

A.G. LAND DOCUMENT CHECKLIST

Date: April 30, 2015

Tenant Code: N/A

TO: Attorney General, Land/Transportation Division

FROM: DLNR/Division of Forestry and Wildlife - Lisa Hadway
Administrator

ROUTING:

DLNR
DAG
DLNR/CP

Initial

DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII
2015 JUL -8 PM 3:00
Date

RECEIVED
LAND DIVISION

EXECUTIVE ORDERS

Section 171-11, H.R.S. - Set Aside; Withdraw; Cancel

Location of Land: Makawao, Maui

Tax Map Key No.: TMK 2-1-03:50

Suspense Date: _____ (if RUSH- explain why: _____)

RECEIVED
MAUI DISTRICT
LAND DIVISION
2015 AUG 20 PM 1:40

Number of Documents to be Prepared: 2 Original(s) 1 Copies

A. FOLLOWING INFORMATION MUST BE INCLUDED WITH REQUEST:

1. X A copy of the approved Board submittal
2. X Survey description and map prepared/approved by the Survey Division
3. X Identify applicant: State department or agency or city and county, or county or other political subdivision
4. X Full name of party, marital status, tenancy, or entity and place of business registration: Department of Land and Natural Resources, Division of Forestry and Wildlife
5. X Most current and complete address: 1151 Punchbowl St. Rm. 325 Honolulu, Hawaii 96813
6. N/A Copy of past executive order, withdrawal from

general lease, etc.

- 7. N/A Effective date of cancellation or withdrawal
(Effective date shall be date of Gov's signature, unless dictated by legislative action)
- 8. N/A Include all previous memoranda from our office.
- 9. N/A Other attachments: _____

- 10. Comments: _____

- 11. SPECIAL INSTRUCTIONS FOR FINAL PROCESSING (Central Office):

PLEASE IDENTIFY RESPONSIBLE STAFF FOR THIS REQUEST:

<u>Emma Yuen</u>	Dated: <u>June 30, 2015</u>
Name-Department staff's designee	Ext.: <u>7-4170</u>

REVIEWING DEPUTY ATTORNEY GENERAL:

<u>Julie China</u>	Dated: <u>7-1-15</u>
Deputy Attorney General	Ext.: _____

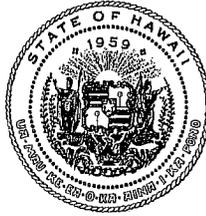
B. APPROVAL/DISAPPROVAL

- 1. Reasons for disapproval _____

2. The document will be returned to the Responsible Staff for appropriate action; 1) obtain signature of applicant, or 2) address AG's concerns.

In the event AG has disapproved the document, and this document has been revised to address AG concerns, please verify that those concerns have been addressed.

DAVID Y. IGE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

July 13, 2015

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

KEKOA KALUHIWA
FIRST DEPUTY

W. ROY HARDY
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

MEMORANDUM

Author: LD/km

TO: The Honorable David Y. Ige, Governor
State of Hawaii

FROM: Suzanne D. Case, Chairperson *WC*
Board of Land and Natural Resources

SUBJECT: Executive Order Setting Aside Public Lands to the Department of Land and Natural Resources, Division of Forestry and Wildlife at Kanaio, Makawao, Maui, Hawaii, TMK No. (2) 2-1-003:050

Enclosed for your consideration and signature are two originals of an executive order setting aside an area of 638.00 acres, more or less, to the Department of Land and Natural Resources, Division of Forestry and Wildlife for addition to the Kanaio Natural Area Reserve purposes.

The Division of Forestry and Wildlife recommends this addition to the Kanaio Natural Area Reserve to protect unique natural resources found within the proposed addition and to positively contribute to regional conservation efforts of the Leeward Haleakala Watershed Restoration Partnership, including the neighboring Auwahi Preserve.

At its meeting of June 26, 2015, under agenda item C-2 (copy enclosed), the Board of Land and Natural Resources approved of and voted to recommend to the Governor the issuance of the subject executive order.

We would greatly appreciate your signing and numbering the enclosed executive orders if they meet with your approval. Upon certification by the Lieutenant Governor, please retain one original and return the second original to our office.

If you have any questions, please feel free to contact Emma Yuen, Natural Resource Planner at (808) 587-4170. Thank you for your attention to this matter.

