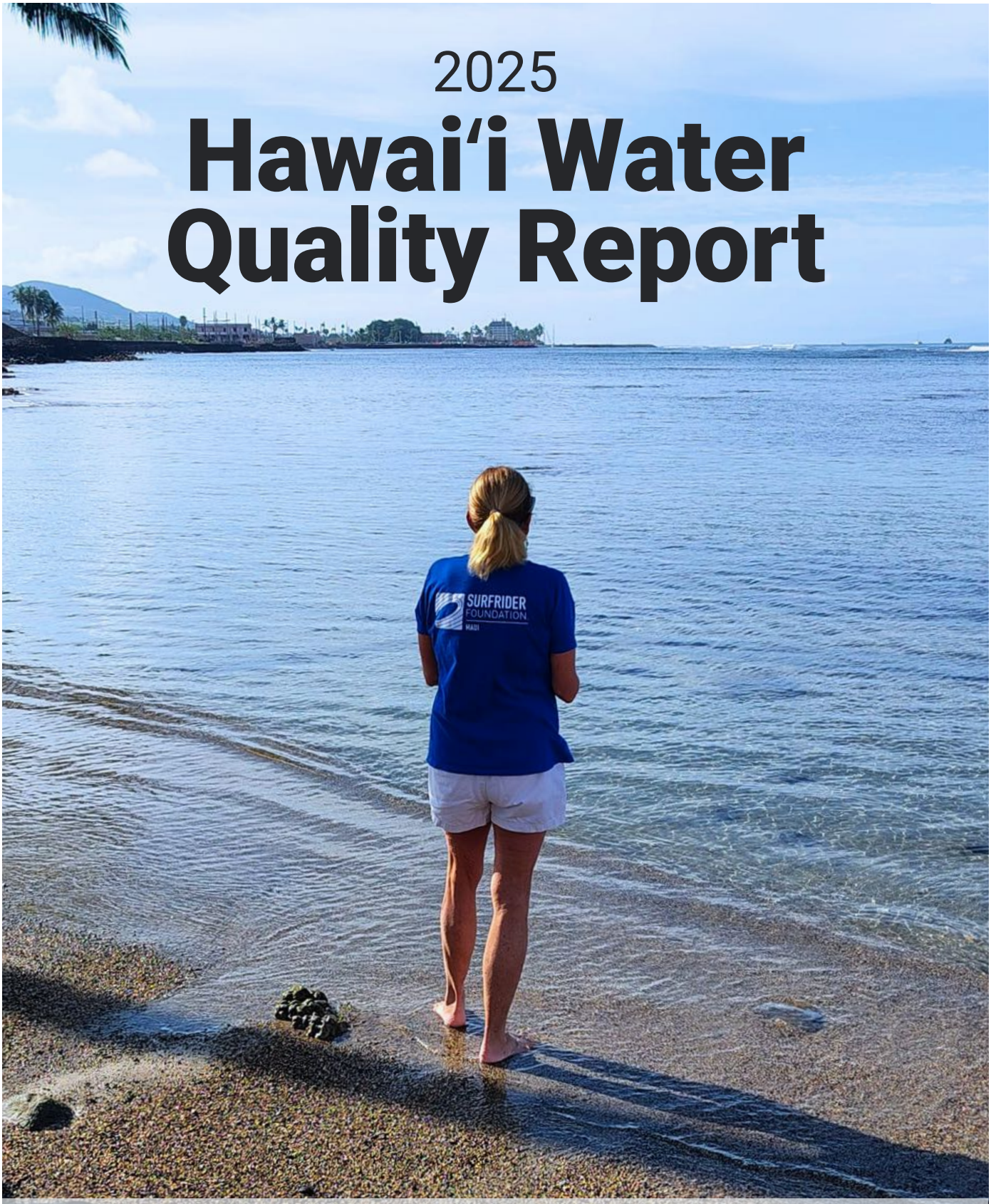
2025

Hawai‘i Water Quality Report



SURFRIDER FOUNDATION
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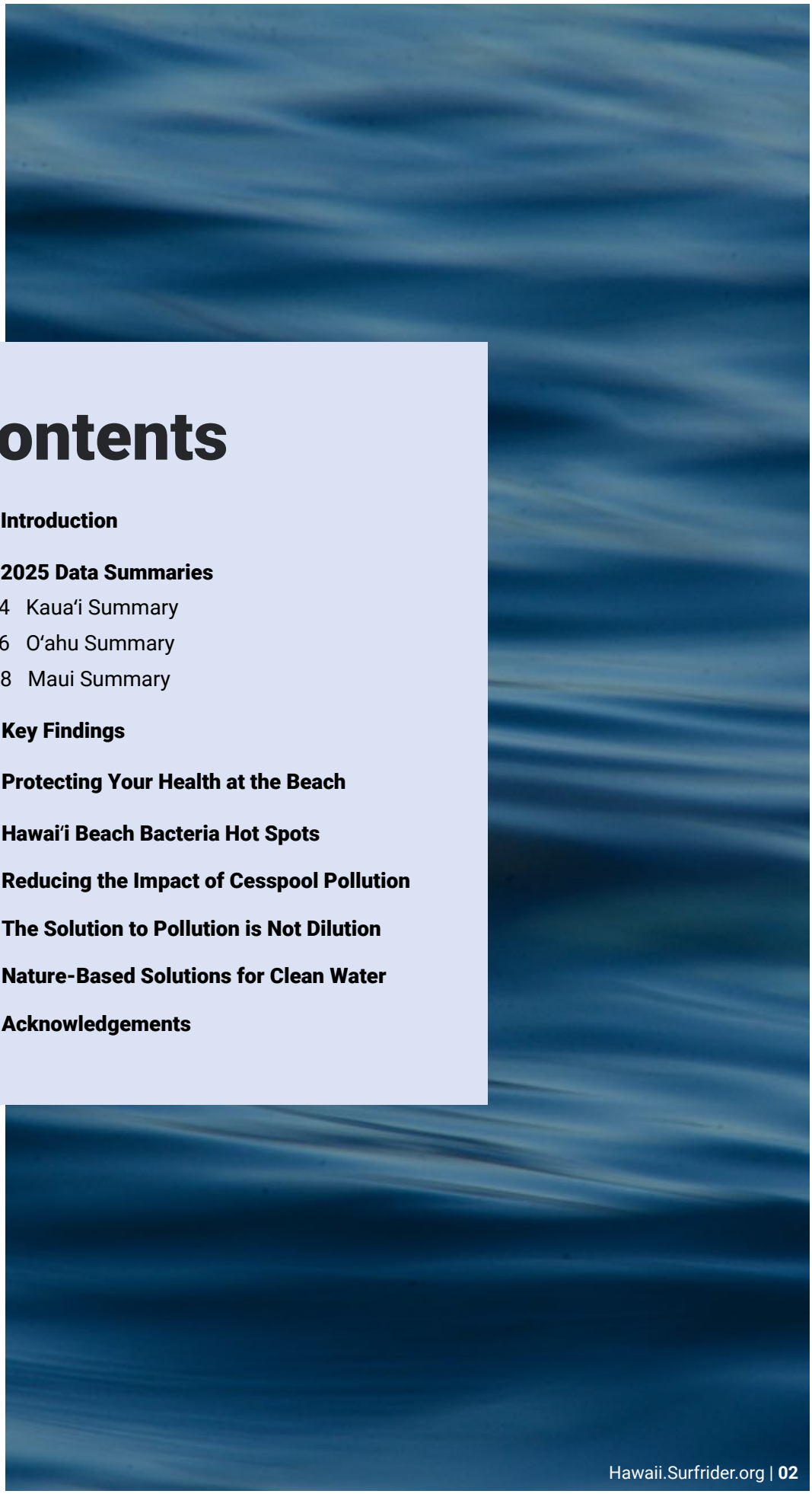
BLUE WATER TASK FORCE



