

Your Water, Conservation, & the Board of Water Supply



Board of Water Supply



Board of Water Supply

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A Message From The Manager



Aloha to the residents of Oahu and our valued customers:

Thank you for your support of the Board of Water Supply (BWS) over the years.

Now more than ever, I need your help. Our water supply is being threatened due to the Red Hill crisis and Oahu is experiencing less than normal average rainfall. Our island could have less water available to meet our community's needs.

Water is an irreplaceable, finite resource. Please consider ways to save our water, to conserve our most precious wai. By reducing water usage by just 10% we can assure that there is enough water for everyone. By using less, we can help preserve what we have for our future. So many times, we take our precious wai for granted. Take a moment and realize that every drop of water that so easily fills your cup took over 25 years to get here and a mere second to use. Cherish this gift we have received and use only what you need.

If we all work together to make every drop count, we can ensure a safe and dependable water supply now and into the future.

Very truly yours,

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu

Introduction

The Board of Water Supply (BWS) put together this booklet with information to help answer commonly asked questions about your water supply, water conservation, and the BWS.

A list of helpful contacts is at the end of this booklet.

Most of the information contained is also available throughout our website at **www.boardofwatersupply.com**

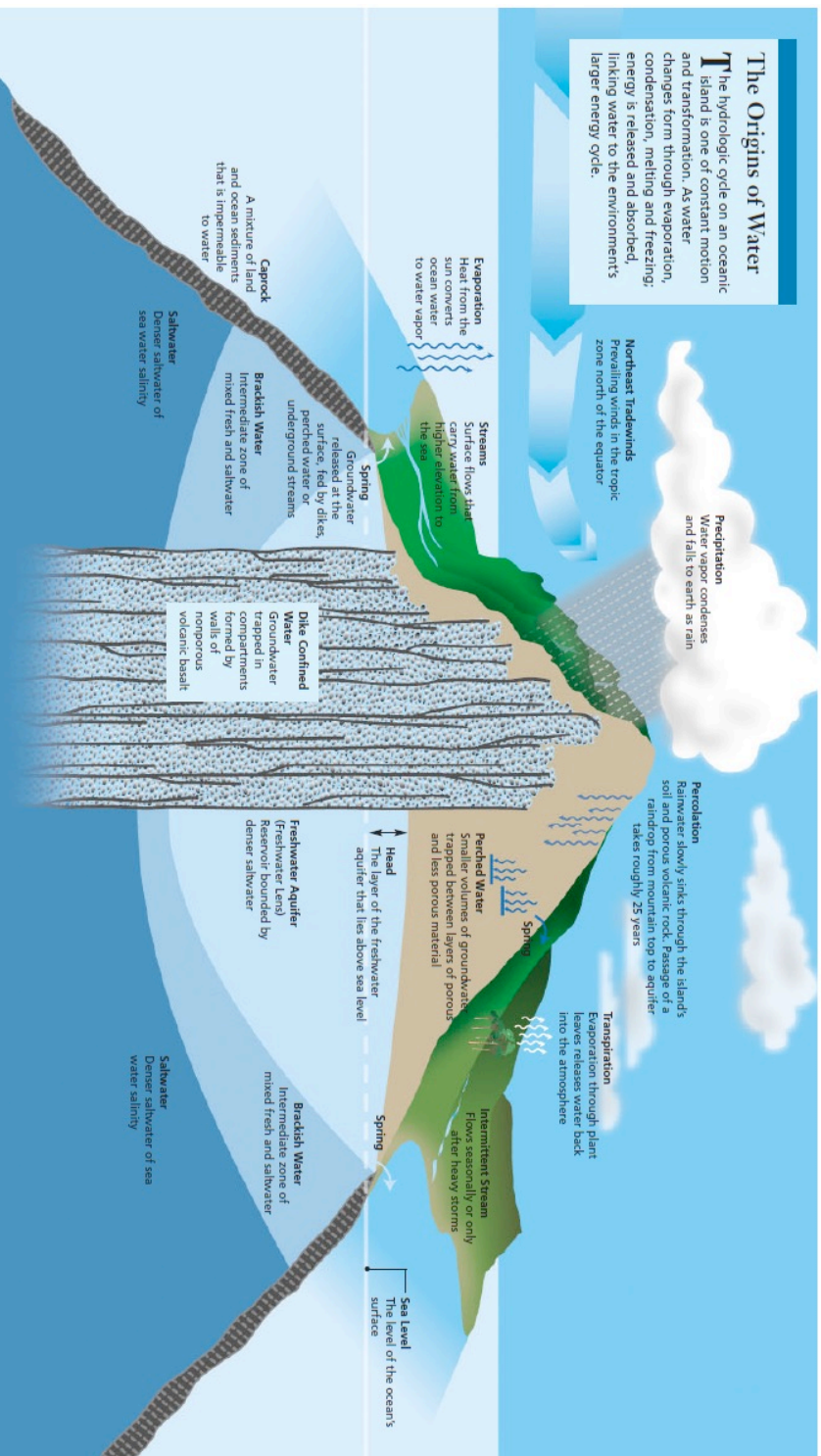