Enclosures

EO Set Aside for DLNR-DOFAW
Kanaio Natural Area Reserve
Page 2
July 13, 2015

cc: Land Board Member
Central Files
District Files

Area Reserve," containing an area of 638 acres, more or less, RESERVING to the State of Hawaii, its successors and assigns, portions of Perpetual Non-Exclusive Access and Waterline Easement, Easement C (15.00 feet wide), more particularly described in Exhibit "A" and delineated on Exhibit "B," both of which are attached hereto and made parts hereof, said exhibits being respectively, a survey description and survey map prepared by the Survey Division, Department of Accounting and General Services, State of Hawaii, both being designated C.S.F. No. 25,234 and dated October 18, 2012.

SUBJECT, HOWEVER, to the condition that upon cancellation of this executive order or in the event of non-use or abandonment of the premises or any portion thereof for a continuous period of one (1) year, or for any reason whatsoever, the State of Hawaii, Department of Land and Natural Resources, Division of Forestry and Wildlife shall, within a reasonable time, restore the premises to a condition satisfactory and acceptable to the Department of Land and Natural Resources, State of Hawaii.

SUBJECT, FURTHER, to disapproval by the Legislature by two-thirds vote of either the Senate or the House of Representatives or by majority vote of both, in any regular or special session next following the date of this Executive Order.

This executive order does not authorize the recipient of the set aside to sell or exchange or otherwise relinquish the State of Hawaii's title to the subject public land.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of Hawaii to be affixed. Done at the Capitol at Honolulu this 31ST day of JULY, 2015.



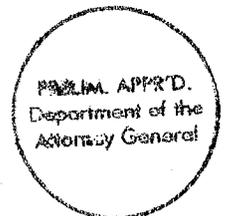
DAVID Y. IGE
Governor of the State of Hawaii

APPROVED AS TO FORM:



JULIE H. CHINA
Deputy Attorney General

Dated: JULY 1, 2015

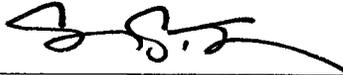


STATE OF HAWAII

Office of the Lieutenant Governor

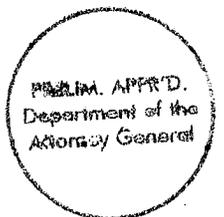
THIS IS TO CERTIFY That the within is a true copy of Executive Order No. 4487 setting aside land for public purposes, the original of which is on file in this office.

IN TESTIMONY WHEREOF, the Lieutenant Governor of the State of Hawaii, has hereunto subscribed his name and caused the Great Seal of the State to be affixed.



SHAN S. TSUTSUI
Lieutenant Governor of the State of Hawaii

DONE in Honolulu, this 6th day of August, A.D. 2015





STATE OF HAWAII
SURVEY DIVISION
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
HONOLULU

C.S.F. No. 25,234

October 18, 2012

ADDITION TO
KANAIO NATURAL AREA RESERVE

4487

Kanaio, Makawao, Maui, Hawaii

Being a portion of the Government Land of Kanaio including a portion of Lot 5 of Kanaio Homesteads.

