

2024

# Clean Water Annual Report

📷 Morgan Maassen

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# Clean Water Initiative

Americans love the beach. More than 100 million beachgoers flock to U.S. beaches every year to enjoy the sand, sunshine, and water. Not only do beaches provide recreation, leisure, and social opportunities, but they are also the foundation of valuable coastal tourism and ocean recreation industries that sustain 2.5 million jobs nationwide and contribute \$240 billion in gross domestic product to the national economy each year ([ASBPA.org](https://www.asbpa.org)).

Since the Surfrider Foundation was founded in 1984, improving coastal water quality has been one of our top priorities. Through our Clean Water Initiative, we strive to protect water quality and reduce pollution so it is safe for you and your family to surf, swim, and play in our ocean and coastal waterways. To meet this goal, Surfrider chapter volunteers are building awareness of water pollution problems and advocating for solutions to protect clean water and healthy coastal ecosystems.

**Through our Clean Water Initiative, we strive to protect water quality and reduce pollution so it is safe for you and your family to surf, swim, and play in our ocean and coastal waterways.**

**The Blue Water Task Force made an impact in 2024 with more labs, sampling sites, and water quality tests performed than ever before.**



**60**   **604**   **10,120**  
BWTF Labs   Sampling Sites   Samples Collected



# Threats

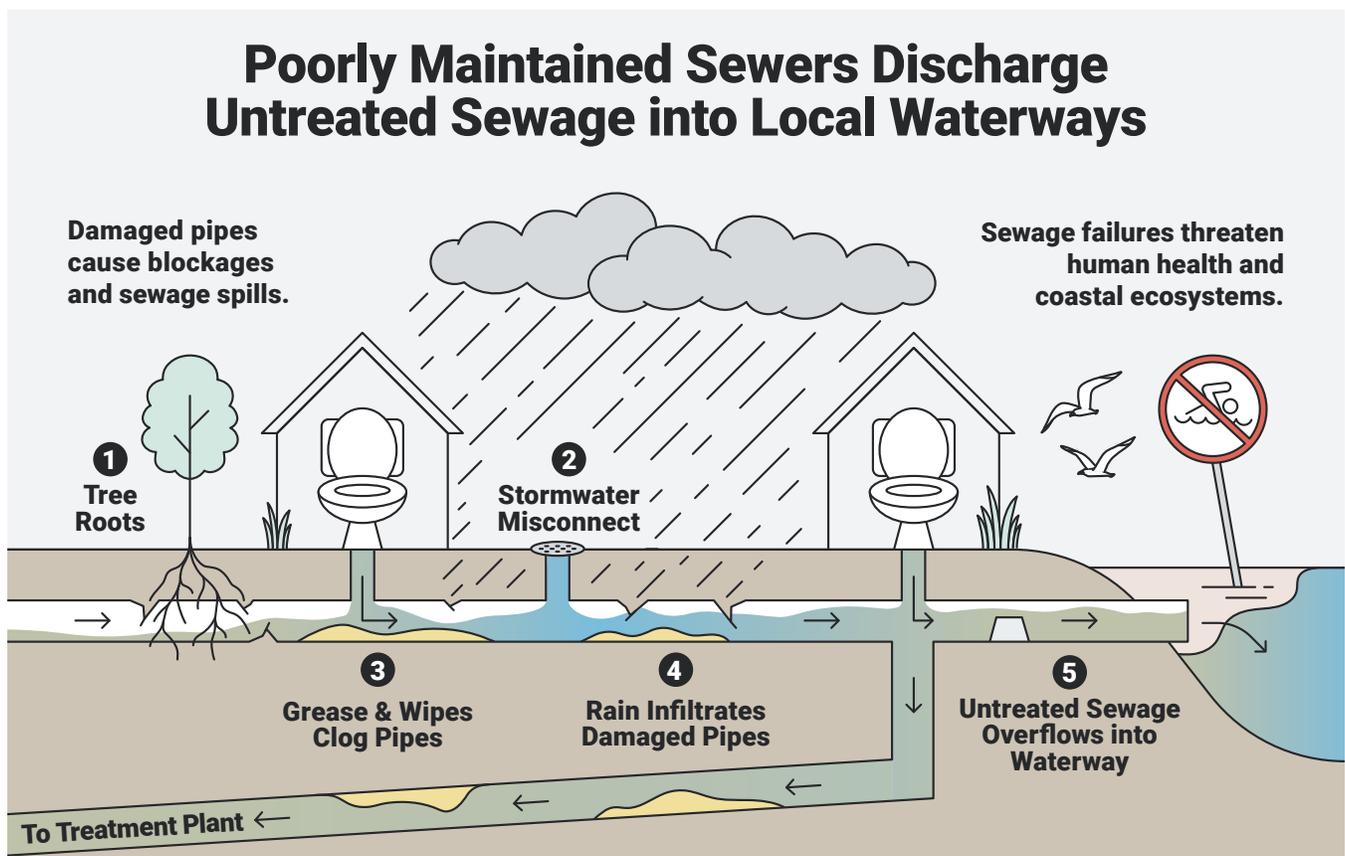
Despite the high value of clean beaches, coastal water quality is threatened by stormwater, urban and agricultural runoff, as well as sewage and industrial discharges. Nearly 10 trillion gallons of untreated stormwater runoff flow into U.S. waterways every year, carrying a cocktail of pollutants including road dust, oil, animal waste, fertilizers, and other chemicals. Years of neglect and underfunding have also left America's outdated wastewater infrastructure in disrepair.

Sewage spills and failing wastewater infrastructure threaten coastal water quality by discharging raw and undertreated sewage into our local waterways and ocean. In fact, sewage spills and infrastructure failures release over 900 billion gallons of untreated sewage into surface waters every year!

Sewage can contain bacteria, viruses, and parasites that make people sick with gastrointestinal symptoms, rashes, skin and eye infections, flu-like symptoms, and even more severe conditions like hepatitis. Sewage and stormwater runoff also pollute waterways with excess nutrients, wreaking havoc on coastal ecosystems. Polluted waterways fuel harmful algal blooms that put human health at risk and result in fish kills and coral reef die-offs.

The growing threats from climate change to our coasts, including sea level rise and more frequent extreme weather events that generate massive amounts of stormwater, are also causing more frequent water infrastructure failures and sewage spills. Significant investments need to be made now to enable our coastal communities to become more resilient and better manage their water resources.

**Sewage spills and infrastructure failures release over 900 billion gallons of untreated sewage into surface waters every year.**



# Surfrider's Approach

Everyone deserves access to clean water to surf, swim, and play in. The Surfrider Foundation is taking a multi-tiered approach to tackle ocean and coastal pollution problems. We advocate for strong laws and sufficient funding to monitor and protect water quality. We ensure that people have access to the information they need to protect themselves and the health of their families when recreating at the beach and in our coastal waterways. When we see information gaps in government testing programs that leave public health unprotected, we seek to meet those community needs with our Blue Water Task Force water quality monitoring program — the largest volunteer-run beach water testing program in the country.

Through a nationwide network of volunteer-led chapters, we are building awareness of pollution problems and bringing together local stakeholders to protect clean water. Our Ocean Friendly Gardens program engages community members in nature-based solutions to urban runoff and improves climate resiliency through hands-on projects and stewardship activities. When more collaborative approaches to reduce pollution fail, the Surfrider Foundation has the legal expertise to bring issues to the courts to ensure proper enforcement of the Clean Water Act to protect clean water for all people.

**The Surfrider Foundation is taking a multi-tiered approach to tackle ocean and coastal pollution problems.**



**Left:** High school students with the South Bay Chapter's Teach & Test program process water samples in Redondo Beach, CA. **Top Right:** A sewage sign warns of polluted water in Imperial Beach, CA. **Bottom Right:** Surfrider visits Washington, D.C. to advocate for pollution solutions.

# Campaigns for Clean Water

In coastal states and territories across the country, Surfrider chapters are increasingly leveling up their local campaigns to address inconsistencies and fill gaps in their state's beach water quality monitoring programs. In Hawai'i, 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. Unfortunately, many of these sites are not tested by the beach program run by the State Department of Health (DOH). 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 in addition to improving their public notification system, which are signs posted on the beach.

While the bill we supported in 2024 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. We also received permission from the state and the County Ocean Safety

Bureau to provide Brown Water Advisory signs for 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, and has had some success in posting permanent signage to warn beachgoers of polluted conditions at sites where their BWTF data nearly always exceeds health standards.

In Florida, our chapter network nearly got a new state bill, the Safe Waterways Act, across the finish line in 2024. This bill, approved unanimously by the state legislature, proposed improvements to how the public is warned of sewage spills and polluted water at the beach so they can avoid unnecessary risk of illness. It would have also given the Florida State Department of Health the authority to close beaches during pollution events to protect public health and required the uniform posting of swim advisories and high bacteria levels. Unfortunately, Governor DeSantis vetoed the Safe Waterways Act, but we will continue to work with bill sponsors in the legislature who share our concern about people getting sick from unknowingly being exposed to polluted water.



**Left:** Brown, stormwater runoff flows into the ocean in Hawai'i after a rain event. **Right:** A lifeguard on Maui holds a new Brown Water Advisory sign.

At the federal level, Surfrider has long advocated for sufficient funding and proper implementation of the Beaches Environmental Assessment and Coastal Health (BEACH) Act grants program administered by the Environmental Protection Agency (EPA). These grants help fund beach water quality monitoring and public notification in coastal states. Chronic underfunding of this program, however, has left testing gaps and public health unprotected, especially during off-season months when lifeguards are not on duty, but ocean recreation, especially for surfers, remains popular. Surfrider advocated to raise this program's funding level to \$15 million in 2024, but in a political climate that saw the budgets of many environmental programs slashed, we were happy that Congress approved level funding of just under \$10 million for the BEACH Act.

In 2024, the expertise and experience of Surfrider's Blue Water Task Force program were shared to inform new legislation, the BEACH Act of 2024. This bipartisan bill, which was also resubmitted in 2025, proposes to extend funding authorization for the EPA's BEACH Act grants for another five years. It also proposes flexibility and improvements for state implementation, including allowing grant dollars to be spent identifying sources of pollution and testing streams that flow across the beach (where BWTF programs often find high bacteria levels and many

kids unknowingly play in the water). The BEACH Act of 2025 also directs the EPA to encourage the development and use of new rapid testing methods so people have more timely information available to decide where it is safe to get into the water. Surfrider activists across the country will continue to advocate for both increased funding and reauthorization of the BEACH Act to protect clean water and public health at the beach.

In Southern California, we are working across jurisdictions and even borders to advocate for wastewater infrastructure solutions to reduce contamination in the international watershed of the Tijuana River. Surfrider San Diego has been raising the alarm on the egregious public health and environmental justice crisis that has been affecting communities on both sides of the U.S./Mexico border for decades. In 2024, significant progress was made towards funding the needed solutions thanks to the efforts of a growing groundswell of community voices and local officials who are demanding action and refusing to be ignored. Together with our community partners, Surfrider won several campaign victories at the federal and state levels, securing \$491 million to fund water infrastructure improvement projects to reduce the flow of transboundary pollution through the Tijuana Watershed and into the Pacific Ocean. Sewage treatment plants on both sides of the border also broke ground on repairs and expansion projects in 2024.



