# BLUE WATER TASK FORCE

## MAUI WATER QUALITY REPORT

2024

SURFRIDER FOUNDATION. MAUI


BLUE WATER TASK FORCE

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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 Maui BWTF program collected 374 water samples at 39 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 Maui BWTF data, please reach out to the below coordinators. 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.

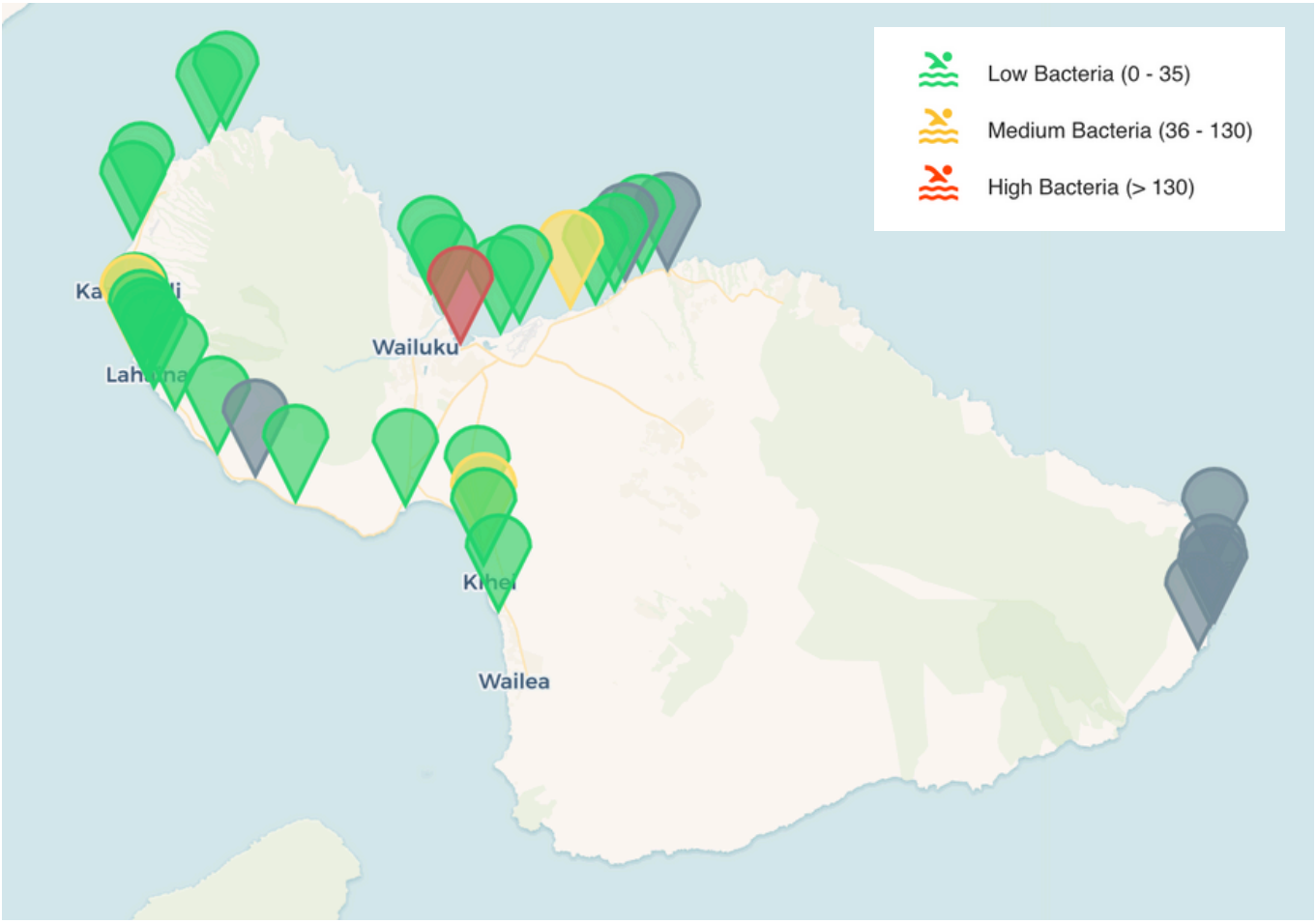
## MAUI

**Program Co-Coordinators:**

Greg Masessa and Kristina McHugh (bwtf@maui.surfrider.org)
View Data: https://bwtf.surfrider.org/explore/51

# MAUI DATA SUMMARY

Please find an analysis of water test results below for 39 sites on Maui (Map 1) that were monitored in 2024. Overall, coastal water quality in the areas tested by the Maui BWTF meet state health standards more often than on Kaua'i and O'ahu. Note that BWTF results are recorded as Most Probable Number (MPN/100 mL), due to our testing methods.




