The Maui Nui Marine Resource Council works for clean ocean water, healthy coral reefs, and abundant native fish for Maui Nui.

MAUI NUI
MARINE RESOURCE COUNCIL

www.mauireefs.org

ANNUAL REPORT 2024

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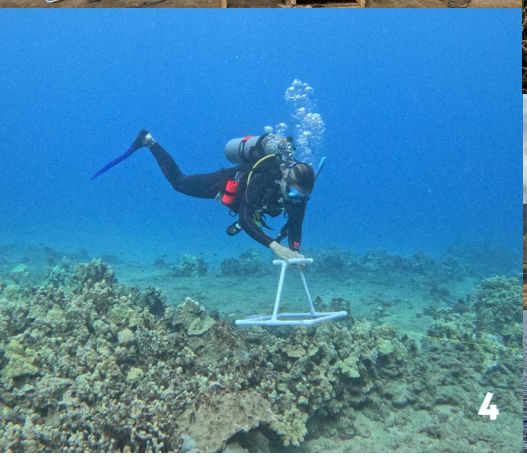
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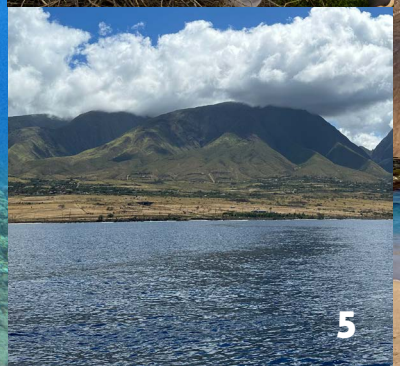
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1. Program Director, Jill Wirt works with Maui Gold Pineapple's team and SoilThrive Hawaii LLC to install a brewer that will allow the pineapple farm to produce their own biological soil amendment.

2. MNMRC volunteers remove invasive plants to support natural wetland habitat at Keālia Boardwalk.

3. Science Director, John Starmer collects limu for nitrogen testing in South Maui.

4. A dive team member performs a Fish and Habitat Utilization (FAHU) reef survey at Oneuli Beach.

5. MNMRC maintains Aqualink buoys in 3 locations across Maui including Mā'alaea.

6. Hui O Ka Wai Ola volunteers collect water samples every three weeks along Maui's leeward coast.

All photos taken by Maui Nui Marine Resource Council, unless otherwise noted.

Maui is a place unlike any other. From mauka to makai, natural ecosystems work together to sustain the beauty and life of the island. You and I are also a part of these ecosystems. No matter where you live, or what your profession is, you play a critical role in ensuring a healthy future for the land, water, and people that make Maui so special.

There is an ʻŌlelo Noʻeau (Hawaiian proverb) says *ʻAʻohe hana nui ke alu ʻia,* "No task is too big when done together by all." (Mary Kawena Pukui, *ʻŌlelo Noʻeau*, 142). This call for collaboration provides clear wisdom as we address the conservation issues facing Maui's marine environment.

Maui Nui Marine Resource Council has always prioritized partnerships and in the following pages, you will see the amazing things that can happen when individuals, organizations, agencies, and industries come together with an openness to explore new ideas, share resources, and work with one another.

With your support, our Reef-Friendly Landscaping program has tapped into a shared desire for organic land care methods across a growing list of industries, including agriculture, government, and hospitality. In addition to this, you have helped us continue our collaboration with Australia's Flying Fish Technologies to watch over Lāhainā's reefs after the wildfire. You will find early results on page 8, and even more on our website. I am also happy to introduce Hui O Ka Wai Ola's new coastal water quality report on 39 locations across Maui, including 7 sites in Lāhainā.

Your continued aloha has been invaluable in advancing work that protects Maui's marine environment. I hope that as you read this report you feel joy and pride for all that we have accomplished together. Mālama ʻāina will forever be ongoing and I look forward to making a difference with you for many years to come.

Amy Hodges,
Executive Director

P.S. Look for the "Deep Dive" section for videos, articles, and more about the impact we are making together.

Protecting Maui's Reefs Starts on Land

One of the most powerful ways we can protect Maui's marine environment is by addressing the impact of land-based pollution. Chemicals used in landscaping at sites like golf courses, resorts, farms, and public parks often end up in the ocean, degrading water quality and harming local reefs.