Surfrider Foundation activists from across the country visit Washington, D. C. to advocate for policies to support clean water and healthy beaches.

In 2024, our understanding of the health impacts of this pollution also increased as university-led studies measured dangerous levels of hydrogen sulfide in residential neighborhoods, released into the air above fast-moving streams within the Tijuana River Valley. This means that local residents can't remain safe by simply avoiding contact with toxic water. People standing in their own front yards, or even inside their home, school, or workplace, could be at risk of getting sick from the dangerous air quality caused by the flow of polluted water through their neighborhood.

This knowledge makes the long-term goals of the Clean Border Water Now program – to stop the flow of polluted water through the San Diego/Tijuana border region – even more urgent, so we can restore clean water and safe, healthy communities and beaches for all to enjoy. Join us in our efforts by [signing our petition](#) asking the Trump administration to declare a national emergency and provide immediate funding, interagency coordination, and public health resources for the impacted communities. Check out the video below to learn more about this public health crisis from the people living through it.



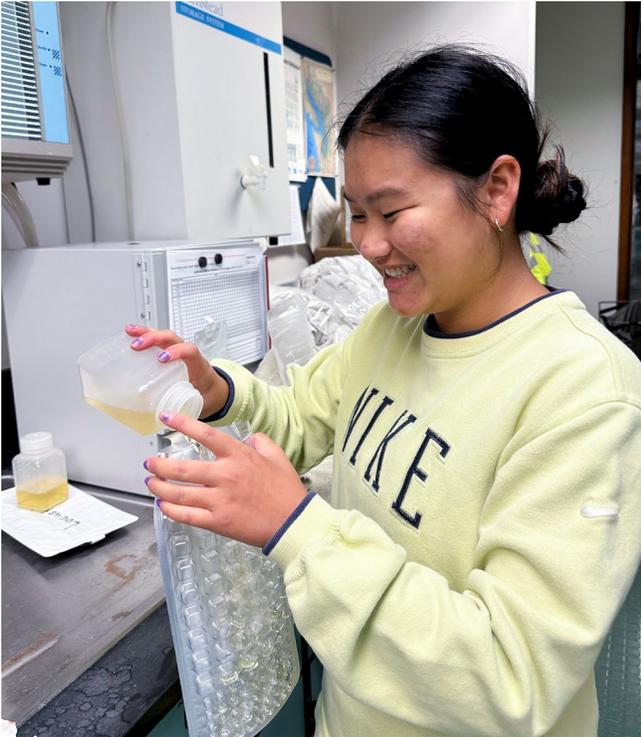
# The Biggest Health Crisis You've Never Heard Of



**Left:** Students and community members Unite to Heal our Coast in Imperial Beach, CA, © Nanzi Muro. **Right:** Clean Border Water Now Manager, Sarah Davidson, discusses funding needs for border water infrastructure solutions with EPA staff, © Adriana Gallegos, Transboundary Pollution Coalition.

# Clean Water Programs

This 2024 Clean Water Report tracks the progress of the Surfrider Foundation's Blue Water Task Force and Ocean Friendly Gardens programs. It also shares case studies demonstrating how Surfrider chapters apply these programs locally to protect public health, identify water quality concerns, and bring their communities together to implement lasting solutions.



The Blue Water Task Force is Surfrider's volunteer water quality monitoring program that provides critical information to protect public health at the beach. Surfrider chapters use this program to raise awareness of local pollution problems and bring communities together to implement solutions. [bwtf.surfrider.org](http://bwtf.surfrider.org)



Ocean Friendly Gardens is Surfrider's sustainable landscaping and education program that provides beautiful, nature-based solutions to reduce polluted runoff and support resilient coasts. [ofg.surfrider.org](http://ofg.surfrider.org)

# Blue Water Task Force



# Program Overview

Since the inception of the Blue Water Task Force (BWTF) program 30 years ago, Surfrider volunteers have been testing water quality at their local beaches and coastal waterways. Now, as the largest volunteer-run beach water testing program in the U.S., with a national network of 60 chapter-led labs, the BWTF measures bacteria levels at more than 600 sites across the country, including ocean, bay, estuary, and freshwater locations. Most chapter water testing programs are designed to fill in the gaps and extend the coverage of state and local agency beach monitoring programs.

Surfrider volunteers are not only testing beaches that are not covered by agencies, but they are also monitoring potential sources of pollution, such as stormwater outlets, rivers, and creeks that discharge onto our beaches. The BWTF is in operation all year round, providing public health protection through the off-season when lifeguards

leave our beaches and health officials stop collecting water samples.

In addition to protecting you and your family's health at the beach, the BWTF is also cultivating the next generation of coastal defenders. Students help collect and process water samples for more than half of our BWTF labs nationwide, gaining valuable experience in both fieldwork and the laboratory along the way. Many of these students go on to pursue careers in conservation and environmental science.

All Blue Water Task Force test results are compared to state water quality standards set to protect public health in recreational waters and are posted on Surfrider's website. Chapters also share their water quality data through social media, email, and community presentations to provide beachgoers with up-to-date information on where it's safe to surf, swim, and play in the water.

**As the largest volunteer-run beach water testing program in the U.S., with a national network of 60 chapter-led labs, the BWTF measures bacteria levels at more than 600 sites across the country, including ocean, bay, estuary, and freshwater locations.**

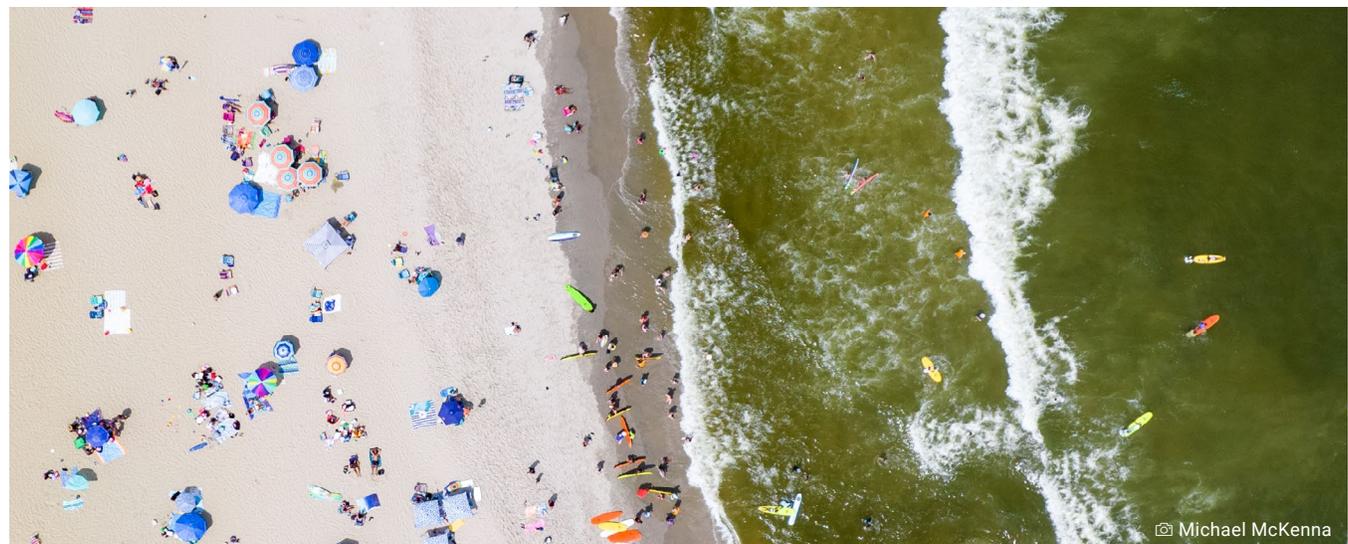


When our BWTF results show long-term or seasonal trends of elevated bacteria levels, our chapters use their data to build community awareness and motivate local decision-makers to take action to find and fix the sources of pollution. Several Surfrider chapters have even launched pollution source studies of their own to provide decision-makers with more information, so pollution sources can be identified in their coastal watersheds. While it can take many years from the first discovery of new pollution concerns until enough political will is generated to drive solutions, the Surfrider Foundation is in it for the long haul.

Across the country, Surfrider's BWTF volunteers are committed to measuring water quality conditions at the beaches they love and rallying their communities around

protecting clean water for future generations to enjoy. Read more about how the Surfrider chapters in Newport, Oregon, San Luis Obispo County, California, Puerto Rico, and the Texas Coastal Bend use their Blue Water Task Force programs to protect safe ocean recreation and solve local pollution problems in the case studies featured at the end of this report.

To best protect your own and your family's health, always check local water quality conditions before you head to the beach — the same way you'd check the weather forecast. All of Surfrider's water test results are available on the [BWTF website](#), or you can access your local agency beach advisories at [Beachapedia.org](#). You can learn more about why water quality matters and how it impacts your beach experience in [Surfrider's coastal blog](#).

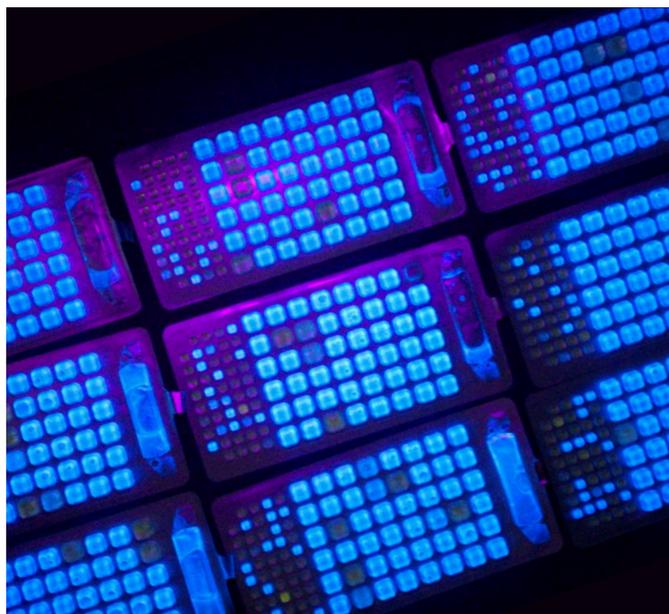


# Program Activity and Results

During 2024, 60 BWTF labs processed 10,120 water samples collected from 604 distinct sampling sites. Once again, Surfrider Foundation chapters broke all previous testing records with more labs, more sampling sites, and more water quality tests performed than ever before. In 2024, a new lab was established in Isabela, Puerto Rico, and

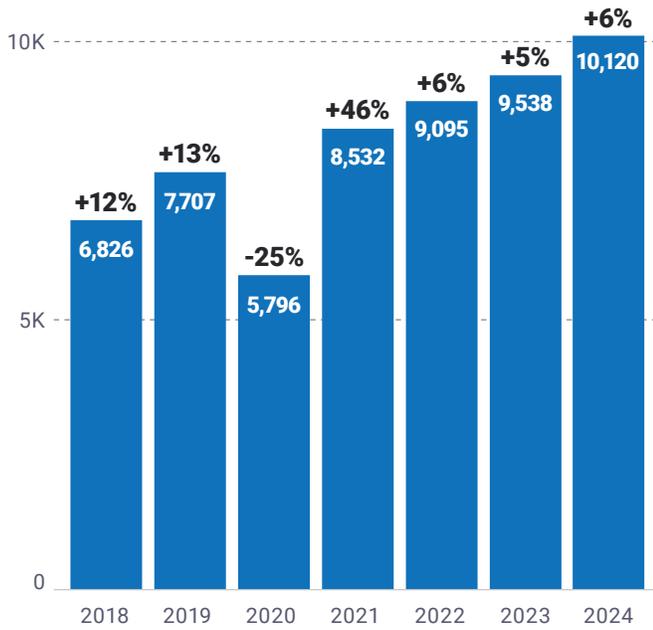
the O'ahu Chapter launched a new lab at Wai'anae High School, located next to Pōka'i Bay along a rural stretch of coastline on the west side of the island. The Coos Bay Chapter in Oregon and the Sonoma Coast Chapter in California also relaunched their programs. You can learn more about these new programs on [Surfrider's coastal blog](#).

