

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Forestry and Wildlife
Honolulu, Hawaii 96813

October 10, 2008

Chairperson and Members
Board of Land and Natural Resources
State of Hawai'i
Honolulu, Hawai'i

Land Board Members:

SUBJECT: ANNUAL PROGRESS BRIEFING TO THE BOARD OF LAND AND NATURAL RESOURCES REGARDING IMPLEMENTATION OF THE MANAGEMENT PLAN FOR THE AHUPUA'A OF PU'U WA'AWA'A AND THE MAKAI LANDS OF PU'U ANAHULU

BACKGROUND:

On July 25, 2003, the Board of Land and Natural Resources approved in concept the *Management Plan for the Ahupua'a of Pu'u Wa'awa'a and the Makai Lands of Pu'u Anahulu*, a ten year plan developed jointly by the Divisions of Forestry and Wildlife and State Parks. In approving this Management Plan, the Board directed DOFAW and SP to provide the Board with annual updates through the following recommendation:

“3) Require annual reports from staff that identify progress and the effectiveness of the public and private sector involvement in implementing the Management Plan.”

This submittal provides a status report on implementation of the Management Plan from 2003-2008, with accomplishments over the past year indicated in bold font at the end of each Objective.

Status of the Pu'u Wa'awa'a Advisory Council (PAC): The PAC is a group of volunteers who represent diverse areas of expertise relevant to the implementation of the Management Plan. Members represent the *Hui 'Ohana mai Pu'u Anahulu a me Pu'u Wa'awa'a* (2 – Ku'uilei Keakealani, Clayton Tremaine), Cultural expert (1 – *vacant*), Neighboring Landowner (1 – Robby Hind), Natural Resource Specialists (3 – Michael Tomich, Susan Cordell, Jon Giffin), recreation use specialists (3 – Bob Okawa, Frank Sayre, Alan Nakagawa), business/ecotourism specialist (1 – Mark McGuffie), 2 grazing management specialists (2 – Corky Bryan, Mark Thorne), and 1 grant writing/coastal zone specialist (1 – Carolyn Stewart). DOFAW is currently soliciting applications to fill the vacancy for the Cultural Resources expert. The PAC has met

four times between the last Board submittal update, and numerous subcommittee meetings have been held covering the various subject areas of the Management Plan. One additional subcommittee has been created for public hunting as of the July 13th meeting. The Advisory Council has adopted a one-year plan borne out of the strategic planning exercise in 2007, and the website www.puuwaawaa.org was launched earlier this year.

The progress to date toward implementing *The Management Plan for the Ahupua‘a of Pu‘u Wa‘awa‘a and the Makai Lands of Pu‘u Anahulu* by Subject Area and Objective is as follows:

Administrative Priorities:

Objective 1. Initiate legislation for establishment of a special fund

The current thinking and consensus by DLNR Management and Administration is that the creation of a special fund specifically for Pu‘u Wa‘awa‘a would not be approved by the State Legislature, and would not support the other Objectives of the Management Plan. **On October 17, 2007, Pu‘u Wa‘awa‘a was officially set-aside as a unit of the Forest Reserve System, which possesses a special fund, which in essence achieves this Objective.**

Objective 2: Develop a Master Plan for the proposed Kīholo State Park

The set-aside for Kīholo State Park Reserve was completed in the spring of 2006, and State Parks has assumed management of this area. Coordinator has convened a group of stakeholders (coastal users and landowners) that has created a 501(c)(3) community organization (“Hui Aloha Kīholo,” incorporation status pending) whose mission is to steward the Kīholo area in partnership with State Parks through seeking funds for the development of a long-range plan. Coordinator has worked with State Parks archaeologists and also worked with a graduate student from Yale to conduct a study related to public impact on resources (see Objective 43) towards interim planning for the area. **Hui Aloha Kīholo and the Pu‘u Wa‘awa‘a Volunteer Work Program have conducted 4 work days in Kīholo to improve trails, restore anchialine pools, clear vegetation from parking areas, and general litter clean ups. On December 31, 2007, Governor Linda Lingle released funds to develop a Master Plan and environmental assessment for Hawaii Island State Parks, including Kīholo.**

Objective 3. Develop new DLNR administrative rules for land areas not covered under present DLNR rules

This Objective has been addressed through the set of rules associated with the new Forest Reserve designation, as indicated under Objective 1.

