



BLUE WATER TASK FORCE

KAUA'I WATER QUALITY REPORT

2024



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INTRODUCTION

The Blue Water Task Force (BWTF) is the Surfrider Foundation's volunteer water quality monitoring program that provides critical information to protect public health at our beaches.

In 2024, the Kaua'i BWTF program collected 190 water samples at 18 sites. Our BWTF Teams are composed of trained volunteers who sample biweekly.

Water quality samples are tested for the presence of enterococcus, a fecal bacteria that indicates the presence of human or animal waste in the water. Elevated levels of enterococcus increase the likelihood that other pathogens that can make people sick may be present.

The goal of BWTF is to fill in monitoring gaps and quickly communicate with the public where it is safe to swim and where bacteria levels are elevated. Water quality results are compared to the standards used by the Hawai'i Department of Health (HDOH) to issue swim advisories. Known as the Beach Action Value (BAV), this threshold is 130 colony forming units of enterococcus per 100mL sample (130 cfu/100mL).

The water quality information generated by the BWTF augments data that the HDOH provides through its beach water quality monitoring program. HDOH tests a limited number of beaches on each island, primarily those with lifeguards and in popular tourist areas. The BWTF, meanwhile, covers a variety of areas popular with local families and recreational users including surf spots and local swimming beaches.

Our data is also important in identifying chronically polluted sites that should continue to be prioritized for ongoing monitoring, as well as potential investigation into the sources of pollution.

Beachgoers should take precautions swimming, surfing, or recreating after heavy rain events for 24-48 hours. Do not enter brown water areas or where there is a warning sign for high bacteria levels. Community members are encouraged to check water quality results posted online before they head to the beach at bwtf.surfrider.org. Current and historic data are available.



ACCESSING DATA

BWTF data is posted online 24-hours after it is collected (see website below). If you have questions about Kaua'i BWTF data, please reach out to program coordinator below. You can also direct questions to Hanna Lilley (hlilley@surfrider.org), Surfrider Foundation's Hawai'i Regional Manager. The BWTF would not be possible without the dedication of our many volunteers and program coordinators (who are also volunteers). We appreciate our volunteers tremendously.

KAUA'I

Program Coordinator:

- Rob Brower (chair@kauai.surfrider.org)

View Data: <https://bwtf.surfrider.org/explore/23>

KAUA'I DATA SUMMARY

This report provides an analysis of water test results for 18 Kauai sites (Map 1) monitored in 2024. Our water quality results indicate that certain sites frequently experience high bacteria levels that exceed state health standards (Table 1). Note that the Kaua'i BWTF program tests at the actual surf break, unless otherwise noted as a stream or river mouth. BWTF results are recorded as Most Probable Number (MPN/100 mL), due to our testing methods.



Map 1. Blue Water Task Force sites on Kaua'i that were sampled once per month in 2024.

KAUA'I DATA SUMMARY

TABLE 1: PERCENT OF KAUA'I SAMPLES EXCEEDING
HEALTH STANDARDS (> 130 MPN/100ML)

SITE NAME	TOTAL SAMPLES	% HIGH BACTERIA (>130 MPN/100ML)	Geomean (MPN)
Waiohai Surf, Poipu	8	0%	5.1
Anahola Bay Surf	11	3%	13.3
Kalapakī Bay Surf	11	9%	57.8
Keālia Surf	11	9%	9
Middles Surf, Hanalei	11	27%	44.1
Rock Quarry Surf, Kilauea	11	27%	12.5
Waikoko Surf, Hanalei	11	27%	9.6
Wailua River Mouth	10	30%	120
Kalihiwai Surf	12	33%	36.9
Pakalas Surf	10	40%	25.8
The Bowl, Surf, Hanalei	11	55%	109.7
Hanamā'ulu Beach	11	64%	182.2
Moloa'a Stream Mouth	10	90%	1348.7
Waikomo Stream - Koloa Landing	10	90%	536.6
Wainiha Stream mouth	11	91%	693.4
Hanalei River at Weke Rd.	11	100%	588.6
Hanamā'ulu Stream Mouth	10	100%	1836
Nāwiliwili Stream	10	100%	1004.4

Table 1. Indicates the percentage of total samples taken at respective sites that exceeded HDOH health standards for enterococcus bacteria (>130 mpn/100mL). Note that the number of total samples is not consistent across sites.

