

National Fish and Wildlife Foundation

NFWF/Legacy Grant Project ID: 0302.11.026734

Coral Reef Conservation Fund 2011 - Submit Final Programmatic Report (Activities and Outcomes)

Grantee Organization: Hawaii Department of Land and Natural Resources

Project Title: Ahihi-Kinau Marine Protected Area Management (HI)

**Project Period** 07/01/2011 - 06/01/2014  
**Award Amount** \$70,404.00  
**Matching Contributions** \$87,468.00  
**Project Location Description (from Proposal)** Ahihi-Kinau Natural Area Reserve is located on the southern shoreline of the Hawaiian Island of Maui. The Reserve includes 327 ha (807 acres) of submerged lands which are a Marine Protected Area.

**Project Summary (from Proposal)** Employ an Outreach and Education Coordinator to reduce human threats to coral reefs at Ahihi-Kinau. Threats to be addressed include illegal harvesting of marine resources and recreational impacts.

**Summary of Accomplishments** We continued implementation of the Outreach and Education Program through the ongoing implementation of a volunteer program and other activities.

**Lessons Learned** Work has been proceeding well in continuing the Outreach and Education Program, although there have been difficulties in maintaining ongoing, full-time staffing of the Coordinator position. The Coordinator resigned from the position in September 27, 2013, and a temporary replacement was not hired until January 6, 2014. During the 3 months without a Coordinator, the Reserve Manager and key volunteers managed the program.

Conservation Activities actions	Hire Education and Outreach Coordinator to implement high priority strategic
Progress Measures Value at Grant Completion	# activities from management plan being implemented six strategic actions
Conservation Activities Progress Measures entry/anchoring etc))	Improve visitor/user awareness of MPA regulations Other (# enforcement violations (illegal fishing, motorized vessel
Value at Grant Completion	TBD
Conservation Activities Progress Measures Value at Grant Completion	Establish a volunteer program Other (# of volunteers recruited and trained for Reserve) 10-15 volunteers

Conservation Outcome(s) human use in the draft plan	Implement six high priority strategic actions identified under management of
Conservation Indicator Metric(s) Baseline Metric Value	# activities from management plan being implemented 0
Metric Value at Grant Completion	6
Long-term Goal Metric Value	6
Year in which Long Term Metric Value is Anticipated	2012
Conservation Outcome(s) Conservation Indicator Metric(s) Baseline Metric Value	Reduction of human trampling impacts Other (Index of coral trampling sensitivity) TBD
Metric Value at Grant Completion	TBD
Long-term Goal Metric Value	TBD
Year in which Long Term Metric Value is Anticipated	2015
Conservation Outcome(s) Conservation Indicator Metric(s)	Stable or increasing fish biomass within the MPA Mean fish biomass

Baseline Metric Value	TBD
Metric Value at Grant Completion	TBD
Long-term Goal Metric Value	TBD
Year in which Long Term Metric Value is Anticipated	2015
Conservation Outcome(s)	Stable or increasing % of mean coral cover within the MPA
Conservation Indicator Metric(s)	% live coral cover
Baseline Metric Value	21.1%
Metric Value at Grant Completion	TBD
Long-term Goal Metric Value	TBD
Year in which Long Term Metric Value is Anticipated	2015
Conservation Outcome(s)	Establish and enforce rules to govern appropriate visitor behavior
Conservation Indicator Metric(s)	% of targeted stakeholders changing behavior
Baseline Metric Value	TBD
Metric Value at Grant Completion	TBD
Long-term Goal Metric Value	TBD
Year in which Long Term Metric Value is Anticipated	2012



# NFWF

## Final Programmatic Report Narrative

**Instructions:** Save this document on your computer and complete the narrative in the format provided. The final narrative should not exceed ten (10) pages; do not delete the text provided below. Once complete, upload this document into the on-line final programmatic report task as instructed.

### 1. Summary of Accomplishments

In four to five sentences, provide a brief summary of the project's key accomplishments and outcomes that were observed or measured.

The project reduced human threats to coral reefs in the Ahihi-Kinau Reserve by establishing a volunteer program and targeted community education. The presence of volunteers and outreach activities improved visitor/user awareness of Marine Protected Area regulations; promoted low-impact behavior through educational materials and a "good stewardship etiquette while visiting" program. Volunteers were effective in supplementing the limited state staff available for management of the Reserve. Volunteers assisted with monitoring human use and biological factors, fostering awareness of resource users on regulations and natural history, and reporting violations to state enforcement officers.

### 2. Project Activities & Outcomes

#### Activities

- Describe the primary activities conducted during this grant and explain any discrepancies between the activities conducted from those that were proposed.

