



2013 Water Quality Report

County of Maui
Department of Water Supply
200 South High Street
Wailuku, Maui, HI 96793
www.mauewater.org

June 30, 2014

Dear Customers:

I am pleased to share the 16th Annual Water Quality Report with you. The Department of Water Supply (DWS) prepares this report every summer as required by the US Environmental Protection Agency (EPA). The report provides you with an overview of your drinking water based on water quality tests taken in 2013. Included are details of the source of your water, what's in your water, and how it compares to US EPA and Hawaii state health standards. Also listed are phone numbers and resources for you to use to learn more about your water.



The DWS provides you with drinking water from pristine and protected sources. The DWS Laboratory checks the drinking water regularly for over 100 potential contaminants, and is accredited by the Hawaii State Department of Health and the National Environmental Laboratory Accreditation Program.

The priorities for DWS this past year included preparing and delivering the long-term Capital Improvement Program, the 20-year integrated operating plan, additional source development projects, and making progress on the Upcountry water meter list. Working with the administration, our staff also continued the analyses of system and growth needs, prioritization of water infrastructure, drought tolerance, reliable capacity, and optimal ways to extend reliable capacity. Staff also provided in-depth research to develop and refine both short and long-term projections for supply and demand of individual water systems. In addition, the DWS made significant steps towards reducing the Upcountry water meter list by issuing new meters beginning in April 2014.

Drinking water is provided to your tap 24 hours per day and 7 days per week for less than a nickel per gallon. Your water supply service is a great value and is provided to the average family at the lowest cost of any of the Hawaiian county water systems. Your water rates help us pay for capital investments that will provide safe drinking water for generations to come. I urge you to take a few minutes to look through this report and learn about your water system. Learn why we believe, "By Water All Things Find Life."

Sincerely,

A handwritten signature in black ink, appearing to read "D. Taylor".

David S. Taylor, P.E.
Director of Water Supply

WHAT IS THIS REPORT ABOUT?

The Water Quality Report is sent to all customers every summer. The federal Safe Drinking Water Act (SDWA) requires that public water systems provide customers with a water quality report that summarizes water quality information for the previous calendar year. We are committed to providing our customers with this information because informed customers are our best allies.

IS MY DRINKING WATER SAFE?

Yes. The Department of Water Supply makes the quality of your drinking water its number one priority. To maintain our commitment to you, we routinely collect and test water samples every step of the way - from the source waters right to your home - checking purity and identifying potential problems. We monitor your drinking water according to EPA regulations to ensure that it meets all state and federal standards.

Our goal is and always has been to provide you with a safe and dependable supply of drinking water.

SOURCE WATER ASSESSMENT

A Source Water Assessment document was completed in 2004 by the University of Hawaii Water Resources Research Center in conjunction with the Department of Health Safe Drinking Water Branch. The assessment provides technical assistance to public water systems to develop protection programs for drinking water sources. The document includes: (1) delineation of the area around a drinking water source through which contaminants may travel to the drinking water supply, (2) inventory of activities that may lead to the release of contaminants within the delineated area, and (3) determination of the susceptibility of the water source experiencing a future contamination. The Department of Water Supply is working with advisory committees to develop a well-head protection program for our drinking water wells. Should you wish to review the source water assessment document, or learn about the well-head protection program, please contact the Water Resources and Planning Division at 463-3110.

SPECIAL NOTICE TO USERS OF KIDNEY DIALYSIS MACHINES AND FISH OWNERS

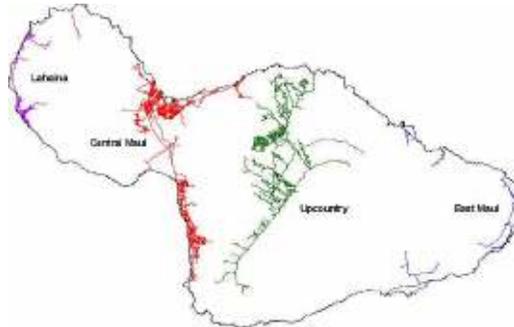
Maui DWS water in the Upper Kula area is treated with chloramines, a disinfectant that produces fewer disinfection by-products such as trihalomethanes. As such, customers who have unique water quality needs including those who use specialized treatments such as kidney dialysis machines or fish owners should make the necessary adjustments to remove chloramines. Go to our website for more information at: www.mauewater.org

Where Does My Water Come From?