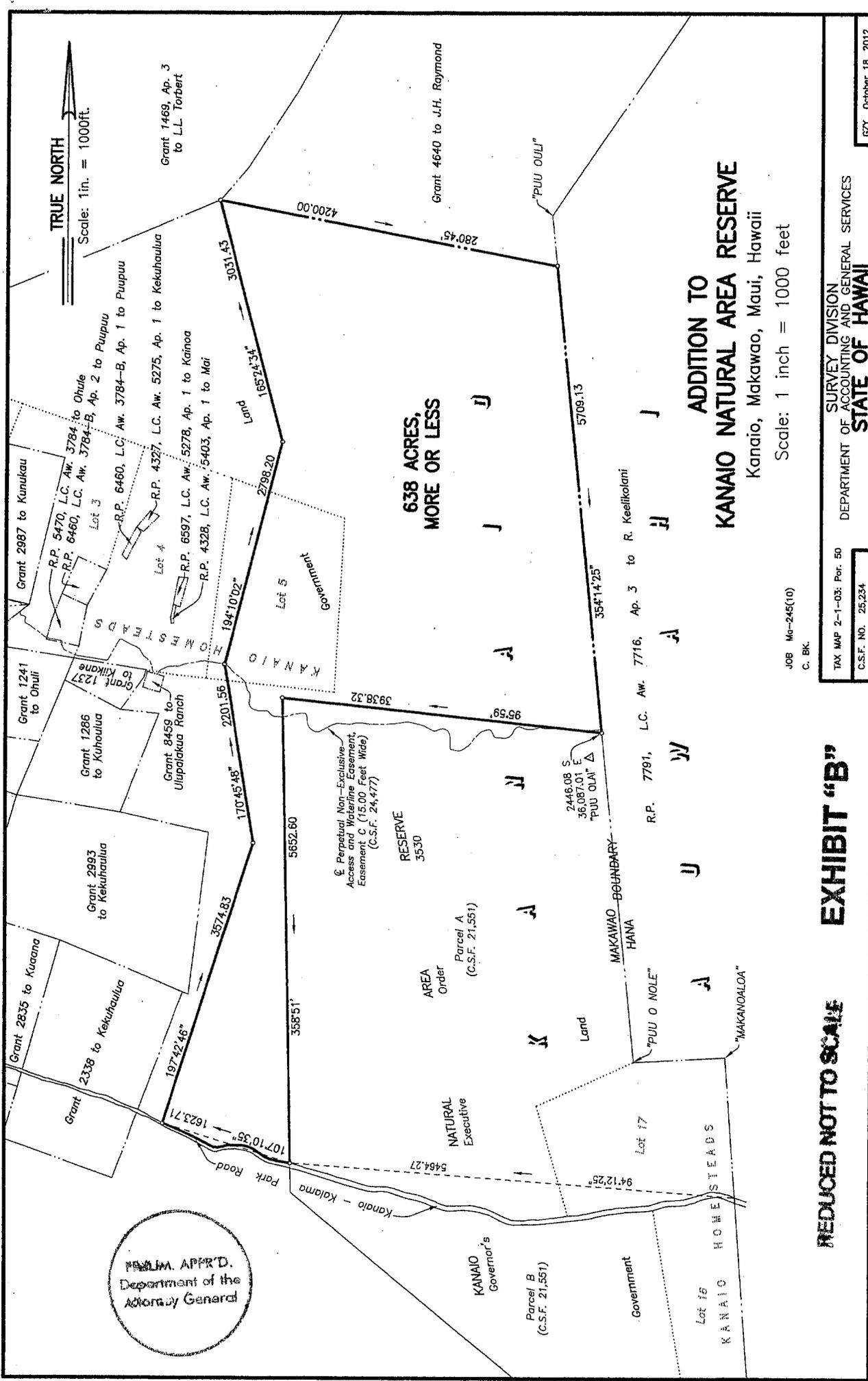
Beginning at the southeast corner of this parcel of land, at the northeast corner of Parcel A of Kanaio Natural Area Reserve, Governor's Executive Order 3530 and on the boundary between the lands of Kanaio and Auwahi, the coordinates of said point of beginning referred to Government Survey Triangulation Station "PUU OLAI" being 2446.08 feet South and 36,087.01 feet East, thence running by azimuths measured clockwise from True South:-

1. 95° 59' 3938.32 feet along Parcel A of Kanaio Natural Area Reserve, Governor's Executive Order 3530;
2. 358° 51' 5652.60 feet along Parcel A of Kanaio Natural Area Reserve, Governor's Executive Order 3530 to the north side of Kanaio-Kalama Park Road;
3. Thence along the north side of Kanaio-Kalama Park Road, the direct azimuth and distance being:
107° 10' 35" 1623.71 feet;

TRUE NORTH

Scale: 1 in. = 1000ft.

PAUL M. APPRD.
Department of the
Attorney General



638 ACRES,
MORE OR LESS

**ADDITION TO
KANAIO NATURAL AREA RESERVE**

Kanaio, Makawao, Maui, Hawaii

Scale: 1 inch = 1000 feet

JOB Ma-245(10)
C. BK.

REDUCED NOT TO SCALE **EXHIBIT "B"**

SURVEY DIVISION
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
STATE OF HAWAII

TAX MAP 2-1-03: Por. 50

C.S.F. NO. 25-234

62Y October 18, 2012
11" X 17" = 1.3 Sq. Ft.