KEY OUTCOMES

2024 BWTF results are consistent with water quality trends from previous years. Across Kaua'i, sites located at stream mouths, beaches with freshwater outlets, or in bays without much circulation are typically characterized by higher bacteria levels than at ocean sites with better circulation and more mixing. Streams located at many of the most contaminated sites can carry runoff from cesspools and other pollution sources in the watershed such as animal waste from pets, agriculture, and wildlife.

Eight sites on Kaua'i had more than 50% of their samples exceed health standards. Hanalei River, Hanalei Bowl, and Wainiha Stream are all located in Priority 1 cesspool areas while Nāwiliwili Stream, Moloa'a, Waikomo Stream, Hanamā'ulu Stream and beach are located in Priority 2 cesspool areas ([link to Hawai'i Cesspool Prioritization Tool](#)), meaning that there is probable cesspool contamination. The chronic pollution documented at these sites by the BWTF, as well as the findings of the [Kaua'i sucralose stream study](#), also indicate the potential impact of sewage pollution in these areas.



BWTF data also indicates that high bacteria levels are measured at many sampling sites during and following wet weather and brown water events. Beginning in November, the rainy season is characterized by large storm events with heavy rainfall. Particularly in the early part of the season, these storms serve to "flush" the island and can result in large amounts of water, sediment, wastewater, and pollutants flowing downhill into the ocean.

Families, ocean users and the public should be aware of the poor water quality conditions and avoid any contact with these freshwater flows. The public should be particularly cautious after heavy rain events that lead to increased runoff and can prompt Brown Water Advisories. Even if you don't see a public notice posted, avoid brown water until conditions clear.

More exposed beaches and those that do not have direct freshwater inputs from streams or rivers generally test clean. These sites seldom show high bacteria levels because of the high volumes of water exchange and mixing that occurs at these sites. Bacteria at these sites, however, can be elevated after rainfall or other heavy storm events.

Note that not all high bacteria spikes were detected during brown water events. This demonstrates the importance of regular water quality monitoring programs. Before going to the beach, check out current water quality conditions at www.bwtf.surfrider.org and [water quality advisories](#) issued by HDOH.

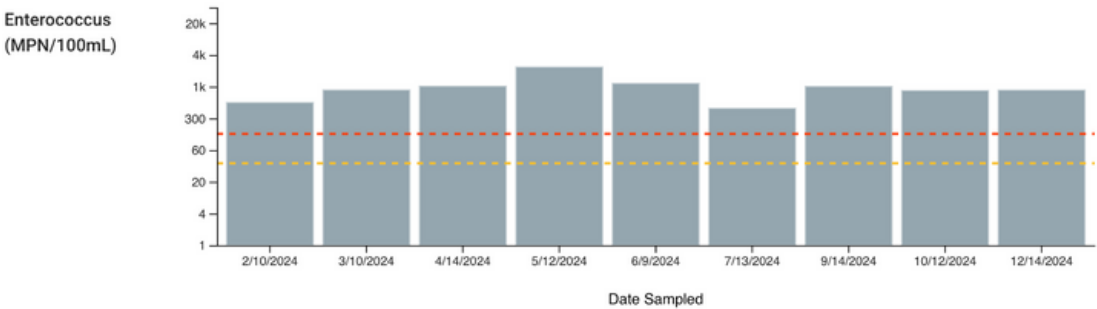
KEY OUTCOMES

PRIORITY SAMPLE SITES: NĀWILIWILI STREAM, KAUA'I

Nāwiliwili Stream feeds into Kalapakī Bay and is influenced by cesspools and urban runoff. In 2024, the average bacteria count (geomean) measured at Nāwiliwili Stream was **1004.4** MPN, and every single sample collected by the Kaua'i Chapter since 2016 has failed to meet state health standards. This polluted water is not safe for recreation. In 2024, Kaua'i Chapter posted a sign warning people that regularly swim and play in the mouth of this stream of the high bacteria levels measured in the water.