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Introduction

In Hawai'i, the ocean is part of everyday life, making water quality a priority public health issue — no one should have to worry about getting sick while recreating at the beach.

Surfrider Foundation's Blue Water Task Force (BWTF) is our volunteer-run water quality monitoring program that provides critical information to inform safe recreation at the beach.

In 2025, volunteers collected 1,138 coastal water samples at 90 sites across Kaua'i (30), Maui (32), and O'ahu (28).

Water samples are tested for enterococcus, a fecal indicator bacteria that signals the potential presence of human or animal waste in the water. Elevated levels of enterococcus increase the likelihood that other illness-causing pathogens may also be present.

Results, posted within 24 hours of collection, are compared to recreational health standards established by the Hawai'i Department of Health (HDOH), specifically the Beach Action Value (BAV) of 130 MPN/100mL.

BWTF monitoring complements the HDOH Clean Water Branch program by expanding coverage to local beaches, surf breaks, and stream mouths where people recreate but are often left untested.

In addition to providing important public health information, BWTF data helps identify chronically polluted sites and inform advocacy efforts to address sources of pollution.

Please note that BWTF results represent conditions at a specific moment in time, and water quality can change rapidly.

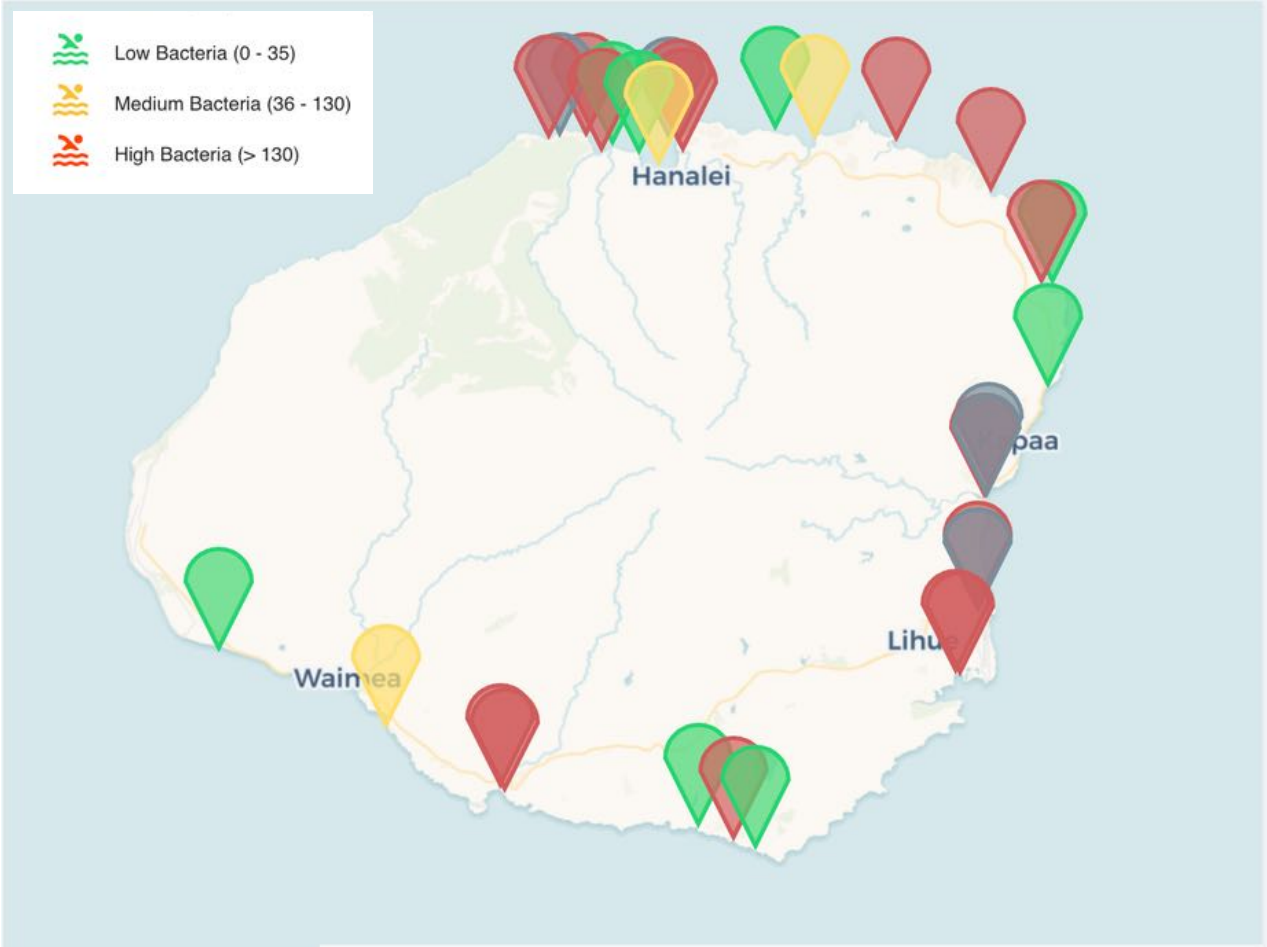
Questions regarding island-specific data can be directed to the coordinators listed in the data summary section or to Hanna Lilley (hlilley@surfrider.org), Surfrider Foundation Hawai'i Regional Manager.

