

A diver in a blue wetsuit and mask is shown underwater, examining a coral reef. The diver is wearing a blue wetsuit, a blue mask with 'AQUALUNG' written on it, and a blue regulator. The diver is holding a piece of coral in their right hand. The background is a clear blue-green underwater environment with a coral reef. The text 'Accomplishment Report 2024' is overlaid in white at the top.

# Accomplishment Report 2024

Department of Land and Natural Resources

# Division of Aquatic Resources

January 2024





## Aloha mai kākou

As we enter this inspiring season of reflection and anticipation, I'm excited to celebrate the remarkable achievements of DAR over the past year! It fills me with pride to share highlights of our significant milestones from 2024 and our ambitious goals for 2025.

I sincerely thank all the dedicated DAR staff for their hard work and commitment, which have truly made a difference. A heartfelt mahalo nui to our invaluable agency, nonprofit, and community partners, as well as the broader Hawai'i community we are privileged to serve. Together, we are committed to managing our state's precious aquatic resources for the benefit of all.

Let's embrace the potential of 2025 with enthusiasm and optimism—there are great things ahead!

Sincerely,

A handwritten signature in blue ink, appearing to read 'Brian Neilson', is written over a light blue circular graphic element.

Brian Neilson, DAR Administrator





# DAR Accomplishments

# Administrative

## 2024 Hawai'i Legislative Session

- Successfully introduced a bill to authorize the State of Hawai'i to become a member of the Pacific States Marine Fisheries Commission (enacted as Act 216)
- Successfully introduced a bill to expand the Department's regular and adaptive management rulemaking authority (enacted as Act 222)
- Successfully advocated for legislation to amend the Ocean Stewardship User Fee law (HRS 187A-52) to clarify who is required to collect the fee and to extend the sunset date of the Ocean Stewardship Special Fund by two years to January 1, 2031 (enacted as Act 214)

## Other Highlights

- The Aloha I Ke Kai Program (previously know as the Ocean Stewardship User Fee) launched in January 2024. This program collects \$1 per passenger participating in an ocean recreation activity that DAR uses for marine stewardship projects. Currently, this program has raised just under \$2 million dollars, engaged over 400 marine commercial operators on six different islands, and funded critical initiatives such as maintenance of the marine debris hotline. The Aloha i ke Kai program serves as an example of true collaboration in marine management, as the program serves marine natural resource needs, commercial business needs, and Hawaii community needs to promote ocean kuleana and stewardship.
- A new DAR field office has been established on Moloka'i.
- The draft of the DAR 2025-2030 Strategic Plan has been completed.
- This calendar year, DAR successfully filled 25 vacant civil service positions, which amounts to over 30% of the civil service workforce.
- DAR succesfully procured over \$14 million appropriated by the Legislature in Fiscal Year 24 to support renovations, improvements, equipment, and contracts aimed at enhancing district management capacity.
- A new water quality working group was formed, consisting of fishers, agencies, and NGOs.



# DAR Accomplishments

## Administrative

### New Funding

- Hawai'i Invasive Species Council – 2024 Funding Award for “Ballast Water and Hull Fouling”
- U.S. Fish and Wildlife Service – Aquatic Nuisance Species (ANS) grant award for “FY24 Hawai'i ANS Management Plan Support”
- Congressionally Directed Funds: Limu Restoration Ark
- Congressionally Directed Funds: Waiakea and Pelekane Restoration and interpretive Trails of historic estuaries estuary restoration
- Congressionally Directed Funds: Examining carbon sequestration potential of different habitats within Indigenous Resource Management landscapes in Hawai'i
- NOAA Earmark -Reducing threats to protected species in the state of Hawai'i (FANC3) \$400,000
- Hawaii Marine Recreational Survey (NOAA)
- EPA Wetland Development Program Grant – Completing the Wetland Program Plan Protection and Restoration Strategy
- Management, Research, and Outreach to Reduce Threats to Endangered MHI Insular False Killer Whale
- 'Āina restoration through community governance to advance climate resilience in the Hawaiian Islands in partnership with Sea Grant and KUA
- National Fish and Wildlife Foundation -- Coral Nursery Capacity-Building for Emergency Response and Conservation on Kauai
- The new Aloha i ke Kai – Hawai'i Ocean Stewardship User Fee Program. Collected just over \$2M in user fee revenues as of December 2024.
- DAR made significant progress toward implementation of the Nonresident Recreational Marine Fishing License Program. This new license is expected to launch in January 2025 and will generate approximately \$1M in annual revenue beginning in 2025.



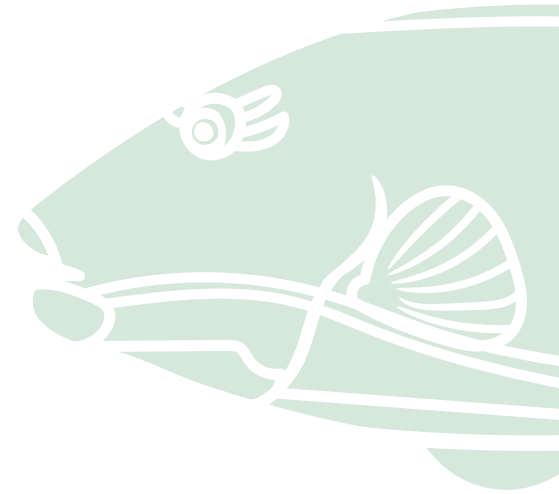
# DAR Accomplishments

# Pono Practices

## Fisheries Management

### Rulemaking Initiatives:

- Established statewide bag and size limit amendments for key coral reef herbivore species (uhu, kala, manini, and kole) and Pāpa'i Kualoa (Kona crab) took effect in February 2024. HAR Chapter 13-95.
- Completed a comprehensive update to DAR's licensing and permitting rules (HAR chapter 13-74) took effect in May 2024. This updated include the establishment of a Non-resident Recreational Marine Fishing License, a Commercial Marine Vessel License, and a Commercial Marine Dealer License, as well as updates to existing license and permit fees.
- Established rules implementing the Ocean Stewardship Special Fund and Ocean Stewardship User Fee (HAR Chapter 13-78) took effect in January 2024. These rules implement HRS 187A-52, which requires all "operators of commercial vessels, water craft, or water sports equipment that are required to have a commercial operator permit" to collect "\$1 per passenger or customer" and transfer these fees to DAR for ocean resource management.
- Established rules for the Kīpahulu Community-Based Subsistence Fishing Area (CBSFA). These rules represent the culmination of a decades-long effort by the Kīpahulu community to ensure protections for their traditional and customary subsistence fishing practices and sustainable marine management of their nearshore resources.
- Completed rule amendments updating the Molokini Shoal Marine Life Conservation District (Molokini MLCD) and statewide Day-Use Mooring Buoy (DMB). This joint effort between DAR and the Division of Boating and Ocean Recreation (DOBOR) included an increase in the MLCD Use Permit fees from a flat rate to a tiered fee system based on passenger capacity.
- BLNR approval of the final adoption of pāku'ikui rules for West Hawai'i. The rule amendment extends the two-year moratorium on take of pāku'iku'i within the West Hawai'i Regional Fishery Management Area (WHRFMA) for an additional two years (to December 18, 2026).
- Completed Statewide public hearings to establish the Maunalua Bay Fisheries Management Area. This effort is lead by Maunalua Bay Fishers committed to long-term sustaible fishing in the Bay. The proposed rules will go the Board of Land and Natural Resources (BLNR) to consider final approval in January 2025.