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

# MAUI DATA SUMMARY

## TABLE 1: PERCENT OF NORTH MAUI SAMPLES EXCEEDING HEALTH STANDARDS (>130 MPN/100ML)

| SITE NAME | TOTAL SAMPLES | % HIGH BACTERIA (>130 MPN/100ML) |
|---|---|---|
| East Maui: Hāmoa Beach | 3 | 0% |
| East Maui: Hāna Bay | 3 | 0% |
| East Maui: Hāneo'o Fish Pond | 3 | 0% |
| East Maui: Kōkī Beach at Kaholopo'o Rivermout | 2 | 0% |
| North Maui: Baby Beach | 12 | 0% |
| North Maui: Kanahā Beach | 12 | 0% |
| North Maui: Kūʻau Cove (Mama's Beach) | 12 | 0% |
| North Maui: Pāʻia Bay | 12 | 0% |
| North Maui: Waiehu Stream | 11 | 0% |
| South Maui: Kalepolepo Beach Park | 12 | 0% |
| South Maui: Waipuilani | 10 | 0% |
| West Maui: Breakwall | 8 | 0% |
| West Maui: Honokowai Beach Park | 12 | 0% |
| West Maui: Lāhainā Harbor | 10 | 0% |
| West Maui: Olowalu Surf Spot | 12 | 0% |
| West Maui: Polanui-Uhailio (Shark Pit) | 10 | 0% |
| West Maui: Punalau (windmills) | 12 | 0% |
| West Maui: Ukumehame/Thousand Peaks | 12 | 0% |
| West Maui: DT Fleming | 1 | 0% |
| West Maui: Napili Bay | 7 | 0% |
| West Maui: Papalaua Beach Park (Grandmas) | 7 | 0% |
| North Maui: Wailuku Stream | 11 | 4% |
| North Maui: Hōʻokipa Beach Park E | 12 | 8% |
| North Maui: Tavares Beach | 12 | 8% |
| South Maui: Māʻalaea Bay | 12 | 8% |
| West Maui: Guard Rails | 12 | 8% |
| West Maui: Pohaku Park (S Turns) | 12 | 8% |
| West Maui: Olowalu Mile Marker 14 | 12 | 8% |
| North Maui: Kanahā - Kalialinui Stream | 11 | 9% |
| West Maui: Pāpalaua Street | 8 | 13% |
| West Maui: 505 Front Street | 7 | 14% |
| South Maui: Kihei Canoe Club | 12 | 17% |
| North Maui: Kahului Harbor | 11 | 18% |
| South Maui: The Cove | 12 | 25% |
| West Maui: Front Street Park | 11 | 27% |
| West Maui: Honolua Bay | 12 | 33% |
| North Maui: Māliko Bay | 11 | 36% |
| West Maui: Mala Ramp | 11 | 36% |
| East Maui: Waioka | 2 | 50% |

Table 1. Indicates the percentage of total samples taken at respective sites that exceeded HDOH health standards for Enterococcus bacteria (>130 mpn/100mL).

# KEY OUTCOMES

2024 BWTF results are consistent with water quality trends from previous years. As in previous years, samples from Wailuku Stream and Māliko Bay have exceed the state health standard more frequently than the other sites tested. Both of these sites are located at the mouth of streams or rivers. Water quality conditions at these sites can likely be attributed to land-based runoff from upland areas that is carried by freshwater streams to the ocean. This is similar to BWTF from across Hawai'i where 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 higher circulation

Compared to O'ahu and Kaua'i BWTF results, Maui has more sites that meet state health standards. Six sites had 25% of their samples exceed state health standards: the Cove, Front Street Park, Honolua Bay, Māliko Bay, Mala Ramp and Waioka.

BWTF data from sampling sites in Kaua'i also indicate that locations have elevated levels of fecal indicator bacteria 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.

# MAUI POST-FIRE COASTAL WATER QUALITY MONITORING

The August 8 Maui fires proved a significant turning point for the Maui Chapter. This unprecedented tragedy and environmental disaster raised ongoing concerns about coastal water quality along West Maui.

