

`AHIHI-KINA`U NATURAL AREA RESERVE
2 Year Resource Protection Action Plan
August 1, 2008 to July 31, 2010
Final Report DRAFT 4.2010

On May 23, 2008, the Division of Forestry and Wildlife submitted a request to the Board of Land and Natural Resources to implement a 2 year closure of portions of Ahihi-Kinau Natural Area Reserve. This closure was requested due to the unregulated high human use in the area and the resulting heavy impacts to the reserve's natural, geological, and cultural resources. The request was initiated by the Ahihi-Kinau / Keoneoio Advisory Group, supported by the Natural Area Reserve Commission, and submitted to the Board of Land and Natural Resources by the Division of Forestry and Wildlife.

Before the Board approved the request, members of the Board requested that human use and resource monitoring continue to be conducted in the Reserve and at the end of the two year closure, staff return to the Board and present a report of their findings as well as a recommendation for the Reserve's future management.

The following document is a summary of what has occurred in Ahihi-Kinau Natural Area Reserve during the closure and includes a summary of the closure action plan implementation, findings from resource surveys and human use surveys, management planning efforts, and capacity changes.

The purpose of the 2008 Resource Protection Action Plan (ie the Closure Plan) was to address human impacts to natural, geological, and cultural resources by controlling access and use throughout the reserve for a period of up to two years in order to mitigate negative impacts associated with visitor use.

The desired outcomes of the 2008 plan were to:

- Immediately reduce human impacts to natural and cultural resources
- Increase visitor safety and emergency personnel response time
- Implement surveys to assess any resource recovery and enable long term monitoring.

In order to reach these outcomes, a detailed action plan was designed which included a goal, several objectives and specific actions required to achieve each objective. Benchmarks and deadlines were assigned to each action to enable future evaluation of the success of each action.

This report evaluates each action and follows the format of the 2008 Action Plan. Changes to performance measures are marked with ~~strike through~~ and additions are marked with an *asterix. Success of each action was measured by the achievement of the stated objectives.

Section 1 – 2008 Action Plan Analysis

The following section provides the 2 year action plan and lists the current status of each action (as of March 2010) with a short analysis of each objective.

2 Year Resource Protection Action Plan – GOAL

Prevent and reduce impacts to natural and cultural resources and increase public safety by providing a management framework with clear information on permitted use and restrictions.

Objective 1. By June 2008, receive BLNR approval on action plan to control access and use within 'Ahiihi-Kina' u NAR by zone for two years.

Action	Performance Measure	Deadline	Status
1a. Solicit comment on action plan at advisory group meetings.	Advisory Group approval	April 7, 2008	COMPLETED Unanimous approval on April 7, 2008
1b. Revise plan as needed, solicit comments on Action Plan at NARS Commission meeting.	NARSC approval	April 21, 2008	COMPLETED Unanimous approval on April 21, 2008
1c. Revise plan as needed, present plan to BLNR for final approval.	BLNR approval	May 2008	COMPLETED Unanimous approval on 5/23/08

Analysis: Objective 1 reached. Approval obtained and closure period started on schedule.

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Objective 2. By August 2008, implement an aggressive and methodical outreach program to inform the general public about the NAR restrictions before they enter the area.

Action	Performance Measure	Deadline	Status
2a. Issue press release to general public through various media.	% informed public * issuance of press release	August 1, 2008	COMPLETED Press release issued on * July 11, 2008
2b. Issue printed notice to visitor industry (rental car companies, concierge, guidebooks, visitor channel)	Total visitor % unknown * issuance of visitor notice	August 1, 2008	COMPLETED *Visitor industry notice issued through Governor's Office Tourism Liason on July 11, 2008
2c. Develop and upload a website	% website developed * number of hits	July 1, 2008 Ongoing	COMPLETED 100 % completed ONGOING *Number of hits on 3/2010: 3935
* 2d. Design and distribute NAR informational brochure. (Also listed as 4b)	Number of brochures printed	July 15, 2008	COMPLETED Ordered 10,000 in July 2008 Reordered 10,000 in Sept. 2009

Analysis: Objective 2 reached. Significant effort put towards outreach efforts. Multiple press releases issued and thousands of brochures distributed. A more thorough analysis of outreach can be found in Section 3.

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Objective 3. Provide the public with regular, interactive means to track progress through public advisory group meetings and an interactive website.

	Action	Performance Measure	Deadline	Status
3a. Develop and upload website	User surveys	August 2008	Not completed	
	% website developed	August 2008	Not completed	
	Number of hits	August 2008	Not completed	
	Number of plans/reports downloaded	August 2008	Not completed	
3b. Hold quarterly meetings to report progress and receive public input	Comments posts on website	August 2008	Not completed	
	Number of meetings	Beginning in July 2008	COMPLETED 10 meetings.	
	Number of attendees	Beginning in July 2008	COMPLETED 102 attendees	

Analysis: Objective 3 not reached. Technical restrictions hindered the design of an interactive Departmental website and budget restrictions prevented the contracting the design and hosting of a private reserve website. Efforts to address this problem were to hold public meeting for the management plan and to post updates, reports, and meeting minutes on the current website.