In response to the obvious need for an alternative to synthetic chemicals and conventional landscaping methods, Maui Nui Marine Resource Council (MNMRC) developed its **Reef-Friendly Landscaping (RFL)** course and certification program to be an accessible way for land care managers and professionals to adopt healthier practices that were backed by science and better for both the land and ocean.

What began in 2023 as test plots across 18 properties has since grown into a comprehensive educational program for landscaping professionals. Developed and taught by local experts, the RFL course is now available both in person and online. Participants from properties around the island have completed the training, which includes a hands-on practicum where each professional creates a custom plan to implement reef-safe landscaping practices at their sites.

Right: A biological soil amendment is a nutrient rich liquid that is an alternative treatment for synthetic fertilizers and pesticides. The amendment will be applied to a 1-acre Reef-Friendly Landscaping test plot at Maui Gold's farm in Haili'imaile. (Photo Credit: Maui Gold)

"If we want our marine environment to be healthy, we have to start on land," said Jill Wirt, RFL Program Director. "This course equips property managers with the tools and knowledge they need to make sustainable changes that benefit both the land and the sea. We're seeing growing momentum across the industry, and we hope reef-friendly landscaping will be adopted widely enough to significantly reduce chemical runoff and sedimentation impacting our reefs."

Expanding the RFL Vision

Building on the success and enthusiasm surrounding RFL, MNMRC launched three new test plots in 2024 in partnership with Maui Gold Pineapple and the County of Maui.

At Maui Gold, a one-acre pilot plot was launched in May with special guests including Mayor Richard Bissen and State Senator Lynn DeCoite in attendance. This 18-month project will span one full pineapple crop cycle, concluding in October 2025. The plot will be treated with a soil amendment, that is a nutrient- and microbe-rich liquid made locally by SoilThrive Hawaii LLC. A custom delivery system designed specifically for Maui Gold will deliver the amendment to the test plot, and SoilThrive will conduct 19 types of soil tests in addition to crop monitoring to assess results.

Later in the year, MNMRC partnered with the County of Maui Department of Parks and Recreation to establish new RFL test plots at Waiehu Golf Course and Ichiro "Iron" Maehara Stadium in Kahului. These locations build on the promising results from a 2022 test plot at Keōpūolani Park, which demonstrated notable maintenance savings and improved plant health.

"We were impressed with how the initial test plot turned out," said Michael-James Mendiola, Parks Beautification Manager. "Even during a time when the irrigation system faced challenges, the RFL plot thrived. It's exciting to see that sustainable practices can reduce water use while keeping our public spaces vibrant and healthy."

Top: Maui County Mayor, Richard Bissen, Senator Lynn Decoite and other guests attend the launch of Maui Gold's RFL test plot (Photo Credit: Maui Gold) Middle: Participants of MNMRC's inaugural Reef-Friendly Landscaping course get hands-on training during a lesson managing native wetlands. Bottom: A new test plot was launched at the Waiehu Golf Course in partnership with the County of Maui.

DEEP DIVE
Learning More

WATCH: Join our team on a day in the field doing reef survey dives.

MNMRC's dive team is often visited by honu and other marine animals while performing reef-health surveys.

Tracking reef health in Lāhainā one year post-fire

One year after the fire, the Maui Nui Marine Resource Council (MNMRC) partnered again with Flying Fish Technologies (FFT) to resurvey reef sites the team visited in 2023.

During the height of the 2023-2024 rainy season, heavy January rains washed significant amounts of toxic runoff into the ocean. Resurveying key sites after the rainy season was critical to understanding how this runoff impacted nearby reefs and fish populations.

As time passes, it becomes harder to distinguish newly stressed or deceased coral and those that have been degraded for longer periods, as well as to identify the cause. While our survey coverage focused on deeper (~10 m) areas, the initial results suggest little change since 2023.

It is important to note that runoff from the fire was concentrated in shallow areas, closer to shore, and MNMRC is working to bring FFT to revisit those nearshore sites (~3m).

Reef Health: Early Results

The results of both 2023 and 2024 surveys are presented as site-specific "posters" that describe the conditions at selected sites. When possible, 2023 and 2024 data are shown together. In other cases, the results of deep and shallow analyses from 2023 are paired together. For a few sites, where deep areas were just sand, only the results from the shallow survey are shown.