BWTF teams are comprised of trained community members who sample biweekly on O'ahu and monthly on Kaua'i and Maui. The BWTF program would not be possible without the dedication of our volunteers and coordinators, whose continued efforts make this work possible.

BLUE WATER TASK FORCE

Kaua‘i 2025 Data Summary

This report provides an analysis of water test results for 30 Kauai sites (Map 1) monitored in 2025. 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 2025.

Scan to view
Kaua‘i Data
https://bwtf.surfrider.org/explore/23

Kaua‘i Volunteer BWTF Coordinator
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Kaua‘i 2025 Data Summary

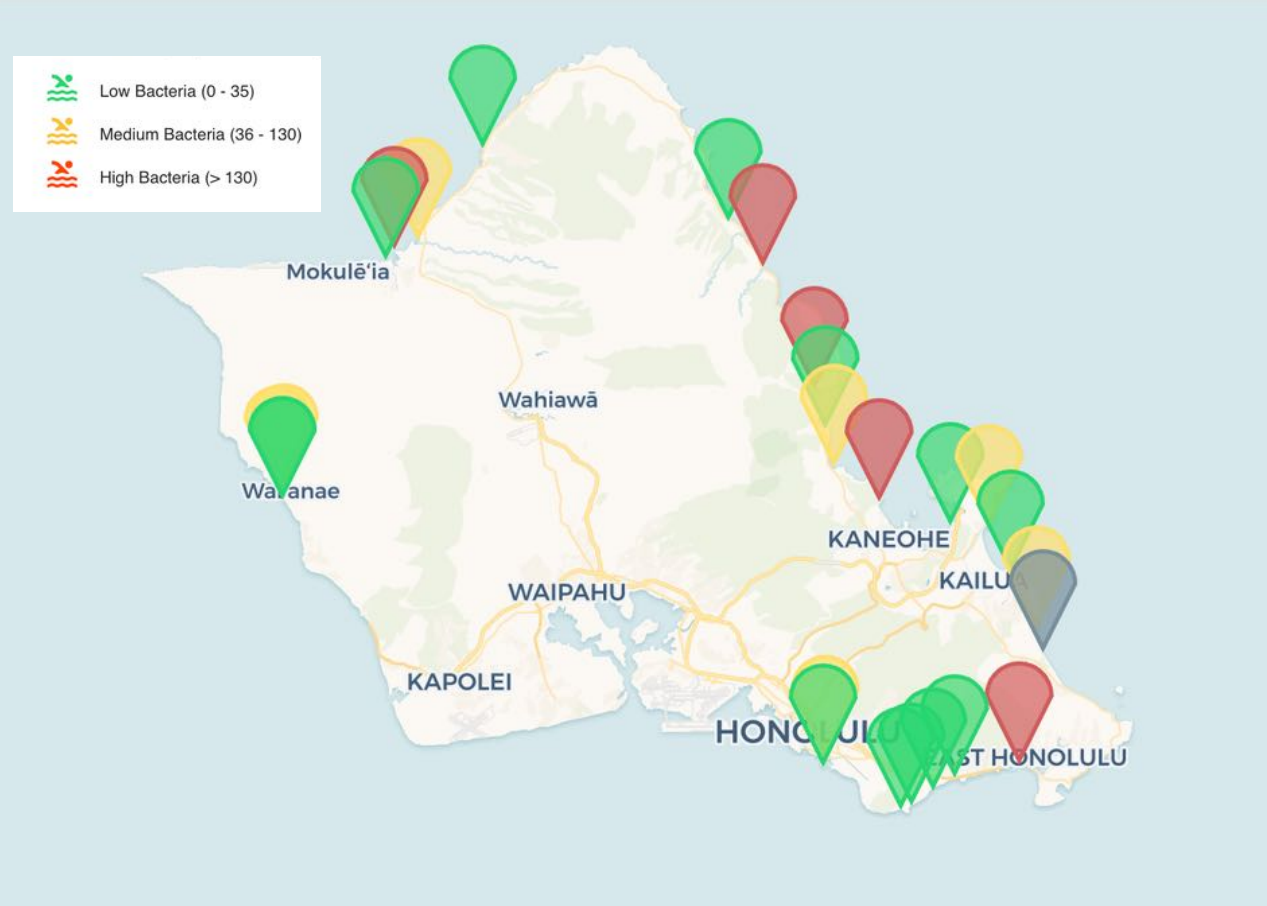
Table 1: Percent of Kaua‘i samples exceeding HDOH health standards for enterococcus bacteria (>130 MPN/100mL) in 2025

