

Reserve Advisory Council

STATE OF HAWAII, DEPARTMENT OF LAND AND NATURAL RESOURCES, DIVISION OF AQUATIC RESOURCES

REPORTING PERIOD: MAY 2018 – AUGUST 2018

1. FISHERIES

BOTTOMFISH FISHERIES

The Division of Aquatic Resources (DAR) is considering the opening of Bottomfish Restricted Fishing Areas (BRFA). To better understand the influence of the BRFAs a refinement of reporting grids is being proposed. This refinement will allow DAR to document fishing activities in areas that were previously closed to fishing. It is unlikely that DAR will be able to open all the BRFAs at once. To prioritize which BRFAs to open DAR is soliciting opinions from numerous stakeholders.

PELAGIC FISHERIES

No report

2. RESOURCE PROTECTION

MARINE LIFE CONSERVATION DISTRICTS (MLCDs)

MLCDs and control sites are surveyed for fish and habitat. Routinely the fish surveys are conducted two to three times a year. During this period, eight of the 10 MLCDs were surveyed for fish. No benthic surveys were conducted for this reporting period.

In June 2018, the Waiopae Tidepools MLCD on Hawaii Island was lost after being covered by lava.

ARTIFICIAL REEFS

Surveys were conducted twice at the Maunalua Bay and Waianae artificial reefs. Efforts to develop an updated Environmental Impact Statement for DARs Artificial Reef project was initiated.

3. ECOSYSTEM & HABITAT

FISH AGGREGATION DEVICES (FADs)

During the period of May 2018 to August 2018 activity was high for the FAD Program.

During May 2018, one FAD was reported missing and six FADs were replaced as detailed below:

- CC – Kaena Point, Lanai (missing on 5/5)
- DK – Anahola, Kauai (replaced on 5/5)
- AA – Port Allen, Kauai (replaced on 5/5)
- MM – Mokapu Point, Oahu (replaced on 5/29)
- LL – Hauula, Oahu, Oahu (replaced on 5/29)
- U – Kaneohe, Oahu (replaced on 5/29)
- X – Kahuku, Oahu (replaced on 5/29)

During June 2018, three FADs were reported missing, four FADs were replaced and one FAD site approved for relocation as detailed below:

- CO – Kena Point, Oahu (missing on 6/4)
- Q – Pauwela Point, Maui (missing on 6/4)
- HH – Pearl Harbor, Oahu (missing on 6/4)
- CC – Kaena Point, Lanai (replaced on 6/18)
- SO – Kealaikahiki, Kahoolawe (replaced on 6/19)
- JJ – Kamohio, Kahoolawe (replaced on 6/19)
- TT – Kanewaa Point, Hawaii (replaced on 6/19)
- ZZ – Waima Point, Hawaii 19-56.9N; 155-57.9W approved from previous position of Mahukona, Hawaii 20-09.5N; 155-57.5W

During July and August 2018 there was no activity.

COASTAL AREAS, REEFS

U. S. Coral Reef Task Force (USCFTF)

The USCFTF AIC at American Samoa adapted and passed the Strategic Coral Restoration plan, which was previously sent to DAR personnel for comments. However, it has not yet published, and is being finalized at this time.

CORAL REEFS ECOSYSTEM MANAGEMENT

West Hawaii Shallow Water Resource Fish Surveys

DAR Kona continued nearshore fish and invertebrate surveys at 25 sites along the West Hawaii coast and completed two rounds of surveys from Lapakahi (North Kohala) to Manuka (Kau) in May and July. These surveys are part of a continuous monitoring program (4-6 times/yr.) along this coast since 1998. During these surveys, relatively warm water was observed (>82°F), and mild bleaching was observed for finger coral (*Porites compressa*), estimated at about 5% of the remaining population. Monitoring Round #90 began in September 2018.