# DAR Accomplishments

# Pono Practices

## Fisheries Management *cont.*

### Other Activities:

- The DAR Fisheries Program produced a document entitled "[Data Review and Management Brief for the West Hawai'i Commercial Aquarium Fishery](#)" and presented it to the BLNR in April 2024. This document details the history of the fishery, biological information regarding target species, data sources relevant to the monitoring of species harvested by the West Hawai'i commercial aquarium fishery, analysis of relevant data, and an assessment of biological risk related the continued practice of commercial aquarium harvest along the West Hawai'i coastline.
- A commercial permitting system has been established for key herbivorous species, specifically uhu and kala. This system also includes a permit system for commercial dealers of both uhu and kala.
- Created a public [online Annual Catch Limit \(ACL\) tracking feature](#) on the DAR website providing monthly updates on commercial kala, uhu, Kona crab, and deep-7 commercial catch relative to their respective ACLs.
- Continued participation in the management of Hawai'i's co-managed Federal-State fisheries with DAR representation on the Western Pacific Regional Fishery Council, as well as the Council's Archipelagic Plan Team, Pelagic Plan Team, and Scientific and Statistical Committee.
- Partnered with the Western Pacific Regional Fishery Management Council, National Oceanic and Atmospheric Administration, fishing community, and other government and non-government organizations to perform a series of in-person meetings across the State to directly engage small-boat fishery participants.
- Participated in the 77th annual meeting of the Pacific States Marine Fisheries Commission in Monterey, CA in October 2024.
- Initiated a Maui Island Kala stock assessment project through partnership with local fishermen, local fish dealers, and Hawaii Cooperative Studies Unit at University of Hawaii at Hilo.

*Maui Kala Fishing Partnership*



# DAR Accomplishments

# Pono Practices

## Education & Outreach

- Expanded and updated the DAR website
- Investigated five shark bite incidents, added the findings to the DAR database, and updated the shark website accordingly.
- Aired two 30-second television spots encouraging pono practices on reefs
- Printed and distributed fishing regulations booklets, pono fishing rack cards, posters, and other education and outreach materials
- Conducted pono fishing and angler education classes and workshops statewide
- Provided classroom and field presentations on numerous aquatic topics
- Conducted fisher outreach at fishing tournaments and other public events
- Facilitated community action plan meetings to manage local marine resources
- Filled the O'ahu education specialist position
- Provided environmental court-appointed training to Hawai'i Island fishery violators
- Participated in Makai Watch training and monitoring
- Produced the 2025 DLNR calendar focusing on Marine Life Conservation Districts
- Hosted over 100 summer camp students from Hui Ho'oleimaluō, Hilo One Summer Camp at the Wailoa Fisheries Research Station
- Shared the Hanalei Estuary Monitoring report with community leaders.
- Participated in the first Ko'olau Limu Festival in Anahola, Kaua'i to share estuary monitoring at Anahola Bay
- Conducted a workshop for an environmental science class from Kamehameha Schools Kea'au Campus at Reed's Bay in Hilo





# DAR Accomplishments

# Pono Practices

## In Reach

- Hosted 11 DAR Sharing Sessions in 2024, highlighting the work of DAR during informal brown-bag sessions to create awareness and cultivate collaborations across the agency.
- DAR All-hands in-person meeting held at Ahupua'a He'eia and hosted by Kāko'o 'Ōiwi, Paepae O He'eia, and Papahana Kouaola
- The development of Ke Kumuko'a: A Hawaiian Culture, Perspective, and Language Guidebook designed specifically for DAR, where the Hawaiian worldview framework of the Kumu Honua Maui Ola, a Native Hawaiian educational philosophy, is the foundational lens by which we can see how DAR staff and the work that we do fits into the larger Hawaiian "universe." Ke Kumuko'a enables DAR staff to better communicate and connect in cultural settings, and to align our intentions and actions as a division with the Hawaiian cultural perspectives and values.







## DAR Accomplishments

# Pono Practices

## Enforcement Action

- Continued BLNR enforcement action against the owners of the motor yacht *Nakoa*, which grounded near Honolua Bay, Maui. Successful BLNR meeting in which the Board imposed a \$1.8 million dollar fine against the owners to go towards environmental restoration of Honolua Bay.
- Successfully settled Contested Case Hearing with owners/operators of *Endless Summer*, a motor yacht that caused extensive anchor damage to coral and live rock in Kailua Bay, island of Hawaii. Settlement funds totaling over \$222,000 will be used for coral reef restoration and management in the waters surrounding the island of Hawai'i.
- Brought successful Civil Resource Violations System (CRVS) action against the owner of *Maui Princess*, a vessel that grounded off the coast of Lahaina, Maui that caused damage to coral and live rock.

## DOCARE Training

- Supported the DOCARE Academy wby providing training on Aquatic resources species and regulations.
- Supported Mālama Pūpūkea-Waimea Marine Life Conservation District site visit with the DOCARE Academy





# DAR Accomplishments

# Pono Practices

## Protected Species

- Provided Hawaiian monk seal response and monitoring statewide, working closely with NOAA Fisheries and other partner agencies to observe, document, tag, monitor and respond.
- Led stranded sea turtle response on Hawai'i Island and Kaua'i. PSP team members and PSP volunteers took 103 hotline calls and responded to 74 turtles that required a response.
- Created a sea turtle monitoring and nesting response partnership on Moloka'i, expanded partnerships and continued to lead sea turtle nesting response on Kaua'i, assisted partners with sea turtle nesting response on O'ahu and Hawai'i Island.
- Provided stranded cetacean response statewide, working closely with NOAA Fisheries and other stranding partners, especially Hawaiian cultural practitioners.
- Ran and promoted DAR's marine debris reporting hotline 833-4-Da-Nets (833-432-6387), contracting five different organizations who answered 112 marine debris calls and removed 21,231 pounds of marine debris from shorelines; and four organizations who removed 13,592 pounds of marine debris and 68,045 feet of fishing line from reefs.
- Worked closely with five different NGOs to promote citizen scientist projects of photo identification of pelagic protected species, as well as assist with photo identification.
- Assisted DAR's permitting program with permits that affected protected species, especially those regarding filming during sea turtle nesting season; and DAR's Oahu program with UXO response and reef restoration design specifications.
- Continued to lead the Barbless Circle Hook Program (a cooperative project with NOAA Fisheries), providing prizes at 16 fishing tournaments across the state (cooperatively with NOAA Fisheries), and promoting BCH with 2,175 people. PSP also runs DAR's BCH social media.