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Objective 4. By August 2008, provide the public with clear information about access and use by clearly delineating boundaries through the posting of signs, by fencing, and by distributing educational material.

Action	Performance Measure	Deadline	Status
4a. Install 40 regulatory and educational signage	Number of signs installed	August 2008	COMPLETED 60+ signs installed by 8/2008
4b. Design and distribute NAR informational brochures (rules, zones, recommended snorkeling areas).	Number of brochures printed	July 15, 2008	COMPLETED Ordered 10,000 in July 2008 Reordered 10,000 in Sept. 2009
	Number of brochures distributed	Ongoing	COMPLETED 10,000 distributed by October 2009, more pending
4c. Erect visual barriers (low fencing) to protect Maoanakala village and help to define zone border	Meters of fencing erected	June 2008	COMPLETED ~240m of yellow rope completed by June 2008 Rope replaced in Dec 2009 with ~ 300m of yellow rope
	Number of people entering restricted area through rope barrier	Ongoing	ONGOING 0 people
4d. Erect physical barriers for future outplanting site and to help define zone border at Kalaeloa	Meters of fencing erected	July 2008	CANCELLED
	Number of people entering restricted area	Ongoing	ONGOING 58 people as of 3/30/2010

Analysis: Objective 4 was reached. Necessary barriers and signs were in place by the start of the closure. Thousands of brochures were distributed on site.

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Objective 5. By August 2008, minimize entry into the restricted zones by increasing presence throughout NAR and ensure effective enforcement of illegal activity if it occurs

Action	Performance Measure	Deadline	Status
	Number of users informed on scene	By August 2008	
	Number of volunteer hours	By August 2008	
5a. Design protocol for educating users on scene and reporting violations	Number of violations reported	By August 2008	
	*Education protocol established for rangers	By August 2008	COMPLETED *Completed by July 2008
	*Reporting protocol established	By August 2008	COMPLETED *Completed by July 2008
Action 5b. Engage DOCARE, MPD, and citizens patrol	Number of citations/warnings/arrests	Ongoing	<p>DOCARE Officers: August 2008 – September 2009</p> <p>For closed area violations: 22 Investigations, 13 Warnings, 58 Citations</p> <p>For other violations: 39 Investigations, 5 Warnings, 55 Citations</p>
* 5c. Increase Departmental presence in area.	Hours closure		<p>13,672 Rangers hours between 8/08 and 2/10 (estimate based on 3 FTE positions for 18 months, 1 FTE for 17 months, 1 FTE for 5 months, 1 PTE for 18 months)</p> <p>Other Divisions unknown</p>

Analysis: Objective 5 was reached. A strong Departmental presence was established in area. Effective enforcement of illegal activity, especially with illegal entry into the closed area, occurred. Between August 2008 and September 2009, **93%** of illegal entries observed by rangers resulted in DOCARE responses. Stats pending review for 2nd half of closure.

Objective 6. By August 2008, increase communication capability throughout reserve by installing a repeater system.				
Action	Performance Measure	Deadline	Status	
6a. Purchase and install radio repeater	% progress on repeater installation	August 2008	DELAYED 0% completed	
6b. Purchase radios for expanded outreach programs	Radios purchased for new staff Radios purchased for volunteers	August 2008	COMPLETED 4 radios purchased CANCELLED	

Analysis: Objective 6 was not reached. Although it is a major factor in current and future management of the area, technical and procurement difficulties have delayed the purchase of a radio repeater.

Objective 7. By November 2008, increase management capacity by hiring and training 3 well equipped rangers.				
Action	Performance Measure	Deadline	Status	
7a. Hire and train 3 rangers	% progress on hiring and training rangers	1 by June 2008 2 more by July 2008	COMPLETED Hired ranger #4 in June 2008 COMPLETED Hired #5 and #6 in Sept 2008	

Analysis: Objective 7 reached. 3 rangers were hired and trained although 1 ranger quit. Currently there are a total of 5 rangers (4 field, 1 admin).

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Objective 8. By December 2008 finalize and implement regular monitoring to assess status and trends of key natural resource features (e.g. fish populations, near-shore corals, anchialine pool fauna)

Action	Performance Measure	Deadline	Status
8a. Previous survey methodology evaluated and set of long-term monitoring protocols finalized by August 2008	Staff *% Previous survey methodology evaluated	By December of each year *August 2008	COMPLETED * 100% completed by August 2008
	*% Long-term human use monitoring protocols finalized	* August 2008	COMPLETED *100% of human use monitoring protocol finalized by July 2008
	*% Long-term marine monitoring protocols finalized	* August 2008	COMPLETED *100 % of marine monitoring protocol finalized by August 2008
	*% Long-term anchialine pool monitoring protocols finalized	* August 2008	COMPLETED *Late – 100% of anchialine pool monitoring protocol established by January 2009
	*% Long-term geology monitoring protocols finalized	* August 2008	COMPLETED *Late – 100% of geological monitoring protocol established by February 2009
	*% Long-term archaeology monitoring protocols finalized	* August 2008	COMPLETED *100% of archaeological monitoring protocol finalized by August 2008
	*% Long-term opih monitoring protocols finalized	* August 2008	COMPLETED *100% of opipi monitoring protocol established by January 2009
8b. Baseline monitoring completed on an annual basis.	Staff		See Objective 9 and 10
			Analysis: Objective 8 was reached. All methodology for monitoring key resources were finalized in order to start monitoring the effects of the closure.