#### Primary Activities Conducted:

1. Established Education and Outreach Program – Establishment of this program is an integral part of the management plan for the Ahihi-Kinau Reserve, which was finalized in October 2012.  
<http://dlnr.hawaii.gov/ecosystems/files/2013/07/Ahihi-Kinau-NAR-Management-Plan.pdf>  
Proposed grant activities were successfully completed in spite of difficulties in hiring and maintaining a full-time Coordinator position (due to medical leave, staff turnover). The project hired an Education and Outreach Coordinator on June 25, 2012 to develop an education and outreach program, including the volunteer program. The Coordinator resigned from the position in September 27, 2013, and a temporary replacement was hired January - May, 2014. During the 4 months without a Coordinator, the Reserve Manager and key volunteers managed the program.
2. Develop and implement a volunteer program. The Education and Outreach Coordinator developed and implemented a successful volunteer program and completed proposed grant activities. As there is limited staff for the Reserve, the volunteer program is critical to providing information and education to visitors. Education and outreach efforts by volunteers continue to inform visitors of open/closed areas of the Reserve, reduce enforcement violations for illegal entry into closed portions of the Reserve, and promoting low-impact behavior through educational materials. The periods without a Coordinator position and/or only a part-time coordinator (due to medical leave) resulted in a reduction in the number of regular volunteers and volunteer hours.
3. Established and maintained visitor entry and passage systems - Education and outreach programs established volunteer interpretive areas and informational materials along self-guided trails and visitor congregation sites (e.g. parking lots, access gates).

4. Long-Term Monitoring - Long-term outcomes within the MPA was measured at two sites within the Reserve in July 2011, 2012 and 2013 as part of a long-term monitoring study of Maui reefs by the Coral Reef Assessment and Monitoring Program (CRAMP), a Hawaii Institute of Marine Biology (HIMB) program conducted in partnership with the Division of Aquatic Resources (DAR). DAR also conducted fish surveys at five locations within the MPA in February, June and October of 2012 and 2013, monitored coral disease at one site in the Reserve and coordinated fish (herbivore) surveys with volunteers at various times throughout 2012 and 2013.

## Outcomes

- Describe progress towards achieving the project outcomes as proposed and briefly explain any discrepancies between your results compared to what was anticipated.
- Provide any further information (such as unexpected outcomes) important for understanding project activities and outcome results.

Progress to achieving project outcomes included successful implementation of six high priority strategic actions identified in the draft management plan. Short-term outcomes of the project were observed to result in increased levels of voluntary compliance with existing laws and management policies protecting the MPA. The overall objective of human use management is to reduce the negative impacts of visitors within MPA in the Reserve by half (from 2007 levels) with a downward trend in negative impacts continuing through 2015. Unexpected outcomes described in more detail below (continued closure of portions of the Reserve due to hazards posed by unexploded Ordnance (UXO)) resulted in reducing negative human impacts but increased impacts from non-native feral goats.

Staff and volunteers continue to staff an interpretive station at Kanahena Cove, a focal point for visitors to the Reserve, with tables and chairs, and interpretive materials (fish id books, maps, etc.). Volunteers here engage visitors providing information on coral and marine resources, tips to minimizing human impacts to the MPA, and safety. Additionally, volunteers direct visitors planning to snorkel to an entry point into the water that minimizes trampling of coral. Outreach and volunteer project outcomes achieved include the following:

- Implemented regular ongoing volunteer program, which started in December 2012 and is currently ongoing. Volunteer hours are recorded/compiled on a monthly basis and total 24 hours in 2012, 1,212 hours in 2013 and 407 hours in 2014 (January-April). The program has had a high of 21 volunteers to the current level of 8 volunteers. The number of regular volunteers fluctuates with the season since many live on the island part-time as well as with the level/availability of staffing for volunteer recruitment and supervision.
- Compiled existing educational and outreach materials for outreach.
- Developed and provided a two-day training program for volunteers which covers marine and coral reef biology, interpretive/outreach training, safety and emergency response, and training in DOFAW/MPA policy and rules.
- Developed a data form and collected volunteer data and visitor use data (data form and existing data included in uploads for report). Staff and volunteers collected information on visitor counts, visitor interactions (# contacted/briefed on rules/reef etiquette), impacts and enforcement violations May 2013 – May 2014. Volunteers recorded 3,794 visitors as contacted/briefed over that time period of over 5,000 visitors (in ocean) and 7,115 (on land). There were 160 impacts recorded (standing on coral, touching sea turtles, fishing gear etc.).
- 28 violations were handled internally (though education/outreach) and 3 were reported to the Division of Conservation and Resource Enforcement (DOCARE).
- DOCARE officers spent approximately 25 hours/month on Reserve enforcement investigations and actions. In FY 2013 there were 14 investigations and 8 citations and in FY 2014 there were 34 investigations and 9 citations.
- Provided education and outreach programs and volunteer service trips to expand educational