# DAR Accomplishments

# Pono Practices

## Protected Species *cont.*

- Visited 33 different classrooms at 15 different schools to teach a total of 1,054 students about DAR, BCH, marine protected species, fishing rules and regulations, and how to be better stewards of the ocean.
- Ran educational booths at 41 different outreach events, providing interactive educational games and outreach materials about marine protected species and sustainable fishing to a total of 4,313 individuals.
- Conducted targeted outreach statewide to recreational and commercial fishers about protected species and citizen science opportunities via “walking the docks,” tabling at fishing stores, attending fisher meetings, and direct mailings.
- Assisted DOCARE’s Makai Watch program, providing protected species and fishing regulations training to Makai Watch community groups on Maui and O’ahu.
- Created new outreach and education materials including stickers, flyers, social media posts, radio interviews, DAR blog posts, and website content.



# DAR Accomplishments


# Pono Practices



## Permitting and Environmental Review

- Provided timely reviews to consultants on impacts to aquatic resources and risk mitigation strategies for numerous projects statewide.
- Provided environmental reviews on Chapter 343 and 195D consultations for a variety of proposed activities statewide.
- Standardized language references for various laws, and best management practices were compiled and provided to staff to improve review times.

## Special Activity Permits

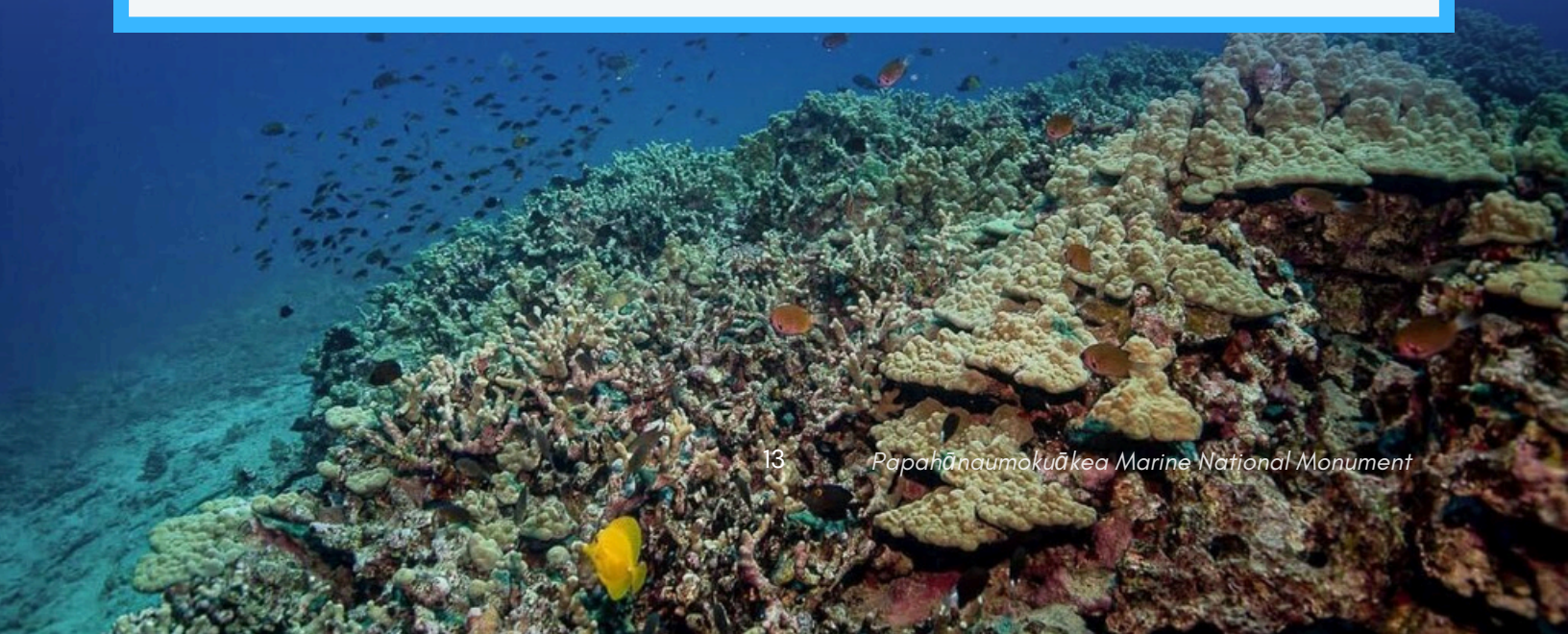
- The Division of Aquatic Resources (DAR) issues Special Activity Permits (SAPs) for research and education while ensuring the protection of Hawai'i's aquatic resources.
  - Developed guidance for filming on sea turtles with the DAR Protected Species Program to help filmmakers avoid turtle nesting areas on Oahu.
  - Provided prompt permit information for Uniform Information Practices Act (UIPA) requests and continue to work with Conservation International (CI) to identify hurdles, make the permitting process smoother, and implement changes to improve efficiency.
  - DAR has completed a project with CI to create a new application and permit template for Special Activity Permits. This will support a new online portal using ArcGIS, aiming to speed up the permit review and issuance process.
  - Worked with CI to develop Standard Operating Procedures (SOPs) and reference materials for Special Activity Permits and the Environmental Review program. We held workshops to train DAR staff on these new materials, which will help new biologists learn how to review SAP applications and draft and process permits.
  - Provided guidance for the Coral Reef Restoration Framework tool, which will help permit holders conduct quality restoration and research on protected coral reefs. The framework is currently under review and will be integrated into the new online permitting portal.
  - Consulted with the Division of Forestry and Wildlife (DOFAW) and the Hawai'i Coral Reef Initiative (HCRI) to start building a new online permitting system, expected to launch in 2025.
  - This new system will simplify the SAP application process and give DAR real-time updates on permit applications, including summaries and maps showing research locations.
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## DAR Accomplishments

# Place-Based Planning

## Papahānaumokuākea Marine National Monument

- Conducted invasive algae desiccation trials using *Acanthophora spicifera* as a proxy for *Chondria tumulosa* to inform biosecurity practices for marine debris collected from the Papahānaumokuākea.
- Performed biosecurity inspection for two potential trash disposal sites for the Papahānaumokuākea Marine Debris Project (PMDP).
- Inspected the offload of buoy chains collected by the US Coast Guard in the Nuisance Algae Mitigation Zone of the PMNM.
- Continued working with PMNM co-managers on permit review and processing
- Took over as chair for the Monument Communications Team
- Continued to increase outreach and communication efforts for PMNM activities and updates through social media
- Held 11 in-person and virtual public comment meetings across the state as well as informational meetings for the proposed PNMS during the public comment period
- Published the draft environmental impact statement for the proposed Papahānaumokuākea National Marine Sanctuary (PNMS) on March 8, 2024
- Published the final environmental impact statement for the proposed PNMS







# DAR Accomplishments

# Place-Based

# Planning

## Hawaiian Islands Humpback Whale National Marine Sanctuary

- Facilitated the cooperative management of the Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS), which spans both state and federal waters. (ADDED)
- Assisted in designing and participated in the HIHWNMS strategic planning process and the climate change impact assessment
- Actively participated in and helped plan Sanctuary Advisory Council meetings; helped with recruitment efforts.
- Continued to work closely with HIHWNMS and other state and NGO partners to provide outreach on speed recommendations as part of the “Go Slow, Whales Below” campaign.
- Secured funding for and lead a cooperative research team on the impact of humpback whales on the marine food web.
- Secured funding for and coordinated the second year of a cooperative research project on zoonotic disease and humpback whales.
- Organized and conducted the inaugural Molokai Ocean Count: Held planning meetings, secured landowner permission, coordinated with ocean count partners, recruited volunteers, participated as site leader, submitted data and organized follow-up meetings.
- Organized the “Molokai Teacher on Board” pilot project with sanctuary staff and a Molokai High School teacher.
- Participated in and coordinated with the Office of National marine Sanctuaries staff participation in Molokai’s Earth Day event in April, 2024.
- Reviewed and made recommendations on permit requests routed to DAR from the Hawai’i Film Office regarding humpback whales.