## IS THE OCEAN SAFE ON WEST MAUI?

In the months after the fire, many research scientists received funding to test for fire contaminants in the oceans around Lāhainā. However, the focus was largely on marine ecosystem and reef health, leaving a large gap in public information regarding human health impacts.

In response to this, Surfrider's Maui Fire Response Coordinator and the Maui Chapter initiated a Maui Post-Fire Monitoring Program to address community concern regarding coastal water quality and ocean recreation safety. We developed a network of water quality and public health experts including HDOH and research scientists collecting post-fire water quality and sediment data.

## OCEAN SAFE FOR RECREATION

We conducted two sampling events in the Lāhainā burn zone and surrounding area- the first in early January 2024 during a big rain event and the second in June 2024 during dry weather. Samples were sent to Physis labs in CA for analysis.

Our results garnered significant local, national, and international media coverage and prompted a HDOH press release. The first round of samples were analyzed for the most probable fire-related toxic contaminants in the ocean - heavy metals and Polycyclic Aromatic Hydrocarbons (PAH) (link to results) We did not find evidence of fire-related contamination that would put human health at risk from recreation in the ocean.

In our second and final round of testing, we only sampled for metals, and again found no evidence of fire-related contamination that would put human health at risk from recreation in the ocean (link to results). In both sampling events, we didn't see any dissolved metal concentrations besides copper and zinc that stood out as elevated above typical background levels. Even the elevated copper and zinc levels were considerably lower than concentrations that could pose a threat to human health.

## CONTINUED WATER QUALITY MONITORING EFFORTS

We were fortunate to mobilize fire relief donations quickly to provide critical water quality data in the early months following the fires. HDOH has since set up a comprehensive quarterly post-fire coastal water quality monitoring program, in close consultation with our efforts, to sample for metals, nutrients, and other potential indicators of wildfire impacts. Consistent with our data, their efforts are confirming that coastal waters around Lāhainā are safe for recreation. Click here to visit their Maui Wildfire Data website.

# LEGISLATIVE ACTION

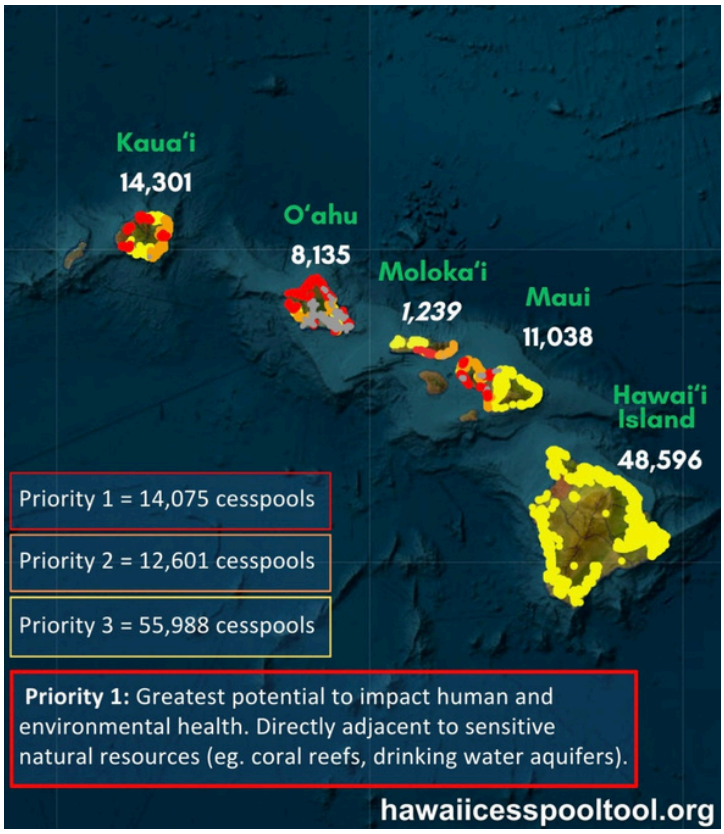
In addition to filling in water quality gaps across the state and informing beach goers about the safety of coastal waters, the Hawai'i Blue Water Task Force programs and their data also help drive important policy changes.

## 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).

# ‘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.



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

hawaii.surfrider.org

Photo by Monica Andrea Photography