



Hawai'i Volcanoes National Park

Water Quality Consumer Confidence Report for 2016

What is the source of my water?

Our sole source of drinking water at Hawai'i Volcanoes National Park (HAVO) is from rain. Our water system collects treats and stores rain water for public consumption. Sodium Carbonate is added to the water to reduce the acidity. The water is processed through three Slow Sand Filters. Zinc-Ortho-Phosphate is added for corrosion control and Sodium Hypochlorite is added for disinfection to make it safe for consumption.



Why are there contaminants in my water?

All 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. (1-800-426-4791).

What are some drinking water contaminants?

The sources of drinking water (both tap 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 can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in various 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides, which can come from a variety of sources such as agriculture, urban storm water runoff and residential uses.

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- 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 storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.
- Acid Rain, usually caused by sulfur dioxide. Natural sources include; volcanoes, sea spray and rotting vegetation.

Is our water system meeting other rules that govern our operations?

The State and Environmental Protection Agency (EPA) require us to test our water on a regular basis to ensure its safety.

In order to ensure tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.



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/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 – (808-426-4791).

Important Definitions

MCL - Maximum Contaminant Level - The highest level of a contaminant that is allowed in drinking water, MCL's are set as close to the MCLG as feasible using the best available treatment technology.



MCLG - Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected risk to health. (MCLG's allow for a margin of safety!)

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

ppm - part per million - One part per million is about 1/2 of a dissolved aspirin in a full bathtub of water (about 50 gallons).

ppb – part per billion - One part per billion is about one dissolved aspirin tablet in a typical 25-meter swimming pool (about 100,000 gallons).

Water Quality Monitoring Results

The Environmental Protection Agency and State Department of Health require that water systems test for contaminants and report all contaminants. **HAVO's water system meets or exceeds the federal and state drinking water standards.** The following tables contain information on trace amounts of contaminants detected.

Regulated Contaminants Results HAVO Water N/A = Non-Applicable

Contaminant	MCL	MCLG	Level Found	Sample Date	Violation	Typical Source
Total Haloacetic Acids	60 ppb	N/A	1.0 ppb	2/17/16	No	Disinfection Byproduct
Trihalomethanes	80 ppb	N/A	3.6 ppb	2/17/16	No	Disinfection byproduct
Xylenes	10000 ppm	N/A	24.8 ppm 22.1 ppm	4/6/16 7/13/16	No	<i>Erosion of natural deposits Discharge from petrochemical refineries.</i>
ethylbenzene	700 ppm	N/A	4.1 ppm 3.8 ppm	4/6/16 7/13/16	No	Erosion of natural deposits, Discharge from petrochemical refineries.



Lead and Copper

Our water system results do not exceed the lead and copper action levels and the system has satisfactorily completed three years of monitoring and was allowed to reduce the frequency of monitoring to once every three years. The table below represents the 90th percentile results of lead and copper testing from 2015 in the HAVO water supply.

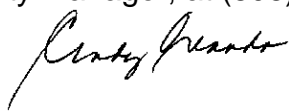
Copper & Lead Contaminants Results HAVO Water

Contaminant	Action Level	MCLG	Level Found	Number of Sites Exceeding	Sample Date Column	Violations	Typical Sources
<i>Copper</i>	<i>1300 ppb</i>	<i>1300 ppb</i>	<i>583 ppb</i>	<i>0 OF 22</i>	<i>6/3/15</i>	<i>No</i>	<i>Corrosion of Plumbing Systems</i>
<i>Lead</i>	<i>15 ppb</i>	<i>zero</i>	<i>5.5 ppb</i>	<i>1 Of 22</i>	<i>6/3/15</i>	<i>No</i>	<i>Corrosion of Plumbing Systems</i>

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. HAVO 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 EPA Safe Drinking Water Hotline at 1-800-426-4791, or at <http://www.epa.gov/safewater/lead>

This Consumer Confidence Report (CCR) reflects changes in drinking water regulatory requirements during 2016. All water systems were required to comply with the Total Coliform Rule from 1989 to March 31, 2016, and began compliance with a new rule, the Revised Total Coliform Rule 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.

Any questions about this report or our water system can be directed to Jon Christensen, Facility Manager, at (808) 985-6055 or Jack Osburn WTO/DSO at (808) 985-6066.



Cynthia L. Orlando
Superintendent

April 3, 2017
Date