# DAR Accomplishments

# Place-Based

# Planning

- Following a 6-month pause after the Lahaina fires, the Maui Holomua community planning team resumed meetings to draft management recommendations for the island, based on a holistic approach to nearshore management. They met nine times to refine their proposal ahead of Information Exchanges aimed at gathering community feedback.
- The Holomua Marine Initiative hosted three in-person Information Exchanges in September, attracting more than 100 residents in Hāna, Lahaina, and Kahului. More details can be found at <https://dlnr.hawaii.gov/holomua/maui-information-exchanges/>.
- The Holomua website was updated to better showcase the Maui planning process.
- DAR has begun planning for the Holomua Marine Initiative for Hawai'i Island, set for 2025.
- Collaboration with Mālama Pūpūkea Waimea led to the implementation of the Pūpūkea Marine Life Conservation District (MLCD) management plan, which included a kickoff meeting of interjurisdictional partners to address action items.
- DAR increased social media capacity to improve outreach, including creating engaging video content.
- Kipahulu Community Based Subsistence Fishing Area (CBSFA) rules were signed by Governor Josh Green March 15, 2024
- DAR initiated Maunalua Fisheries Management Area (FMA) Chapter 91 rule making process
- Continued discussion regarding draft Ka'upulehu Marine Management Plan



# DAR Accomplishments

# Restoration

## Estuarine & Wetland Restoration

- Collaborated with the National Estuarine Research Reserve System at He'eia (HNERR), the University of Hawaii, and other partner organizations to plan and acquire funding for a research study. This study aims to examine the carbon sequestration potential of native plants in various habitats within Indigenous resource management landscapes.
- Planned and secured funding, in collaboration with Kāko'o 'Ōiwi and Paepae o He'eia, totaling over \$5 million through the NFWF National Coastal Resilience Fund (NCRF) for the He'eia Community Coastal Restoration Program, a 4-year project whose goal is to restore 24 acres of wetlands, 20 acres of constructed wetlands and traditional agricultural integrated systems, and protection and enhancement of 88 acres of a traditional fishpond serving as a flood detention basin.
- Participated and completed, in collaboration with He'eia partners, the bi-annual stream and estuary surveys to monitor changes over time resulting from ongoing restoration efforts throughout the He'eia watershed. This marks the sixth year of conducting these surveys.
- Removed and restored approximately 4 acres of invasive mangrove and other invasive trees along the entire length of the shoreline within the Pearl Harbor National Wildlife Refuge. Additionally, completed the West Loch Pearl Harbor USFWS Coastal Wetland Grant project, which cleared and restored over 11 acres of shoreline and pond habitat previously inundated with invasive mangrove.





# DAR Accomplishments

# Restoration



## Estuarine & Wetland Restoration cont.

- Completed Phase I of the anchialine pool habitat protection strategy at the Waianae Boat Harbor property, including shoreline fencing, and collected opae ula (native Hawaiian shrimp) for the Anchialine Pool Ark, a conservation collection housed at the Anuenue Fisheries Center (AFRC), aimed at preserving the genetic diversity of these species.
- Contributed to acquiring a planning grant to plan and restore three wetland sites along South Moloka'i negatively affected by invasive mangrove, conducted site visits for mangrove removal planning as part of an NFWF grant managed by Pacific Birds and the Molokai Land Trust, and fulfilled a portion of the pledged match for a restoration planner.
- Initiated a partnership restoration project with Malama Maunalua and the Maunalua Fishpond Heritage Center to enhance native fish habitat at Paiko Lagoon. The project aims to increase water circulation, restore natural water flow, enhance tidal exchange, and manage vegetation growth, with the goal of reviving Paiko Lagoon as an important juvenile fish nursery.
- Supported the restoration of the Kalauha'iha'i fishpond in Maunalua Bay, collecting baseline information to measure how fish react to the renewed freshwater inflow to the damaged fishpond and its downstream estuary by collecting data both before and after the restoration.



# DAR Accomplishments

# Restoration

## Coral Reef

### Statewide

- Collaborated with Federal, State, and non-profit partners to develop a storm response plan and participated in restoration workshops including rubble stabilization, storm damage response, and coral reproduction
- Drafted the Makai Restoration Action Plan for Goal 2: Coastal Protection with an advisory group of over fifteen state, county, federal, and nonprofit organizations. Public review of this reef restoration plan is scheduled for February 2025.
- Kicked off the Reef Habitat Plan: for fishers, by fishers. In 2024, over 300 fishers contributed through our [ArcGIS StoryMap Survey](#) that will close in winter 2025 so that fisher working groups can integrate the results into the third and final Makai Restoration Action Plan for Goal 3: Fish Habitat.

### West Hawai'i

- Established coral restoration projects within seven different reef sites in West Hawai'i
- Collected corals from 5 different restoration sites for propagation and grow-out within the West Hawai'i coral nursery at the Ridge to Reef Restoration Center and produced a total of 316 coral microfragments from three different species
- Conducted seven coral rescue events where divers removed healthy corals from man-made structures (day-use moorings, seawater intake pipe, off-shore fish pens) and outplanted them to nearby reef structures
- Engaged in multiple collaborative coral restoration events with Arizona State University and The Nature Conservancy



# DAR Accomplishments

# Restoration

## Coral Reef

### O'ahu

- Outplanted 126 corals across five restoration sites, including a new restoration site off the south shore of O'ahu near a previously damaged reef, bringing the total number of outplanted coral modules on O'ahu to 298
- Expanded restoration efforts for rare endemic species Purple Rice Coral (*Montipora dilatata*) and Knobby Finger Coral (*Porites duerdeni*) by outplanting 14 coral modules in Kāne'ohe Bay, O'ahu
- O'ahu Coral Nursery staff engaged with over 1,000 individuals through education and outreach events, including students, community groups, teachers, and legislators
- Finalized designs, secured contractor, and started site preparation for a new dedicated Rare Coral Ark facility on O'ahu

### Kaua'i

- Received a National Fish and Wildlife Foundation Grant to establish the first coral nursery and restoration facility for the island of Kaua'i