Depending on where you live on Maui or Molokai, you receive either ground water or surface water. Ground water starts as rain falling over the mountains. The water is filtered naturally as it seeps through the porous volcanic rock to reach large underground formations called aquifers. Pumps are used to get this water from the aquifers to you. Surface water accumulates mainly as a result of direct runoff from rain into streams and rivers.

On Maui there are five water districts:

Central: A blend of surface water treated at the Iao Treatment Plant and ground water serves Kahului, Kihei, Maalaea, Makena, Paia, Waihee, Wailea and Wailuku



East Maui: Keanae, Nahiku, Hana: have ground water in all districts

Lahaina: A blend of ground and surface water treated at the Lahaina and Mahinahina Treatment Plants serves all of Lahaina and Napili

Molokai: Ground water in all districts

Upcountry:

Lower Kula: Surface water treated at the Lower Kula Treatment Plant serves areas from Piihola to Omaopio

Makawao: A blend of surface water treated at Kamole Treatment Plant and ground water serves Hali'imaile, Haiku, Makawao and Pukalani

Upper Kula: Surface water treated at the Upper Kula Treatment Plant serves Olinda to Kanaio

Your Comments Are Welcome!

We welcome your questions, concerns and observations. We also encourage our customers to attend and participate at our meetings regarding our water utility. The Board of Water Supply usually meets on the 4th Thursday of the month at 9:00 a.m. Please call 270-7304 for meeting locations or check out our web site for details:

www.mauiwater.org

FLUSHING PROGRAM IN THE UPCOUNTRY AREA TO IMPROVE WATER QUALITY

The DWS is flushing waterlines in the Upcountry area to improve water quality in its dead-end distribution lines. The purpose of this program is to comply with the Lead and Copper rule of the federal Safe Drinking Water Act. Flushing a waterline involves turning on the water at a fire hydrant or standpipe at full force to rid the pipeline of any buildup in the pipe. This process can take up to 20 minutes at any one point. Staff also take residual chlorine samples of the water before and after the flushing to ensure that water delivered to consumers meets the requirements of the Safe Drinking Water Act. Consumers should contact the Field Operations office at 270-7633 if water at their tap is discolored.

Automatic Flushing Devices

This automatic flushing device (AFD) allows water to be flushed from a hydrant or standpipe several times a day. This automatic flushing will help keep the water flowing through the pipes which will prevent water quality problems that can happen when the water does not move enough. You will be seeing these devices more frequently as the Water Department installs these devices in our various water systems.



Why Is There Anything In My 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. Sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs 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 waters before we treat it include:

Microbial Contaminants - such as virus, protozoa and bacteria, may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

Inorganic Contaminants - such as salts and metals, which may 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 - may come from a variety of sources such as agriculture and residential uses.

Radioactive Contaminants - are naturally occurring.

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.

For more information about contaminants and potential health effects call the EPA Safe Drinking Water hotline @ 1-800-426-4791.

Lead and Copper in your drinking water. Are you at risk?

Lead is not detectable in the Maui DWS systems. 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. The Maui DWS 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>

Home water filters are not necessary. They can be helpful if you have lead plumbing in your home or want to remove chlorine. **HOWEVER**, if you choose to have a water filter, it must be maintained and replaced according to manufacturer instructions. Talk to your supplier if you have questions about your filter.

Customers can maintain water quality in various ways.

Backflow protection - a simple, but important component in plumbing that safeguards the drinking water supply. Higher water pressures elsewhere can cause a reversal in the normal flow of water.