SITE NAME	TOTAL SAMPLES	% High Bacteria (>130 MPN/ 100 ML)	Geomean (MPN/100 ML)
East Kaua‘i: Keālia Surf	12	0%	3
North Kauia‘i: Wakikoko Surf, Hanalei	12	0%	9
North Kaua‘i: Kalihiwai Surf	12	0%	30
North Kaua‘i: Maniniholo (Pukas surf)	4	0%	4
South Kaua‘i: Kukui‘ula Bay	10	0%	15
South Kaua‘i: Waiohai Surf, Poipu	12	0%	4
West Kaua‘i: Intersections Surf	7	0%	4
North Kaua‘i: Middles Surf, Hanalei	12	8%	26
East Kaua‘i: Anahola Bay Surf	12	8%	8
North Kaua‘i: ‘Anini Boat Ramp	10	20%	19
East Kaua‘i: Lydgate (Morgans Pond)	9	22%	9
West Kaua‘i: Pākālas Surf	12	25%	86
East Kaua‘i: Kalapakī Bay Surf	12	25%	60
North Kaua‘i: Kāhili Surf (Rock Quarry)	12	25%	15
East Kaua‘i: Hanamā‘ulu Bay Beach	12	42%	118
South Kaua‘i: Waikomo Stream (Koloa Landing)	12	42%	100
West Kaua‘i: Port Allen Boat Harbor	8	62%	152
North Kaua‘i: Hanalei Bay (The Pier)	12	66%	247
North Kaua‘i: Lumaha‘i River Mouth	4	75%	117
East Kaua‘i: Wailua River Mouth	12	75%	266
East Kaua‘i: Anahola Stream Mouth	7	86%	451
North Kaua‘i: Pu‘u Pōā Beach (Wailei‘ia Stream)	11	91%	850
North Kaua‘i: Wainiha River Mouth	11	91%	341
West Kaua‘i: Waimea River Mouth	11	91%	763
East Kaua‘i: Hanamā‘ulu Stream Mouth	12	92%	927
North Kaua‘i: Moloa‘a Stream Mouth	11	100%	2159
East Kaua‘i: Nāwiliwili Stream	12	100%	1230
North Kaua‘i: Hanalei River At Weke Rd.	12	100%	666
North Kaua‘i: Mānoa stream	4	100%	4538
West Kaua‘i: Hanapēpē River Mouth	9	100%	1070

Note that sampling occurs monthly and not all sites are sampled at the same frequency. The Kaua‘i chapter also calculates the geometric mean (geomean), a statistical average used to better represent long-term bacteria levels over time.

O‘ahu 2025
Data Summary

An analysis of water test results is provided below for 28 O’ahu sites (Map 2) monitored in 2025. Our water quality results indicate that certain sites frequently experience high bacteria levels that exceed state health standards (Table 2). Note BWTF results are recorded as Most Probable Number (MPN/100 mL), due to our testing methods.



Map 2. Blue Water Task Force sites on O’ahu that were sampled twice per month in 2025.

Scan to view
O‘ahu Data
https://bwtf.surfrider.org/explore/44

O‘ahu Volunteer BWTF Coordinator
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O‘ahu 2025 Data Summary

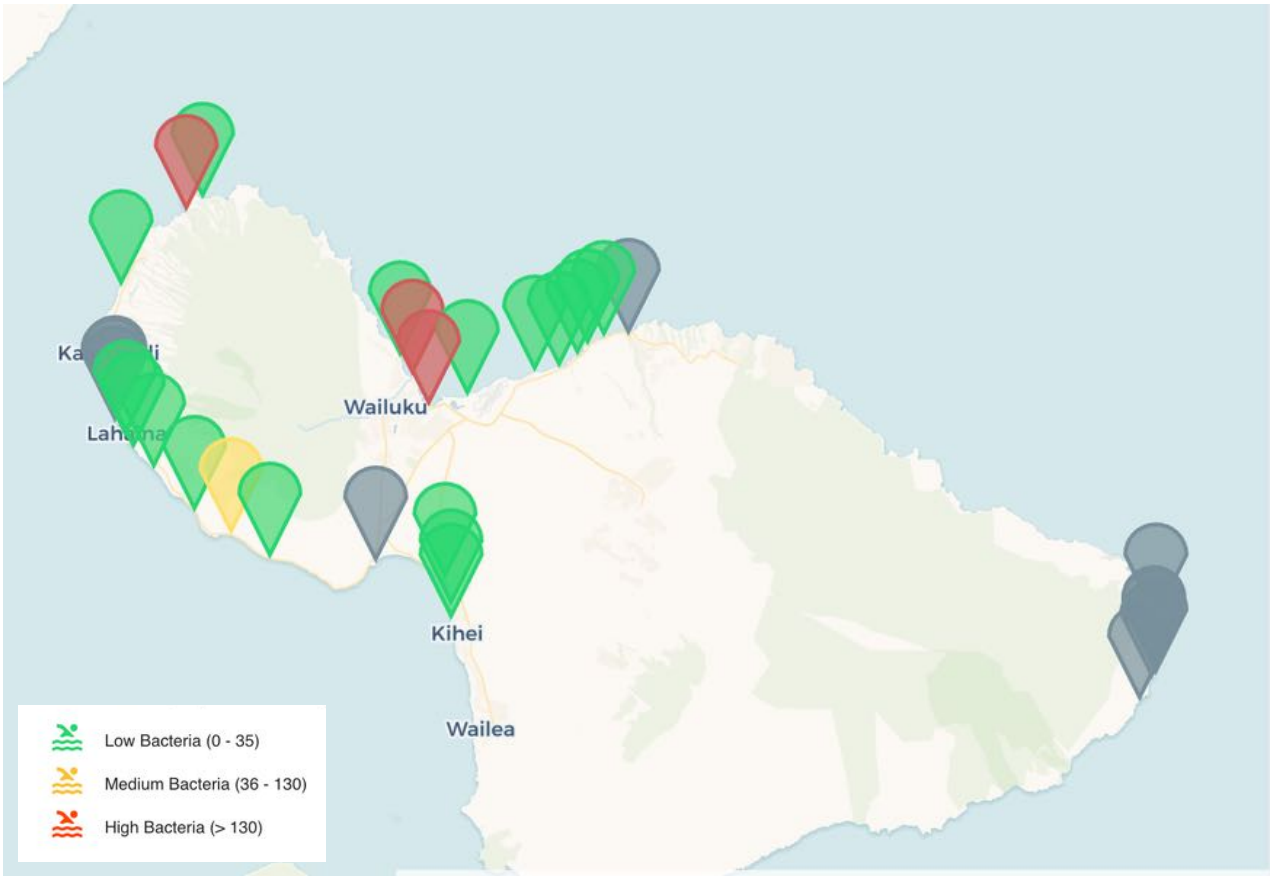
Table 2: Percent of O‘ahu samples exceeding HDOH health standards for enterococcus bacteria (>130 MPN/100mL) in 2025