**During 2024, 60 BWTF labs processed 10,120 water samples collected from 604 distinct sampling sites.**

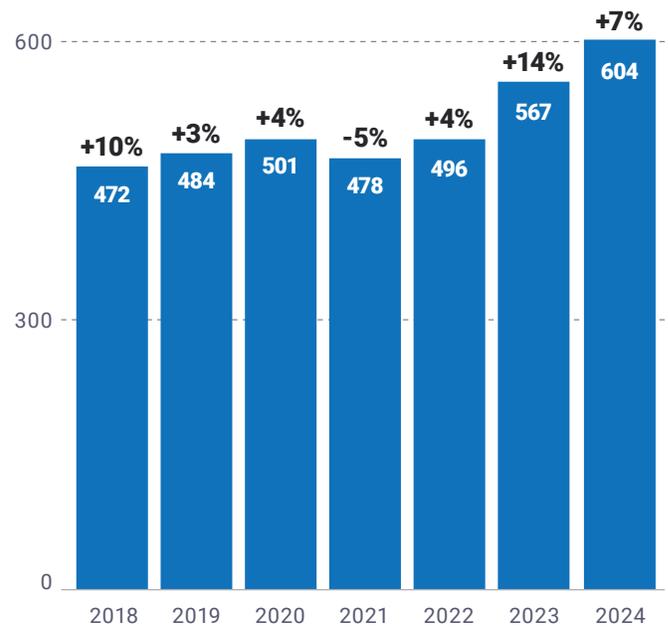


# Annual Growth in Water Testing

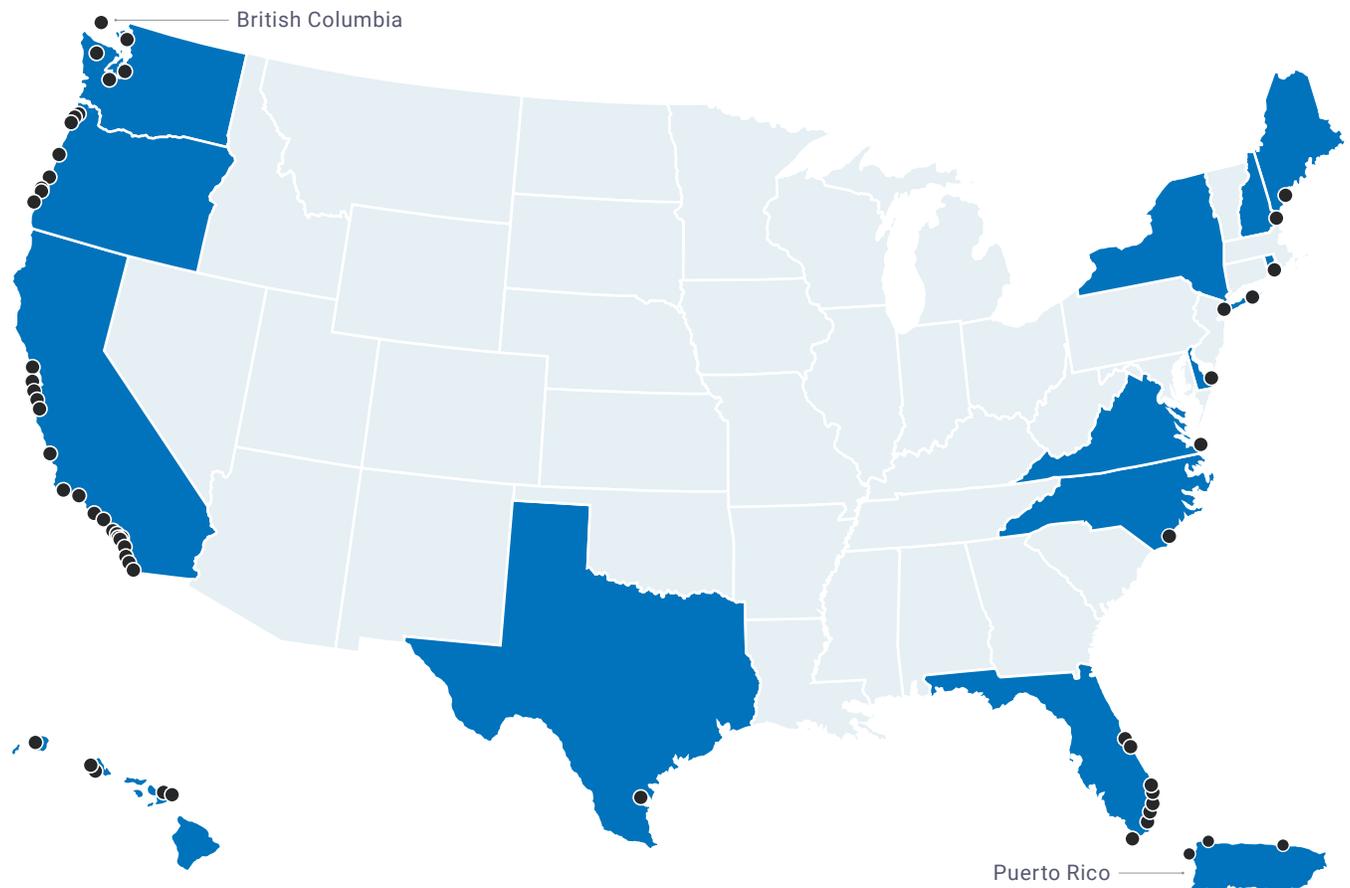
Number of Tests Per Year



Number of BWTF Sites Per Year



## Water Testing Lab Locations



# Water Tests Performed in 2024

**10,120**  
Total Tests

## Northeast

Maine 32  
New Hampshire 96  
Rhode Island 147

## Mid-Atlantic

E.Long Island: East Hampton 960  
E.Long Island: Southampton 1084  
New York City 65  
Delaware 41

## Southeast

Virginia 39  
Cape Fear, NC 116

## Florida

Space Coast 314  
Palm Beach County 135  
Broward County 60  
Miami 1070

## Texas

Texas Coastal Bend 135

## Puerto Rico

Rincón & Isabela 1205  
Isla Verde 255

## Hawai'i

Kaua'i 190  
Maui 381  
O'ahu 515

## British Columbia

Vancouver Island 277

## Washington

Northwest Straits 41  
South Sound 94  
Olympia 46

## Oregon

North Coast 62  
Three Capes 75  
Newport 255  
Port Orford 65  
Charleston 41

## California

Marin County 69  
San Mateo County 327  
Santa Cruz 133  
San Luis Obispo 306  
Isla Vista 59  
Ventura County 255  
Los Angeles 164  
South Bay 324  
Huntington Beach 42  
Newport Harbor HS 113  
South Orange County 35  
Sonoma Coast 28  
San Diego 219

## Costa Rica

Nosara: Playa Guiones 201

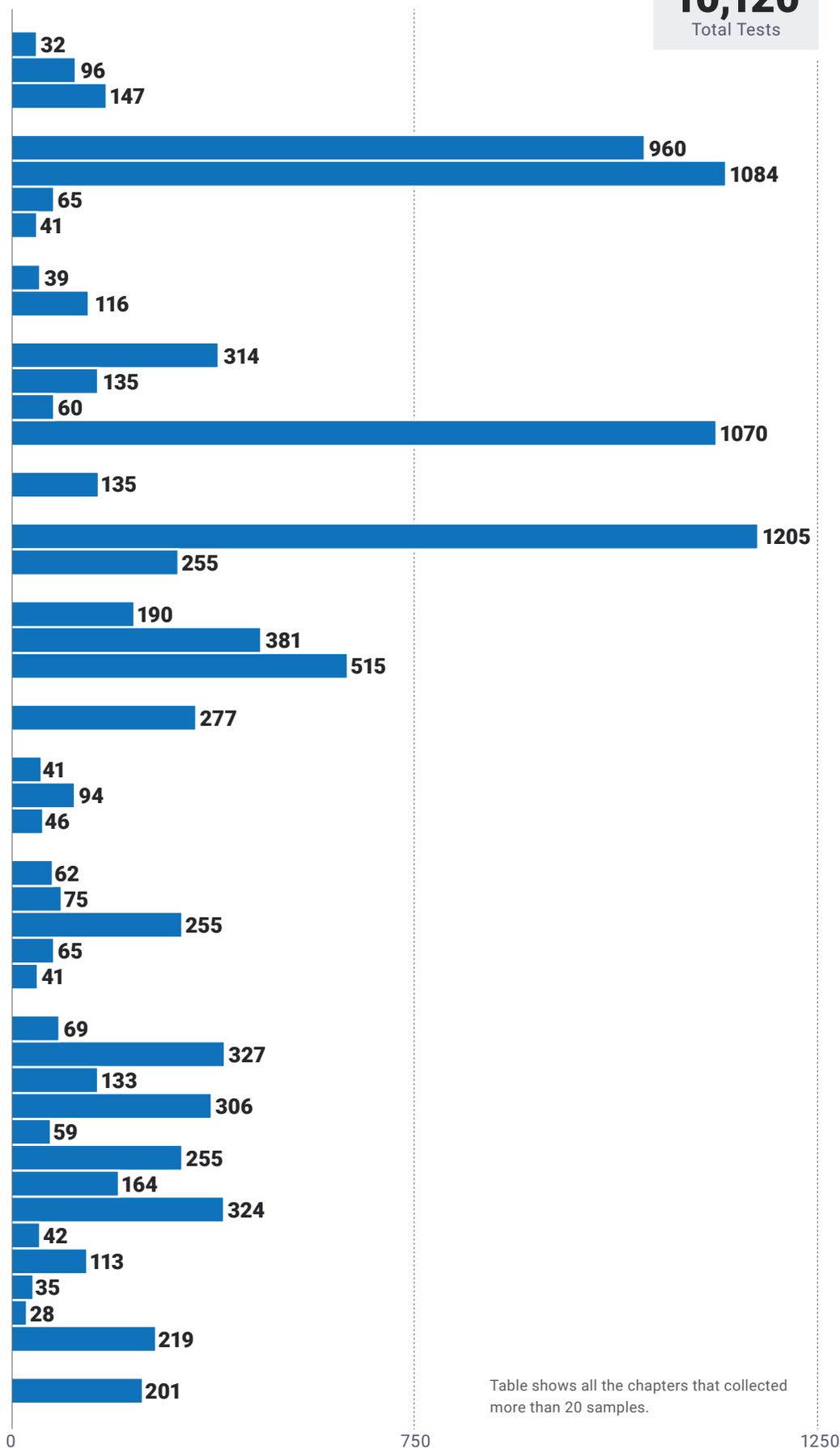
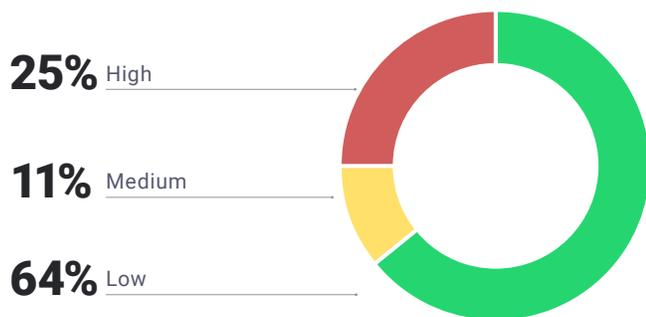