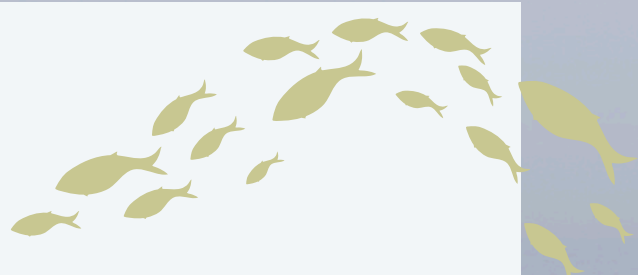
# DAR Accomplishments

# Restoration

## Sport Fish Restoration

### Artificial Reef Program

- Performed 15 artificial reef surveys at Maunalua Bay (6) and Waianae (9). This data will provide information on fish biomass, density, diversity, and benthic succession over time on the existing artificial reefs.
- Submitted archaeological report to the State of Hawaii Historical Preservation Division (SHPD). This report is part of the permitting process to expand the artificial reef in Maunalua Bay.
- Began pre-consultation with the National Oceanic and Atmospheric Administration (NOAA) Essential Fish Habitat and Endangered Species Act staff as part of the artificial reef expansion permitting process.
- Presented at three neighborhood board meetings: Hawaii Kai, Kuliou'ou/Kalani Iki, and Waialae/Kahala. These presentations informed the public about the program's history and future deployment. One resolution was passed in support of the artificial reef program (Waialae/Kahala).
- Presentation and feedback sessions were held with the Maunalua Bay Fisher Hui and Statewide Fisher's Working Group to get input from fishers about the expansion and future visions for the Artificial Reef Program.
- Advised on the ReeFrame artificial reef and coral nursery project in collaboration non-profit, federal, and academic partners.





# DAR Accomplishments

# Restoration

## Sport Fish Restoration

- Stocked 25,700 rainbow trout fingerlings at the Kōke'e Public Fishing Area (PFA), Kaua'i.
- Recorded 2,994 angler visits to the Pu'u Lua Reservoir Kōke'e PFA with 15401 trout caught during the open season

## Wahiawa Public Fishing Area, O'ahu

- Assisted with "The Day On The Lake" event in collaboration with state and county organizations, as well as the Wahiawa community. Over 1,000 people attended the event. A total of 452 people were able to tour Wahiawa Public Fishing Area (PFA) on small boats.
- Installed hyacinth booms along the shoreline in the Wahiawa Freshwater State Park area and along the shoreline of Kemoo Island in the basin area of the reservoir to increase prey-predator habitat.

## FAD Program

- Installed 19 Fish Aggregating Devices (FAD)s, providing the most active FADs in over a decade.
- Deployed modifications to the FAD mooring system to test the longevity of new designs.





# DAR Accomplishments

# Restoration

## Aquatic Invasive Species

- Collected and analyzed ballast water data from 946 vessel arrivals in 2023 for presentation at the 2024 Pacific Ballast Water Group Meeting. Collected ballast water reporting forms from 980 vessel arrivals in 2024.
- Conducted recreational vessel hull fouling surveys at 15 different small boat harbors across Oahu, Hawai'i Island, Maui, and Kauai to gather information about hull husbandry practices, voyage history, and general knowledge of biofouling and aquatic invasive species; surveyed a total of 1,495 vessels and 21 harbor users
- Provided consultation for the US Coast Guard during their quarterly VIDA state engagement meetings and provided official follow-up comments to topics discussed
- Organized and facilitated a May 2024 Alien Aquatic Organism Task Force Meeting with representatives and stakeholders from federal & state agencies, non-profit organizations, and vessel industry companies
- Removed non-native *Montipora foliosa* and *Montipora stellata* coral colonies from Reef 8 in Kāne'ōhe Bay. Scheduled biannual and annual follow-up surveys to assess removal success.
- Conducted snorkel and SCUBA delineation surveys around Kualoa Beach Park and Mokolii Island due to reports of a potential non-native soft coral.
- Responded to reports of *Anemonia manjano* in Kāne'ōhe Bay and conducted comprehensive snorkel surveys to delimit the spread of the invasive species.
- Collected samples of potentially non-native *Terrazoanthus* sp. at He'eia Harbor and Kualoa Beach Park.
- Investigated reports of potentially non-native *Acropora* sp. coral in Laie. Surveyed area and collected samples for genetic identification.
- Performed surveys of the Nu'uuanu Stream area to investigate the spread of a non-native aquatic plant, Manatee Mudflower (*Micranthemum glomeratum*).
- Performed annual follow-up surveys for *Discosomma nummiforme* in the Ala Wai Small Boat Harbor.
- Conducted annual SNAP surveys to monitor invasive algae in Kāne'ōhe Bay and the Waikīkī MLCD.



# DAR Accomplishments

# Restoration

## Aquatic Invasive Species *cont.*

- Retrained employees on the “Super Sucker” system to anticipate invasive algae removal in Kāneʻohe Bay. Applied for Special Activity Permit for operations.
- Continued developing structure from motion (SfM) analysis of coral outplant sites as part of efforts to expand large-scale imaging programs for mapping of coral modules and the assessment of invasive *Anemonia manjano*.
- Provided support for Mālama Maunalua with an urchin caging experiment in Maunalua Bay by outplanting urchin cages at known invasive algae hot spots.
- Staffed specially targeted outreach tables at 10 events across Oahu, reaching approximately 1,100 members of the public
- Distributed pamphlets and other outreach material to all pet stores on Oʻahu to promote the new aquatic-specific “Don’t Let It Loose” (DLIL) campaign. Collaborated on the first DLIL Amnesty Week at the Waikiki Aquarium.
- Responded to reports of and removed non-native coral colonies found in ‘Anini, Kauaʻi

## Sea Urchin Hatchery

- Continued biocontrol management of invasive algae by outplanting 57,879 hatchery-raised juvenile sea urchins to 71,150 m<sup>2</sup> of reef in Kāneʻohe Bay.

## Limu Restoration

- Support community limu restoration efforts by providing tank space, water, and air for volunteers to cultivate limu for limu restoration.





*Kaua'i Non-native coral removal*

# DAR Accomplishments

## Restoration

### Environmental Response

- Continued assessment of the damage to coral reef and live rock caused by a Navy P8 Plane grounding in Kāneʻohe Bay off of the Marine Corps Base Hawaiʻi in November 2023. 180 corals were up righted in an emergency restoration action in December 2023. Analysis of the impact completed in August 2024 showed that between 4,531 and 5,720 coral colonies were negatively impacted based on median values. Live rock impact ranged from 38.95 m<sup>2</sup> using median values to 96.70 m<sup>2</sup> using mean values.
- Collaborated with Kuleana Coral Restoration (KCR), community-based nonprofit, and NOAA to rapidly respond to emergency coral damage likely resulting from improper anchoring at Kewalo Pipe, Oahu. KCR and DAR staff successfully reattached 206 corals that were broken loose to suitable adjacent reef.
- The US Navy detonated an unexploded ordinance that posed a potential threat to ocean users and organisms in Kaneohe Bay, Oahu, on October 7, 2024. DAR staff investigated the coral and live rock in the area prior to detonation and assessed damage to those resources after the detonation. DAR staff also dedicated two vessels to monitor protected species, including monk seals, turtles, and cetaceans, on the day of the detonation.