Objective 4. Fund and hire a Management Plan Coordinator

This Objective was accomplished with the establishment of a

watershed-Pu'u Wa'awa'a Project Coordinator position under the LNR 407 Program and the hiring of Michael Donoho to fill this position. The initial priority stated in the Plan under this Objective, to establish or identify an existing 501(c)(3) partner organization, has been accomplished under a partnership with Ka 'Ahahui o Ka Nahelehele, a group formed in early 2007 whose mission is to assist public and private land managers in the general stewardship of native dryland forests. Coordinator facilitates all Advisory Council and Subcommittee meetings.

Fire Management:

- Objective 5. Increase public fire hazard awareness through educational programs**
Signs have been posted along Highway 190, and Coordinator produced an informational brochure in 2006 about Pu'u Wa'awa'a and surrounding dryland forest areas. **Wildfire education continues to be a theme during outreach events and field trips in Pu'u Wa'awa'a. In 2008, coordinator wrote a grant proposal that was funded by the American Hiking Society to construct an informational kiosk informing visitors about the area, including the wildfire hazard risk.**
- Objective 6. Reduce fire hazard at Pu'u Wa'awa'a using prevention measures**
Fire and fuel breaks have been established and maintained along Highway 190 as well as throughout the high fire hazard areas within critical habitat at Pu'u Wa'awa'a. Fuel loading across the general landscape has also been reduced within the existing grazing areas through Right-of-Entry permits. **Access to Pu'u Wa'awa'a beyond the safety zone has been restricted during extreme dry conditions to reduce the potential for human-related fire starts.**
- Objective 7. Provide fire pre-suppression management for conservation units**
Coordinator has received basic wildland fire training and refresher courses. Coordinator provided assistance in the development of Community Wildfire Preparedness Plan (CWPP) in 2007 that addressed critical assets and liabilities within the area, and has contributed to pre-suppression projects, such as re-lining of the Lake House Reservoir, the establishment of a "green break" along Highway 190 in 'Ohia Paddock, and the installation of a 20,000-gallon water tank in the remote middle Hale Piula Paddock. **Currently preparing a fire break expansion plan complete with signage to facilitate faster response time to wildfire events.**
- Objective 8. Effectively suppress fire in the event that a wildland fire does occur at Pu'u Wa'awa'a**
Coordinator has been the first-on-scene for 2 wildfires (January and March 2006) and helped to contain the early spread of such fires as well as logistical support on those fires since fire training was not complete at that

time. Since that time, a 100-gallon tank/pump has been staged at the Coordinator's office and training is now complete. **Drought mitigation funds have been secured in December 2007 to complete the re-lining of the reservoir to enhance bucket-drop operations.**

Natural Resource Management:

Objective 9. Fence the best remaining sections of native forest and remove ungulates from these conservation units on a priority basis

Of the 12 conservation units indicated in the Management Plan, four have been constructed to date: the Waihou Unit Phase I (204 acres), the Upper Kipuka Oweowe Unit (10 acres), the Pu'u Wa'awa'a Cinder Cone Unit (70 acres), and the Pu'u Wa'awa'a Forest Bird Sanctuary ("FBS," 3,806 acres). Kipuka Oweowe and the Cone Unit are ungulate-free. The trap-and-release project for the FBS was initiated in February of 2007, with nearly 700 feral pigs removed to date. Maintenance of these fence enclosures, alien plant removal, and native outplantings has been conducted by field crew and volunteer efforts. **With the addition of a 3-person field crew, the Waihou enclosure fence is now ungulate-proof and all feral animals have been removed. Kipuka Oweowe is completely free of fountain grass. Funds are being sought to construct the next enclosure, the Henahena Unit, which is over 800 acres.**

Objective 10. Protect native flora and fauna by controlling non-native predators

A routine predator control program for rats, cats, mongoose and wild dogs has been conducted since late 2004.