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

June 26, 2015

Chairperson and Members
Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Land Board Members:

SUBJECT: AMENDMENT TO A PRIOR BOARD ACTION APPROVING THE
ADDITION OF APPROXIMATELY 700 ACRES TO THE KANAIO
NATURAL AREA RESERVE; MAKAWAO, MAUI, TMK: 2-1:03:50
(POR)

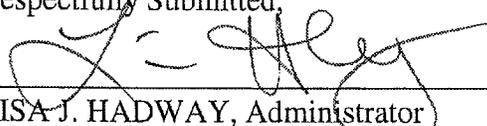
On January 8, 2010, the BLNR approved item C-4 to accept the hearing masters reports and approve set asides for additions to the Kanaio Natural Area Reserve (NAR) and the Kahaualea NAR. The Kanaio NAR addition is approximately 700 acres of a larger parcel of unencumbered State land. The submittal stated that approval of the Kanaio NAR was subject to final subdivision, to divide the parcel between the NAR and the remaining unencumbered land.

At that time, staff had believed that the set aside required a subdivision. Later it was determined that a subdivision is not needed to set aside the addition to the Kanaio NAR. No development that would require a subdivision is proposed in the area. An amendment to the prior submittal is needed to establish that the set aside approval is not subject to final subdivision.

RECOMMENDATION: That the Board:

1. Rescind the prior Board action of January 8, 2010, approving recommendation 2a of Item C-4.
2. Approve of and recommend to the Governor the issuance of an executive order for the addition of approximately 700 acres to the Kanaio Natural Area Reserve at Makawao, Maui, identified by Tax Map Key: 2-1:03:50.

Respectfully Submitted,



LISA J. HADWAY, Administrator
Division of Forestry and Wildlife

APPROVED FOR SUBMITTAL:



SUZANNE D. CASE, Chairperson

Attachment 1: Item C-4, approved during the Board of Land and Natural Resources' January 8, 2010 meeting, including attachments 1 and 2

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

January 8, 2010

Chairperson and Members
Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Land Board Members:

SUBJECT: ACCEPTANCE OF HEARING MASTERS' REPORTS ON PUBLIC HEARINGS FOR TWO PROPOSED ADDITIONS TO THE NATURAL AREA RESERVES SYSTEM ON HAWAII ISLAND AND MOLOKAI, AND APPROVAL AND RECOMMENDATION TO THE GOVERNOR FOR ISSUANCE OF TWO EXECUTIVE ORDERS: ADDITION OF APPROXIMATELY 700 ACRES (PENDING FINAL SUBDIVISION) TO THE KANAIO NATURAL AREA RESERVE; KANAIO, MAKAWAO, MAUI, TMK: 2-1-003-050 (POR), AND ADDITION OF 5,794.88 ACRES TO THE KAHUALEA NATURAL AREA RESERVE; KAHUALEA, PUNA, HAWAII ISLAND, TMK: 3-1-1-001-001 (POR)

BACKGROUND:

Kanaio Extension:

Kanaio Natural Area Reserve (NAR) was established in 1990 to preserve an area of dryland forest in East Maui that contains a remarkable diversity and biomass of native species. Dryland forests in Hawaii are increasingly rare, and require management intervention to prevent their disappearance from the landscape.

The area proposed for addition to Kanaio NAR, a portion of TMK 2-1-003-050, is located adjacent to Kanaio NAR, bordering the Reserve's west and north boundaries. Until 1994, this parcel was leased to Ulupalakua Ranch for cattle grazing.

While planning conservation fencing designed to protect the remnant native vegetation in the upper section of the existing Kanaio NAR from browsing by goats and deer, NARS staff observed the quality of the native shrubland located on TMK 2-1-003-050. In addition, due to terrain considerations, NARS staff recognized that constructing fencing on the portion of TMK 2-1-003-050 to the west of the existing NAR, would reduce cost and harm to native vegetation. NARS staff began conversations with Land Division about the possibility of fencing on the unencumbered land and formally proposed the

concept of adding this area to the existing NAR to the NARS Commission in June 2003. DOFAW also prepared an environmental assessment for different fencing alignments and related conservation management, which included a discussion on the possible addition of this area to Kanaio NAR (Draft Environmental Assessment published August 2003; Final Environmental Assessment and Finding of No Significant Impact published November 2003). The Draft Environmental Assessment was distributed to a wide range of Federal, State and County agencies, private organizations, and individuals, and no negative public comments were received during the environmental review process.