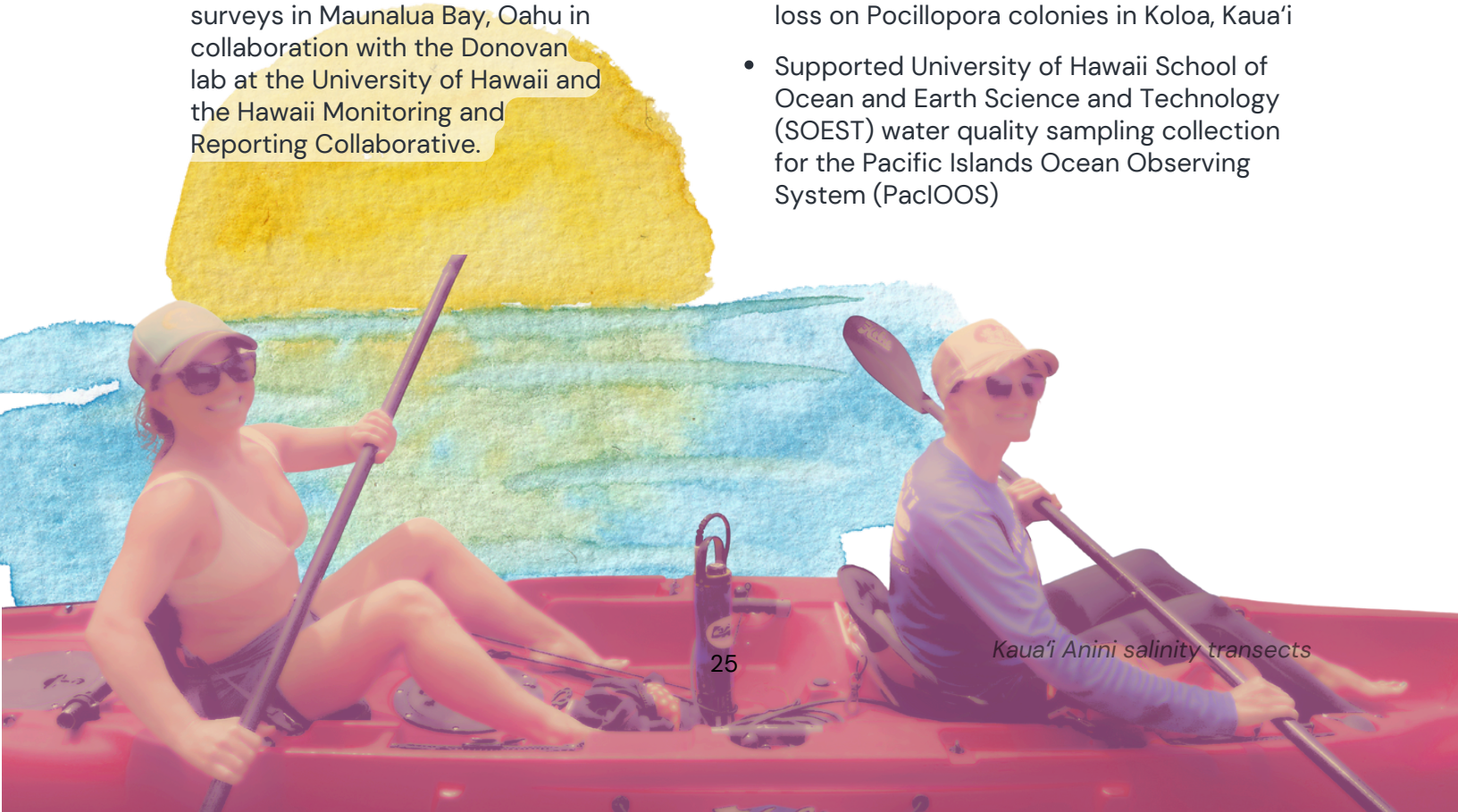


## DAR Accomplishments

# Ecosystem Monitoring

## Reef Monitoring

- Completed over 1,100 fish surveys statewide.
- Conducted Fish and Habitat Utilization Surveys (FAHU) at established monitoring sites throughout Hawai'i.
- Continued to survey Coral Reef Assessment and Monitoring Program (CRAMP) sites throughout the state and initiated incorporation of structure from motion (SfM) photogrammetry into the methodology.
- Expanded structure from motion (SfM) survey capabilities through trainings across the state
- Designed and initiated FAHU surveys in Maunaloa Bay, Oahu in collaboration with the Donovan lab at the University of Hawaii and the Hawaii Monitoring and Reporting Collaborative.
- Collaborated with NOAA to perform fish and habitat dive surveys in Papahānaumokuākea to monitor the effect of the presence and spread of *Chondria tumulosa*.
- Worked with Virginia Institute of Marine Science and the National Park Service to continue and improve on lobster survey methods in Kalaupapa National Park, Moloka'i.
- Continued to monitor and record rates of black band disease found in coral around Kaua'i.
- Completed rapid chrysophyta surveys at 'Anini, Kaua'i to quantify the extent of the spread across the reef
- Recorded and monitored incidents of tissue loss on *Pocillopora* colonies in Koloa, Kaua'i
- Supported University of Hawaii School of Ocean and Earth Science and Technology (SOEST) water quality sampling collection for the Pacific Islands Ocean Observing System (PacIOOS)







## DAR Accomplishments

# Ecosystem Monitoring

## Estuarine Monitoring

- Sampled over 20,000 fish in 13 estuaries statewide finding an atypical year with native species more abundant than introduced species.
- Building on the DAR's comprehensive inventory of Hawaiian estuaries through a collaborative project (Estuary Viewer) with Coastal Zone Management (CZM) and Hawai'i State GIS to create statewide and countywide GIS maps with attribute tables for Hawaiian estuaries. This effort addresses tackles a major gap in aquatic resource management.
- Presented the paper Using aquatic eDNA to understand how a century of water diversion is impacting insular estuaries at the Coasts and Estuaries Research Federation
- Continued work to describe the life history of uouoa mullet *Neomyxus leuciscus*, a native fish in Hawaiian estuaries, to improve management of this species, especially regarding its use of estuaries as juvenile habitat.
- Anticipating several wetland restorations and fishpond restorations in Maui (Waihee, Waiehu-Wailuku, Ukumehame, and Haycraft Beach Park), DAR Maui in collaboration with the local stakeholders have started to monitor the before-restoration conditions in the coastal habitat adjacent to the restoration sites. Biological change are monitored using beach seine and cast nets, and habitat change is monitored using temperature and water quality loggers.
- Pilot testing of the use of infra-red drone survey techniques to identify coastal submarine groundwater discharge areas around Maui.