Objective 11. Control invasive weeds that suppress native plant populations

The Pu'u Wa'awa'a Volunteer Work Program was initiated and conducted on a monthly basis by the Coordinator since December of 2004, and one of the main tasks is invasive weed removal, targeting populations within and outside of established conservation units. **The newly-established field crew has assumed most of the weed control work at Pu'u Wa'awa'a, and special groups like the Youth Conservation Corps have targeted critical areas for particularly aggressive species such as banana poka, fire weed, Spanish needle, tree tobacco, and others.**

Objective 12. Protect isolated occurrences of rare and endangered species

Implemented a paddock-by-paddock plan for fencing individual endangered species using own fieldwork time and individual and group volunteer efforts. To date nearly four dozen individual halapepe (*Pleomele hawaiiensis*) and 'aiea (*Nothocestrum breviflorum*) have been protected using 16' sections of heavy gauge hog paneling in the initial 'Ohia Paddock (main entry paddock). **The individual fencing plan for rare trees is ongoing in the 'Ohia and Waihou paddocks. Instead of a 60-**

plus acre enclosure as indicated for the proposed 'Aiea unit under Objective 9 above, individual fences have been installed around these endangered trees. This has reduced material costs, will reduce maintenance time, and facilitate fuels management between trees.

Objective 13. Restore native plant populations including rare and endangered species

Outplantings have been coordinated using staff, special groups, and the Volunteer Work Program in all four main conservation units as well as several smaller units throughout Pu'u Wa'awa'a. **To date, nearly 50,000 common and rare plants have been planted during rainy seasons, and follow-up watering and weed management has been conducted by both the field crew and volunteers.**

Objective 14. Develop a resource management and monitoring program

The Hawaii Permanent Plot Network (HIPNET) has established a ten hectare plot in the Forest Bird Sanctuary through the Hawaii Experimental Forest, which will monitor changes in the upper forest areas on a long term basis.

Objective 15. Create a native plant seed orchard at the Pu'u Wa'awa'a Meeting House

This project was initiated in September of 2006 with the establishment of a 7,000 square-foot enclosure between the Meeting and Lake Houses, with nearly 150 plantings to date representing 2 dozen species. **NRCS has awarded a grant to Pu'u Wa'awa'a, which has been used as a match for two other approved grants, to restore nene habitat and native dryland forest over the entire 45-acre reservoir paddock. This will also serve as a large-scale seed orchard.**

Objective 16: Preserve and protect unique native invertebrate populations at Pu'u Wa'awa'a and the makai lands of Pu'u Anahulu

Administering research permits for the study of native bee populations, and coordinated the withdrawal of commercial bee keepers from Pu'u Wa'awa'a, who have been operating in conflict with native bee populations for over 70 years. Worked with game managers to relocate bee keeping activities to Pu'u Anahulu.

Objective 17: Protect and enhance native bird populations and their habitat

The fencing and ongoing predator control programs for the Pu'u Wa'awa'a Forest Bird Sanctuary is a first step in the protection and future enhancement of native bird populations at Pu'u Wa'awa'a. Research projects related to forest bird behavior and habitat have been administered within the Sanctuary. Once ungulates are removed from the FBS, known forage trees and plants will be outplanted to improve habitat. **The NRCS grant mentioned in Objective 16 above will enhance over 40 acres of**

degraded landscape for habitat for nene, a project funded for the next 5 years. The Drought Mitigation funds will restore the reservoir as part of that habitat.

Objective 18. Manage Fisheries Resources at Kīholo Bay

This is a near-term priority for the newly-formed *Hui Aloha Kīholo* community group partner, who has already drafted a bill that would ban any net fishing in the inner bay area, a habitat essential for juvenile marine life for the greater coastal region. **This proposed rule change is still pending.**

Objective 19. Continue sea turtle protection and research in the Kīholo Bay Area

Hawaii Preparatory Academy and National Marine Fisheries Service continue their ongoing sea turtle research in Kīholo Bay.

Objective 20. Protect anchialine pool resources in the coastal regions of Pu‘u Wa‘awa‘a and Pu‘u Anahulu

The Pu‘u Wa‘awa‘a Volunteer Program has restored and maintained the Waiaelepi anchialine pool at Kīholo for the past 2 years, and Coordinator is working with a private landowner on restoration of a pool on their property.