SITE NAME	TOTAL SAMPLES	% High Bacteria (>130 MPN/ 100 ML)
South O‘ahu: Hui Nalu Canoe Launch	19	0%
South O‘ahu: Kaimana Beach	8	0%
South O‘ahu: Mākālei Beach Park	8	0%
West O‘ahu: Pililā‘au	16	0%
East O‘ahu: Kailua Beach Park	25	4%
South O‘ahu: Magic Island Bowls	24	4%
South O‘ahu: Wailupe Beach Park	25	4%
North O‘ahu: Kahaone Place	20	5%
North O‘ahu: Pūpūkea Tidepools	20	5%
West O‘ahu: Pōka‘i Bay- Inside	16	6%
West O‘ahu: Pōka‘i Bay- Outside	16	6%
South O‘ahu: Ka‘alāwai (Black Point/Cromwells)	17	12%
East O‘ahu: Mākao	21	19%
South O‘ahu: Wai‘alae Beach Park	16	19%
East O‘ahu: Kaimalino	24	21%
East O‘ahu: South Kāne‘ohe Bay	25	24%
South O‘ahu: Ka‘alāwai (Black Point-East)	17	24%
South O‘ahu: Magic Island Canoe Launch	24	25%
North O‘ahu: Chocolates	21	33%
East O‘ahu: Waimānalo Stream	24	46%
North O‘ahu: Kaiaka Bay	20	**55%**
East O‘ahu: He‘eia Stream	19	**58%**
East O‘ahu: Waiāhole Beach Park	23	**61%**
West O‘ahu: Kaupuni Stream	16	**75%**
South O‘ahu: Kuli‘ou‘ou Stream	25	**80%**
East O‘ahu: Hakipu‘u Boat Ramp	22	**82%**
East O‘ahu: Kahalu‘u Beach	25	**84%**
East O‘ahu: Chings (Punalu‘u Beach Park)	20	**100%**

Note that sampling occurs biweekly and not all sites are sampled at the same frequency.

Maui 2025
Data Summary

An analysis of water test results is provided below for 32 sites on Maui (Map 3) monitored in 2025. 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 (Table 3). Note that BWTF results are recorded as Most Probable Number (MPN/100 mL), due to our testing methods.



Map 3. Blue Water Task Force sites on Maui that were sampled once per month in 2025.

Scan to view
Maui Data
https://bwtf.surfrider.org/explore/51

Maui Volunteer BWTF Coordinator
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bwtf@maui.surfrider.org

Maui 2025 Data Summary

Table 3: Percent of Maui samples exceeding HDOH health standards for enterococcus bacteria (>130 mpn/100ml) in 2025

SITE NAME	TOTAL SAMPLES	% High Bacteria (>130 MPN/ 100 ML)
West Maui: Ukumehame/ Thousand Parks	12	0%
West Maui: Punalau (Windmills)	10	0%
West Maui: Polanui-Uhailio (Shark Pit)	12	0%
West Maui: Pohaku Park (S Turns)	10	0%
West Maui: Olowalu Surf Spot	10	0%
West Maui: Olowalu Mile Marker 14	8	0%
West Maui: Guard Rails	10	0%
North Maui: Waiehu Stream	9	0%
North Maui: Tavares Beach	9	0%
North Maui: Pāʻia Bay	11	0%
North Maui: Kanahā - Kalialinui Stream	11	0%
North Maui: Hōʻokipa Beach Park E	10	0%
North Maui: Baby Beach	9	0%
East Maui: Hāna Bay	3	0%
East Maui: Hāmoa Beach	3	0%
South Maui: Kalepolepo Beach Park	12	8%
South Maui: Kihei Canoe Club	12	8%
West Maui: Lāhainā Harbor	11	9%
South Maui: Waipuilani	11	9%
West Maui: Front Street Park	9	11%
North Maui: Kūʻau Cove (Mama's Beach)	9	11%
South Maui: Māʻalaea Bay	8	13%
North Maui: Kahului Harbor	11	18%
South Maui: The Cove	5	20%
West Maui: Honolua Bay	10	20%
West Maui: Baby Beach	5	20%
North Maui: Māliko Bay	5	20%
North Maui: Kanahā Beach	4	25%
East Maui: Hāneoʻo Fish Pond	3	33%
West Maui: Mala Ramp	11	45%
North Maui:ʻĪao Stream Mouth	8	**50%**
East Maui: Kōkī Beach at Kaholopoʻo Rivermouth	3	**67%**

Note that sampling occurs monthly and not all sites are sampled at the same frequency.

Key Findings

Hawai'i is often viewed as paradise, with pristine, clean aquamarine waters, but many don't realize, our state is facing a serious wastewater crisis.

In addition to aging, failing and overburdened sewage infrastructure, Hawai'i has the highest number of cesspools per capita in the United States, with approximately 83,000 statewide. The porous volcanic geology of our islands allows sewage from these systems to quickly seep into groundwater and flow towards the ocean. Stormwater runoff also carries animal waste, landscaping chemicals, and other pollutants into local waterways and ultimately to the beach.

Consistent with previous years, 2025 BWTF results show that sites located at or near freshwater outlets generally experience higher bacteria levels than beaches with greater circulation and water exchange. All of the chronically polluted sites featured as "beach bacteria hot spots" in this report are located at the base of watersheds with high concentrations of cesspools and are influenced by freshwater discharges from streams.