Board of Water Supply

Oahu's Water Supply

The Origins of Water

The hydrologic cycle on an oceanic island is one of constant motion and transformation. As water changes form through evaporation, condensation, melting and freezing, energy is released and absorbed, linking water to the environment's larger energy cycle.

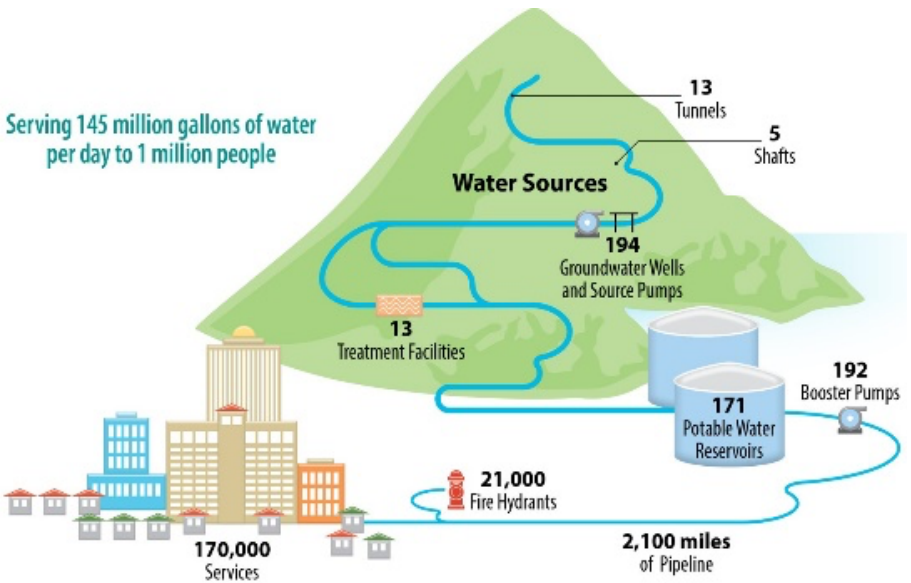


Oahu's Water Supply

Where Our Water Comes From

Oahu sustains a population approaching one million people, with five times as many more visitors. Our only source of drinking water is groundwater: Hawaiian native forests have evolved over millions of years to become the best quality watershed covers. Vegetation in the forest fills every level. It soaks up rainfall like a giant sponge, allowing water to seep slowly underground where it is filtered and stored in the porous volcanic rock of the island.

Because of our large population, effective water management is a major element in planning for expanding water needs. Our water resources on Oahu are limited, so conservation is a key element in our long-term strategy to protect and enhance this precious resource. If we save enough water now, we'll have what we need for years to come.



The BWS Complex Water System

1. The BWS pumps water from the aquifer via wells, shafts, and tunnels.
2. Water enters an island wide distribution system.
3. We move water from pumping stations to mains and up to reservoirs for storage.
4. Water is fed back into mains for delivery to homes and businesses.

Why Water Conservation Is Needed

The BWS has always asked its customers to use water efficiently and to avoid wasting water when possible, as a best practice for managing Oahu's finite resources.

