

2020
Consumer Confidence Report
Napu'u Water Inc.

by
 BIG ISLAND WATER SERVICE, LLC
 Rick Strojny, DSO-4
 Certified Distribution System Operator Grade 4

“Water is the driving force of all Nature.”
Leonardo da Vinci

Is My Water Safe?

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.



Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune 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/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).



Where does my water come from?

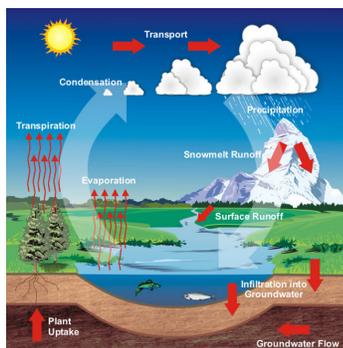
Napu'u Water Inc. (NWI) provides for the needs of Pu'u Lani Ranch, the community of Pu'u ana hulu, and Pu'u Wa'a Wa'a Ranch. Napu'u Water Inc. owns and operates two deep ground water wells located at Pu'u Lani Ranch subdivision and Pu'u Wa'a Wa'a Ranch that access the Kiholo aquifer. NWI's water flows perhaps from both Mauna Loa and Mauna Kea. The Kiholo aquifer is recharged through rainfall as water percolates through the porous rock. It seems bizarre, but the island's groundwater sits atop underground seawater. That's because freshwater is less dense than saltwater; rain soaks into the island and forms a floating freshwater lens atop bottom layers of ocean water. In proportion, the freshwater lens is something like an iceberg: for every foot of water above sea level, there are 40 feet below it. Napu'u Water's submersible pumps pump the fresh water up approximately 2,500 ft from sea level to the wellheads. Water is then chlorinated for disinfection and is either used immediately by the community, or stored in a 100,000 gallon storage tank and several smaller tanks totaling 32,500 gallons for future higher demand periods.

Source water assessment and its availability

Napu'u's drinking water is monitored and tested by the operator for the system, Big Island Water Service, and additionally tested by independent certified laboratories and the Hawai'i Department of Health for all contaminants established by the Safe Drinking Water Act. In 2019, NWI completed an EPA mandated three year Phase II and Phase V compliance test. In 2016, NWI completed an EPA mandated nine year Radiological compliance test. No contaminants or results of any significance were detected in these extensive tests. A Hawaii Source Water Assessment Report was accomplished in November 2006 for Napu'u Water Inc. This report is available for owners by contacting the Napu'u Water Inc. Board of Directors.



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 (EPA) Safe Drinking Water Hotline (800-426-4791). 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: microbial contaminants, such as viruses and bacteria, that 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 by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and 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, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

How can I get involved?

The Napu'u Water Inc. Board of Directors meets regularly and welcomes your participation. The meeting dates are available to you on the NWI website, www.napuuwater.com, or by contacting the administrator/coordinator for NWI at 808-325-2314 or admin@napuuwater.com. In addition, the NWI annual meeting held in the last quarter of the year is an excellent time to meet the Board of Directors and learn about the status of your water company.

Description of Water Treatment Process

Your water is treated by disinfection. Disinfection involves the addition of chlorine or other disinfectant to kill dangerous bacteria and microorganisms that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century. Napu'u Water Inc. has not had any Microbial contamination or violations in it's history.

Water Conservation Tips

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 shower head. 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.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Visit www.epa.gov/watersense for more information.

Did You Know?

Congress enacted the Safe Drinking Water Act (SDWA) in 1974 and amended and reauthorized it in 1986, 1996, and 2016. It is the main federal law that ensures the quality of American's drinking water. The SDWA authorizes the U.S. Environmental Protection Agency (EPA) to set national standards for drinking water to protect against health effects from exposure to naturally occurring and man made contaminants.

Federal drinking water regulations apply to approximately 152,700 privately and publicly owned water systems that provide water for human consumption to at least 15 service connections or that regularly serve at least 25 people. These systems are called Public Water Systems (PWS).

The EPA delegates monitoring and enforcement of the rules and regulations to each state and their appointed agency, which in Hawaii is the Department of Health (DoH), Safe Drinking Water Branch (SDWB). It doesn't matter how big or small a water system is, all PWS's have relatively the same requirements from the EPA and DoH/SDWB regarding water testing, reporting, sanitary requirements, and adherence to regulations.