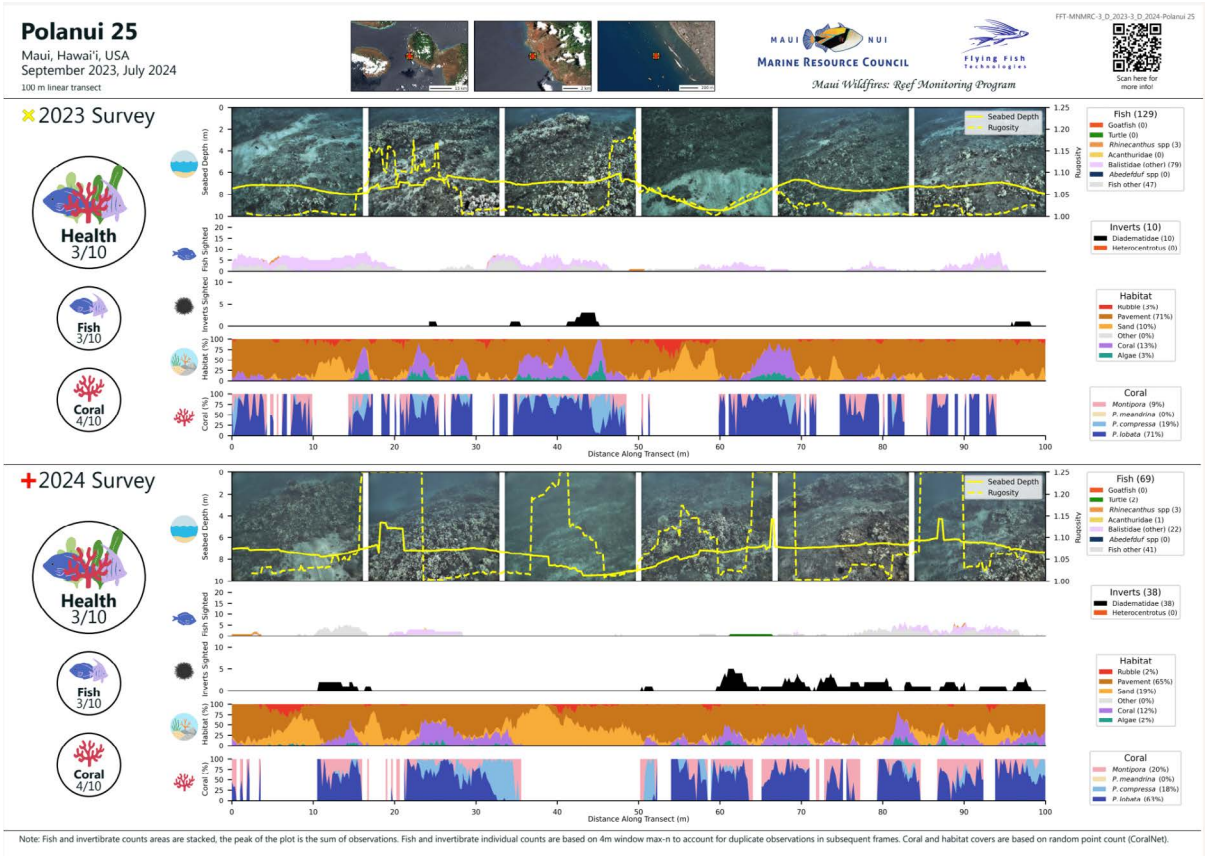
At present, coral populations at key sites should either be recovering from the negative effects of the runoff events, or the coral may be showing signs of stress or have died. By comparing survey data and 3D maps, MNMRC can evaluate how the reef sites have changed due to the fire and, by extension, better understand how to protect the reef against further damage.