One round of Honaunau Retro surveys was completed at 3 sites in South Kona, including two sites within Honaunau Bay, and one site within Alahaka Bay. These surveys are part of a long-term fish and benthic monitoring study that has been conducted periodically at these same sites over four-year consecutive periods since 1974. Analysis of this dataset will begin in Winter 2019.

Monthly fish surveys were conducted at Keei (South Kona) at a long-term monitoring site. These surveys began in 1977, which provides a historical framework for interpreting the data.

Data analysis continued for Shallow Water Resource Fish Surveys (SWRF), which were conducted at 72 sites from February 27 to April 24, 2018. The objective of the surveys was to document the abundance of adult resource fish species in shallow water habitats along the coastline, where they are typically most abundant during the day. Surveys will be compared to similar surveys conducted in 2008, 2009, 2011 and 2014.

DAR Kona met with community members and NGO partners in the village of Miloli'i to discuss progress on their Community Based Subsistence Fishing Area (CBSFA) application.

The DAR Kona team also participated in numerous community and management meetings (e.g. DAR database planning meeting, FishPath tool workshop hosted by The Nature Conservancy at Kaupulehu, the 4th Joint Government Water Conference "Protecting Hawaii's Groundwater", the South Kohala Coastal Partnership Conservation Action Plan update, the 30x30 Initiative update, and others) to help stay informed and inform resource management in West Hawaii.

4. SUBSISTENCE & RECREATIONAL

HAWAII MARINE RECREATIONAL FISHING SURVEY (HMRFS)

The HMRFS program continues to collect non-commercial fisheries data for the State of Hawaii. From May through August 2018. A total 957 angler intercepts were completed for both the shoreline and private boat modes from Kauai, Oahu, Maui, Molokai and Hawaii. Due to funding limitations, HMRFS staff are at a 3/4-time status for the duration of State Fiscal Year 2019 or until additional funds become available.

The MRIP Workshop in Honolulu has been delayed until January 2019. Though the focus of the workshop will be the certification of the proposed HMRFS survey design changes as outlined in the MRIP Pacific Islands Regional Implementation Plan,

representatives from the territories will also be in attendance to align certification efforts for the Western Pacific Region.

5. OTHER ISSUES

STATISTICAL UNIT ACTIVITIES

Commercial Fisheries Reports

The 2017-2018 MHI Deep 7 Bottomfish fishing year ended on August 31, 2018. As of 9/21/2018, 343 licensed fishers made 2,143 trips and landed 223,028 pounds of Deep-7 bottomfish, or 75.0% of the Annual Catch Limit (ACL), which is 306,000 pounds.

The current 2018-2019 Deep 7 Bottomfish fishing year began on September 1, 2018 with a new and higher ACL of 492,000 pounds. This ACL is based on the new 2018 Stock Assessment report prepared by NOAA Fisheries and it will continue to be in place for each Bottomfish fishing year until August 31, 2021.

WPacFIN is providing technical support to DLNR-DAR to replace MS Visual FoxPro database applications that run the commercial fisheries reporting systems. This is a high priority project to re-write the fishing report and fish dealer reporting systems using a different desktop application. The database file is in MySQL. During August, the data entry application for the aquarium fish catch report was completed. The next project priority is to finish an application to import the fish auction's weekly dealer transaction electronic file into the MySQL database.

Commercial Dealer Reports

Beginning in May and ending in August, the web portal vendor assembled mock ups or proto-type system displays of the online dealer report system design specifications. A proto-type was compiled for online dealer public and admin versions. The public version is for primary dealers to log into the web application to input purchase receipt transaction reports and to verify the report submission status. The admin version is for DLNR-DAR staff to input purchase reports received from primary dealers who do not submit reports online. The web portal vendor will be developing the online dealer report system application from September 2018 through April 2019. Testing of the online system is slated for May and June 2019 and it is scheduled for rollout on July 2019.

DLNR-DAR established Hawaii Administrative Rules in January 2018 to require primary dealers to submit the dealer purchase report on a weekly basis.