100%
OF NĀWILIWILI STREAM
SAMPLES IN 2024
EXCEEDED HEALTH
STANDARDS FOR
BACTERIAL COUNTS

Nāwiliwili Stream Results 2024

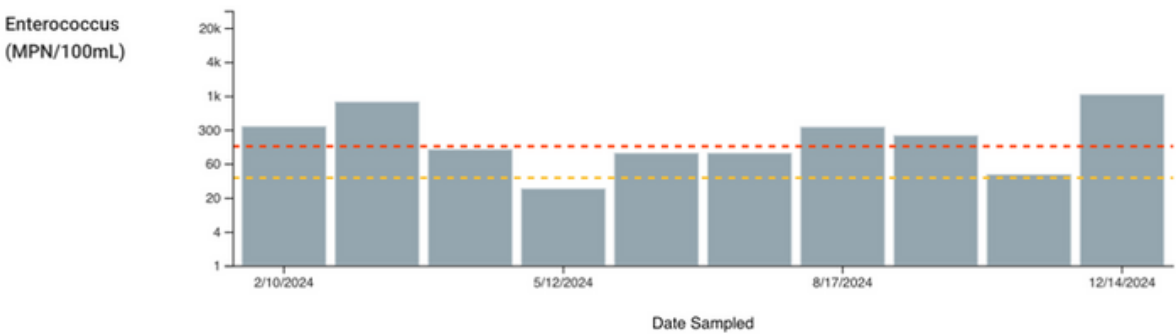


PRIORITY SAMPLE SITES: HANAMĀ'ULU STREAM

Like Nāwiliwili Stream, Hanamā'ulu Stream is considered a chronically polluted site. In 2024, the average bacteria count (geomean) measured **1,836** MPN. Every sample collected by the Kaua'i Chapter since 2011 has failed to meet state health standards. The Kaua'i Chapter has posted signs warning the public not to recreate in the water. The stream water is not safe for recreation and should be avoided.

100%
OF HANAMA'ULU
SAMPLES IN 2024
EXCEEDED HEALTH
STANDARDS FOR
BACTERIAL COUNTS

Hanamā'ulu Stream Results 2024



LEGISLATIVE ACTION

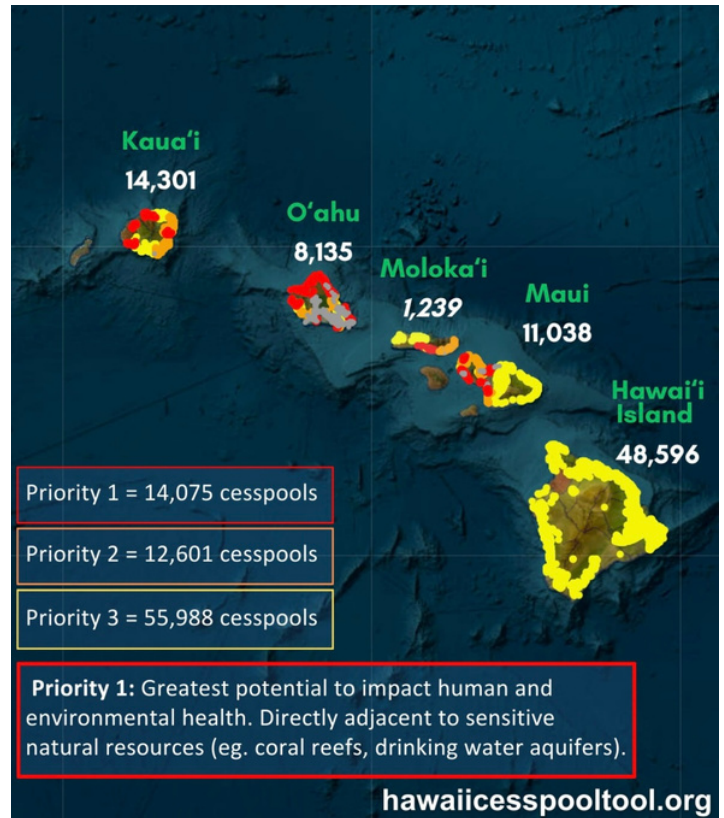
In addition to filling in water quality gaps across the state and informing beach goers about the safety of coastal waters, the Hawai'i Blue Water Task Force programs and their data also help drive important policy changes.