There were 24 sites — located at or near freshwater outlets — that failed to meet health standards more than half the time they were tested. Of those, 18 are located within Priority 1 or 2 cesspool areas identified through the Hawai'i Cesspool Prioritization Tool. The chronic pollution documented at these locations indicates the likely influence of sewage contamination in many of these watersheds.

BWTF data also shows that bacteria levels often increase during and following wet weather and brown water events. Hawai'i's rainy season, which typically begins in late fall, can bring intense storm events that flush sediment, wastewater, and other pollutants into coastal waters.

More exposed beaches without direct freshwater inputs generally test cleaner because increased circulation and water exchange help dilute contaminants. However, bacteria levels at these beaches can still become elevated following heavy rainfall and storm events.

2025 data shows persistent water quality concerns with 24 sites exceeding health standards more than 50% of the time, including 14 sites on Kaua'i, 8 on O'ahu, and 2 on Maui.

3	90	1,138
BWTF Labs	Sampling Sites	Samples Collected

Protecting Your Health at the Beach

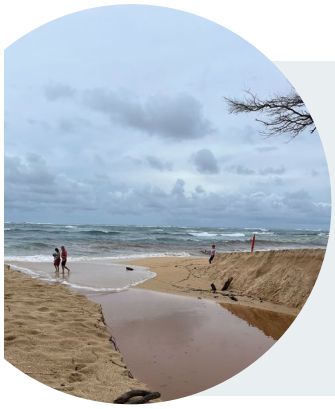
CHECK

Before going to the beach, check the current water quality conditions at:

→ bwtf.surfrider.org
HDOH water quality advisories

AVOID

Avoid recreating at sites with bacteria levels exceeding health standards, active water quality advisories, or with visible brown water. Use caution and avoid recreation near stream and river mouths or storm drains, especially following rain events.



WAIT

Beachgoers should wait to swim, surf, or recreate in coastal waters **at least 24-48 hours** after major rain events.

REPORT

If you believe you got sick at the beach, report it using the WAI SeaSick reporting tool for suspected waterborne illnesses and infections.

→ SeaSick Reporting Tool

Hawai‘i Beach Bacteria Hot Spots

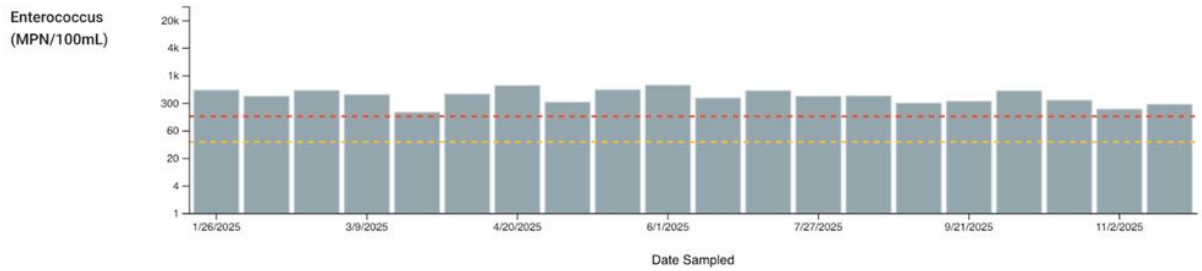
Punalu‘u Beach Park (Chings), O‘ahu

Punalu‘u Beach Park, commonly known as “Chings,” is a relatively new monitoring site for the O‘ahu BWTF. Testing at the site began in September 2024, near the historic Chings Store, following a request from a local community member. Water quality at Punalu‘u beach park is impacted by the Punalu‘u Stream, which drains a large agricultural valley. There are also a handful of priority-one cesspools near the beach. Unfortunately, all samples collected at Chings in 2024 and 2025 exceeded state recreational water quality standards, highlighting persistent contamination concerns at this popular windward beach.

100%

of Chings samples in 2025 exceeded health standards for bacterial counts

Chings Results 2025



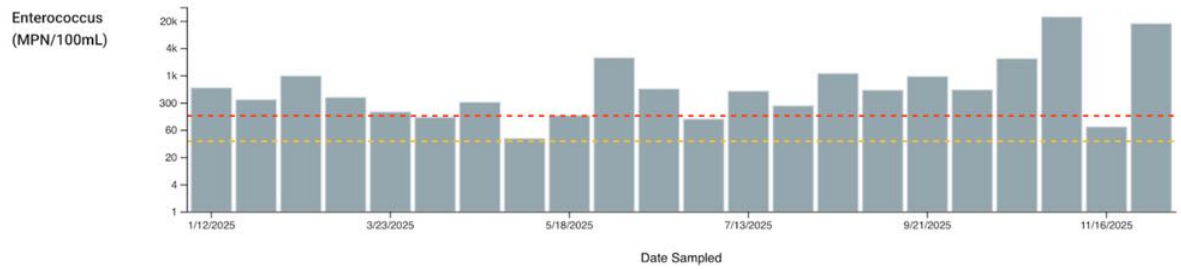
Hakipu‘u Boat Ramp, O‘ahu

Hakipu‘u Boat Ramp is located at the northwest end of Kāne‘ohe Bay. Although access to the boat ramp is on private land, the coastal waters here are frequently used by both locals and tourists recreating at Secret Island, Moloi‘i Pond, and Kualoa Beach Park. In August of 2020, the O‘ahu BWTF responded to the concerns of a local community group regarding cesspool pollution. Wastewater is disposed via cesspool at nearly every house in the neighborhood. Water quality in the area is also influenced by a stream that drains from Kualoa Ranch.