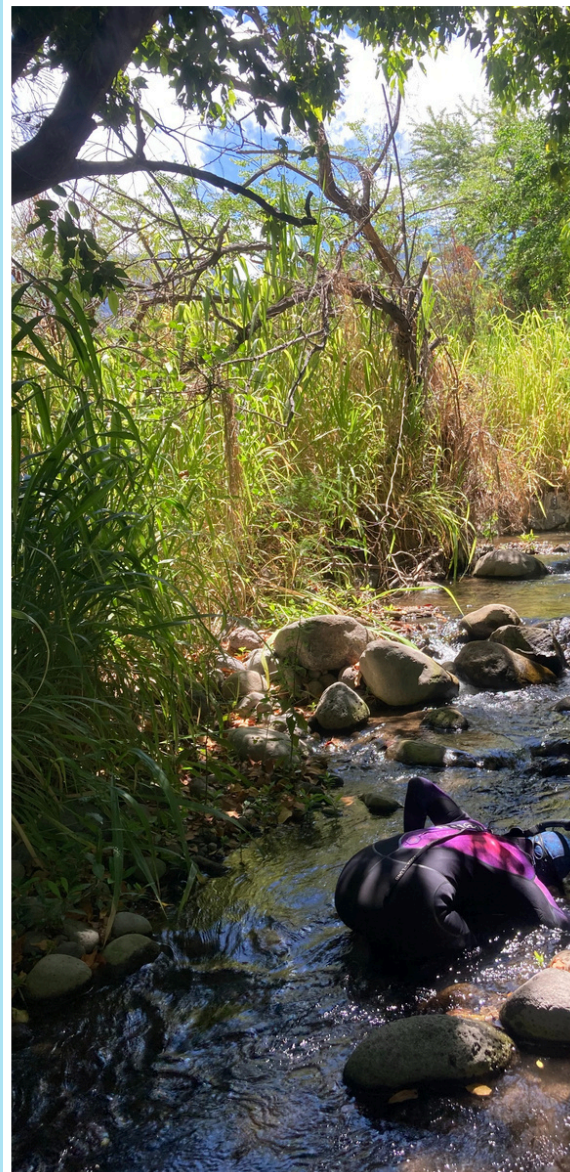
# DAR Accomplishments

# Ecosystem

# Monitoring

## Stream Monitoring

- The Commission on Water Resource Management (CWRM) is proposing to amend the interim instream flow standard for Waikoloa, Hawai'i. Waikoloa stream merges with Keanuiomano stream to form Waiulaula stream before reaching the shoreline. To establish a baseline for stream restoration, DAR is conducting a study at the lower reach of Waiulaula stream, which includes presence-absence and video surveys. Additionally, mauka stream video surveys are being conducted on Waikoloa stream.
- Conducted a study on stream biota response to stream flow restoration through IIFS and presented the results at the 154th Annual Meeting of the American Fisheries Society.
- Established new annual stream monitoring sites in Maui through partnering with community members and CWRM to monitor biota change in response to stream flow and neighboring/upstream restoration efforts.
- Worked with CWRM to carry out their annual biological monitoring survey for Maui and Kauai to inform their management action.
- Worked with National Park Service to carry out their annual biological inventory survey in Waikolu stream, Kalaupapa National Historical Park, Moloka'i.
- Performed Ki'iKi'i Stream survey and eDNA sampling with CWRM staff for IFS standards on Oahu.
- Monitored Hālawā Stream with UH-NREM staff on Oahu.



*Kalaupapa (upper) and Ukumehame (lower) streams*

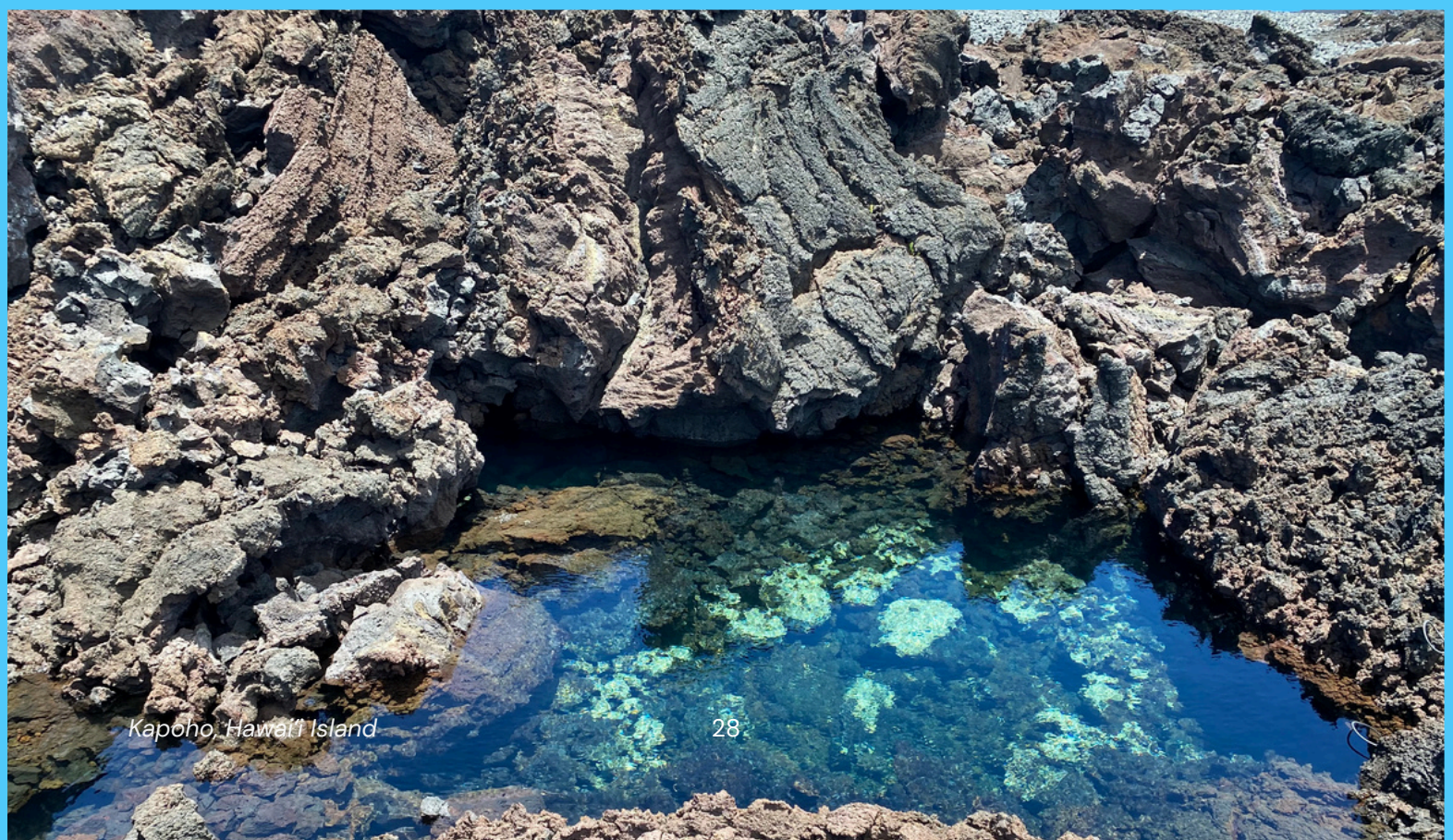


# DAR Accomplishments

# Ecosystem Monitoring

## Anchialine Pool Monitoring

- Developed an evaluation framework with partners to assess the needs and management strategies for Hawaiian anchialine ecosystems. This framework produced a decision support tool that provides comprehensive site evaluation profiles, aiding managers and stakeholders in effective protection and restoration efforts. This project received partial funding from the U.S. Environmental Protection Agency through assistance agreement CD-98T31401 to the Department of Land and Natural Resources (DLNR).
- Drafted a state monitoring and assessment strategy that incorporates new technologies for long-term monitoring of anchialine ecosystems in Hawai'i, again partly funded by the EPA under the same assistance agreement.
- Participated in the 6th International Symposium on Anchialine Ecosystems and the 26th International Conference on Subterranean Biology in Cagliari, Italy, in September 2024. They presented their anchialine protection strategy and evaluation tool at the conference, funded in part by the EPA.