Table shows all the chapters that collected more than 20 samples.

# Bacteria Levels Measured in 2024



## 80% of the beaches tested yielded at least one high bacteria result that exceeded state health standards in 2024.

The collective results from all the participating Blue Water Task Force labs have remained relatively constant over the years. Of the 10,120 water test results reported in 2024, 64% indicated low bacteria levels, 11% indicated medium bacteria levels, and 25% measured high bacteria levels that exceed state standards that protect public health in recreational waters. The percentage of water samples that yielded high bacteria rates was up slightly from the year before (22% in 2023), but probably more important to a beachgoer is the fact that 80% of the beaches tested (483 of the 604 sampling sites) yielded at least one high bacteria result that exceeded state health standards. This highlights the importance of regular water quality

monitoring at the beach to protect public health and promote safe recreation. You can find the Beach Action Value, or water quality criteria, used at your local beach to trigger swim advisories or beach closures in Surfrider’s Beachapedia article, [Beach Water Quality Monitoring Programs in Coastal States](#).

The majority of the water samples that failed to meet health standards were collected from freshwater sources, such as rivers, creeks, and estuaries, that are influenced by stormwater runoff, or at beaches near these outlets. These results are consistent with national trends, which show that stormwater runoff is the number one cause of beach closures and swimming advisories in the U.S. Stormwater can wash chemicals and other pollutants from streets and lawns into local waterways and down to the beach. In addition, stormwater and flooding after rain events can cause wastewater infrastructure, such as cesspools, septic systems, and sewers, to become overwhelmed and fail – releasing untreated sewage into our local waterways and ocean. Across the country, Surfrider’s BWTF programs are measuring high bacteria levels at a concerning number of beaches and recreational waterways where stormwater runoff and failing sewage infrastructure are polluting the water. In many instances, no one else is monitoring these sites, or agency sampling seasons are restricted to only a few months during the summer. This further underscores the importance of community-generated information, like Surfrider’s BWTF data, to help ensure safe recreation and ultimately help to restore clean water in coastal communities.



A water sample is collected from the Thea Foss Floating Dock in Tacoma, WA.

# Surfrider's 2024 Beach Bacteria Hot Spots

The following table highlights ten priority beaches across the country where Surfrider's Blue Water Task Force consistently measures high bacteria levels. The table shows the percentage of samples collected at each beach that resulted in bacteria counts exceeding the state health standard for recreational waters. This translates to a percentage of high bacteria measured at each site as an indication of safety for recreational use.

These popular recreational beaches pose real health risks to swimmers, surfers, and families. Each location regularly shows dangerous levels of fecal-indicator bacteria tied to human illnesses, including gastrointestinal issues, flu-like symptoms, and serious skin conditions like MRSA and staph infections. The Surfrider chapters testing these sites are working urgently in their communities to alert the public about these health hazards and advocating for solutions to stormwater runoff, failing sewage infrastructure, and other contributing sources responsible for these polluted conditions.

Beach/Location	High Bacteria Rate
<b>Windmill Beach</b> <u>Sag Harbor, New York</u>	<b>43%</b>
<b>Ballard Park</b> <u>Melbourne, Florida</u>	<b>52%</b>
<b>Park View Kayak Launch</b> <u>Miami Beach, Florida</u>	<b>90%</b>
<b>Playa Crashboat</b> <u>Aguadilla, Puerto Rico</u>	<b>23%</b>
<b>South Sound Thea Foss Floating Dock</b> <u>Tacoma, Washington</u>	<b>64%</b>
<b>Linda Mar Beach</b> <u>Pacifica, California</u>	<b>71%</b>
<b>San Luis Creek Mouth</b> <u>Avila Beach, California</u>	<b>38%</b>
<b>Imperial Beach</b> <u>San Diego, California</u>	<b>82%</b>
<b>Kahalu'u</b> <u>Kahalu'u, O'ahu, Hawai'i</u>	<b>92%</b>
<b>Waikomo Stream at Koloa Landing</b> <u>Poipu, Kaua'i, Hawai'i</u>	<b>90%</b>

\*High Bacteria Rate = Percentage of samples collected that fail to meet the state health standard for recreational waters



Playa Crashboat in Aguadilla, Puerto Rico.

From a small harbor on Long Island, New York, to urban beaches on the shores of the Puget Sound in Washington, and the Indian River Lagoon in Florida, Surfrider's BWTF is filling in gaps to provide critical health information to keep beachgoers and park users safe. Ballard Park in Melbourne, Florida, and Playa Crashboat in Aguadilla, Puerto Rico, are both popular spots for families to enjoy a fun day near or in the water, but they are also affected by stormwater runoff and old, failing sewage infrastructure.

At Ballard Park, the Space Coast Chapter installed two buffer gardens in 2024 to soak up and filter polluted runoff before it can reach the Indian River Lagoon (IRL). They also posted informational signs with QR codes directing park visitors to their water quality test results so they can make informed decisions about whether it's safe to get into the water. For decades, water quality in the IRL has been declining due to stormwater runoff and failing wastewater infrastructure, including sewage spills and septic systems in the watershed. The resulting nutrient pollution with high levels of nitrogen and phosphorus, has disrupted the ecological balance within the IRL, causing harmful algae blooms, fish kills, and declining seagrass beds. This legacy of pollution has worked its way up the food chain and has caused thousands of manatees to die in recent years as they

are literally starving because there is not enough seagrass available for them to eat while they spend the cooler, winter months in this estuary. Despite investing \$200 million in a new IRL Protection Program, a recent court decision has ruled that the State of Florida needs to do more to improve sewage treatment and reduce inputs of nutrient pollution in the Lagoon to protect manatees, listed as threatened under the Endangered Species Act. At the state legislature, Surfrider is advocating for another \$100 million of funding in this year's budget for water quality improvement projects and will continue to advocate for federal funding through the Clean Water Revolving Fund to support wastewater improvement projects across the country.

In Miami, Florida, the chapter has been sharing its data for the Park View Kayak Launch with the city and researchers at the University of Miami to contribute to efforts to pinpoint locations of failures in sewer lines and pumping stations. The Park View Island canal has been under a no-contact water advisory since March 2020. Despite this, people can still be found swimming and kayaking in the canal. Last year, [CBS News Miami](#) covered the chapter's BWTF program, helping to build community awareness of the pollution problems at this popular recreational site.



**Left:** A BWTF volunteer collects a water sample in S. Florida. **Top Right:** The Ballard Park Ocean Friendly Garden on the shore of the Eau Gallie River and Indian River Lagoon in Melbourne, FL. **Bottom Right:** Nutrient pollution is causing seagrass beds to decline, threatening Florida's manatee population.

In Pacifica, California, the San Mateo County Chapter has joined a coalition of environmental and surfing groups to raise public awareness and investigate the sources of pollution in San Pedro Creek, which flows to the Pacific Ocean at Linda Mar Beach. Just down the coast, the San Luis Obispo Chapter began conducting eDNA testing in SLO Creek and Avila Beach in August 2024 to provide more information on potential pollution sources. Learn more about the chapter's efforts in the case study at the end of this report.

Close to the U.S./Mexico border, Imperial Beach remains affected by transboundary flows of stormwater, sewage,

and industrial pollution through the Tijuana River Valley. In fact, the Tijuana River also had the dubious distinction of making America's Most Endangered Rivers top-ten list in 2024 and 2025. Surfrider and our coalition partners made great strides in 2024 by securing \$491 million for needed infrastructure improvements. Sewage treatment plants on both sides of the border also broke ground on capital improvement projects. Despite this progress, affected communities continued to suffer. They faced not only water pollution but also dangerous levels of hydrogen sulfide released into the air from heavily polluted, fast-moving streams within the watershed.



**Top:** The Tijuana River Watershed straddles the border between Mexico and the U.S.,  This is CA. **Bottom Left:** A BWTF volunteer in San Diego processes a water sample in the lab. **Bottom Right:** Signs demanding action at the Unite to Heal Our Coast event in Imperial Beach, CA,  Nanzi Muro.

Both beaches that made Surfrider’s 2024 Beach Bacteria Hot Spots list in Hawai’i failed to meet recreational water quality standards at least 90% of the time they were sampled in 2024. On O’ahu, the chapter’s sampling site at Kahalu’u is used as an access point to go snorkeling, boating, and fishing in Kāne’ohe Bay. The watershed has a high concentration of cesspools that contribute to pollution, and Kahalu’u is on the receiving end of a stream that brings stormwater runoff down to the beach.

On the island of Kaua’i, the chapter tests water quality at surf breaks and stream mouths to complement the state’s program, which only monitors popular, lifeguarded beaches. Many of these stream mouths exceed safe water quality criteria nearly every time they are tested, yet families with small children often play in the shallow, calm waters of the streams where they flow across the beach, unaware of the pollution risks. For over a decade, the chapter has been trying to get permission to post signs at the most contaminated sampling sites to warn people of the potential health risk. Like the other Hawaiian Islands, many areas of Kaua’i still rely on cesspools that ultimately leach sewage into coastal watersheds. In fact, the chapter even conducted a study testing 24 streams across the island for the presence of sucralose, an artificial sweetener used to indicate the presence of human sewage in waterways. Their findings point to cesspools and

other potential sources of human sewage that need to be addressed to protect safe recreation downstream.