Beginning on July 1, 2018, 250 primary dealers across the state were notified to comply with this weekly report period requirement. DLNR-DAR will eventually enforce this report requirement using the Civil Resources Violation System (CRVS) when the online dealer report system is implemented next July 2019. Primary dealers who do not comply with the reporting requirement are being sent reminder notices every week. The weekly report period includes all dealer purchase receipt transactions occurring between Sunday and Saturday. Dealers are required to submit that weekly report period report transactions to DLNR-DAR by the following Tuesday. It is important that DLNR-DAR receive complete and reliable dealer reports from dealers on time. The dealer reports are used to check the validity of the fisher's Commercial Marine License and to verify what is reported on fishing trip reports.

AQUATIC INVASIVE SPECIES (AIS) MANAGEMENT

Kaneohe Bay AIS Control, Monitoring, and Restoration Efforts

Invasive algae management continues in the bay in the form of monitoring and sea urchin out-plantings. All priority patch reefs have been stocked to the desired capacity with urchins, and efforts have now shifted to stocking urchins on the invasive algae on fringing reefs. The final NOAA Estuary Habitat Restoration Grant report has been submitted and is in review. A paper on previous and current efforts in Kaneohe Bay has been published in PeerJ: Neilson BJ, Wall CB, Mancini FT, Gewecke CA. (2018) Herbivore biocontrol and manual removal successfully reduce invasive macroalgae on coral reefs. PeerJ 6: e5332.

Harbor Monitoring

The AIS team, in cooperation with the DAR Ballast Water and Hull Fouling team, deployed invertebrate settlement arrays called Autonomous Reef Monitoring Structures (ARMS) in three harbors within the state. ARMS were deployed in Honolulu and Barber's Point, Oahu along with Nawiliwili Harbor, Kauai. The purpose of this project is to allow organisms to attach themselves to the arrays, and then assess the benthic communities for invasive species after retrieval in approximately one year.

Kauai *Salvinia molesta* eDNA Project

The AIS team completed Phase 2 in assessing the distribution of *Salvinia molesta* on Kauai using the environmental DNA (eDNA) sampling techniques. Water samples were collected at perennial stream mouths on the leeward side and inland stream folks on the windward of Kauai to determine the presence or absence of *S. molesta*. The results are being used to create an island-wide distribution map of *S. molesta* for Kauai watersheds.

Staffing

The AIS Lead Aquatic Biologist IV position was filled by the previous Aquatic Biologist III Field Team Coordinator Justin Goggins. Dan Lager, who has

worked for over four years as a Fisheries Technician IV on the AIS team, has currently move up into the Temporary Assigned Aquatic Biologist III position.

Rapid Response

AIS team members responded to reports of coral bleaching near the Natatorium in Waikiki and assessed a potential Crown of Thorns (COTS) outbreak near Waianae, Oahu. Site inspections for the Red Devil Cichlid were conducted and confirmed to be present in Nuuanu Stream.

West Hawaii Reef Resilience Survey

One AIS technician and other DAR staff participated in the West Hawaii Reef Resilience Surveys, headed by The Nature Conservancy. These surveys are part of a long-term effort to assess variables that may indicate the ability of reefs to be resilient under times of stress.

Presentations and Outreach Events

Six presentations were given at the Hawaii Conservation Conference on topics ranging from Kaneohe Bay AIS control methods, Ballast Water and Hull Fouling, Risk Assessment Tool Analysis, and eDNA use as a rapid assessment tool. AIS staff also presented our algae mapping results to the Kilohana Summer Project with the Kamehameha Schools on Molokai.

AIS team members participated at the following community based outreach events (Hawaii State Library Outreach Event, Molokai Limu Day Outreach Event, Niu Valley School STEM Outreach Presentation, Waikalua Loko Fish Pond Community Day, National Hunting and Fish Day, Ewa Pono Outreach & Beach Cleanup, NOAA Protected Resources Presentation, Rotary Club Presentation on Forestry and Aquatic Resource projects).

