

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

You may also access your 2019 Kukuihaele Water Quality Report online at:

<https://www.hawaiidws.org/CCRKukuihaele2019.pdf>

## 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, Kukuihaele 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 Kawika Uyehara, P.E., at 961-8670.

## 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.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Shutting off water while brushing your teeth, washing your hair, and shaving could save up to 500 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!

For more information,  
visit us at [www.hawaiidws.org](http://www.hawaiidws.org)  
& follow the conservation links  
or visit [www.epa.gov/watersense](http://www.epa.gov/watersense)

## Where does my water come from?

On March 11, 2019, Kapulena Well was put online to service the Kukuihaele Water System and the physical connection to the South Kohala Water System was severed. The normal source of water for Kukuihaele Water System as of March 11, 2019 is Kapulena Well, which is a groundwater source. Previously on November 3, 2011, a physical connection was made from South Kohala Water System to Kukuihaele Water System and as of November 8, 2011 to March 10, 2019, Kukuihaele Water System received water primarily from South Kohala Water System (see Appendix A for South Kohala Water System data). 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.

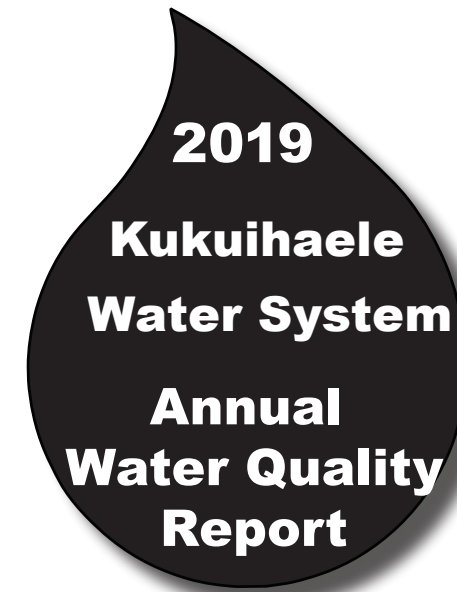
## How can I get involved?

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

# 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

## 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.

## 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.

## 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 Ueyehara, 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. Immunocompromised 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.

## 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@hawaiidws.org](mailto:dws@hawaiidws.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 in your home plumbing undisturbed 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. 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.

# 2019 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   |     |      |                         |             |                     |             |           |   |
|--|-----|------|-------------------------|-------------|---------------------|-------------|-----------|---|
|  |     |      | Kukuihaele Water System |             |                     |             |           |   |
| Contaminants (units)   | MCL | MCLG | AL                      | Level Found | Range of Detections | Sample Date | Violation | Typical Source of Contaminant   |
| <b>Radioactive Contaminants</b>  |     |      |                         |             |                     |             |           |   |
| Beta/photon emitters (pCi/L)   | 50  | 0    | n/a                     | 2.0         | ND - 4.0            | 2019        | 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. |
| <b>Inorganic Contaminants</b>  |     |      |                         |             |                     |             |           |   |
| Atrazine (ppb)   | 3   | 3    | n/a                     | 0.045       | ND - 0.082          | 2019        | No        | Runoff from herbicide used on row crops.  |
| Barium (ppm)   | 2   | 2    | n/a                     | 0.0026      | none                | 2019        | No        | Discharge of drilling wastes; erosion of natural deposits.  |
| Copper-source water (ppm)  | n/a | n/a  | 1.3                     | 0.0095      | none                | 2019        | No        | Corrosion of household plumbing systems; erosion of natural deposits.   |
| Fluoride (ppm)   | 4   | 4    | n/a                     | 0.059       | none                | 2019        | No        | Erosion of natural deposits.  |
| Nitrate (ppm)  | 10  | 10   | n/a                     | 0.22        | 0.21 - 0.23         | 2019        | No        | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.  |
| <b>Disinfection By-Products</b>  |     |      |                         |             |                     |             |           |   |
| Haloacetic acids (HAA5) (ppb)  | 60  | n/a  | n/a                     | 5.8         | none                | 2019        | No        | Byproduct of drinking water disinfection.   |
| Total Trihalomethanes (TTHMs) (ppb)  | 80  | n/a  | n/a                     | 11.4        | none                | 2019        | 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)]. |     |      |                         |             |                     |             |           |   |

## 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.

| Lead and Copper Rule Compliance                                     |     |      |                         |                 |             |           |   |
|---|-----|------|-------------------------|-----------------|-------------|-----------|---|
|   |     |      | Kukuihaele Water System |                 |             |           |   |
| Contaminant (units)   | AL  | MCLG | Level Found             | # of Sites > AL | Sample Date | Violation | Typical Source of Contaminant   |
| Copper (ppm)  | 1.3 | 1.3  | <0.05                   | 0/8             | 2018        | No        | Corrosion of household plumbing systems; erosion of natural deposits. |
| The 90th percentile value of copper is reported as the level found. |     |      |                         |                 |             |           |   |

- 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.