82%

of Hakipu‘u Boat Ramp samples in 2025 exceeded health standards for bacterial counts

Hakipu‘u Boat Ramp Results 2025



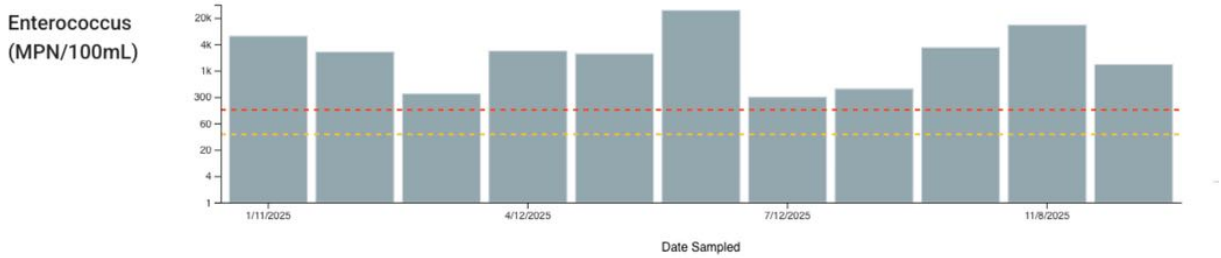
Moloa‘a Stream Mouth, Kaua‘i

The stream mouth at Moloa‘a Beach is impacted by chronic fecal contamination. In 2025, the geometric mean (average) bacteria level measured at Moloa‘a Stream Mouth was 2,159 MPN, and 100% of samples failed to meet state health standards. Along with a high density of cesspools in the area, studies detecting sucralose in Moloa‘a Stream further indicate wastewater contamination at the site. Despite these elevated bacteria levels, families and keiki often play in the shallow, calm waters at the stream mouth. Community members have reported illnesses after recreating here, contributing to growing concern about water quality. Residents are especially worried that increasing development pressure could further exacerbate wastewater contamination in the area.

100%

of Moloa‘a samples in 2025 exceeded health standards for bacterial counts

Moloa‘a Stream Mouth Results 2025



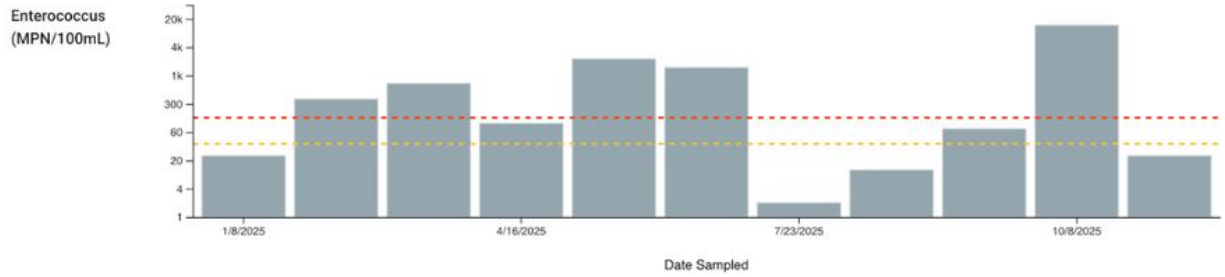
Mala Ramp, Maui

Mala Ramp is a heavily used recreational and culturally significant area in Lahaina for fishing, diving, snorkeling, surfing, boating, and ocean recreation. Located near the mouth of Kahoma Stream adjacent to a Priority 1 cesspool area, the site is influenced by polluted runoff from the watershed. Mala is a popular surf spot and also hosts a diverse nearshore reef ecosystem that attracts many snorkelers. Following the 2023 wildfires, Mala became one of Lahaina’s primary harbor access points, leading to increased local and commercial ocean activity. Because the area is heavily used for recreation and ocean access, ongoing bacteria exceedances raise public health concerns.

45%

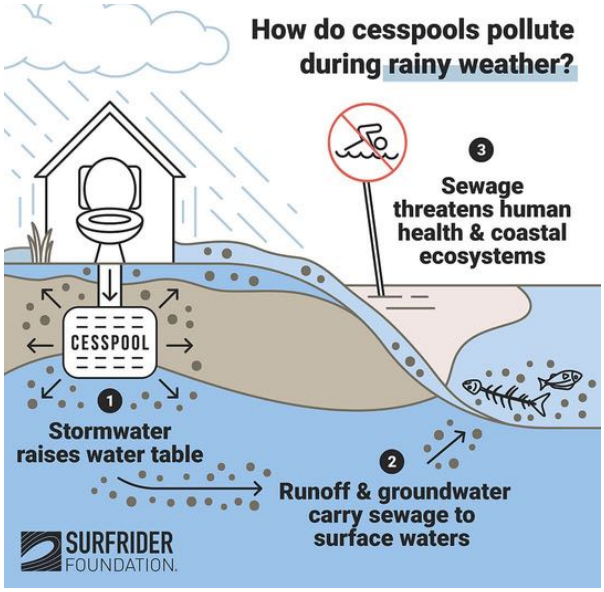
of Mala Ramp samples in 2025 exceeded health standards for bacterial counts

Mala Ramp Results 2025



Reducing the Impact of Cesspool Pollution

Over 83,000 cesspools discharge an estimated 52 million gallons of untreated sewage into the environment each day, making cesspool pollution one of the greatest threats to water quality statewide. Because cesspools are unlined pits in the ground, sewage seeps into groundwater and ultimately reaches streams, nearshore waters, and beaches. Dense coastal development, porous geology, shallow groundwater, and increasing climate impacts such as flooding and sea level rise further exacerbate the problem.



Legislative Action

Hawai'i Statute (Act 125) requires all cesspools to be upgraded or converted by 2050, yet significant barriers continue to hinder progress. Affordability remains one of the greatest challenges, with conversions often costing homeowners tens of thousands of dollars and out of reach for many households. Surfrider Foundation supports legislation and policy solutions that address the financial, regulatory, and infrastructure barriers to cesspool conversion, and in recent years, has successfully advocated for measures focused on improving affordability and access to wastewater solutions.

In 2025, HB736 (Act 198) and HB879 (Act 188) were signed into law, funding a three-year pilot program through the University of Hawai'i Water Resources Research Center to evaluate cost-effective wastewater solutions that protect water quality and funding one additional full-time position at HDOH to assist with cesspool compliance and expedite conversions, respectively.