The chapter has successfully posted warning signs at four of its most frequently polluted sampling sites, all of which have high bacteria rates of 90% or higher. In 2024, a sign even went up on the Nāwiliwili Stream at Kalapakī Bay. This was a huge victory for the chapter, as both the state and county had been resistant to posting here, despite Nāwiliwili Stream failing to meet health standards every time it has been tested since 2016! In 2025, the Waikomo Stream at Koloa Landing has been added to the Beach Bacteria Hot Spots list due to a high bacteria rate of 90%. Koloa Landing is a very popular area for snorkeling and diving, yet the chapter found markers of sewage in Waikomo Stream every time they sampled it during their sucralose study. The chapter would like to see a warning sign posted here as well to help build public awareness of the pollution problems and related health risks.

The ultimate goal is to find and fix the sources of pollution and to restore clean water – because no one should get sick from spending time at the beach. This is what is driving Surfrider’s efforts to protect water quality across the nation. We want to ensure that our beaches and ocean are clean and safe for all people to enjoy, for generations to come.



**Left:** Surfrider Foundation Kaua’i Chapter Chair, Rob Brower, hangs a sign to warn families of polluted water. **Right:** Children playing in Nāwiliwili Stream on the island of Kaua’i in Hawai’i.

# Maui Post-Fires Coastal Water Quality Monitoring Program

In the months following the 2023 Lāhainā Fires on Maui, there were many questions about the safety of water at the beach near the burn zone and along the entire west side of the island. There were federal and state agency-led programs to monitor the air, soil, and ash for fire-related contaminants. Academic researchers were also monitoring water quality to determine the potential impacts of the fires on the coral reef ecosystems in the near-shore waters.

Despite these efforts, no one was answering the question that the Maui Chapter was receiving over and over again from the local community – “Is it safe to swim yet?” More than that, the west side of Maui is popular for activities like paddling, surfing, fishing, diving, and snorkeling. Yet, five months after the Lāhainā Fires burned in August 2023, there was no water quality data available to let people know if it was safe to return to the water. To meet this need, Surfrider developed the [Maui Post-Fires Coastal Water Quality Monitoring Program](#).

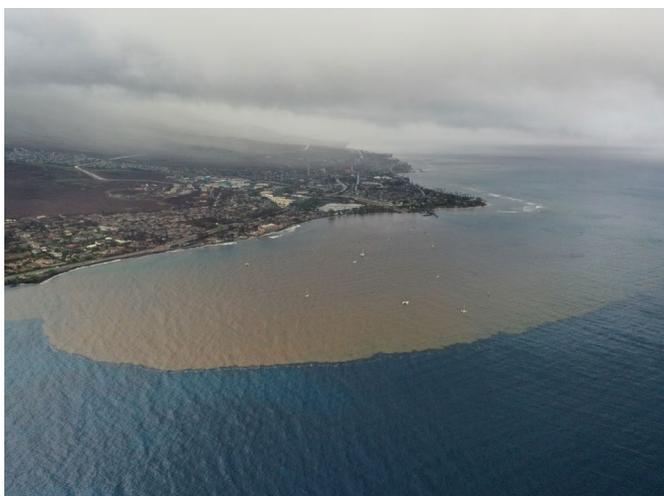
On January 10, 2024, water samples were collected in brown water conditions from eight sites on the west side of Maui, just after the first heavy rain hit this coast following the Lāhainā Fires. Samples were analyzed for enterococcus, fecal indicator bacteria, and fire-related contaminants, including heavy metals and PAHs (Polycyclic

Aromatic Hydrocarbons). We did not find evidence during our initial sampling run of fire-related contamination that poses a risk to human health from ocean recreation.

Surfrider sampled the same sites again in June during dry weather, along with a control site further down the coast. Once again, we did not have any test results that exceeded safe benchmarks for recreation.

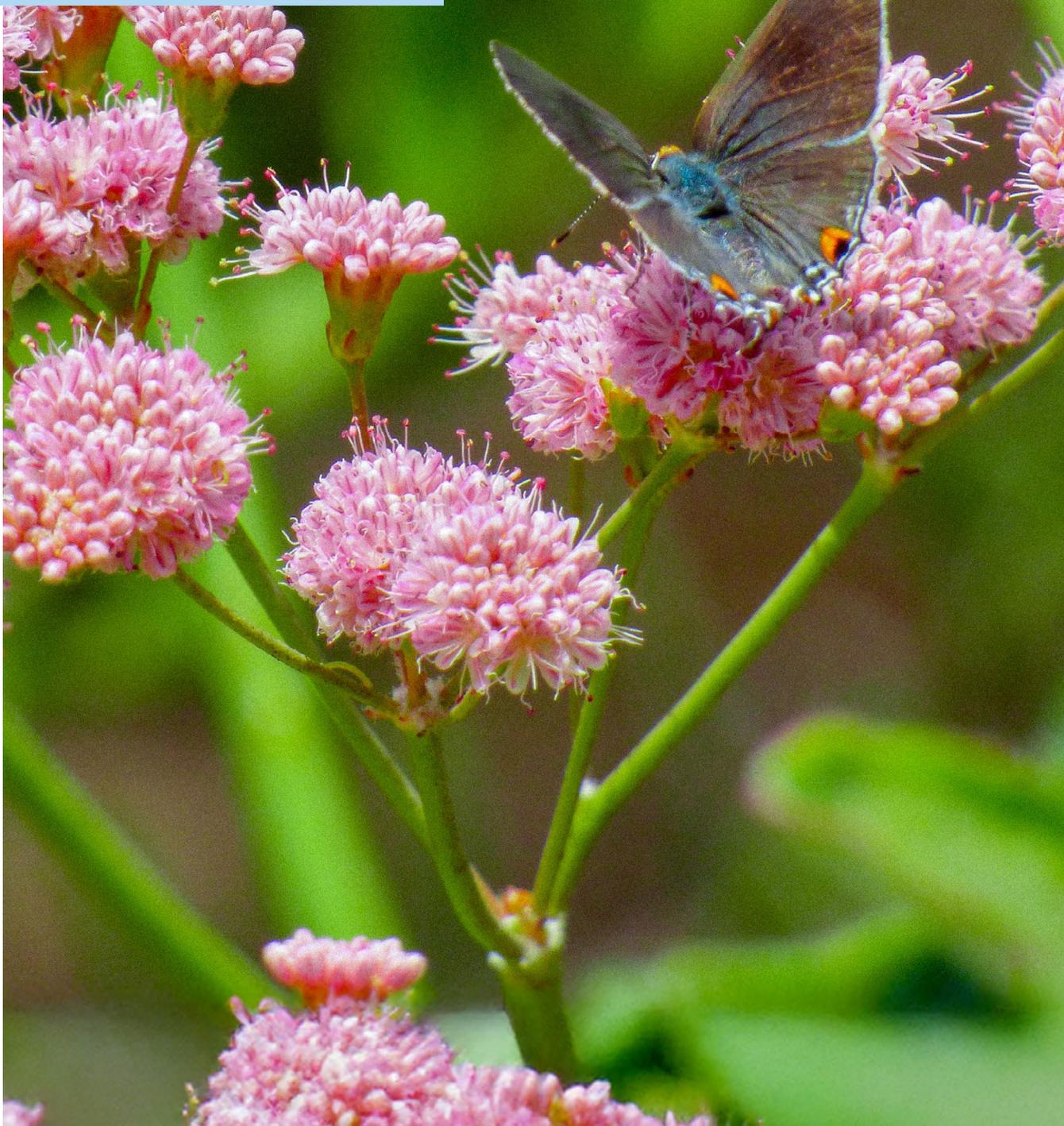
While finding appropriate human health/recreational guidelines for fire-related contaminants was challenging, nearly all of our test results were also well below the aquatic life criteria, which are typically much lower than recreational standards. The one exception was the concentrations of copper that exceeded aquatic life criteria in Lāhainā Harbor, which was most likely a pre-existing problem, as copper-based products are heavily used to clean boat hulls.

As a result of these two sampling events, the Maui Chapter was very pleased to be able to share valuable water quality information on the island, allowing people to safely return to the water and recreate. You can learn more about the Maui Post-Fires Coastal Water Quality Monitoring Program and view our results and testing protocols on the Surfrider Foundation Maui [website](#).



**Left:** Runoff from the Lāhainā burn zone washes ash and sediment into the ocean on West Maui, following the first significant rain event post-fires in January 2024, © Mark Deakos. **Right:** Maui Fire Response Coordinator, Hanna Lilley, collects water to analyze for heavy metals and other fire-related contaminants.

# Ocean Friendly Gardens



# Program Overview

Surfrider's Ocean Friendly Gardens (OFG) program offers simple and beautiful nature-based solutions to protect clean water and support resilient coasts and communities. Surfrider chapters use this program to safeguard clean water, create beautiful green spaces in their community, and connect people with impactful climate actions they can take at home and beyond.

The OFG program connects our actions in the watershed to water quality at the coast. Whether you live inland or at the beach, your yard is a mini-watershed that can protect clean water and prevent pollution. We all live upstream from the ocean!

Ocean Friendly Gardens incorporate native plants and natural water catchments, like rain gardens and bioswales, to protect clean water and provide wildlife habitat. Through this program, we are building community capacity to implement and drive broad, long-lasting solutions to urban runoff. By returning nature to our urban spaces, OFGs are also restoring biodiversity and increasing climate resiliency in coastal watersheds.

## Ocean Friendly Garden Benefits

### Protect Clean Water:

Ocean Friendly Gardens soak up and naturally filter rainwater that lands on your property, reducing your water bill while protecting clean water at the coast.

### Restore Habitat & Biodiversity:

Native plants create habitat for pollinators and wildlife, supporting critically needed biodiversity within our urban and suburban areas.

### Support Climate Resilience:

Ocean Friendly Gardens sequester carbon in healthy soils, reduce emissions from gas-powered maintenance tools, and offset urban heat island effects.



Deeply rooted native plants in the Ballard Park Ocean Friendly Garden will naturally filter runoff before it reaches the Indian River Lagoon,  Zaperzon.

# Program Activity

Surfrider chapters are educating their communities about the water quality problems created by stormwater runoff and conventional landscaping practices. They are also promoting sustainable gardening and lawn care practices that provide easy and inexpensive ways for everyone to take action to support clean water and climate resiliency at home and in their neighborhood.

Each chapter implements its Ocean Friendly Gardens program in response to local needs and priorities, leveraging available opportunities and collaborating with diverse community partners. To learn more about these program pathways, see the [OFG Chapter Guide](#).

**Making Yards More Ocean-Friendly:** Chapters are helping people apply OFG principles to soak up rain and reduce polluted runoff in their own yards at home. These positive changes can be made incrementally or all at once with the help of volunteers. Yards and gardens that fully meet the [OFG criteria](#) can display signs as program ambassadors and are registered on the [OFG map](#) to track program impacts and provide local inspiration.

**Community Gardens & Partnerships:** Chapters collaborate with a range of diverse local partners to create public gardens and steward existing green infrastructure projects, providing community benefits where they are most needed. Equitable access to clean water, vibrant green spaces, and culturally and ecologically significant native plants are shared priorities for OFG collaborations.