Objective 21. Control feral ungulate populations makai of the Queen Ka‘ahumanu Highway

Over the last few years, the goat population in the Kīholo area has increased substantially. **A trap-and-release program was conducted, relocating these animals in a nearby game management area.**

Objective 22. Protect biological cave resources

Since 2004, the Coordinator has administered a research permit for Douglass Medville of the National Speleological Society to survey caves in the Kīholo and greater Pu‘u Wa‘awa‘a region. **Mr. Medville and his team continues to work in Pu‘u Wa‘awa‘a under a Right-of-Entry permit.**

Objective 23. Provide areas for scientific research supporting restoration efforts

Coordinator assisted with the establishment of the Hawaii Experimental Tropical Forest in association with the US Forest Service, of which Pu‘u Wa‘awa‘a is the dryland forest component. **A working group meets monthly to develop the research application protocols, check-in procedures, website development, and to coordinate implementation planning. A site has been proposed for HETF support facilities at the former quarry site, and a weather station is to be sited within the Forest Bird Sanctuary to provide climate data for the upper reaches of the Forest Reserve. Existing structures are being renovated for use**

by researchers and in support of other activities under the Management Plan.

Objective 24. Fund and hire permanent field staff to implement natural resource management objectives

In partnership with the Three Mountain Alliance, a three person crew was established in October 2007 to work on natural resource projects in Pu'u Wa'awa'a and other sites in West Hawaii on a shared basis. This crew has upgraded enclosure fences to ungulate-proof status, engaged in weed control operations, conducted outplanting of native species, assisted with feral animal control in the PWWFBS, and other related tasks.

Grazing Management:

Objective 25. Continued use of grazing as a means to control fine fuels build up along Highway 190, and at both existing and future conservation units
Permitted grazing for fine fuels control along Highway 190 has been facilitated and overseen by the Coordinator since March 2005. Expanding the water system will serve to improve the effectiveness of permitted grazing at Pu'u Wa'awa'a.

Objective 26. Develop and implement a long-term grazing plan supporting the diverse objectives of the Pu'u Wa'awa'a management plan
A grazing management plan is currently being drafted by University of Hawaii College of Tropical Agriculture, and a review of this draft is expected at the end of summer 2008.

Public Hunting Program:

Objective 27. Continue to provide a safe and quality hunting environment
The public hunting program continues at Pu'u Wa'awa'a, and Coordinator provides information on upcoming hunts to related individuals and organizations, as needed.

Objective 28. Provide sustainable public hunting opportunities
The public hunting program is integrated with other aspects of Management Plan implementation.

Objective 29. Enhance game habitat in selected areas of the Pu'u Wa'awa'a
Several game bird guzzlers have improved the availability of water in several areas within the GMA.

Objective 30. Utilize public hunting to reduce feral ungulate pressure on remaining native plant resources in proposed conservation unit areas

This was done in the FBS as part of a phased ungulate removal plan. All constructed conservation units are ungulate-free or are approaching ungulate-free status. Public hunting continues in areas proposed as conservation units.

Objective 31. Promote youth hunter programs

Youth hunting program has been discontinued until changes in the hunting statutes and rules will authorize youth hunting seasons.

Objective 32. Promote disabled hunter access programs

This program was discontinued in 2005 due to a lack of interest by the disabled hunting public. Program will not be reinstated until changes in the hunting rules allow the issuance of hunting permits for persons with disabilities.

Objective 33. Determine hunting seasons for feral sheep, goats and pigs based on monitoring their movement, population trends, and habitat conditions

The Habitat Conservation Plan (HCP) for Pu'u Wa'awa'a and Pu'u Anahulu has been ongoing since 2003, and will be final pending the hiring of a new project coordinator.

Objective 34. Expand predator control program

This has taken place with the initiation of predator control in the FBS and Waihou units, and the FBS program has expanded to small mammals in addition to feral pigs, sheep and goats.

Objective 35. Develop game bird guzzlers

Wildlife staff has installed a number of guzzlers over the past three years.

Objective 36. Establish dove flights in Pu'u Wa'awa'a by establishing forage plots

This Objective has not been addressed and is being reconsidered as a project to be pursued, based on hunter interest.