In Hawaii, although the quality of drinking water is regulated and monitored by the DoH/SDWB, the water resources, i.e. ground water and it's related pumping and sustainable yield management, and surface water is managed by the Commission of Water Resource Management (CWRM), which is part of the Department of Land and Natural Resources.

EPA has drinking water regulations for more than 90 contaminants. The general categories are 1) Physical (e.g. sediment or organic material suspended in water, 2) Chemical (e.g. naturally occurring or man made chemicals) 3) Biological (e.g. microbes like bacteria, viruses, etc) 4) Radiological (e.g. unstable atoms emitting ionizing radiation like cesium, plutonium, uranium)

Cross Connection Control

In response to requirements, recommendations, and guidance from the Hawaii Department of Health Safe Drinking Water Branch, Napu'u Water Inc. (NWI) instituted a proactive Cross Connection Control Program with the Backflow Prevention Assembly installation initiative. NWI encourages all members/customers to proactively be aware of potential cross connections that may occur (e.g. hoses left in pools/hot tubs, faulty irrigation system sprinklers that may let in surface water and contaminants). Proper installation, inspection, and maintenance of back flow prevention devices can reduce and eliminate the chance of contamination of NWI's distribution system, protecting our clean and safe drinking water.

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides - they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- Properly maintain your septic system to reduce leaching inadequately filtered water into water sources
- Dispose of chemicals properly; take used motor oil to a recycling center.

Additional Information for Lead

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. Napu'u Water Inc. 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>.

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. 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 vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

Unit Descriptions	
ppm	ppm: parts per million or milligrams per liter (mg/L)
ppb	ppb: parts per billion or micrograms per liter (ug/L)
NA	NA:Not Applicable
ND	ND: Not Detected
ppm	ppm: parts per million or milligrams per liter (mg/L)
ppb	ppb: parts per billion or micrograms per liter (ug/L)
pCi/L	pCi/L: Picocuries per liter

Important Drinking Water Definitions	
Term	Definition
MCLG	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	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.
TT	TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variations and Exemptions	Variations and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Important Drinking Water Definitions	
MRDLG	MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL	MRDL: Maximum residual disinfection level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Contaminants Inorganic	MCLG or MRDLG	MCL, TT, or MRDL	Highest Detect In Your Water	Range Low-High	Sample Date	Violation	Typical Source
Fluoride (ppm)	4	4	0.82	0.63-0.84	2020	No	Erosion of natural deposits; Discharge from fertilizer
Nitrate (measured as Nitrogen) (ppm)	10	10	1.2	0.51-1.2	2020	No	Runoff from fertilizer use;Leaching from septic tanks, sewage; Erosion of natural deposits
Chromium (ppb)	100	100	3.06	2.64-3.06	2019	No	Erosion of natural deposits
Sulfate (optional) (ppm)	NA	250	45	22-45	2020	No	Erosion of natural deposits

Contaminants Inorganic	MCLG	AL	Your Water	Sample Date	#Samples Exceeding AL	Exceeds AL	Typical Source
Lead - action level at consumer taps (ppb)	0	15	ND	2018	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Copper - action level at consumer taps (ppm)	1.3	1.3	ND	2018	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

The 90 percentile value is reported

Contaminants	MCLG or MRDLG	MCL, TT, or MRDL	Your Water	Range Low-High	Sample Date	Violation	Typical Source
Disinfectant By-Products							
There is evidence that the addition of a disinfectant is necessary for control of microbial contaminants							
Haloacetic Acids (HAA5) (ppb)	NA	60	3.40	NA	2019	No	By-product of drinking water chlorination
TTHMs [Total Trihalomethanes] (ppb)	NA	80	10.80	NA	2019	No	By-product of drinking water chlorination

Radiological Particle	MCL	MCLG	Result	Range	Sample Date	Violation	Typical Source
Beta Particle (pCi/L)	50 **	0	4.7	NA	2016	No	Erosion of natural deposits

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

For more information please contact:

Rick Strojny, DSO-4
 71-1699 Puu Napoo Dr. #56
 Kailua Kona, HI 96740

email: bigislandws@gmail.com

Phone: (808) 640-2799



AND



AND