However, water conservation has now become a necessity due to the recent fuel contamination of the Navy water system that eventually led to shutdown of three nearby BWS water sources (Halawa Shaft, Halawa Wells, and Aiea Wells) to prevent further spread of the fuel or contamination of its own supplies.

This has created serious consequences for the BWS water supply and distribution system, as Halawa Shaft, is one of the largest BWS sources on Oahu and the timing for reactivation of these sources remains indefinite.

The BWS is working to minimize any impacts to its ability to provide reliable water service and is making up 20% of Honolulu's water previously supplied by Halawa Shaft by using other sources. However, these sources are starting to show signs of over-pumping and the BWS, as always, is asking water users to be as water efficient as possible.

The BWS has been monitoring water demand closely and is asking for the public's help to further conserve water by 10 percent. This is necessary to ensure that our sources remain healthy and sustainable over the long term.

The BWS's conservation program touches on various ways in which individuals, families and organizations can do their part to help conserve and preserve Oahu's water supply.

Ways To Help Conserve Water

Recommended Voluntary Reductions:

- Limiting irrigation and lawn/landscape watering twice a week, before 9AM or after 5PM;
- Postponing installation of new lawns (which require constant irrigation)
- Postponing car washes and refilling of swimming pools
- Take shorter showers;
- Run full loads for clothes washers and dish washers
- Check for dripping faucets and running toilets
- Check for and repair property leaks

The BWS hopes that voluntary conservation results will help avoid mandatory measures.

Reduce Water Use by 10%



Average family water use is
200 gallons/day --
10% of 200 = 20 gallons

**Ideas to help
save 20 gallons**



Turn off the tap when you wash hands, brush teeth, or shave.
Save: Up to 2.5 gallons/minute



Do only full loads of dishes and/or laundry instead of partial loads.
Save: 15 - 20 gallons/load



Take a short shower instead of a tub bath.
Save: Up to 25 gallons



Wash your car with a bucket & sponge instead of a garden hose.
Save: At least 60 gallons



**If we all save a little water
then together we'll save a lot**

Board of Water Supply

www.boardofwatersupply.com/conservation

7 Easy Ways To Save Water

Save water for a dry day. Experts estimate that about one-third of water from your tap goes down the drain through wasteful water use. You can reduce senseless water loss through our 7 Easy Ways to Save Water:

1. Water lawns just 2-3 times a week.
2. Don't water lawns between 9 a.m. and 5 p.m.
3. Check for leaks in plumbing and toilets.
4. Install water-efficient plumbing fixtures.
5. Take shorter showers.
6. Put a nozzle on your garden hose.
7. Don't let the faucet run and run.

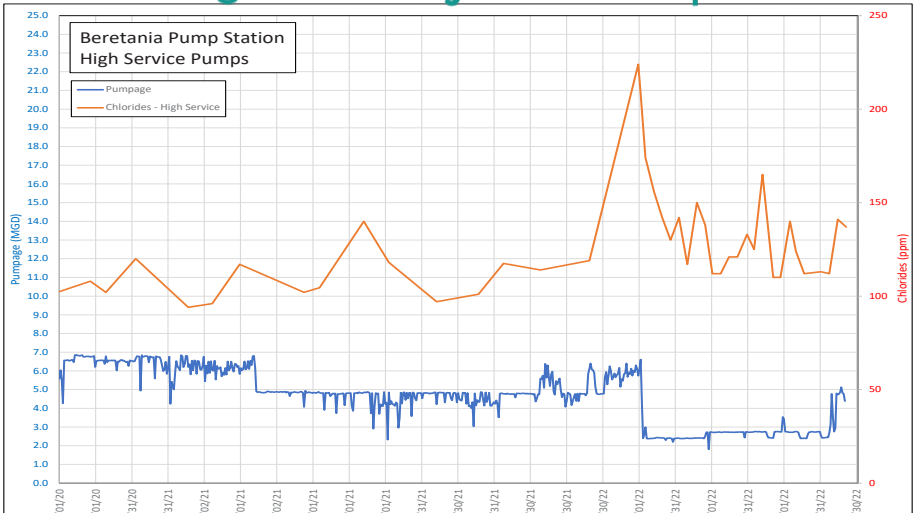
Visit our website at www.boardofwatersupply.com/conservation for more water-saving ideas.