This may allow contaminated water to enter the water distribution system. Backflow prevention devices allow the water to flow in only one direction. The air gap between a faucet and water in the sink is the most common form of backflow prevention. Never leave a running hose in a bucket of water. The contents of the bucket could be "sucked back" into your home plumbing and potentially contaminate the water. Businesses in Maui County that are required to have backflow prevention devices should check them annually to ensure that they are working properly.



Proper use of pesticides/herbicides - avoid pesticide/herbicide application when rain is expected. This will prevent pesticide/herbicide runoff that may contaminate our groundwater.

Proper disposal of hazardous materials - hazardous materials such as paint, solvents, used oil and other household cleaning supplies must not be dumped on the ground. Call the Recycle Maui County Hotline at 270-7880 to find out where you can properly dispose these materials to avoid groundwater contamination or at <http://www.co.maui.hi.us/recycle>

IMPORTANT HEALTH INFORMATION

Some people may be more vulnerable to drinking water contaminants 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. For information about the Environmental Protection Agency's (EPA) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* or other microbial contaminants and potential health effects call the EPA's Safe Drinking Water Hotline (800-426-4791) .

We are required by Federal and State laws to test your drinking water for different contaminants. The following is a list of contaminants that we routinely test for in your water:

Regulated Contaminants



Microbiological Contaminants

Total coliform
Fecal coliform
E. coli
Giardia
Cryptosporidium

Turbidity

Inorganic Contaminants

Antimony
Arsenic
Asbestos(>10um)
Atrazine
Barium
Beryllium
Cadmium
Chromium(total)
Copper
Cyanide(as free cyanide)
Fluoride
Lead
Mercury(total)
Nitrate(as N)
Nitrite(as N)
Selenium
Thallium

Organic Contaminants

2,4-D
2,4,5-TP(Silvex)
Acrylamide
Alachlor
Aroclor 1016,1221,1232,1242
Aroclor 1248,1254,1260
Atrazine
Benzo(a)pyrene(PAHs)
Carbofuran
Chlordane
Di(2-ethylhexyl)adipate
Di(2-ethylhexyl)phthalate]
Dibromochloropropane
Dinoseb
Dioxin
Diquat
Endothall
Endrin
Epichlorohydrin
Ethylene dibromide(EDB)
Glyphosate
Heptachlor
Heptachlor epoxide
Hexachlorobenzene
Hexachloropentadiene
Lindane
Methoxychlor
Oxamyl(Vydate)
PCBs(Polychlorinated biphenyls)
Pentachlorophenol
Pichloram
Simazine
Toxaphene

Volatile Organic Contaminants

Benzene
Carbon tetrachloride(CTC)
Chlorobenzene
o-Dichlorobenzene
p-Dichlorobenzene
1,2-Dichloroethane(EDC)
1,1-Dichloroethylene
cis-1,2-Dichloroethylene
trans-1,2-Dichloroethylene
Dichloromethane
1,2-Dichloropropane(DCP)
Ethylbenzene
Haloacetic Acids(HAA5)
Styrene
Tetrachloroethylene(PCE)
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane(TCA)
1,1,2-Trichloroethane
Trichloroethylene(TCE)
1,2,3-Trichloropropane(TCP)
Total Trihalomethanes(TTHMs)
Toluene
Vinyl chloride
Xylenes(total)

Radioactive Contaminants

Alpha emitters
Beta particles/photon emitters
Radium 226+228
Uranium

Unregulated Contaminants

2,4-DB
Aldicarb
Aldicarb sulfone
Aldicarb sulfoxide
Aldrin
Butachlor
Carbaryl
Dicamba
Dieldrin
3-Hydroxycarbofuran
Methiocarb
Methomyl
Metolachlor
Metribuzin
Molinate
Nickel
Paraquat
Propachlor
Propoxur
Thiobencarb

Acetochlor
Bromoform
DCPA mono-acid degradate
DCPA di-acid degradate
4,4'-DDE
2,4-dinitrotoluene
2,6-dinitrotoluene
EPTC
Manganese
Methyl t-Butyl Ether(MTBE)
Molinate
Nitrobenzene
Perchlorate
Terbacil



Frequently Asked Questions (FAQ)

What is the pH of my water?