| Sodium (Not Regulated by State or Federal Government) |      |      |                         |                     |             |           |   |
|---|------|------|-------------------------|---------------------|-------------|-----------|---|
|   |      |      | Kukuihaele Water System |                     |             |           |   |
| Contaminants (units)                                  | MCL  | MCLG | Level Found             | Range of Detections | Sample Date | Violation | Typical Source of Contaminant                                     |
| <b>Inorganic Contaminants</b>                         |      |      |                         |                     |             |           |   |
| Sodium (ppm)  | none | none | 12.0                    | none                | 2019        | No        | Erosion of natural deposits; additive used for corrosion control. |

- pCi/l** = Picocuries per liter.
- 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



# Appendix A

## 2019 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 Contaminant Data Tables

| Regulated Contaminants   |   |      |             |                     |             |           |   |
|--|---|------|-------------|---------------------|-------------|-----------|---|
| South Kohala Water System  |   |      |             |                     |             |           |   |
| Contaminants (units)   | MCL   | MCLG | Level Found | Range of Detections | Sample Date | Violation | Typical Source of Contaminant             |
| <b>Microbiological Contaminants</b>  |   |      |             |                     |             |           |   |
| Turbidity (NTU) **   | TT = maximum of 1 NTU   | 0    | 0.40        | none                | 2019        | No        | Soil runoff.                              |
|  | TT = percentage of samples ≤ 0.3 NTU in at least 95% of measurements taken each month |      | 99%         | none                | 2019        | 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.   |   |      |             |                     |             |           |   |
| <b>Disinfection By-Products</b>  |   |      |             |                     |             |           |   |
| Haloacetic acids (HAA5) (ppb)  | 60  | n/a  | 12.3        | 8.1 - 16.1          | 2019        | No        | Byproduct of drinking water disinfection. |
| Total Trihalomethanes (TTHMs) (ppb)  | 80  | n/a  | 13.8        | 9.6 - 15.8          | 2019        | 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)]. |   |      |             |                     |             |           |   |

| Lead and Copper Rule Compliance                                     |     |      |             |                 |             |           |   |
|---|-----|------|-------------|-----------------|-------------|-----------|---|
| South Kohala Water System   |     |      |             |                 |             |           |   |
| Contaminant (units)   | AL  | MCLG | Level Found | # of Sites > AL | Sample Date | Violation | Typical Source of Contaminant   |
| Copper (ppm)  | 1.3 | 1.3  | <0.05       | 0/24            | 2018        | No        | Corrosion of household plumbing systems; erosion of natural deposits. |
| The 90th percentile value of copper is reported as the level found. |     |      |             |                 |             |           |   |

### 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.
- 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.
- 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.
- cyst** = The infectious stage for *Giardia*.
- 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

# Appendix A

## 2019 South Kohala System Water Quality Data Tables (continued)

### Unregulated Contaminant Data Tables

| LT2ESWTR Cryptosporidium (Not Regulated by State or Federal Government) |      |      |                                |                     |             |           |   |
|---|------|------|--------------------------------|---------------------|-------------|-----------|---|
| South Kohala Water System   |      |      |                                |                     |             |           |   |
| Contaminants (units)  | MCL  | MCLG | Level Found                    | Range of Detections | Sample Date | Violation | Typical Source of Contaminant   |
| <b>Microbiological Contaminants</b>                                     |      |      |                                |                     |             |           |   |
| <i>Giardia</i> (cysts/L)  | n/a  | n/a  | Source water before filtration |                     |             | No        | Can be found in soil, food, water, or on surfaces that have been contaminated with feces from infected humans or animals. |
|   |      |      | 0.011                          | ND - 0.174          | 2019        |           |   |
| Sodium (Not Regulated by State or Federal Government)                   |      |      |                                |                     |             |           |   |
| South Kohala Water System   |      |      |                                |                     |             |           |   |
| Contaminants (units)  | MCL  | MCLG | Level Found                    | Range of Detections | Sample Date | Violation | Typical Source of Contaminant   |
| <b>Inorganic Contaminants</b>   |      |      |                                |                     |             |           |   |
| Sodium (ppm)  | none | none | 6.0                            | none                | 2019        | No        | Erosion of natural deposits; additive used for corrosion control.   |

### Giardia

The U.S. Environmental Protection Agency (EPA) published the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR) on January 5, 2006. The LT2ESWTR improves control of microbial pathogens and requires source water monitoring for public water systems (PWSs) that use surface water. Based on system size and filtration type, water systems need to monitor for Cryptosporidium, *E. coli*, and turbidity.

The purpose behind the LT2ESWTR rule is to address the health effects associated with Cryptosporidium in surface water used as a drinking water supply and does not require monitoring for *Giardia*. However, samples were also analyzed for *Giardia* as it provides the Department of Water Supply additional water quality information. Two of the total twenty-four water samples analyzed indicated the presence

of *Giardia* in the untreated source water. The untreated source water was then sent through a filtration and disinfection process at the Waimea Water Treatment Plant where the treated water meets all Federal and State requirements. In 2019, the source water monitoring data was used to categorize the source water into one of four “bin” classifications that have associated treatment requirements. Based on water qual-

ity results, the Department of Health informed us that our South Kohala Water System fell into the lowest risk “Bin 1” category which requires no additional treatment at the Waimea Water Treatment Plant. More information regarding the LT2ESWTR can be found at: <https://www.epa.gov/dwreginfo/long-term-2-enhanced-surface-water-treatment-rule-documents#Overview>