Voluntary Conservation

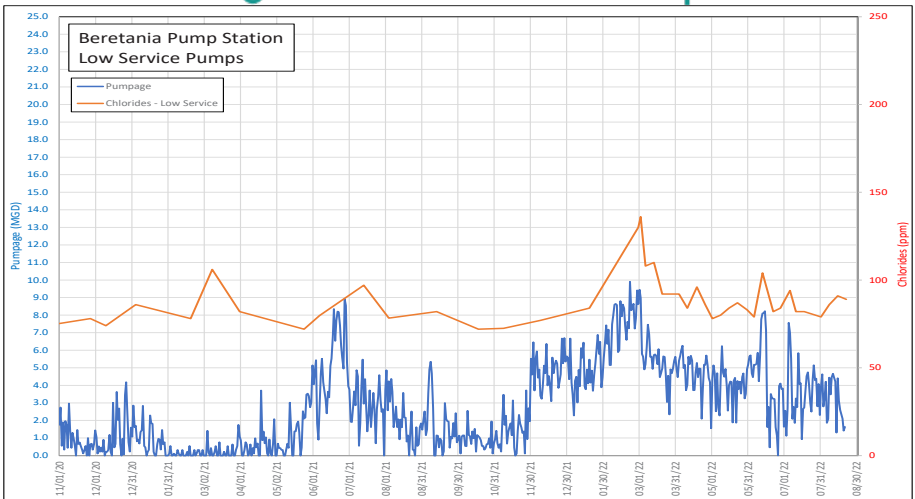
On March 10, 2022 rising levels of chloride in BWS Beretania Wells were detected. This was a result of additional pumping to help make up the loss of supply from Halawa Shaft, which was shut down last year in response to fuel contamination of the Navy's Red Hill source. The additional pumping, coupled with less than normal rainfall, led the BWS to ask island residents and businesses to voluntarily reduce their water use by 10% now to prepare for the summer season.

The graphs below show the spike in chloride levels in water from the Beretania Wells aquifer which led to our request for voluntary conservation.

Beretania High Service Pumps



Beretania Low Service Pumps



Restaurant Water Service Rule

BWS Drinking Water Upon Request (Section 2-209, 5) Rule

The Department (Board of Water Supply) shall restrict the serving of drinking water to any customer unless expressly requested at any restaurant, hotel, café or cafeteria, or any other place where food is sold, served, or offered for sale. These restrictions shall not apply to catered groups of 25 or more people. Failure to comply with these requirements may result in the imposition of a fifty-dollar (\$50.00) special assessment for each violation, or in the discontinuation of water service and/or penalties as authorized in Section 2-205, 2b and Section 5-501 of these Rules and Regulations.

An eight-ounce glass of water requires an additional 16 ounces of water to wash and rinse the glass, and often the glass is left untouched.

The BWS asks restaurants for their kokia in reminding staff and customers of this regulation. Under the rule, staff may serve water upon request or may ask the customer if they want to be served a glass of water.

If a restaurant wishes to obtain a supply of tent cards, contact the BWS's Communications Office at (808) 745-5041 or email contactus@hbws.org.



Top Water Waster – A Leaky Toilet

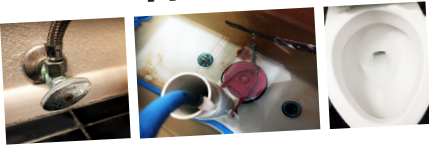
One Of The Top Indoor Water Wasters – A Leaky Toilet!

If your toilet “hums” at times, check for a leak. A toilet leak can add hundreds of dollars to your bill over time.

- Drop 1 toilet leak detection dye tablet into your toilet tank
 - Tablets are FREE at the BWS lobby
 - OR, you can squeeze 2-3 drops of food coloring into the tank
- Wait a few minutes (don’t flush your toilet)
- If you see the color in your bowl, you’ve got a leak!
- Repair as soon as possible.