**Public Awareness & Education:** Chapters host educational workshops on topics like rainwater retention, healthy soils, and native plants. They also promote OFG principles by tabling at community events like beach cleanups, farmers markets, and street fairs.

**Campaigns & Policy:** Chapters advocate for local ordinances and policies to amplify the benefits of Ocean Friendly Garden practices. Examples include bans and restrictions on fertilizers, pesticides, and artificial plastic turf. Positive, solution-oriented policies include improving municipal stormwater management codes and requiring native plants in public landscaping.



**Left:** The Los Angeles Chapter helps install a bioswale at the historic Kuruvungna Springs indigenous cultural center. **Right:** The San Francisco Chapter co-hosts an educational OFG workshop with a local community garden.

There was growing momentum for the Ocean Friendly Gardens program across Surfrider’s chapter network in 2024, with several exciting new projects and community partnerships established. These chapter activities not only provide ecological benefits, but also serve as hands-on training opportunities for volunteers to learn how to incorporate OFG principles in their own yards and neighborhoods.

### Florida

The Space Coast Chapter’s OFG program focuses on restoring native habitats and reducing the flow of polluted runoff into the Indian River Lagoon. In 2024, they installed two buffer gardens at Ballard Park, located at the mouth of the Eau Gallie River where it discharges into the Indian River Lagoon. The chapter’s [Blue Water Task Force sampling site](#) at Ballard Park frequently shows high levels of bacteria, landing it on the national list of Beach Bacteria Hot Spots every year since 2021. The buffer gardens were designed to absorb stormwater runoff

before it can reach the river and lagoon. Further east in Indialantic, the chapter transformed several drainage swales full of turf grass into beautiful bioswales bursting with native plants. These bioswales will slow down and soak up stormwater runoff as it flows across the barrier island towards the Indian River Lagoon.

Just down the coast, the Broward County Chapter launched their OFG program by certifying their first garden at the Deerfield Teen Center. The project was designed and installed by local students at The Sea Lab Project, an after-school program for youth that helps engage local BIPOC communities through art and STEM mentorship. In Miami, the chapter joined other environmental organizations in successfully advocating for an impervious surface ordinance that limits hard surfaces in Miami-Dade County. This ordinance aims to reduce runoff, promote sustainable development practices, and enhance the county’s resilience to climate change.



**Left:** Space Coast chapter installs buffer gardens at Ballard Park in Florida,  Zaperzon. **Right:** Volunteers plant native plants in several bioswales along a popular walkway to filter runoff and create wildlife habitat in Indialantic, Florida,  Abby G.

## New York

The community gardens installed by the Eastern Long Island Chapter in East Hampton Village continue to be exemplary models of sustainable landscaping and nature-based solutions in the region. Ongoing stewardship by the chapter and their local partners keeps these OFG bioswales functioning as attractive, efficient examples of green infrastructure, reducing polluted runoff in downstream waters and providing acres of native pollinator habitat in their community. Visit the [ELI Chapter website](#) to learn more about their OFG projects and how they are promoting sustainable landscaping practices in their community.

## Hawai'i

The O'ahu Chapter's core volunteers steward the [Kaka'ako Ocean Friendly Garden](#) on a weekly basis and host frequent public workdays that draw a crowd of eager participants. Installed in 2019, this garden not only absorbs runoff but also provides the local neighborhood access to valuable green space in urban Honolulu. It features culturally significant native Hawaiian plants and educates visitors about traditional food sources and medicines. The chapter is also collaborating with the EcoRotary Club to compost food scraps to create natural soil amendments for their community garden.



**Top:** The Village Green Bioswale in full bloom in East Hampton, NY. **Bottom:** Propagating plants and sharing the harvest from the Kaka'ako Ocean Friendly Garden on O'ahu.

## California

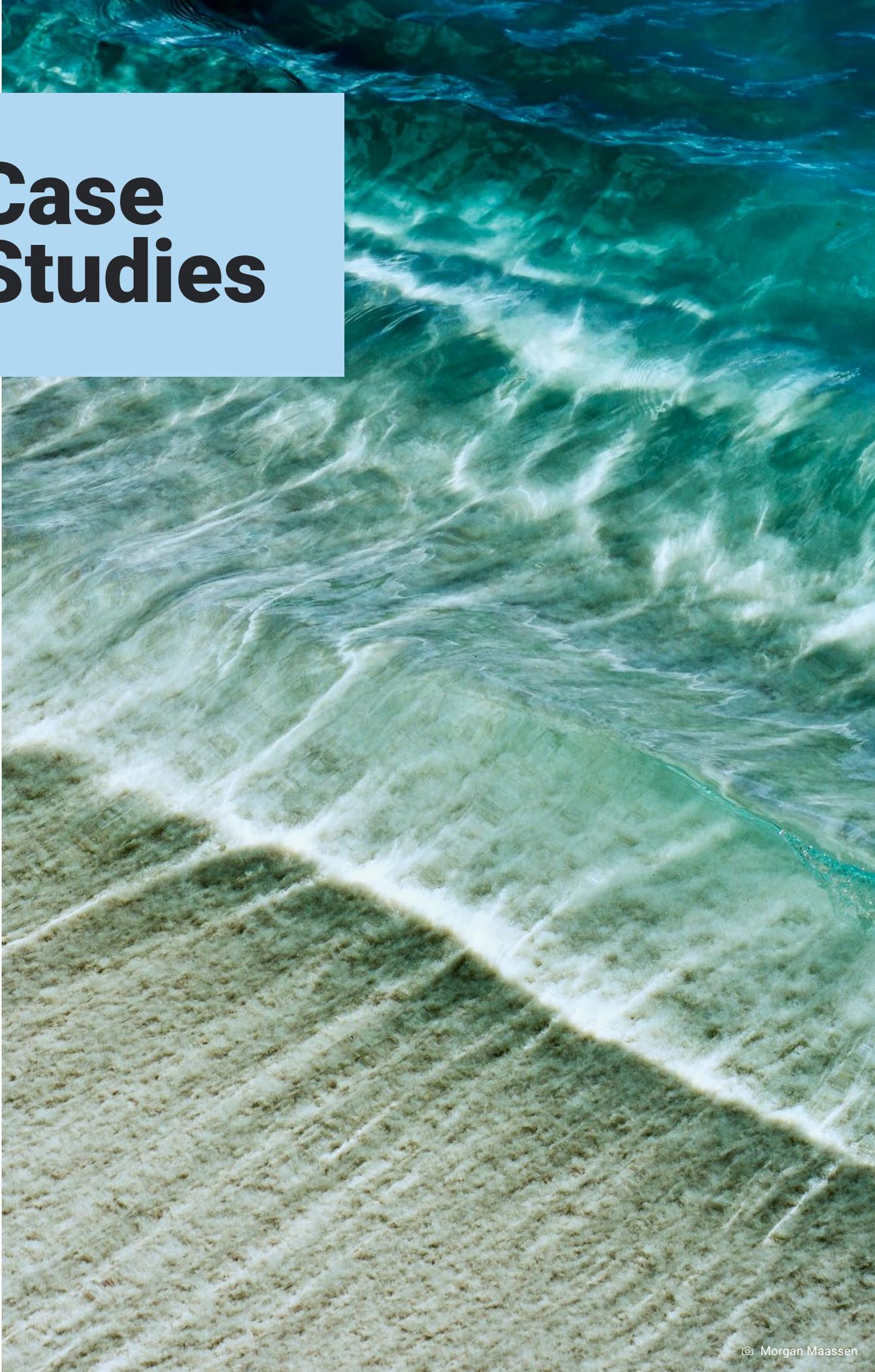
The North Orange County Chapter is building capacity for public OFG projects at local parks in Seal Beach and Huntington Beach by planting native plants, stewarding water retention features, and removing invasive species. In Los Angeles, the chapter's OFG program is continuing to build momentum through community collaborations. It completed a yard overhaul in the Leimert Park neighborhood with LANCSA, a neighborhood council sustainability group, for a lawn-to-Ocean Friendly Garden transformation. The LA Chapter also collaborated with the Tongva-Gabrieleno Springs Foundation, an indigenous-led nonprofit, to create a native plant bioswale at Kuruvungna Village Springs. This bioswale protects the freshwater spring and the downstream Santa Monica Bay from parking lot runoff.

The Long Beach Chapter continued to collaborate with the city of Long Beach to install three more OFGs along the city's waterfront, setting an example for sustainable public landscaping. The chapter also created a new garden at a Title 1 elementary school in collaboration with a parent-run nature club, providing hands-on learning opportunities for both the students and their parents. In San Francisco, volunteers tackled their first OFG activity by partnering with Far Out West Community Garden to host a workshop series, educating community members about stormwater runoff, rainwater retention strategies, and native plants. You can read more about these impactful chapter collaborations in California and across Surfrider's chapter network in our [coastal blog](#).



**Top Left:** Students at Lafayette Elementary School plant a native garden with the Long Beach Chapter in CA. **Bottom Left:** Volunteers shape a backyard bioswale and test the flow with a hose. **Right:** OFG volunteers spread mulch in a waterfront garden in Long Beach, CA, 📷 Dani Dong.

# Case Studies



# Puerto Rico

## Testing the waters to protect safe recreation and resolve sewage failures in Rincón and across Puerto Rico.

The Northwest coast of Puerto Rico is blessed with world-class surf, beautiful beaches, and vibrant coral reefs that offer spectacular snorkeling and diving opportunities. Visitors from around the world flock to the island to enjoy its culture and natural resources. Unfortunately, water and energy infrastructure have not kept pace with rampant and unsustainable coastal development, leading to frequent sewage system failures and contaminated beaches.

The [Rincón Chapter](#) started testing area beaches and freshwater outflows, or quebradas, nearly two decades ago to promote and protect safe recreation while building community awareness of water quality conditions. The [Rincón Blue Water Task Force](#) (BWTF) has educated thousands of people over the years—including Surfrider volunteers, community members, university professors and students, as well as visiting scientists and natural resource managers. Through this work, participants have learned the importance of checking water quality

conditions before entering the ocean and how to identify pollution sources in the watershed.

The Rincón Chapter has trained a core group of community volunteers to recognize sewage malfunctions, blockages, and spills, and to alert the chapter’s BWTF program lead, Steve Tamar. If appropriate, the chapter will further investigate and report these issues to local authorities. This collaborative relationship has led to the resolution of several wastewater infrastructure failures and power supply issues in Rincón. The cooperation between the chapter and sewage authorities has had several positive impacts, particularly at [Playa Lala](#), a heavily frequented beach in the Rincón urban core and a well-known sea turtle nesting site. Previously, Playa Lala was notoriously contaminated and listed as a Priority Polluted Beach in the [2021](#) and [2022](#) Clean Water Reports. However, chapter advocacy for infrastructure backups and resiliency improvements at sewage pumping substations has made the Rincón/Aguada section one of the most resilient sections of the wastewater network in Puerto Rico.



Playa Lala in Rincón, Puerto Rico.