*Kapoho, Hawai'i Island*





## DAR Accomplishments

# Ecosystem Monitoring

## Database

- Continued efforts to build and expand a statewide ecosystem monitoring database
- The DAR Database received 220 issue requests submitted by users with 85% of the issues addressed successfully by the close of the fiscal year.
- To improve user experiences and efficiency, a new customized Marine Monitoring data entry app was rolled out successfully. Additionally, this change resulted in cost savings because there are no license fees for the DAR Marine Team, and new users can be added at no additional expense.
- To address concerns for legacy data stored in obsolete database applications, DAR Fish Tagging's 20+ years of data were migrated to custom built data tables in the DAR Database to secure this information for posterity.
- Improvements were made by amending aquatic species names in 'Ōlelo. These modifications improve visual displays in the DAR Database dashboards.
- To intake field observations associated with environmental DNA (eDNA) methodology, a customized eDNA data entry app was built to reduce data entry errors and increase efficiency.

## Socio-Cultural Monitoring

Completed piloting of DAR's Socio-Cultural Monitoring Project at three marine managed areas on O'ahu: Pūpūkea Marine Life Conservation District, Waikīkī Fisheries Management Area and the Waikīkī Marine Life Conservation District.

## Fisheries Monitoring

The Hawai'i Marine Recreational Fishing Survey (HMRFS) monitors non-commercial fishing activity on five of the main Hawaiian Islands throughout the year to help inform fisheries management. In 2024, the HMRFS program completed 965 shoreline interviews and 476 private boat interviews statewide for a combined total of 1,441 interviews.





## DAR Accomplishments

# Ecosystem Monitoring

## Community-Based Monitoring

- Established a partnership between Kuleana Corals and an O'ahu community group to perform coral outplanting based on the group's input.
- Provided assistance to a community group in presenting their monitoring efforts at the 31st Annual Hawai'i Conservation Conference.
- Actively collaborating with a community group from Ho'okena (Hawai'i Island) to expand community-based monitoring efforts in the area.

## Water Quality

- In response to requests from fishers last year for DAR to look at water quality in relation to reef and fish health, DAR assigned the 2024–2025 National Coral Reef Management Fellow to create and assess capacity for a Water Quality Action Plan for DAR, which will be completed by the end of 2025
- Convened the Mauka to Makai Water Quality Working Group, made up of representatives from various state and federal agencies, fishing groups, nonprofits, community organizations, and research institutions. The working group met monthly and provided guidance and input for the creation of the Water Quality Action Plan
- Met with water quality stakeholders around Hawai'i Nei, with a focus on water quality data collecting organizations (Department of Health, Hui O Ka Wai Ola, Hawai'i Wai Ola, and Surfrider Blue Water Task Force) to uncover gaps in water quality work in Hawai'i that DAR can help fill to ensure water quality is improved with reef health in mind
- Organized a workshop at the US Coral Reef Task Force meeting in Saipan to learn from the CNMI jurisdiction how they incorporate water quality and biological data for their monitoring





Hawai'i Division of Aquatic Resources

# DAR Accomplishments 2025 Priorities



# DAR Accomplishments

# 2025 Priorities

## Pono Practices

- Implement online systems for Commercial Marine Vessel License, Commercial Marine Dealer License, and Nonresident Recreational Marine Fishing License
- Develop and statewide and regional regulations to manage the aquarium fishery
- Begin funding additional Aloha I Ke Kai projects to benefit marine resources, ocean users, and related businesses
- Initiate market sampling of select species to inform inshore finfish stock assessments and produce data-driven stock assessments for these species in collaboration with NOAA
- Produce and distribute new regulated species identification guides to DOCARE, commercial fishers and dealers, and the general public.
- Introduce a quarterly commercial fishing newsletter to keep commercial fishers, dealers, and the general public aware of catch and sales trends as well as establishing a conduit for regulatory updates and outreach.
- Increase efforts to directly outreach commercial fishers and dealers to promote correct and timely reporting as well as the importance of registration with the State.
- Continue ongoing work with partners to test the feasibility of a novel survey-based data collection method specific to the boat-based uku fishery.
- Fill the vacant Kaua'i Education Specialist position
- Renew and grow partnerships on O'ahu and Kaua'i
- Partner with Freshwaters Illustrated on Hawaii streams and estuaries video
- Create a series of short videos focused on DAR staff doing their work
- Expand and develop the DAR website and Social Media engagement
- Streamline permitting process and build staff capacity to efficiently process Permits and Environmental Reviews



# DAR Accomplishments 2025 Priorities

## Place-Based Planning

- Develop Maui Island management action plan based on Maui community planning process
- Begin Holomua place-based planning process on Hawai'i Island
- Finalize the Sanctuary Designation Process for Papahānaumokuākea Marine National Monument
- Continue supporting future planning process for Lalo (Tern Island)
- Finalize and implement Maunaloa Bay Fishery Management Area rules
- Develop Ka'ūpūlehu Fishery Management Area rules in collaboration with the Ka'ūpūlehu community and stakeholders



## Administrative

- Complete DAR 2025–2030 Strategic Plan
- Develop Annual District Reports including metrics for tracking aquatic resource status over time in response to environmental change, use, and management activities.
- Fill vacant positions
- Enhance capacity to fulfill DAR's mission in collaboration with community members.





# DAR Accomplishments

## 2025 Priorities

### Restoration and Protection

- Support the coral nursery facility on Kaua'i and expand capacity for restoration actions
- Build DAR capacity to address the threats of invasive soft corals, coral disease, and vessel incidental discharge.
- Draft an action plan with fishers to guide reef restoration that enhances fish habitat.
- Scope protection and restoration strategies for estuaries.
- Co-produce interagency environmental permitting guidance and best practices for wetland restoration actions to scale statewide.

### Ecosystem Monitoring

- Continue Fish and Habitat Utilization Surveys (FAHU) across the Main Hawaiian Islands to provide spatial and temporal data to inform management decisions.
- Conduct SfM surveys on diseased coral colonies to calculate rate of spread
- Complete the Estuary Viewer in collaboration with with Coastal Zone Management (CZM) and Hawai'i State GIS to create statewide and countywide GIS maps with attribute tables for Hawaiian estuaries.
- Develop technical reports and improve access and availability of DAR ecosystem monitoring data

## & DISTRICT REPORTS [Click to view](#)