For more tips, go to www.boardofwatersupply.com/leak-detection.

Replacing A Toilet Flapper Valve



1. Turn off water to the toilet - Close the shut-off valve located outside the toilet, below the toilet tank.
2. Remove the toilet tank lid.
3. Drain the toilet tank by flushing the toilet after the water is turned off. The toilet tank should now be empty.
4. Unclip the flapper chain attached to the top of the flapper from the flush handle arm connected to the flush handle.
5. Reach in and disconnect the side ears on the flapper from the pegs on the sides of the overflow tube.
6. Put the new flapper into place by hooking each ear of the flapper onto the pegs on the overflow tube.
7. Connect the flapper chain onto the flush handle arm connected to the flush handle.
8. Make any necessary adjustments to the chain on the flush handle arm in the non-flushed position. It needs to be long enough to allow the flapper to sit solidly in place with minimal slack but not so long as the chain could float under the flapper as the water rushes out when flushed.
9. Turn the water back on and test by flushing several times.

Note: If this flapper has a water savings adjustment dial on the bottom of the flapper stopper. For more flow, hold the black knob and turn the clear plastic knob so that you can see through the half-moon-shaped hole.

For less flow, hold the black knob and turn the clear plastic knob so that you see only partially through the half-moon-shaped hole.

For a video on leak detection and how to install a toilet flapper, go to [www: boardofwatersupply.com/conservation/leak-detection](http://www.boardofwatersupply.com/conservation/leak-detection)




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www.boardofwatersupply.com

Detecting Leaks With Dye Tablets



Checking for and repairing leaks helps to reduce water waste, conserve water, could lower your water and wastewater bill, and home.

Check your toilet for leaks with the leak detection tablets provided in this kit.

1. Remove toilet tank lid
2. Drop in 1 blue toilet tank leak detecting tablet

3. Wait 10 to 15 minutes
4. If the color appears in the bowl, you have a leak.
5. A faulty flapper causes most toilet leaks. Remember to check it regularly and replace it when necessary

See other side for directions to install or change toilet flapper. For more water conservation tips, visit www.boardofwatersupply.com/conservation.


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www.boardofwatersupply.com

Xeriscape & Rain Barrels

Save Water Outdoors - Xeriscape And Rain Barrels

Xeriscaping is the environmental design of residential and park land using methods that minimize water use. Because an estimated 50 percent of water consumption in the average single-family home is used outdoors, xeriscaping offers an ideal way to minimize water waste while maintaining the beautiful landscapes of our island. For more information, including the 7 principles of xeriscape and traits of a less thirsty plant, www.boardofwatersupply.com/conservation/xeriscape.

Additionally, rain catchment systems (rain barrels) are easy and effective tools for conserving water outdoors. The captured nonpotable rainwater can be used in various activities, including watering lawns and plants, as well as washing tools, cars, and pets. If you plan on purchasing your 55-gallon rain barrel from a local retailer, you may qualify for a \$40 Water Sensible Rebate (see the Water Sensible Program section in this handbook). For more information about rain catchment, visit www.boardofwatersupply.com/raincatchment.



Reporting Water Waste

Reporting Water Waste Helps Us To Help Customers Conserve

Report water waste incidents to (808) 748-5041 or email contactus@hbws.org. Help us follow up by providing as much detail as you can about the incident – precise location, nearby landmarks, and time of day.

Waiwai Email Newsletter

Timely Updates From the BWS

The BWS's Waiwai newsletter provides timely, valuable information via email on the Board of Water Supply's operational actions being taken in response to the Red Hill water contamination issue and other important information. To sign up, visit: www.boardofwatersupply.com/protectoahuwater.

THERE IS NO SUBSTITUTE FOR PURE WATER

Waiwai

The Source for Water Updates



Get the latest from the BWS!
Get the latest updates on Red Hill and Board of Water Supply initiatives to protect Oahu watersheds via our new email newsletter. More info at: www.boardofwatersupply.com





Helping You Understand Your Water Usage

Get a better understanding of how your home uses water, how your usage compares with similar users in your community, and what your household can do to improve water efficiency when you subscribe to WaterSmart®.