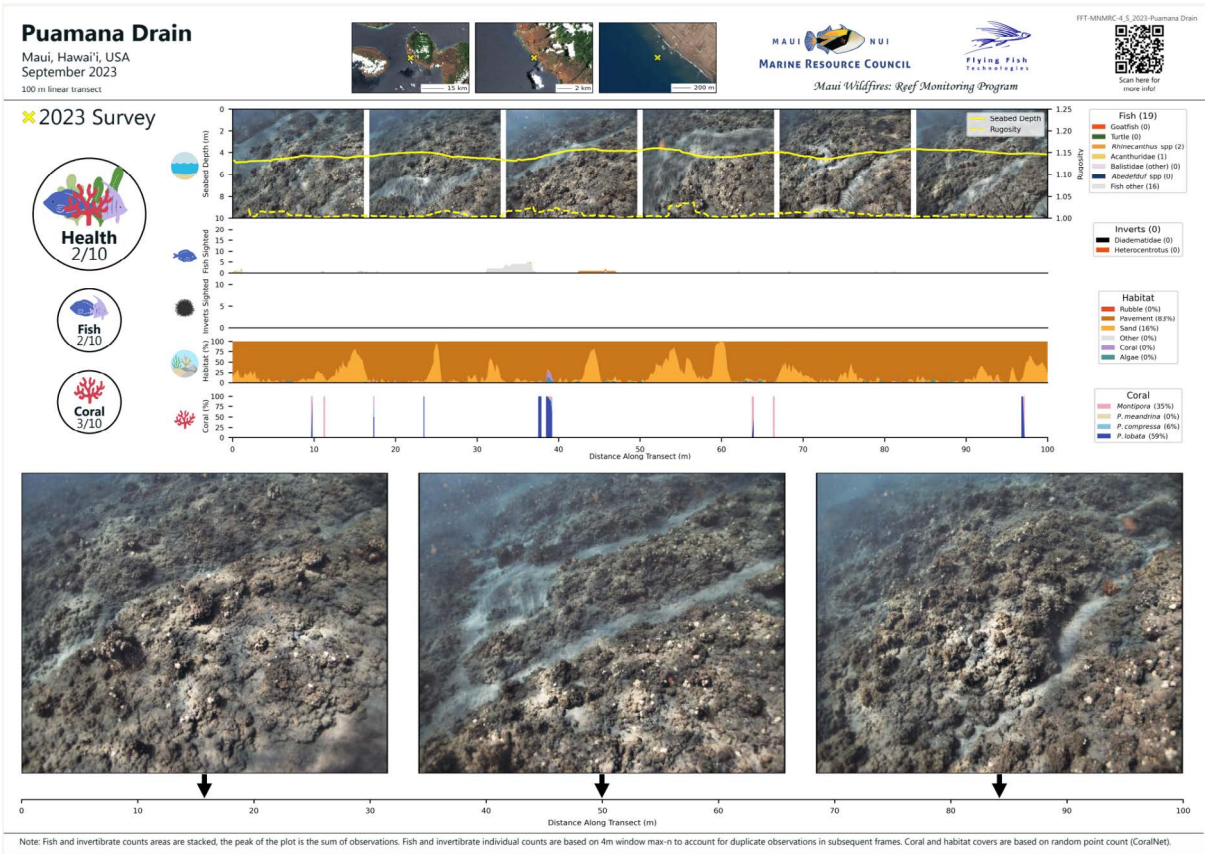
No precedent exists for an urban wildfire event occurring so close to a reef, and there is no easy way to predict how the fire's aftermath may impact overall reef health and the fragile ecosystems along the coastline and nearshore waters.

Continuing this important project provides a way to study, compare, and note changes to the affected sites and detect changes in coral cover and fish/invertebrate abundance. Findings can then be used to create actionable solutions to protect and restore impacted marine ecosystems.

MNMRC is committed to sharing research findings with the Maui Nui community as we continue to work together to care for and protect our fragile coral reefs and support Lāhainā's nearshore ecosystem.

Top Left: The Vertigo3 underwater drone is prepared for deployment by a member of the Flying Fish Technologies team. Top Right: Once the drone is underwater, progress can be viewed on an ipad. Bottom Left: Flying Fish team members work on replacing the tow line in between deployments. Bottom Right: The team poses for a photo at the end of a successful day.





Top: Posters illustrating reef health near the burn zone were created from surveys done in 2023 and 2024 by the Maui Nui Marine Resource Council and Flying Fish Technologies.