The pH of water varies by districts:

Central	7.3-7.9
Makawao	7.6-9.1
Lahaina	7.8-8.2
Lower Kula	7.9-9.0
Upper Kula	7.2-9.2
Molokai	7.2-7.3



Do I have hard or soft water?

Hardness is measured in milligrams per liter (mg/L). Any hardness reading over 75 mg/L is considered hard water. Generally, surface water is soft water. Makawao, Pukalani, Lower Kula and Upper Kula have soft water between 17-69 mg/L. Ground (well) water on Maui is usually 52-171 mg/L .

Is there fluoride in my water?

The Maui DWS does not add fluoride to your water. If you are concerned about your children's dental health, please talk to your pediatrician or dentist.

What can I do about chlorine taste and odor?

Chlorine kills organisms that may cause disease. If you choose to remove the chlorine with a filter, refrigerate the water to limit bacterial re-growth. Other alternatives include:

Filling a pitcher and letting it stand in the refrigerator overnight (this is the best way), filling a glass or jar with water and letting it stand in the sunlight for 30 minutes, or heating water to approximately 100 degrees Fahrenheit.

How often is my water tested? And can I get my water tested?

Every week our water is tested by our certified microbiologists at the source and within the distribution system for any bacteriological contamination. Chemicals are analyzed on a timetable established by state/EPA requirements. You may have your own tap water tested by a private water quality testing lab for a fee. A list is available through our laboratory at 270-7550.

I live on a dead-end (cul-de-sac) and my water has a yellow tinge to it. Is this okay?

You should call the DWS service line (270-7633) to have personnel flush the dead-end main. Or, if you prefer, open the faucets in your home until the water clears up; this will bring fresh water to your home and improve its water quality.

How to Contact Us

Questions on water quality: Maui DWS Laboratory: **808-270-7550**

Questions about: DWS Administration: **808-270-7816**

All other DWS inquiries: **808-270-8046**

Drinking water in Hawaii - DOH Safe Drinking Water Branch:
1-800-468-4644
ext. 6-4258

EPA Safe Drinking Water Hotline: **1-800-426-4791**

ABBREVIATIONS

ppm = parts per million = **mg/L** = milligrams per Liter = one second every 12 days

ppb = parts per billion = **µg/L** = micrograms per Liter = one second every 32 years

ppt = parts per trillion = **ng/L** = nanograms per Liter = one second every 32,000 years

ND = None Detected

NQ = Not Quantifiable

NA = Not applicable

> = Greater than

≥ = Greater than or equal to

< = Less than

≤ = Less than or equal to

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's as feasible using the best available 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.

We're also on the web: **www.mauewater.org**

Other websites:

Department of Health - Safe Drinking Water Branch:

www.hawaii.gov/health/eh/sdwb

EPA (Environmental Protection Agency):

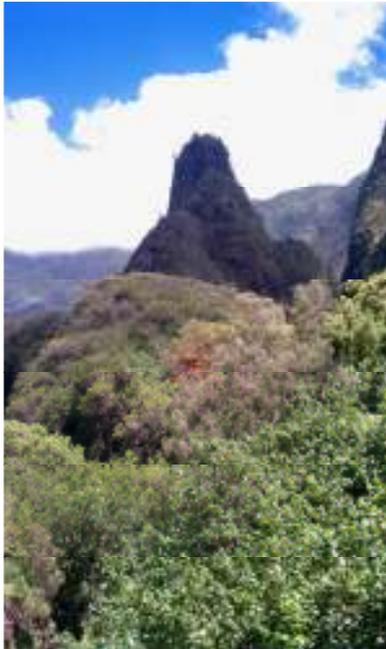
www.epa.gov/safewater



Photos by Rowena Kellough

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