WaterSmart® is an online program that provides BWS customers access to detailed online and mobile water use data to encourage them to take control of their water usage. It also offers recommendations, based on how each customer consumes water at their home, to make their usage more efficient.

Visit www.honolulu.watersmart.com to sign up. You can also opt to receive alerts for high water use, which could indicate a leak.

For more info, www.boardofwatersupply.com/watersmart



Programs To Help Our Customers Conserve

Check out www.boardofwatersupply.com/watersensible for available programs to help BWS customers further their water conservation efforts:

Residential

- Residential customer rebates for the purchase and installation of qualifying water-saving:
 - EnergyStar® clothes washer
 - Weather-based EPA WaterSense® irrigation controller
 - Rain barrels to achieve even greater water savings in their homes.

Go to www.boardofwatersupply.com/conservation/watersensible/rebates.

Commercial

- Commercial customer rebates are available for the commercial sector for:
 - Landscaping
 - Plumbing
 - Commercial kitchens

Go to www.boardofwatersupply.com/commercialrebates.

WaterSensible

Food Service Incentive Program

Participating food service operations will be given the opportunity to install high-efficiency aerators and/or high-efficiency pre-rinse spray nozzles as a means of conserving water and to helping to lower their water bill.

Go to www.boardofwatersupply.com/conservation/watersensible/food-services.

WaterWisdom

Apartment & Condominium Incentive Programs

Property and resident managers as well as residents living in apartments and condominiums can participate in the Water Wisdom Program. The program offers resources and ideas to help multi-family residential buildings succeed in conserving water. Go to www.boardofwatersupply.com/waterwisdom.



Safe Drinking Water

BWS Water Is NOT Affected By The Navy's Red Hill Situation

The BWS is sure that the water it serves to its customers has NOT been contaminated and compromised by the Navy's Red Hill situation. Here is why:

- 1) The Navy drinking water system and the BWS drinking water system are isolated from each other.
- 2) All municipal drinking water sources are regularly tested according to EPA-mandated protocols and must meet or exceed all requirements for safe drinking water.
- 3) Since 2014, in addition to all the EPA-mandated drinking water testing, the BWS has performed extra testing at sources nearby the Red Hill fuel tanks. This extra testing is intended to detect any potential contamination before it impacts the municipal water supply. For the past eight years, the BWS has not detected any contamination from the Red Hill fuel tanks in any nearby municipal drinking water source.

So not only are the systems isolated from each other, but both regular EPA testing and extra BWS testing of the sources near Red Hill confirm that municipal drinking water around the island remains uncontaminated and safe to drink.

Perspective

Water quality is measured in parts per million, billion, or trillion. Here are some comparisons:

- One part per million = 1 second out 11.5 days or 1 penny out of \$10,000
- One part per billion = 1 second out of 31.7 years or 1 penny out of \$10 million.
- One part per trillion = 1 second out of 320 centuries or 1 pinch of salt out of 10,000 tons of potato chips.

Confidence In Water Quality

BWS has a three-facet approach to bring assurance, quality, and confidence in every glass of water we drink:

- BWS works with the United States EPA and the State of Hawaii Department of Health to run thousands of tests annually to ensure that water in the water system meets the highest of federal and state safe drinking water standards.

Safe Drinking Water

- BWS stays on top of the latest trends, regulatory changes, and environmental issues related to drinking water.
- We educate customers about their water quality. Each summer, the BWS is required to mail an annual Water Quality Report, also known as the Consumer Confidence Report (CCR), to customers. To download the online report for your address, use the Water Quality Report link at www.boardofwatersupply.com/wqr.

Oahu's Groundwater

Since approximately 1923, the BWS has been continually testing and adjusting the amount and frequency chlorine is added to the water to ensure our water system is properly treated and that it delivers safe drinking water. Almost all of the water pumped into the BWS water distribution system is chlorinated. Because the distribution system is interconnected, waters from chlorinated sources can mix with unchlorinated supplies. Small amounts of chlorine in the water may be found most everywhere on Oahu. Concentrations can range from 0.1 to 0.5 milligrams per liter (ppm) of chlorine throughout the water system.