Objective 9. By August 2009 complete baseline monitoring for human impacts to resources in and out of restricted zones.
*** (Combined with Objective 10)**

9a. Survey human-use behavior	Number, activity, and location of people	By August 2009	Ongoing
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Analysis: Objective 9 was combined with Objective 10 because they contained the same targets.

Objective 10. By August 2009 complete baseline monitoring for natural resources, incorporating previous studies

Action	Performance Measure	Deadline	Status
Staff, trained volunteers, others			Ongoing
*% baseline marine monitoring completed	* August 2009		COMPLETED * 100% of baseline completed in January of 2009
*% baseline anchialine pool monitoring completed (pool portion)	* August 2009		COMPLETED * 100% completed in March of 2010
*% baseline anchialine pool monitoring completed (bird portion)	* August 2009		COMPLETED * 100% completed in March 2010
*% baseline geology monitoring completed	* August 2009		COMPLETED * 100% complete in January of 2010
*% baseline archaeological monitoring completed	* August 2009		COMPLETED * 100% of baseline for high use corridors completed in 2008
*% opihí monitoring completed	* August 2009		COMPLETED * 100% of baseline for opihí completed in March of 2009

Analysis: Objective 10 was reached. All of the baseline measurements of the key resources were completed within the closure period. Due to the short period of this project, noticeable changes did not occur to all of the resources, however, there were some startling changes recorded in anchialine ponds and marine life.

Objective 11. By January 2009, design and test a program to provide reliable, quality, guided educational walks for visitors to Kalaeloa and Mokuha.

Action	Performance Measure	Deadline	Status
	*% of hike routes determined	* January 2009	COMPLETED
	*% of participant criteria determined	* January 2009	COMPLETED
11a. Design and test program to provide 2 hikes/day, 2 days a month	*% of participant survey design completed	* January 2009	* 100% of criteria determined by January 2009
	*% of hike guide script completed	* January 2009	* 100% of survey completed by January 2009
	Number of participants	January 2009	Late – 90% of script completed by January of 2010
	Survey results of participants	January 2009	No participants
	Numbers of ranger hours needed	May 2009	No surveys completed
11b. Evaluate feasibility to expanding guided hike program	Number of volunteers/docent available		Not completed
	Liability / costs associated with expansion		Not completed

Analysis: Objective 11 was not reached. Preparation for the guided hikes was completed however access into the closed area has been suspended due to safety and liability concerns until radio communications are solidified.

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Objective 12. By June 2010 delineate clearly marked trails and ocean entry points to prevent degradation of resources and increase visitor safety.

Action	Performance Measure	Deadline	Status
12a. Delineate clear trails that avoid sensitive resources at 'Ahihi Bay and Mokuha	% of trail delineation completed	'Ahihi Bay trail by August 2008 All others by June 2010	COMPLETED 100 % completed in June 2008
12b. Assess the possibility of delineating trail to Kalaeloa	% completion of assessment Decision to delineate trail	By November 2009 By November 2009	COMPLETED 100% completed by November 2009 COMPLETED Decision made by November 2009

Analysis: Objective 12 was reached. Ahihi Bay trail was delineated by the start of the closure. All other trails were assessed and will be delineated in accordance with the approval of the management plan.

Objective 13. Continue monitoring of natural and cultural resources, building on baseline monitoring .

Action	Performance Measure	Deadline	Status
	*% of year 2 marine monitoring completed	Ongoing	Ongoing
	*% of year 2 anchialine pool monitoring completed (pool portion)	Ongoing	Ongoing
	*% of year 2 anchialine pool monitoring completed (bird portion)	Ongoing	Ongoing
	*% of year 2 geology monitoring completed	Ongoing	Ongoing
13a. Continue to implement monitoring protocols	*% of year 2 archaeological monitoring completed	Ongoing	Ongoing
	*% of year 2 ophi monitoring completed	Ongoing	Ongoing

Analysis: All monitoring will continue to be implemented to track long term changes.

Objective 14. Continue revising and updating Ahili-Kinai NAR Management Plan, incorporating Action Plan.

Action	Performance Measure	Deadline	Status
14a. Work with Advisory Group and other interested groups to review management plan.	Staff, others *Number of meetings	By July 31, 2010	
14b. Incorporate Action Plan Analysis into Management Plan.	*% Completion of Action Plan Analysis	* By April 2010	

Analysis: Ongoing as of March 2010

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