The area nominated for addition is a portion of the TMK parcel that still contains high-quality native vegetation and habitat for the Blackburn's sphinx moth and is important to the ongoing management, including protective fencing, of the existing Reserve. It includes the entire lava flow located above and to the west of the existing Reserve and hosts both intact native shrubland and lava tubes and underground caves.

The Division of Forestry and Wildlife received a right-of-entry to conduct conservation management and approval to go out for public hearing on the proposed addition by the Board on June 18, 2004. Legal notice of the public hearing was published on August 11, 2004, and the public hearing was held on September 1, 2004 pursuant to HRS § 195-4(b). Approximately 35 people attended the public hearing. Twelve people testified on the proposal, with six in favor and six opposed. An additional nine letters in support and two letters in opposition were submitted after the public hearing. Those in favor of the proposal focused on the importance of protecting rare natural areas for future generations. Testimony in opposition to the proposal had three main themes: challenge to the State's ownership of the existing Kanaio NAR, opposition to the planned conservation fencing, and opposition to future conservation management, instead supporting management for recreational public use. Attachment 2 contains a Hearing Master's Report and summary of testimony.

DISCUSSION:

DOFAW staff believes that the benefits of adding the proposed portion of TMK 2-1-003-050 to Kanaio NAR outweigh any disadvantages. The final proposal is included as Attachment 1. In summary, the dryland forest of East Maui is rare and deserving of dedicated conservation management attention. This area is designated critical habitat for the endangered Blackburn's sphinx moth (*Manduca blackburni*) and eight threatened and endangered plants (*Bonamia menziesii*, *Alectryon micrococcus*, *Cenchrus agrimonioides*, *Colubrina oppositifolia*, *Melicope mucronulata*, *Melicope adscendens*, *Melicope knudsenii*, *Flueggea neowawraea*). Long-term protection of the proposed 700 acres through NAR designation, combined with protective conservation fencing, would not only protect unique natural resources found within the proposed addition, but would also positively contribute to regional conservation efforts of the Leeward Haleakala Watershed Restoration Partnership, including the neighboring Auwahi Preserve.

DOFAW received a right-of-entry to conduct conservation management, including fencing, from the Board on June 18, 2004 and fence construction is currently underway.

A formal set-aside to DOFAW would put all the land within the fencing under the same jurisdiction and authority. In addition, a formal set-aside of this area to DOFAW as an addition to Kanaio NAR would most accurately reflect the planned future management and provide needed long-term protection for the unique natural resources in the area, reflecting DLNR's mission to restore and preserve unique natural ecosystems.

Kahaualea Extension:

Kahaualea Natural Area Reserve was established in 1987 to preserve representatives of pioneer vegetation on lava flows, lowland rain forest and mesic forest, in the Puna District. It includes the largest known populations of a federally endangered fern (*Adenophorus periens*), as well as the currently active flows of the Puu Oo vent. In July 2007, Kahaualea NAR closed due to safety concerns from ongoing volcanic activity, and in February 2008, the BLNR ratified the closure until July 25, 2009. Some of the safety hazards in the Reserve are also present in the proposed extension.

The area proposed for addition to Kahaualea NAR is located between and adjacent to Kahaualea Natural Area Reserve and Hawaii Volcanoes National Park. Inclusion of this proposed extension, which is also referred to as "Tract 22", into the Natural Area Reserve System (NARS) would facilitate management of the native ecosystems found in that region, and strengthen the protection of the areas already protected in the Kahaualea NAR. This would add 5,795 acres to the existing NAR.

This proposed Kahaualea NAR Extension contains a sampling of native ohia-dominated open and closed-canopy plant communities, as well as pioneer vegetation from recent lava flows. This parcel would increase the protective designation for these types of natural communities, which harbor rare and endangered species. Additionally, this parcel is characterized by high management contiguity, bounded by all sides by areas with designated protection from conversion of natural land cover and a mandated management plan in operation to maintain or restore to a natural state. The area also contains important geological features, examples of succession on lava flows and is adjacent to areas designated as a World Heritage Site by UNESCO for its cultural importance.