FEDERAL LEVEL ADVOCACY

In March 2024, five Surfrider Hawai'i volunteers met virtually with federal representatives to advocate for sufficient funding and proper implementation of the BEACH Act grants program administered by the Environmental Protection Agency (EPA). Each of the volunteers, representing their respective chapters, shared annual water quality reports highlighting the chronic pollution along their respective coastlines, and the need for cesspool upgrades to address wastewater pollution.

IMPROVING STATE WATER QUALITY MONITORING PROGRAM

Surfrider's Blue Water Task Force (BWTF) programs on O'ahu, Kaua'i, and Maui have long measured high bacteria levels where people enjoy a wide range of recreational activities in the water, but many of these sites are not tested by the beach program run by the Hawai'i Department of Health (HDOH). For many years, Surfrider has worked on building support in the Hawai'i State Legislature to mandate more robust testing coverage of beaches by the state's program. While the bill we supported last year did not pass, we were able to negotiate a compromise with the DOH that meets the bill's intent to sample beaches during both wet and dry weather. Previously, all sampling was suspended while Brown Water Advisories were in place.



Credit: Wastewater Alternatives and Innovations

REDUCING THE IMPACT OF CESSPOOL POLLUTION

Hawai'i's 83,000 cesspools are one of the biggest threats to water quality across the state, discharging 52 million gallons a day of sewage into coastal waters. In recent years, Surfrider has played a key role in successfully urging the state government to finally move away from relying on these antiquated and ineffective systems for managing household wastewater. While this work is ongoing, each year Surfrider has been supporting new legislation to further the state's progress towards meeting the 2050 goal. In 2024 we helped pass legislation that will help identify priority areas where sewers and central wastewater infrastructure can replace cesspools (HB2743/Act 217).

IMPROVING PUBLIC SIGNAGE

'BROWN WATER ADVISORY' SIGNAGE

The HDOH issues preemptive BWA warnings to the public to avoid coastal waters that are brown or have runoff due to potential health risks. BWAs, however, are only posted online and via local news outlets. In an effort to alert beachgoers to the potential threat of pollution, we received permission from the state and County Ocean Safety Bureau to provide Brown Water Advisory signs for the lifeguards on Maui to use to warn beachgoers of polluted conditions directly on the beach. Surfrider Kaua'i is now working to bring these signs to their island as well.



One of their worst offenders, Nāwiliwili Stream at Kalapakī Bay, has failed every water test performed since 2016, landing this site on the Surfrider Foundation's national list of polluted beaches. This is concerning because children are often seen wading and playing in the shallow stream mouth, parents completely unaware of the polluted conditions.



In 2024 Kaua'i chapter finally received permission to hang a sign at Nāwiliwili Stream at Kalapakī Bay that warns of high bacteria levels and directs people to view the chapter's BWTF water quality data so they can make informed decisions on where it is safe to get into the water and where pollution could put them at risk of getting sick.

HIGH BACTERIA SIGNS ON KAUA'I

For over a decade, the Kaua'i Chapter's BWTF has tested surf breaks and stream mouths to complement the beach water quality monitoring program conducted by HDOH. The Chapter's data clearly demonstrates that while the surf breaks typically test clean, many of the streams they test are chronically polluted with extremely high levels of enterococcus bacteria.





This report is brought to you by the
Surfrider Foundation Hawai'i Region.

hawaii.surfrider.org

Photo by Monica Andrea Photography