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- Developed and regularly updated volunteer handbook (uploads) and policies to address volunteer recruitment, hiring, training, evaluation and volunteer appreciation.
- Provided Volunteer Recognition events with members of the Advisory Committee and Resident Stakeholders as invited guests.
- Produced newsletter for ongoing education and announcements to volunteers, neighbors of the Reserve and the general public.
- Compiled educational materials for volunteers for continuing education. including online portal for continuing education <http://ahihikinau.wordpress.com/>
- Provided Reserve t-shirts and hats to volunteers.
- Contractors completed construction of an interpretive structure where visitors can get information, view maps and volunteers. The structure will also provide shade and wind protection for volunteers.
- Constructed a pedestrian trail to improve safety and direct Reserve visitors to the volunteer education and information table.

The effectiveness of the project in achieving long-term outcomes is difficult to detect over the period of this project. DAR continued monitoring at two sites to track long-term status of coral reef health and trends as well as fish surveys 3 times per year at five sites. Data from the two Reserve sites was included in a statewide analysis (*Over a Decade of Change in Spatial and Temporal Dynamics of Hawaiian Coral Reef Communities*. 2014)(included in the grant report uploads - CRAMP.Paper.pdf). Marine protected areas (MPAs) on Maui, including sites within the Reserve sites have remained stable or experienced slower declines in coral cover compared to sites with open access.

We are planning on continuing the Outreach and Education Programs initiated through the NFWF grant with state funds and are currently in the middle of hiring process to refill the Outreach and Education Coordinator position (vacant since mid-May 2014). In January 2014, U.S. Fish and Wildlife Service National Coastal Grants Wetlands Conservation Grants Program awarded a grant of \$344,400 to the Division of Forestry and Wildlife for Ahihi Kina'u Coastal Wetlands Ecosystem Restoration. This grant will help continue and expand successful programs started through the NFWF project such as coral reef protection and restoration and education and outreach.

### Unexpected Outcomes

Additional factors, not anticipated at the time of grant submission, have further reduced human impacts to the Reserve over the grant period. Reserve closures have lasted for longer than expected, and have been extended due to planning and surveys for unexploded ordnance. Many portions of the Reserve were originally only closed to the public for two years (2008-2010) due to concerns about degradation of natural resources due to unmanaged human impacts and for preparation of a management plan. During the original closure staff and partners completed baseline surveys for geological, coastal, marine and cultural resources as well as human impacts. The State worked closely with the Nature Conservancy of Hawai'i to develop a management plan to guide conservation efforts and to communicate management goals and objectives to constituents and partners. Reserve closure was extended in 2010 to 2012 in order to complete the management plan.

Although the management plan was completed in 2012, Reserve closure has been extended until 2016 for planning for removal of munitions and unexploded ordnance deposited via bombing practice by the U.S. Military in WWII. The Remediation project follows CERCLA (Comprehensive Environmental Response, Compensation and Liability Act) guidelines. These actions include Phase 1: Site Investigation (completed in 2008); Phase 2: Remedial Investigation/Feasibility Study (currently in the Feasibility portion); and Phase 3: Remedial Action to complete the process (yet to be completed). The Remedial Investigation field survey was completed in 2011, with reports and meetings with staff and

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others in 2012. In July 2012 continued closure of the Reserve was approved until 2014 to allow the Remedial Investigation and Feasibility Study to be conducted. The Final Remedial Investigation report was presented in a meeting in early 2013 and concluded that significant hazards still exist, rated at a Hazard Level 2 due to historical findings of UXO in portions of the Reserve, and need to be addressed through the Feasibility Study process, necessitating continued closure of the area, with restricted access, until long term solutions can be identified.

<http://www.poh.usace.army.mil/Portals/10/docs/factsheets/KanahenaFactSheet.pdf> (included in uploads)

Reserve closure for both the management plan and for UXO remediation planning has allowed many areas with significant human impacts to recover, such as trampled coral reef and beaches, sea turtle and monk seal habitat, waterbird and shorebird habitats, and other coastal marine life habitats. A related unforeseen outcome developed due to drought (2009-July 2013) and lack of human presence in the area (due to closure). There was a significant influx of feral goats into the Reserve from surrounding private ranches and goats have impacted native and non-native vegetation more than in recent previous years. Fencing plans are now being made to exclude feral goats and other non-native ungulates from the coastal sections of the Reserve.

### **3. Lessons Learned**

Describe the key lessons learned from this project, such as the least and most effective conservation practices or notable aspects of the project's methods, monitoring, or results. How could other conservation organizations adapt similar strategies to build upon some of these key lessons about what worked best and what did not?