The proposed NAR extension is within the recovery habitat of the Hawaii Creeper (*Oreomyza mana*) and the Akepa (*Loxops coccineus coccineus*), which are both federally listed as endangered. Additionally, the endangered fern *Adenophorus periens* can be found in this area. This area and Kahaualea NAR were transferred from Campbell Estate to the State in 1987 as part of a land exchange. Campbell Estate's original intention was to develop geothermal resources on the parcel. This area was exchanged for the Wao Kele O Puna NAR (E.O. 3130), which was withdrawn in 1987 by former Governor Waihee.

The Division of Forestry and Wildlife recommended the NAR extension to the NARS Commission on July 22, 2009. The NARS Commission recommended the NAR extension on August 25, 2009. The Division of Forestry and Wildlife received approval to go out for public hearing on the proposed addition by the Board on September 25, 2009. Legal notice of the public hearing was published statewide in newspapers on

October 16, 2009, and the public hearing was held on November 12, 2009 pursuant to HRS § 195-4(b). Sixteen people attended the public hearing, and five testified, with four in support of the proposal and one opposed. An additional eleven letters in support were received. Those in favor highlighted the regional importance of this area to protect the neighboring NAR and National Park, as well as the biological importance of the area. Testimony received in opposition concerned the lack of funding for NARS and the NARS land-grabbing to reduce public hunting opportunities. Attachment 4 contains a Hearing Master's Report and summary of testimony.

RECOMMENDATION: That the Board:

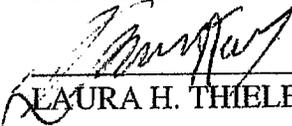
1. Accept the Hearing Masters' Reports for the proposed Kanaio Extension and the proposed Kahaualea Extension (Attachments 2 and 4).
2. Approve of and recommend to the Governor the issuance of executive orders for the following actions:
 - a. Addition of approximately 700 acres (pending final subdivision) to the Kanaio Natural Area Reserve at Kanaio, Makawao, Maui, identified by Tax Map Key: 2-1-003-050 (Attachment 1).
 - b. Addition of 5794.88 acres to the Kahaualea Natural Area Reserve, at Kahaualea, Puna, Hawaii Island, identified by Tax Map Key: 3-1-1-001-001 (Attachment 3).

Respectfully Submitted,



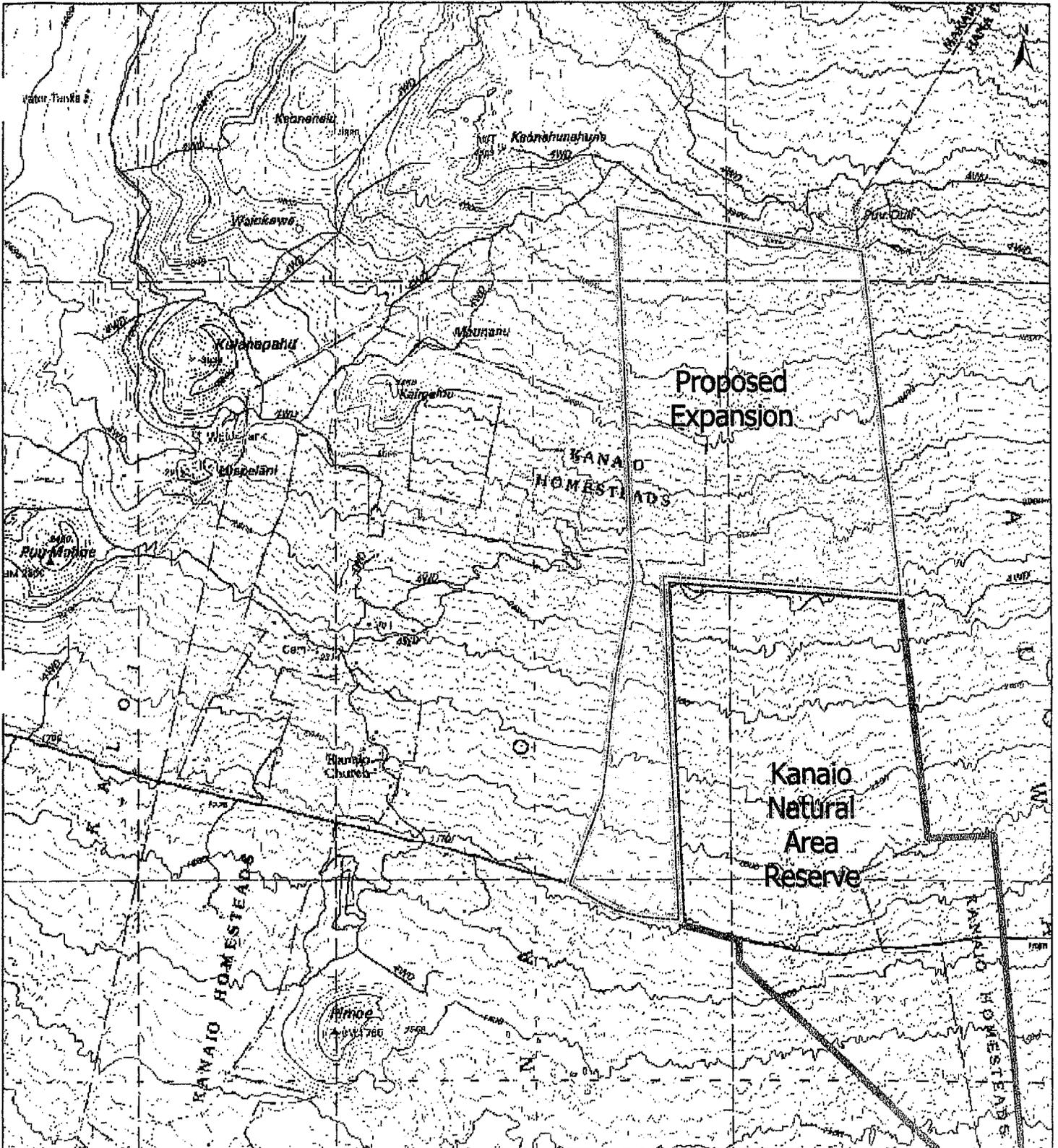
PAUL J. CONRY, Administrator
Division of Forestry and Wildlife