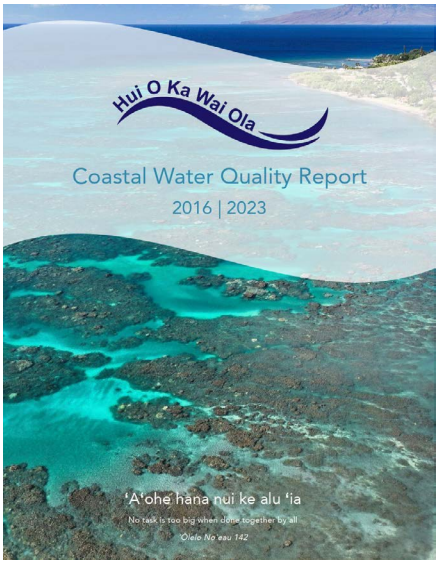
DEEP DIVE
Learning More

WATCH: We explain early reef health results.

VIEW: Results from reef locations around Maui.

WATCH: A day on the water with the Flying Fish Team.

Hui O Ka Wai Ola's 2023 Coastal Water Quality Report



In August, **Hui O Ka Wai Ola (HOKWO)** published its bi-annual coastal water quality report covering nearshore data collected at 39 locations along Maui's leeward coast. In addition to publishing the report, Program Manager, Liz Yannell shared key findings with our community during a free webinar as part of our *Know Your Ocean Speaker Series*.

The report highlighted encouraging trends, particularly in the aftermath of the 2023 Lāhainā wildfires. Despite potential threats from post-fire runoff, water quality in the region remained within its typical ranges, thanks in large part to proactive soil stabilization and erosion control measures.

The report also pointed to persistent challenges for leeward Maui. Chronic turbidity and elevated nitrate levels, often tied to land-based pollution sources like fertilizers and wastewater, remain above state standards at many sites. These findings underscore the importance of continued investment in watershed management.

HOKWO's data, which meets state Department of Health quality assurance standards, has always been available to the public, but now it is also integrated into the global Aqualink platform, a monitoring system for marine environments. This new addition expands access to real-time ocean conditions and increases the visibility of Maui's coastal health on an international scale.

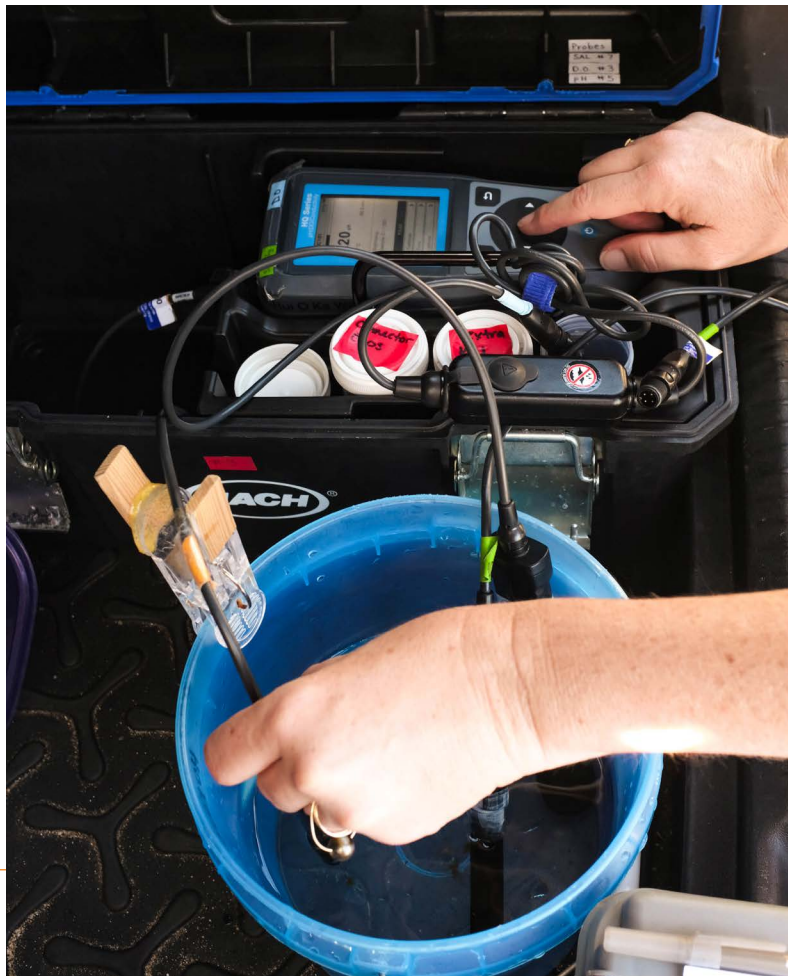
We are incredibly grateful for our dedicated network of volunteers who go into the field to make sure this valuable information is available to our community. This new report reinforces our island's deep need for sustained monitoring and targeted remediation to address ongoing water quality concerns.