The early reporting community effort, which involves reporting pinhole leaks, hairline cracks in pressurized sewage lines, and seepage from manholes, has enabled the agency to address issues before larger failures occur. As a result, contamination events at Playa Lala have been reduced by nearly 50%, and the beach is no longer on Surfrider's Beach Bacteria Hot Spots list. The chapter plans to use these successes to advocate for significant investments in sewage infrastructure, including substantial upgrades to waste treatment plant capacities and treatment capabilities, before further coastal development stressors arise.

The chapter has also established deep community roots and collaborative relationships through its weekly monitoring program, and the Rincón BWTF is now regarded as the go-to source for beach water quality information. After Hurricane Maria devastated Puerto Rico in 2017, the chapter was able to leverage these community partnerships to resume water testing relatively quickly, while most of the island remained in the dark, and water supply and

wastewater agencies were inoperative for several months, even up to a year in some locations. The chapter was able to provide critical services in the aftermath of Hurricane Maria, testing sources of water that people were turning to for drinking and household needs until their taps started to flow again.

In 2021, the Rincón Chapter helped establish a second BWTF lab to monitor water quality in La Reserva Marina Arrecife de la Isla Verde (the Isla Verde Marine Reserve) located just east of the San Juan capital. Partner organization, [Arrecifes Pro Ciudad](#), runs this lab and tests five sites within the reserve every week.

With support from the municipality of Isabela, a third lab was established in 2024 to cover the coastline from Aguadilla to Isabela. Five new ocean beach sites were added, as well as the [outflow from the sewage treatment plant in Isabela](#). The effluent from this plant discharges into the Atlantic Ocean near the Villa Pesquera and Pocita de la Princesa beaches, both popular with ocean swimmers.



**Top Left:** Rincón Chapter volunteers prepare water testing supplies for BWTF partners at Arrecifes Pro Ciudad. **Bottom Left:** BWTF Coordinator, Sailyñ Cordero, demonstrates basic water chemistry for local students. **Right:** Rincón BWTF volunteer lead, Steve Tamar, collects a water sample at the Reserva Marina Tres Palmas.

The Rincón Chapter has long suspected that this sewage treatment plant might be affecting water quality along the nearby coastline, and the Isabela lab is better situated to respond to pollution events. In fact, the new lab coordinator, Sailyn Cordero, traveled to San Juan with Steve Tamar from the Rincón BWTF to meet with EPA officials to discuss their concerns about the pollution coming from the Isabela treatment plant. During this meeting, they learned that this facility is slated to be closed over the next 2-3 years, and all effluent will be rerouted down the coast to the wastewater treatment plant in Aguada. While this could be considered good news in the short term, Surfrider is concerned that the pollution burden will be shifted onto communities further south. Additional wastewater infrastructure, such as new pumping stations, would need to be built, and it is a risky prospect to send sewage over a long distance in a pressurized pipeline in a coastal zone vulnerable to severe weather, storm surge, and sea level rise. Surfrider advocates are instead looking for opportunities to advocate for increasing the capacity, improving treatment, and fixing existing problems at the Isabela plant, as a better investment to ensure the function and resiliency of the wastewater infrastructure system in Northwest Puerto Rico.

In the meantime, volunteers and staff at all three BWTF labs are busy informing their communities on where it is safe to surf, swim, and play in the water. In 2024, nearly 1,500 water tests were performed in Puerto Rico! One beach that failed to meet safe health standards in 23% of water samples collected in 2024 is Playa Crashboat, which lands this beach on Surfrider's Beach Bacteria Hot Spots list this year. Sources of pollution at Playa Crashboat include stormwater runoff, failing septic and cesspools in the watershed, and the public showers right there at the beach. Surfrider is hoping to address these threats by raising community awareness and advocating for improved wastewater infrastructure to protect this iconic beach.

Looking forward, Surfrider intends to seek new partnerships to extend water quality testing and to establish more community-based reporting networks across Puerto Rico to better protect public health, coastal ecosystems, and the island's valuable coastal resources. If you live in Puerto Rico or plan to visit, check water quality conditions on the [BWTF website](#) before getting into the water.



Left: Processing samples in the new Isabela lab. Right: Rincón and Isabela BWTF volunteers at Playa Lala.

# Newport, Oregon

## Leveraging community partners to protect public health and solve pollution problems with the Blue Water Task Force.

Located on the Central Coast of Oregon, the city of Newport is known for its stunning coastline, thriving marine life, and abundant outdoor recreational opportunities. In fact, Newport offers some of the best whale watching opportunities and surf breaks along Oregon's Coast. Newport is also a hub for fishing, with one of the busiest fishing ports in the state. Anglers can catch everything from salmon to crab, and kayaking enthusiasts enjoy exploring the scenic, rugged coastline. The growing popularity of the area for both tourists and residents, along with the development that comes with it, has started to impact coastal water quality.

The [Newport Chapter](#) launched its Blue Water Task Force (BWTF) program nearly two decades ago to raise community awareness of local water quality conditions and to protect safe recreational activities at the coast.

Over the years, the Newport BWTF has earned a strong reputation as a trusted source of water quality information. This success can be attributed to a dedicated team of volunteers, strong community partnerships, and a solid working relationship with the city of Newport.

The chapter partners with the [Oregon Coast Aquarium](#) to host its BWTF lab. Every other weekend, chapter volunteers collect water samples from 14 different beaches and sampling sites from Seal Rock up to Otter Rock State Park. Aquarium Youth Volunteers and staff process the samples in the lab and post the test results on the [BWTF website](#). The chapter further shares this water quality data with the community through its bi-weekly newsletter and social media channels. In 2024, the Newport BWTF tested over 250 samples to inform the public about local water quality conditions!



A rugged coastline with stunning views characterize the beaches near Newport, Oregon.

While this collaborative relationship is beneficial to the chapter, as they don't have to worry about running their own lab, the high school students who participate as youth volunteers gain valuable hands-on experience in a scientific laboratory and a deep understanding of local water quality issues.

Like agency-run beach monitoring programs in most coastal states, the [seasonal beach program](#) run by the Oregon Department of Environmental Quality and the Oregon Health Authority has a limited budget and is only able to test four beaches within the Newport Chapter's area from May through September. This leaves many popular beaches untested and public health completely unprotected during the cooler, off-season months. During the winter, surfers enjoy larger, more powerful waves hitting the coast, especially from November through February. The Newport BWTF fills these testing gaps by monitoring more beaches year-round than the state can cover. The chapter also tests several stormwater pipe outfalls that bring pollution to the beach. With a large and responsive volunteer team, the Newport BWTF is often the first to detect potential pollution issues before they become widespread problems. When their testing reveals a dangerously high bacteria test result, the chapter alerts

the city and notifies the public through their newsletter and social media posts.

The Newport BWTF is proud of its strong, collaborative relationship with the [city of Newport](#). What began as an investigation into Newport's stormwater system following pollution at Nye Creek nearly 20 years ago has since evolved into a valuable and productive working relationship (read more about this long-established and productive relationship [here](#)). Today, the city uses BWTF water quality data to flag issues in its storm drains and sewer lines. When high bacteria levels are detected, the chapter alerts the city's public works staff, enabling them to quickly investigate the source.

For example, in 2023, the chapter found high bacteria levels at [Schooner Creek](#). When the city investigated, they discovered manholes in a forested area that were part of an abandoned development that had been overlooked due to a mapping error. In the 1990s, a developer started building underground infrastructure for new homes, but after facing strong community pushback, the project was left unfinished. As a result, the manholes were left in the middle of the woods, and trash had built up inside, blocking the stormwater system.



BWTF volunteers use sampling poles to collect water samples at Nye Beach.



After correcting the problem, the city revised its inspection process to check sewer connections outside of typical neighborhoods and streets. The city has expressed its appreciation for the BWTF's work and is eager to continue collaborating to identify potential sources of sewage contamination in the stormwater system and creeks that discharge onto local beaches. The chapter maintains regular contact with the city, ensuring members are always up to date on contamination events and infrastructure repair progress, which fosters trust and transparency within the community.

The Newport BWTF volunteers have also been making waves at the national level. Their passionate advocacy at town hall meetings played a key role in getting [Senator Ron Wyden](#) to sponsor the [BEACH Act](#). The BEACH Act ensures that people have the water quality information they need to protect themselves and the health of their families when

recreating at our beaches and coastal waterways. Thanks to this grassroots work, BWTF volunteers are helping shape policy that will benefit not only Newport but coastal communities nationwide.

Looking ahead, the Newport Chapter is eager to reopen its second lab in [Depoe Bay](#), which will enhance testing efforts in northern Lincoln County. With the support of dedicated volunteers and their local partners at the Oregon Coast Aquarium and the city of Newport, the Newport BWTF is making a real difference in their community, ensuring that local waters remain clean and safe for everyone to enjoy for years to come.

If you have plans to visit the Central Oregon Coast this year, make sure to look up the [Newport Chapter](#) to check on local water quality conditions and get involved in some fun local events.



**Top:** Reading water quality test results in the lab. **Bottom:** Surfers enjoy a large, clean swell in Newport, Oregon.

# San Luis Obispo, California

## Filling in testing gaps and tracking pollution sources on California's Central Coast with the Blue Water Task Force.

San Luis Obispo (SLO) County offers sweeping coastal vistas, beautiful sandy beaches, great surf breaks, and vibrant tidepools and marine life to explore for all who enjoy visiting the area or are fortunate enough to call it home. Located on California's Central Coast, SLO County is not as populated or developed as the larger urban centers in the Bay Area or near Los Angeles. Coastal recreation and tourism, agriculture, and vineyards and wineries make up a significant part of the local economy. To protect their treasured coastline, the [SLO County Chapter of the Surfrider Foundation](#) has been working hard for over 30 years to combat the mounting pressures of over-development, climate change, and pollution from oil spills, agriculture, stormwater, and sewage infrastructure on their beaches and local water quality.

In 2012, the SLO Chapter first launched its Blue Water Task Force (BWTF) program with two volunteers collecting weekly water samples at Avila Beach and at the mouth of the San Luis Creek. The chapter partnered with the [Central](#)

[Coast Aquarium](#), conveniently located in Avila Beach, to host their lab. They established a sampling schedule to complement the beach monitoring program conducted by the [SLO County Environmental Health Department](#). The County tests on Mondays, while the chapter collects samples later in the week, so there are fresh test results on Fridays to inform safe recreation over the weekend. From this humble beginning, the SLO BWTF has grown into a large volunteer-run program that monitors 21 beaches and creek sampling sites from Pismo Beach up to San Simeon in the northern part of the County. In 2014, the SLO Chapter helped the [Cal Poly Surfrider Student Club](#) establish a second BWTF lab on their campus. The students collect samples at beaches and surf breaks in and around Morro Bay and process them in the lab on campus. A third lab was established in North SLO County in 2020. It was originally hosted at the Monterey Bay National Marine Sanctuary's Coastal Discovery Center but was later relocated to a [local school](#) due to renovations. The team is looking forward to engaging students in the lab starting next school year.



Avila Beach, California.