The Project had difficulty in recruiting and retaining an Outreach and Education Coordinator, which resulted in fluctuations in volunteer numbers and hours. During periods when this key position was vacant it was difficult to maintain regular volunteer numbers. During the grant period there were also numerous vacancies and transitions in state staffing for the Reserve, so the Coordinator position lacked adequate supervision and guidance at times. The project is currently recruiting for a new Outreach and Education Coordinator with state funds, under a revised job description with a more accurate description of duties and the harsh environmental working conditions at the Reserve. Additionally, there is now more stable state staffing (supervisory position) for the Reserve, which will improve future communication and program effectiveness.

The project had difficulty monitoring human impacts in a standardized format. The retention of a Coordinator problems and state staffing transitions delayed the development and implementation of a human use monitoring protocol, data gathering and analysis of human use data. Volunteers required guidance, supervision and encouragement to collect the human use data and periods of transition (between Coordinators and/or without Coordinators) resulted in lack of data and/or poor data quality.

Over the project period we successfully monitored and compiled information of total number of volunteers recruited and trained and volunteer hours per month. Although we successfully developed data forms to collect information on numbers of visitors/ visitor impacts and started to compile this information, it was difficult to determine the effectiveness of the project in achieving short-term outcomes through monitoring of human use such as visitor levels, behaviors, and impacts. Human use data was not collected consistently by volunteers over a long enough period of time during the project period and gaps in volunteer staffing (area was not staffed by volunteers over regularly) resulted in gaps in both content and data entry. We are working to improve and refine data collection consistency, content, compilation and data entry. This will include further volunteer training, gathering feedback on the form, form revisions and continued research on alternative methods of data collection, data entry and data summary that require less staff and volunteer effort (e.g. electronic traffic counter on roadway). The state is planning on implementing a fee system for parking at the Reserve, which would potentially be an easier way to collect information on the numbers of visitors, rather than relying on the volunteers to collect data on visitor numbers.

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The project is still challenged to develop sustainable funding sources to support staff and volunteer programs. Currently there is adequate state funding for another year of project staffing, however additional funds are needed beyond this time frame. Staff and partners are currently pursuing the development of sustainable funding mechanisms for staff and Reserve Management by developing the ability (through administrative rule changes) to charge a parking fee.

#### 4. Dissemination

Briefly identify any dissemination of project results and/or lessons learned to external audiences, such as the public or other conservation organizations. Specifically outline any management uptake and/or actions resulting from the project and describe the direct impacts of any capacity building activities.

Project results and challenges were presented and discussed at three public meetings of the thirteen member 'Ahihi-Kina'u/Keoneoio Advisory Group in 2014 (February, May) and 2012 (August). The 'Ahihi-Kina'u/Keoneoio Advisory Group is composed of representatives from government (state (DLNR), county, federal (National Park Service), adjacent landowners, community representatives (recreation/snorkeling, cultural resources, fishing, conservation, marine science, and tourism). A presentation from the May 2014 meeting is attached in the uploads section of this report.

The Volunteer Coordinator set up and regularly updated a Facebook page created for communicating key messages and for monitoring what others are posting online about the Reserve.

<https://www.facebook.com/FriendsOfAhihiKinau>

The Reserve specific Facebook page is not regularly being updated by staff as we are transitioning to a Facebook page for the entire state Department of Land and Natural Resources.

Volunteers assisted with the removal of a large piece of Japanese tsunami marine debris in March 2013, resulting in a story on the front page of the Maui News.

<http://www.mauinews.com/page/content.detail/id/570674/Possible-tsunami-debris-retrieve---.html>

Local volunteer groups are working such as Surfrider Foundation, Native Hawaiian Plant Society, Kihei Charter School, Youth Conservation Corps, Boeing Corporation, cultural groups etc. are currently working with Reserve staff on special projects to benefit the Reserve's coral reefs, including marine debris removal. These groups are all provided with an orientation to the Reserve, including the significance of the resources and human impacts to those resources.

#### 5. Project Documents

Include in your final programmatic report, via the Uploads section of this task, the following:

- 2-10 representative photos from the project. Photos need to have a minimum resolution of 300 dpi;
- Report publications, Power Point (or other) presentations, GIS data, brochures, videos, outreach tools, press releases, media coverage;
- Any project deliverables per the terms of your grant agreement.

**POSTING OF FINAL REPORT:** *This report and attached project documents may be shared by the Foundation and any Funding Source for the Project via their respective websites. In the event that the Recipient intends to claim that its final report or project documents contains material that does not have to be posted on such websites because it is protected from disclosure by statutory or regulatory provisions, the Recipient shall clearly mark all such potentially protected materials as "PROTECTED" and provide an explanation and complete citation to the statutory or regulatory source for such protection.*