Trainings

All AIS team members have completed 24 HR Hazwoper Training, which is the minimum required training course to be allowed on-scene during a hazard emergency response event. One Team member has been trained in Aerial Drone Surveillance Research Methods with the Federal Aviation Administration.

Ballast Water and Biofouling

As a follow-up to the last report regarding implementation of the Hawaii Invasive Species Council and Hawaii Concurrent Resolution (HISC 18-1 and HCR 130), DAR staff has assisted in developing the testing protocol currently being used to conduct efficacy testing of vessel in-water cleaning debris capture systems. The first leg of testing has been completed in Baltimore, Maryland during the summertime. The second leg of testing for the same biofouling management system will occur in Alameda, CA, where DAR staff will assist with testing

operations. The purpose is to learn and gain hands on experience for when we conduct efficacy testing of these systems in the State of Hawaii.

Regarding our Harbor Monitoring Project, we deployed artificial reef monitoring (ARMs) units in 3 commercial harbors (Honolulu Harbor, Barber's Point Harbor, and Nawiliwili Harbor) and near each harbor mouth to monitor for new aquatic alien species recruitment (if any) and identify (quantify) if new species are getting out of the harbors onto local reefs. We have one more location to deploy which is Kahalui Harbor. We use these structures so we don't have to take apart corals to look for these alien species because many of them take residence within the nooks and crannies of healthy and unhealthy corals.

ROADMAP TO 30 X 30

The Division of Aquatic Resources (DAR) is currently developed a *Roadmap to 30x30* report, which will summarize context and identify specific actions and milestones to achieve the goal of "effectively managing 30% of Hawaii's nearshore marine waters by 2030." Part of the Sustainable Hawaii Initiative and the Aloha+ Challenge, the Marine 30x30 will focus on four main components: 1) updating statewide fisheries rules, 2) developing a cohesive system of Marine Managed Areas, 3) expanding capacity for enforcement and monitoring, and 4) ensuring a comprehensive monitoring approach. The Division has been working with a steering committee as well as several technical partners (including WESPAC representatives) over the past year to bring together the best available information on these topics and chart a course to improve fisheries management in the nearshore environment. The *Roadmap to 30x30* represents the beginning of this process and DAR anticipates the report to be publicly available in early 2019. Next steps will be to share more information about several opportunities for stakeholders and the public to provide feedback and work collaboratively on each topic over the next 2-3 years.

COMMERCIAL AQUARIUM PERMITS

On July 26, 2018, after a full and detailed review of two Final Environment Assessments (EAs) prepared by the Pet Industry Joint Advisory Council (PIJAC), the Department of Land and Natural Resources determined that the collection of marine life around Hawaii Island and Oahu pursuant to Commercial Aquarium Permits may have a significant impact on the environment and that the preparation of an Environmental Impact Statement (EIS) is required. The Hawaii Supreme Court ruled on September 6, 2017, that an environmental review must first occur before permits can be issued to catch aquatic life for the commercial aquarium trade using fine mesh nets. DLNR will continue to cease issuance of Aquarium Permit to use fine mesh net to collect live aquarium marine fish until the industry completes and submits an Environmental Impact Assessment. At this time, neither the former aquarium permit holders nor PIJAC have indicated whether an EIA will be prepared.

**FEASIBILITY OF A NON-COMMERCIAL MARINE FISHING REGISTRY,
PERMIT, OR LICENSE (RPL) SYSTEM IN HAWAII**

The Division of Aquatic Resources (DAR) is considering the establishment of a fee-based non-commercial marine fishing license system in Hawaii. The idea is based on a 2016 independent Study Group report that explored the feasibility of establishing a non-commercial marine fishing registry, permit, or license (RPL) system in Hawaii. The same Study Group is in the process of conducting further stakeholder outreach to share about the group's research and findings and gather feedback from the public.