Objective 37. Increase game bird hunting opportunities

Habitat has not improved to the point where additional game bird hunts can be scheduled. Special hunts or additional opportunities cannot be scheduled until changes in the hunting statutes and rules are implemented to allow this objective to be pursued.

Objective 38. Manage pasture vegetation via grazing to provide game bird habitat

Pastures vegetation has been managed per Objective 25, through permits administered by the Coordinator.

Objective 39. Encourage game species research within Pu'u Wa'awa'a

The HCP is conducting game species research at Pu'u Wa'awa'a.

Objective 40. Develop a bird dog training area within Pu'u Wa'awa'a

Three bird dog training areas have been designated within Pu'u Wa'awa'a through efforts of the Coordinator and Wildlife staff. Since then, there have been no inquiries from the hunting public to utilize these training areas.

Objective 41. Fund and hire one permanent position to implement management objectives for hunting management within Pu'u Wa'awa'a

This Objective has not been addressed.

Trails, Access and Ecotourism:

Objective 42. Survey and develop historic trails within and adjacent to the ahupua'a for public use

Ongoing. All known historic trails have been surveyed and some are open through the Na Ala Hele Program, however use of certain trails is not encouraged due to the lack of staff to maintain and provide oversight of these trails over remote State lands. Old bulldozer tracks that have become overgrown are cleared as appropriate to provide public access as trails and provide the basis for the public hiking program at Pu'u Wa'awa'a, which currently features about 10 miles of trails in the hunting Safety Zone. Coordinator has directed volunteer efforts to clearing trails, and has developed trail map/brochure for the system.

Objective 43. Document Current Public Use of the Kīholo Bay Area

This objective was achieved in 2007.

Objective 44. Construct new trail segments as needed

The current thinking for Pu'u Wa'awa'a is to utilize existing bulldozer tracks for the trail system as stated in Objective 42. There are enough of these previous surface disturbances within the Safety Zone to develop a system that can be open through hunting seasons that routes visitors through the dryland forest and away from sensitive species as needed. Existing 4-wheel drive roads outside of the Safety Zone will provide seasonal access to the more remote areas and campgrounds on a permit basis at which time the management capacity of the program is adequate to do so.

Objective 45. Provide public access to Pu'u Wa'awa'a on selected roads

Current thinking on this item is to restrict vehicular access to the Safety Zone, as vehicle-related fire starts are responsible for several wildfires in Pu'u Wa'awa'a, and for the potential conflict with ranching and other Plan Objectives. Here, roads will be maintained so that 2-wheel drive cars can

be safely driven to trailheads and to points of interest for visitors with disabilities.

Objective 46. Manage short- and long-term commercial ecotourism activities

This Objective is being addressed in the Environmental Assessment and will not be initiated until the EA is complete.

Objective 47. Fund and hire permanent field staff to implement management objectives for trails and access projects and the proposed Kīholo State Park, and support enforcement within for both ahupua'a

This Objective has not been initiated.

Cultural and Archeological Resources:

Objective 48. Conduct a comprehensive cultural and archaeological survey of Pu'u Wa'awa'a and the makai portion of Pu'u Anahulu

While this Objective has not been initiated, talks with the 'ohana from the area for their involvement and guidance on this project have begun. Several grant proposals are currently being drafted to address this objective.

Objective 49. Protect and Restore Cultural Sites

This Objective has not been initiated, pending the completion of Objective 48 above.

Objective 50. Establish protocol for sustainable traditional and cultural gathering

The Advisory Council subcommittee on Cultural Resources is in the early stages of developing this protocol.

Cultural and Environmental Education Program Development:

Objective 51. Fund and hire an education center staff to initiate education and volunteer programs

Although staff has not been hired, Coordinator continues to serve as interpreter for 12-15 school and youth groups annually. Coordinator is working with new US Forest Service staff on educational programs under the Hawaii Experimental Tropical Forest (HETF) designation for Pu'u Wa'awa'a.