Since excessive amounts of chlorine can affect the taste and odor of drinking water, the BWS adds only what is needed to keep disease-causing bacteria from contaminating our water supply. If you experience a strong chlorine smell or taste in your water, contact the BWS Microbiological Laboratory at (808) 748-5850.

The BWS does not add fluoride to the municipal water supply. A small amount of naturally occurring fluoride is present in Oahu's drinking water supply. The amount ranges from 0.05–0.15 mg/L. Federal regulations require all military installations add both fluoride and chlorine to their water supplies regardless of water quality. BWS is concerned about the cost to fluoridate 100% of our water supply above naturally occurring levels when less than 5% of the water we use daily is actually consumed.



Board of Water Supply

Your Annual Water Quality Report

is NOW Available

3 ways to get your report



Mail

sent to all BWS customers by July 1.



Online

from July 1 at www.boardofwatersupply.com/wqr.



Call

(808) 748-5041 from July 1 to request a report.

Disaster Preparedness

QUICK TIPS

For Water Emergency Preparedness



Start Conserving

- Do NOT wash cars or water lawns.
- Postpone laundry unless absolutely necessary. If so, wash FULL loads only.



Fill Up Containers

- Use basins, sinks, and bathtubs for additional water storage for non-drinking purposes.



Turn Off Fixtures

- Turn off water-using fixtures such as automatic ice makers or irrigation systems.



Tune in to the News

- Stay tuned to news reports. BWS, through the City Department of Emergency Management, will issue informational bulletins and status reports.

source: www.boardofwatersupply.com

Disaster Preparedness

Storing Drinking Water For Emergency Use

Your emergency preparedness kit should include:

- One gallon of water stored per person per day, for at least 14 days for drinking and sanitation purposes.
- Special needs persons may require more: nursing mothers, young children, and persons with medical issues.

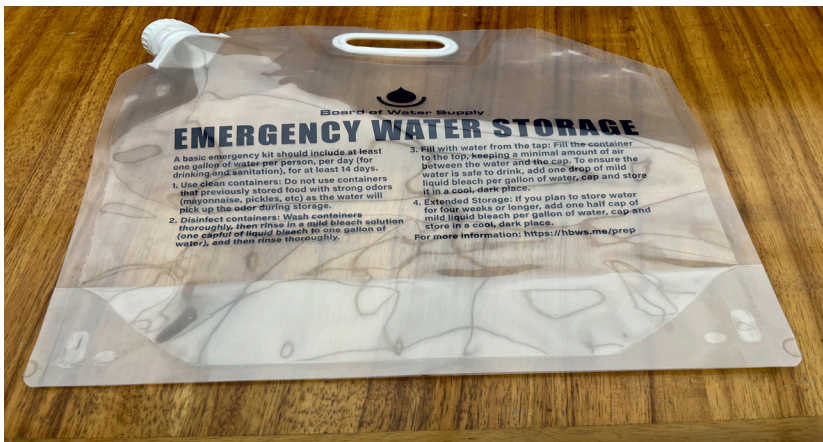
The easiest and most efficient way to prepare emergency water supply is to take water from the tap.

- Use good, clean containers to store drinking water. Do not use containers which previously stored food with strong odors (mayonnaise, pickles, etc.).
- Wash containers thoroughly using soap and water.
- Sanitize containers by using one capful of unscented liquid bleach to one gallon of water; rinse thoroughly.
- Fill container to the top, keeping minimal air space between cap and water level.
- Add one drop of mild, unscented liquid bleach per gallon of water to ensure water is safe to drink.

Extended storage: If you plan to store water for four weeks or longer, add one-half cap of mild liquid bleach per gallon of water, cap, and store in a cool, dark place.