In 2026, HB1618, establishing a low-interest revolving loan fund for cesspool conversion, passed the Legislature and awaits the Governor's signature.

Decentralized Wastewater Systems

Beyond affordability, there are also significant implementation challenges. Permitting is often a slow and complex process involving environmental and cultural review across multiple agencies. Additionally, in many rural communities, expanding or installing centralized sewer systems is not possible, thus increasing the need for effective decentralized wastewater solutions.

Recognizing this need, Surfrider Foundation joined Wastewater Alternatives & Innovations in their launch of Hawai'i's first Responsible Management Entity (HiRME) initiative – a cross-sector effort focused on developing the technical, managerial, and financial systems needed to support decentralized wastewater infrastructure at scale.

The Solution to Pollution is NOT Dilution

While cesspools remain a major source of pollution, permitted discharges from wastewater treatment plants also impact coastal water quality. Many facilities discharge treated or partially treated sewage directly offshore and rely on dilution in the ocean to meet water quality standards rather than adequately reducing pollution at the source.

Clean Water Act Permits & Mixing Zones

Surfrider Foundation monitors and engages in Clean Water Act (CWA) permit processes that regulate point source pollution from wastewater treatment facility discharges. Overseen by the HDOH, these permits establish enforceable pollution limits and remain in place for at least five years.

Surfrider advocates for stronger permit limits that better protect public health and coastal ecosystems. We push back against the longstanding reliance on “mixing zones” — designated areas where facilities are allowed to exceed water quality standards based on the assumption pollution will dilute offshore. In reality, these zones create localized “sacrifice zones,” degrading miles of coastal waters where currents and storms can also carry contaminants back to shore

Wailua Wastewater Treatment Plant

In August 2025, Kaua‘i’s Wailua Wastewater Treatment Plant CWA permit came up for renewal. The aging facility has a history of failing pipes and sewage spills, while an increased load from a growing population continues to place additional strain on the system.

The proposed permit allowed the plant to continue discharging up to 1.5 million gallons per day of partially treated sewage just 235 yards offshore of Lydgate Beach Park. Relying on a mixing zone, the draft permit set bacteria limits more than 50 times the recreational health standard.

In addition to submitting legal and technical comments, the Kaua‘i Chapter activated over 100 community members to call for stronger protections in the permit. In response, the Kaua‘i County Council held a briefing to discuss Surfrider's concerns, and we remain engaged in ongoing discussions with the County and facility operators to address disinfection concerns and improve treatment performance.

Sand Island Wastewater Treatment Plant

In March 2026, HDOH released a draft permit for the Sand Island Wastewater Treatment Plant. Sand Island is the state’s largest wastewater treatment facility, serving most of urban Honolulu, and is still not operating at full secondary treatment standards. The plant discharges up to 90 million gallons of treated sewage a day just two miles offshore into Mamala Bay.

The proposed permit relies heavily on mixing zone assumptions and allows bacteria levels more than 220 times the recreational health standard. BWTF monitoring has documented repeated exceedances, including a sample measuring 78,622 (MPN/100mL) enterococcus in July 2025. In response, Surfrider O‘ahu submitted technical comments and rallied the community to advocate for stronger bacteria and nutrient limits.

Nature-Based Solutions for Clean Water

Individual and community actions to restore and steward healthy landscapes also play an important role in reducing pollution and improving coastal water quality. Healthy watersheds absorb and filter runoff, preventing sediment, nutrients, bacteria, and other pollutants from flowing into streams and nearshore waters. Surfrider Foundation promotes a scalable watershed approach to clean water through its Ocean Friendly Gardens program, which emphasizes practices such as building healthy living soil, contouring landscapes to retain rainwater, reducing runoff, and prioritizing climate-adapted native plants over conventional turf grass landscapes.

Fire Resilient Landscape Guide for Lahaina & West Maui

Maui communities have experienced firsthand the devastating impacts of prolonged drought, wildfire, and increasingly extreme storm events driven by climate change.

Following the 2023 West Maui wildfires, the Maui Chapter partnered with Pacific Fire Exchange, Hawai'i Wildfire Management Organization, and other contributors to develop Re-planting After Fire: A Fire-Resilient Landscape Guide for Lahaina & West Maui. The guide empowers residents with practical strategies to proactively reduce wildfire risk around homes and neighborhoods through fire-resilient, water-wise, and ocean-friendly landscaping practices. Importantly, many of these same actions also support healthy watersheds by reducing erosion, slowing stormwater runoff, improving soil health, and decreasing pollution flowing into the ocean.

Watershed Restoration at Honolua Bay

On Maui, the chapter has partnered with Aloha Pu'u Kukui to restore native forests in the watershed above Honolua Bay, a beloved surf and marine ecosystem where the Maui BWTF monitors water quality. Through three restoration events involving hundreds of community volunteers, more than 3,000 native trees and shrubs were planted mauka to help restore watershed function and protect water quality makai.

From installing Ocean Friendly Gardens in residential yards to large-scale forest restoration, these stewardship efforts help strengthen watershed resilience and protect Hawai'i's coastal waters.

Acknowledgments

None of this work would be possible without the dedication of our BWTF volunteers. Volunteers make this effort possible at every step of the way from the water samplers, to the sample couriers, to the lab volunteers processing and interpreting results, to getting results out to the community—this is a complex effort dependent on every single person involved.

We also want to recognize our community partners and satellite BWTF labs that monitor water quality in their own communities. In Wai'anae, O'ahu, Carmen Guzman and Joseph Simpliciano of Kingdom Pathways monitor four sites and process samples at the Wai'anae High School Water Testing Lab alongside students from the Marine Science Learning Center. In Hāna, Maui, Brianna Craig leads BWTF monitoring efforts with Hāna High School, sampling five sites across the Hāna coastline.

Please reach out to your local chapter BWTF coordinator listed above if you are interested in joining the task force– we are always looking for more volunteers!

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