Previous page: Water samples are collected in a syringe, bottle and bucket for testing. Top: Volunteers collect water samples from Haycraft Beach. Bottom Left: After samples are collected the North Kīhei team returns to the mobile lab. Bottom Right: Samples are tested for 13 parameters including: pH, salinity, turbidity, nutrients, and water temperature. (Photo Credit: Hui O Ka Wai Ola).

DEEP DIVE
Learning More

WATCH Highlights from the 2023 report.

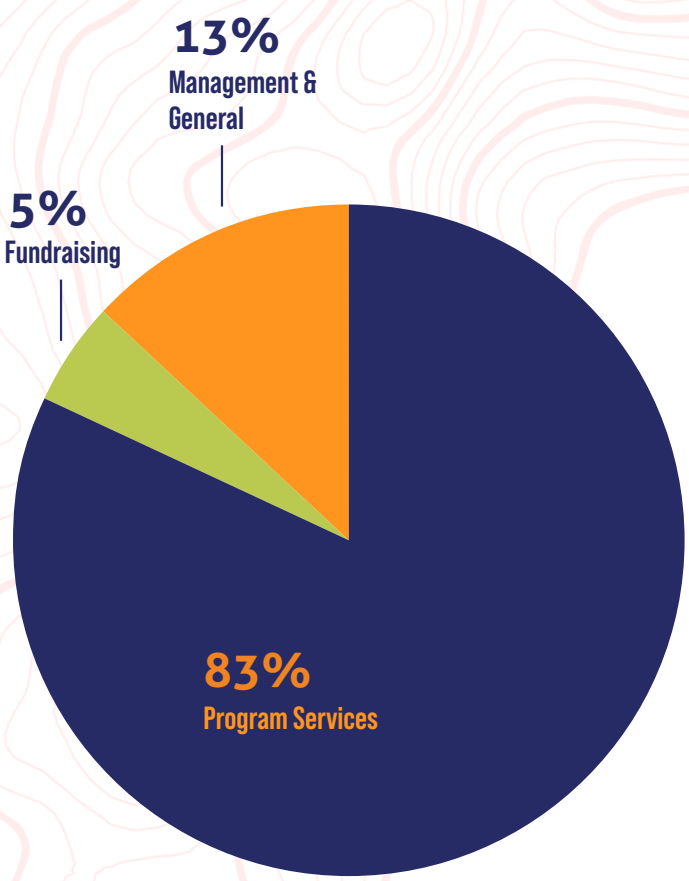
READ View the full water quality report.



