium (Not Regulated by State or Federal Government)																
Contaminants (units)	MCL	MCLG	Waimea Treatment Plant			Waimea Treatment Plant/ Waimea Well			Waimea Treatment Plant/ Parker Ranch Well 1			Waimea Treatment Plant/ Waimea Well/Parker Ranch Well 1			Violation	Typical Source of Contaminant
			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		
Inorganic Contaminants																
Sodium (ppm)	none	none	10.0	none	2016	10.0	none	2016	10.0	none	2016	10.0	none	2016	No	Erosion of natural deposits; additive used for corrosion control.

- 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.
- n/a** = not applicable

Special Notice under Ground Water Rule

The U.S. Environmental Protection Agency (EPA) published the Ground Water Rule (GWR) on November 8, 2006. Under the GWR, a Special Notice is required in the Water Quality Report, for any uncorrected significant deficiencies that have not been addressed at the time of the report. The uncorrected significant deficiencies for South Kohala Water System will be disclosed until they are addressed.

What is a Significant Deficiency?

Sanitary surveys are onsite reviews of the water source, facilities, equipment, operation and maintenance of a public water system for the purpose of evaluating the adequacy of such source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water. Sanitary surveys are conducted by the State every three or five years depending on the water system. The South Kohala Water System is on a three-year cycle as the system is considered a surface water system.

When a sanitary survey is conducted, the State identifies significant deficiencies that a water system must correct and the water system must reply with a corrective action date from

the date of receiving the survey report. A significant deficiency is defined as, “any defect in a system’s design, operation, and maintenance, as well as any failure or malfunction of any system component, that the State determines to cause, or have the potential to cause, an immediate sanitary risk to health”. Depending on the significant deficiency, some corrective actions take longer to implement.

Significant Deficiencies and Corrective Actions

The Sanitary Survey for the South Kohala Water System was conducted on September 22-24, 2015. The Sanitary Survey report was received by the Department of Water Supply (DWS) on November 30, 2015 and the Department responded on December 22, 2015 with our corrective actions. Some of our corrective actions could not be completed by this time and are documented in this water quality report. The uncompleted significant deficiencies are detailed below with the name of the facility, the description of the significant deficiency, the state-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed.

Raw Water Reservoirs (#1, #2, #3 and Backwash Reservoir)

Reservoir #3 appears to be susceptible to runoff from the adjacent pasture land immediately upslope. Potential solutions include isolating livestock from this upslope area or providing a higher curb around the reservoir that is less susceptible to flooding off this slope, i.e. slope and perimeter access road both appear to be higher than the top of the curb, which may be overtopped during heavy rainfall events.

Corrective Action and Progress to Date

Waikoloa Reservoir #3 is entirely surrounded by an existing chainlink fence. In addition there is an existing concrete curb that prevents surface water runoff from flowing into the reservoir. However, per direction from the Department of Health, Safe Drinking Water Branch, DWS is currently working to install additional livestock fencing above Reservoir #3. DWS is awaiting decision from Department of Land and Natural Resources prior to installation of the proposed livestock fencing. Thus, the anticipated completion of the additional fencing is the end of 2017.