Facilities and Infrastructure:

Objective 52. Upgrade and maintain Structures B3, B4, B5, B6, B8, B10, B12, B13, B14 and B15 to support Management Plan operations and objectives

Coordinator administered funds and oversaw the extensive renovation of Structure B3; has worked with tenants on maintenance of Structures B4, 5, and 6; established a partnership with a partner agency and secured funds to renovate B8; and secured funds to renovate B14. Structure B10 is in use by cattle grazing permittee; structures B12 and B13 will likely be demolished as the old quarry site has been selected for Hawaii Experimental Tropical Forest facilities; and structure B15 has been maintained and is in excellent condition.

Objective 53. Upgrade Structures B1, B2 and B9 for use by livestock permittee

These structures have been maintained and are in use by the livestock permittee and DOFAW staff.

Objective 54. Establish an education center at Structure B7

This structure has been utilized by various groups for education-related purposes regularly over the past three years, but requires extensive renovations. A fund administered by non-profit partner has been dedicated to renovations to Structure B7 as an interim education center, until which time a permanent facility is established in partnership with the HETF.

Objective 55. Demolish and remove Structure B11

This Objective has been achieved.

Objective 56. Upgrade Cultural and Environmental Education facilities

A non-profit group, Hui Aloha Kīholo, is working toward securing funds needed to upgrade structure B16.

Objective 57. Repair water reservoirs and tanks at three existing sites

A contractor has been selected to complete the relining of the meeting house reservoir, and materials are available to re-line the Po‘o Ho‘oho‘o reservoir. Discussions about options to re-line the Hale Piula catchment have begun.

Objective 58. Install seven new water catchment tanks in Pu‘u Wa‘awa‘a

Catchment tanks have been installed at Kipuka Oweowe, Waihou 1, and Pu‘u Wa‘awa‘a Cone Units. Others are pending completion of the conservation units per Objective 9.

Objective 59. Upgrade and expand existing waterline system

Negotiations with an adjacent landowner to establish an utility right-of-way to bring water from Hawaii County’s Kaloko tank are ongoing. Also, the water company located in Pu‘u Wa‘awa‘a is upgrading their system for efficiency and reliability per an engineering report finalized in March 2008.

Objective 60. Repair and maintain existing roads within Pu‘u Wa‘awa‘a

Coordinator was arranged with staff and private landowners at Pu‘u Wa‘awa‘a for the repair of the main paved roads as well as re-grading essential unpaved roads through the Safety Zone since 2004. A schedule for re-grading unpaved roads has not been established.

Objective 61. Maintain the airplane landing strip

The airstrip has been maintained as an emergency landing facility.

Objective 62. Develop a Public Shooting Range

The public shooting range is now located outside of the Management Plan project area and is being developed by a working group of interested staff and citizens.

Funding secured in FY08:

In-kind Contributions

Grazing Permittes – cattle, water, fencing, labor, equipment, fuel	\$300,000
Volunteers – weeding, planting, seed collection, trail work (5,000 hrs)	<u>\$110,000</u>
	\$410,000

Grant Funding

NRCS Grant – fencing, restore native cover, weed control, etc.	\$106,500
HTA Grant – road improvements, match for NRCS project	\$ 32,500
State Drought Mitigation Funds – reservoir re-lining	\$250,000
Kīholo State Park Master Planning -	\$500,000
State Watershed Funds – Fire Plan, crew salaries and equipment	\$522,000
American Hiking Society – trail expansion and signage grant	\$ 3,000
Kona Brewers Festival – Meeting House improvements	\$ 2,500
Anonymous Donation – Uhiuhi enclosure catchment structure	<u>\$ 5,000</u>
	\$1,421,500

Partner-provided Funding

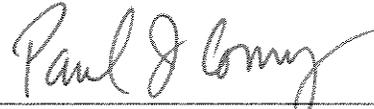
Hawaii Wildfire Management Organization – Seed bank project	\$ 14,000
HI Experimental Tropical Forest – planning and infrastructure (portion)	<u>\$670,000</u>
	\$684,000

Revenues

Cell Tower lease fee – Pu‘u Anahulu	\$ 18,000
Private donors – anonymous	<u>\$ 7,500</u>
	\$ 25,500

TOTAL FY08 **\$2,541,000**

Respectfully submitted,



PAUL J. CONRY, Administrator
Division of Forestry and Wildlife

APPROVED FOR SUBMITTAL:



LAURA H. THIELEN, Chairperson
Board of Land and Natural Resources