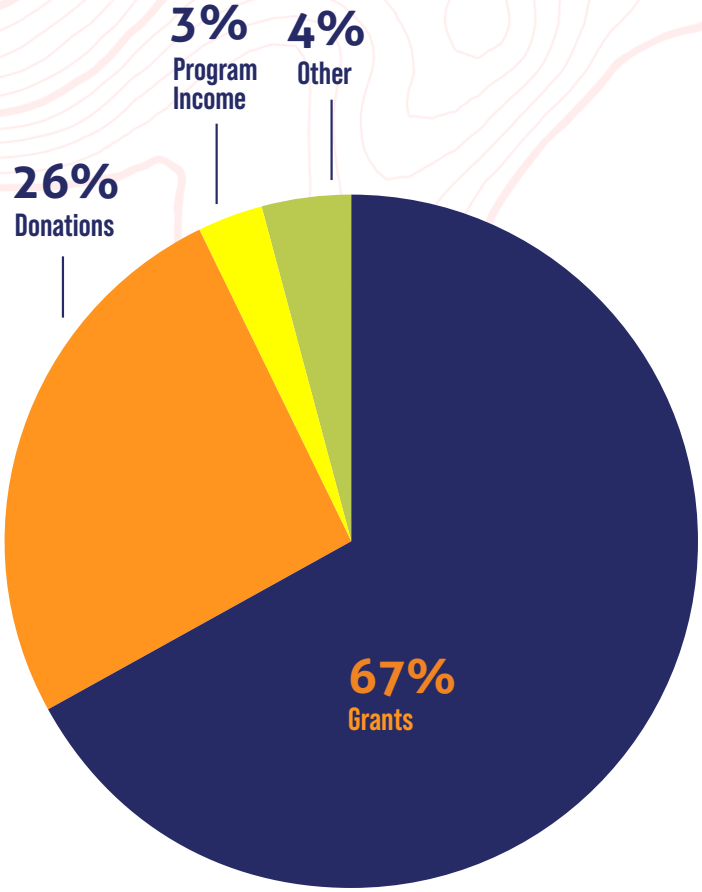
Financial Statement

Combined statement of activities for the fiscal year ending December 31, 2024.

In 2024, our income exceeded expenses, and we raised $1,115,325 for operations, enabling MNMRC to continue conservation work to protect and enhance coral reefs in Maui Nui. The financial information shared here are from MNMRC's audited 2025 consolidated financial statements.



Expenses



Support

	2022	2023	2024
Total Income	$1,152,774	$1,115,325	$1,116,265
Total Expenses	$1,064,540	$1,103,015	$1,041,627
End Net Assets	$651,630	$663,940	$728,578

‘A‘ohe hana nui ke alu ‘ia

No task is too big when done together by all.

-Mary Kawena Pukui, ‘Ōlelo No‘eau 142

Maui Nui Marine Resource Council

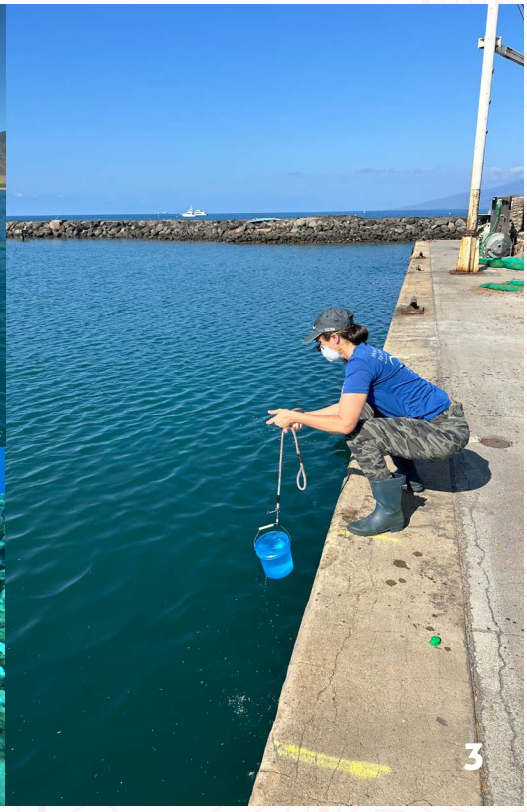
Amy Hodges,
Executive Director

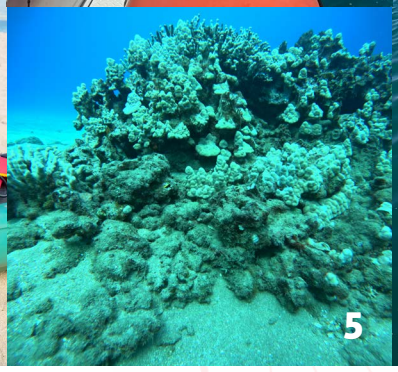
Mike Fogarty,
Finance Director

John Starmer,
Science Director

Jill Wirt,
Program Director

Sara Sugidono,
Communications &
Development Director





MAUI NUI
MARINE RESOURCE COUNCIL

@mauireefs
YouTube
Facebook
Instagram

www.mauireefs.org

info@mauireefs.org

P.O. Box 331204
Kahului, HI 96733

(808) 707-5056

Inside Cover:

1. An MNMRC volunteer plants new ‘akulikuli at Keālia Boardwalk.

2. The MNMRC team performs reef health dive surveys throughout the year.

3. Hui O Ka Wai Ola continued to monitoring water quality at Lāhainā Harbor and other sites in and near the burn zone of the 2023 Lāhainā wildfire.

4. Science Director, John Starmer prepares a Manta sensor to test salinity conditions at Kāhana Beach Park.

5. A large coral colony at Oneuli Beach in Mākena.

Donate to Support Healthy Reefs