For more emergency preparedness tips, visit:

www.boardofwatersupply.com/community/prep



About BWS

Humble Beginnings

The Territorial Legislature created the Board of Water Supply (BWS) in 1929 to halt abuse of water and create a safe and perpetual drinking water supply. Now, 90 years later, the BWS is still serving as protector of Oahu municipal resources.

Semi-Autonomous City Agency

The BWS sustains itself financially with money paid for water service. It is governed by a seven-member Board of Directors:

- Five community members are appointed by the Mayor and approved by City Council
- The Director of the State Dept. of Transportation
- The Director of the City Dept. of Facility Maintenance

Information about BWS Board members is at www.boardofwatersupply.com/bwsboard.

The BWS records its monthly Board of Directors meetings, which are scheduled for 2 p.m. on the 4th Monday each month. View the agendas, read meeting minutes, or watch online at www.boardofwatersupply.com/boardmeetings.

What does it mean?

“Uwe ka lani ola ka honua” is the Hawaiian proverb that appears behind the water fountain fronting the main BWS office building on Beretania Street. It translates to “When the heavens weep, the earth lives.”



About BWS

Water Weight

The volume of 1 cubic foot of water is 7.5 gallons that weighs about 62.5 lbs. A 55-gallon drum would weigh more than 450 lbs.

BWS Fleet

The BWS has its own staff to maintain a fleet of more than 500 vehicles that are housed at its Beretania Street headquarters and its corporation yards in Kalihi, Heeiea, Pearl City, Wahiawa and Waianae. This includes about 400 motor vehicles, most of which are identifiable by their distinctive "BWS green" color and license plate number, and more than 70 pieces of field construction equipment and 30 trailers.

Adequate Supply

Reservoirs placed at strategic elevations and locations throughout the island store enough water, for the most part, to meet about 1-1/2 times the daily need for the communities that they serve. Pumps boost water up to reservoirs, where it remains until needed. From there, gravity carries water from the reservoir to your home.

Watersheds Are Important

With a holistic approach to water management, the BWS is participating in watershed protection partnerships throughout the island. Watersheds catch rainwater that soaks into and replenishes our underground aquifers. Landowners share resources to preserve existing watershed lands, crucial to replenishing Oahu's underground supply, and educate the public to cultivate a personal sense of stewardship.

Using Water From A Fire Hydrant

Legal use of water from a fire hydrant requires a temporary meter. The device measures the amount of water drawn from the hydrant so that the BWS can bill the user. As with any other BWS customer with a metered account, the user can draw water from this temporary water service point at any time. A temporary meter is sturdily crafted and carefully affixed and locked to the hydrant.

Should you see anyone taking water from a hydrant that does not have such a hookup, please call 911 to report it, as this is considered water theft. A police report is needed for the BWS to be able to follow up.

About BWS

Main Break Updates Available Online

During a main break, BWS customers have another way – besides calling the 24/7 Water Trouble Line at (808) 748-5000 – to get basic information about breaks on water mains 4-inches and larger.

The BWS main break map on the www.boardofwatersupply.com homepage provides information updates as it becomes available. This includes the break location, pipe size, and, if needed, traffic impact and location of alternate water sources for customers without service.

REPORTED MAIN BREAKS

Find information about reported water main breaks on pipes 4" or larger or have significant impact in the community.

REPORTED MAIN BREAKS

ABOUT MAIN BREAKS

MAIN BREAK FAQ

REPORT AN OUTAGE



The BWS also posts updates for main breaks on its Facebook and Nextdoor social media accounts. Updates for breaks with major impacts to traffic or large-area outages are also posted on Twitter, as well as on HNL.info, a free, subscriber-only alert service managed by the City and county of Honolulu. For more information about HNL.info, visit <https://hnl.info>.

Frequently Called BWS Water Service Numbers

24/7 trouble line to report or get info on a main break or schedule water shut-off for repair: (808) 748-5000, Option 1

Bill payment: (808) 748-5000, Option 2, or email customerservice@hbws.org

General customer account inquiries: (808) 748-5000, Option 5, or email customerservice@hbws.org

Non-customer-related inquiries, water waste, or other water concerns: (808) 748-5041, or email contactus@hbws.org



Board of Water Supply