After posting on the BWTF website, the chapter shares its test results through water quality email reports and on its [social media platforms](#). Their data is even linked on the [SurfSafeSlo website](#), hosted by the County Health Department, which the chapter partnered with to post four advisory signs at the mouth of San Luis Creek, featuring a QR code that directs people to the latest water quality data. The year-round water quality information that the SLO BWTF is generating is critical to informing safe recreation at the beach and in coastal waters in the community, especially this past winter, as the County's beach program was forced to scale back its testing due to budget limitations.

### Tracking Pollution Sources

One of the chapter's first testing sites that showed signs of pollution with [frequent high bacteria levels](#) was at the mouth of San Luis Creek at Avila Beach. This is concerning because families often set up their beach blankets at the mouth of this creek to let their children play in its relatively calm, shallow water. Curious about how far up the creek this contamination might extend and whether they could pinpoint sources of pollution, the chapter added five additional sampling sites in the creek over the years. However, the test results at each site continued to show signs of contamination. In 2022, the chapter released a [10-year water quality report](#) that summarized its program

findings and discussed the documented bacteria problems in San Luis Creek. This report was shared with staff at the County Health Department and State Water Board in hopes of convincing these agencies to further assess and identify the contributing sources of pollution so they can be resolved. Potential sources of pollution in the watershed include leaking septic systems, sewer line failures, animal agriculture, pets, birds, and other wildlife.

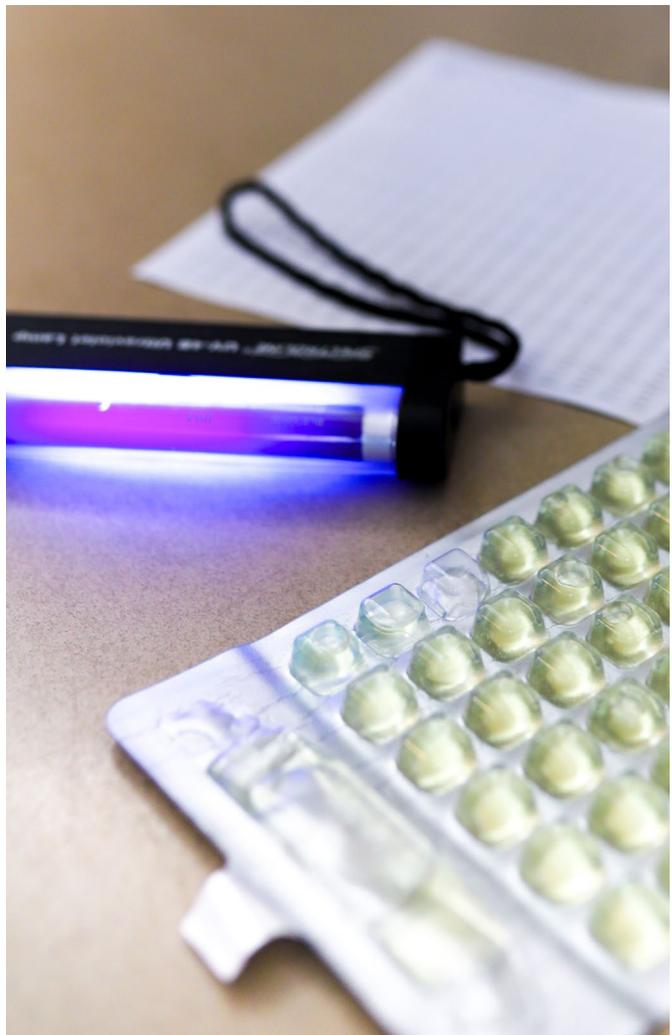
The following year, the chapter's sampling site at Avila Beach, located at the mouth of San Luis Creek, landed on the national list of Beach Bacteria Hot Spots in the Surfrider Foundation's [annual Clean Water Report](#). This list highlights 10 popular recreational beaches where Surfrider's BWTF has consistently detected bacteria levels exceeding state health safety standards. The mouth of San Luis Creek has remained on Surfrider's national list for the past three years, with high bacteria rates of 34% – 38%. That means more than 1 in every 3 samples collected fail to meet safe swimming standards at this popular spot for children to play, paddle, and splash around in the water. With this new notoriety, the chapter has received a lot of media attention to help raise public awareness of the pollution problems in San Luis Creek and their efforts to find the sources of pollution. Check out the news story below that ran multiple times on local TV stations in June 2023.



Pollution problems in San Luis Creek covered by KEYT/KCOY featuring Niel Dilworth with the SLO BWTF program, June 2023.

With community awareness and concern growing, the chapter decided to conduct a pollution source study to provide more information on the contributing sources of pollution at Avila Beach and in San Luis Creek, as well as at two sites in Pismo Beach that frequently show high bacteria levels. In August 2024, they started collecting monthly fecal indicator bacteria and eDNA samples to determine which species are contributing to the bacterial contamination. Regular water quality tests that measure enterococcus and other fecal indicator bacteria only tell us that there is waste from a warm-blooded animal (or a human) in the water, but they don't differentiate between species. More specific information is needed to identify the exact sources of pollution so they can be found and fixed. All samples are analyzed for enterococcus bacteria in the chapter's lab, while eDNA samples are shipped to Jonah Ventures,

a professional laboratory, to determine the presence of E. coli and human, cow, dog, poultry, sheep, and swine eDNA. The chapter aims to complete this study in July 2025 after a full 12 months of testing, but preliminary results indicate that eDNA from humans was associated with elevated levels of bacteria in San Luis Creek and Pismo Creek/Estuary, and to a lesser extent at Avila Beach. When the study is complete, the chapter intends to discuss its findings and determine necessary actions with a newly formed Avila Beach Bacteria Workgroup, which includes staff from the SLO County Public Works and Environmental Health Departments, as well as the CA Water Board. The chapter's ultimate goal is to find the sources of pollution in the San Luis Creek and Pismo Creek Watersheds, so local authorities can fix these problems and restore clean water for everyone to enjoy at the beach.



**Top Left:** Children play in the San Luis Creek despite warning sign. **Bottom Left:** A water sample is collected from the surf near Morro Rock. **Right:** UV light is used to read test results in the lab.

# Corpus Christi, Texas

## Protecting safe recreation and building community awareness of local water quality conditions with the Texas Coastal Bend Blue Water Task Force.

The Texas Coastal Bend is home to scenic beaches, diverse marine life, and abundant outdoor activities. From surfing and boating to birdwatching and fishing, the region offers plenty of opportunities to enjoy the natural beauty of the Gulf Coast. However, the area faces challenges due to mounting pressures on its beaches and water resources from rapid commercial and residential development, driven by the increasing demands of its popular tourism industry and a growing local population.

While industrial wastewater on the Texas coast mainly impacts the bays behind the barrier islands, the beaches along the Gulf of Mexico are vulnerable to urban runoff, sewage leaks, and other forms of pollution. Surfers have also been noticing an uptick in waterborne illnesses – like earaches and stomach problems – after heavy rains, so the Texas Coastal Bend Chapter decided to take action

three years ago and start a Blue Water Task Force (BWTF) program. With ongoing development on North Padre Island, the chapter also wanted to gather baseline data to track how newly constructed streets, yards, and parking lots might increase runoff and affect water quality over time.

To launch their new BWTF program, the Texas Coastal Bend Chapter teamed up with Dr. Jeff Turner’s lab at Texas A&M University-Corpus Christi to begin testing three sampling sites at local beaches popular for surfing and general beach-going. The chapter’s BWTF program complements the year-round beach monitoring program run by the Texas General Land Office, providing more valuable water quality data to inform safe recreation in the community and raise public awareness of local pollution problems.



Port Aransas, Texas.

Every Thursday, Surfrider volunteers collect water samples from Padre Balli Beach and two sites near Packery Channel and deliver them to the university lab, where students test them for enterococcus bacteria. The results are ready by Friday, ensuring up-to-date water quality information for beachgoers planning their weekend activities. This collaborative relationship is a win-win situation for both the chapter and the participating university students. The college students receive valuable hands-on lab experience while exploring career opportunities in water quality and environmental science. The reputation of the chapter's program benefits from its association with an academic research laboratory, and the chapter is spared the cost and time required to perform the lab analyses. Texas Coastal Bend is proud to be the first chapter to bring a BWTF program to the Gulf of Mexico.

To help keep the public informed about water quality conditions and when it's safe to swim or surf at the beach, the chapter shares its water quality results widely in their community every time they test. All of the chapter's data

is posted on [Surfrider's BWTF website](#) and is shared in a water quality report via social media and email. These reports are often picked up by local media outlets, such as [3News \(KIII-TV\)](#). The chapter also distributes stickers with a QR code that links directly to their test results, making it even easier for the community to stay informed about local water quality conditions.

So far, the results of the [Texas Coastal Bend BWTF program](#) have been generally clean. There have been a few instances of elevated bacterial levels after heavy rains. When this happens, the chapter quickly alerts the public to ensure everyone's safety. Along with their regular bacteria testing, the chapter has also started monitoring salinity, turbidity, and pH to gather more information about environmental conditions at each site. Looking ahead, they're excited to expand their sampling efforts to more locations in Port Aransas. As the program grows, the chapter is dedicated to keeping its community's beaches safe, clean, and enjoyable for everyone.



**Left:** Texas Coastal Bend BWTF volunteer lead, Tommy Shilts, collects a water sample. **Right:** Samples are processed by students in the lab at Texas A & M University.

Another program the chapter is proud to support is the Make Promises Happen Surf Camp, which serves individuals with disabilities. Founded 26 years ago by chapter Co-Chair Cliff Schlabach and his wife RoxAnne, the camp helps children from Texas and Oklahoma experience the joy of surfing in a supportive and inclusive environment. The chapter adopted the camp in 2004, and it's held annually in Port Aransas. This year's event is scheduled for July 19<sup>th</sup>. The camp is not just about surfing – it's about building confidence, creating friendships, and making lasting memories for everyone

involved. It's always a blast, and it's often hard to tell whether the campers or the volunteers have more fun! Whether they are making sure the water is safe or cheering on the campers as they catch waves, it's all about making the beach a place where everyone can enjoy the water.

If you plan to visit Corpus Christi or North Padre Island, Texas, connect with the [Texas Coastal Bend Chapter](#) for information on local events and current water quality conditions.



The Texas Coastal Bend chapter hosts the Make Promises Happen Surf Camp in Port Aransas.

# Contacts



**Mara Dias**  
Water Quality Initiative  
Senior Manager  
[mdias@surfrider.org](mailto:mdias@surfrider.org)



**Jaime LeDuc**  
Blue Water Task Force Manager  
[jleduc@surfrider.org](mailto:jleduc@surfrider.org)



**Sarah Davidson**  
Clean Border Water Now Manager  
[sdavidson@surfrider.org](mailto:sdavidson@surfrider.org)



**Kathryn Dressendorfer**  
Southern California Ocean  
Friendly Gardens Coordinator  
[kdressendorfer@surfrider.org](mailto:kdressendorfer@surfrider.org)



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