APPROVED FOR SUBMITTAL:



LAURA H. THIELEN, Chairperson

Attachment 1: Map and Proposal for the Extension of Kanaio Natural Area Reserve
Attachment 2: Hearing Master's Report – Kanaio Extension
Attachment 3: Map and Proposal for the Extension of Kahaualea Natural Area Reserve
Attachment 4: Hearing Master's Report – Kahaualea Extension



Conceptual Map

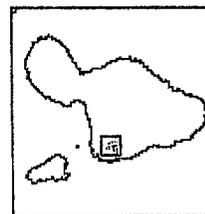
Kanaio

Natural Area Reserve Proposed Expansion



TMK: 2-1-003-050 State Unencumbered Land

0 .125 .25 .5 .75 1 Mile



Map by DFWW
January 2002

FRANK B. MARSHALL

PROPOSAL FOR THE EXTENSION OF KANAIO NATURAL AREA RESERVE

January 2007

I. EXECUTIVE SUMMARY

The Division of Forestry and Wildlife proposes to expand the existing Kanaio Natural Area Reserve by approximately 700 acres to protect significant native resources found on adjacent unencumbered State land. The area proposed for addition is part of a larger single parcel (TMK 2-1-003-050) that was previously leased for grazing. In June, 2004, the Board of Land and Natural Resources granted an immediate right-of-entry to the Division of Forestry and Wildlife to conduct conservation management actions over this area, including the construction of conservation fencing to exclude ungulates (hooved animals). The expansion area includes the entire lava flow located mauka and to the west of the existing NAR and hosts intact native shrubland, pioneer vegetation on lava flow, and lava tubes and underground caves. Expanding the existing NAR to include this area would significantly increase protection for the only sizeable tract of native vegetation remaining at mid-elevation on the entire south slope of Haleakalā.

II. INTRODUCTION (General)

Dryland forests of Hawaii, formerly extensive, are arguably the most depleted and threatened plant communities in the State. The area proposed for addition to the existing Kanaio Natural Area Reserve would partially address this threat by protecting an intact example of a native mid-elevation shrubland community formerly widespread on south Maui. Exhibit A is a conceptual map illustrating the area proposed for addition.

The conservation value of the proposed addition is high:

- 1) it includes designated critical habitat for eight threatened and endangered plants on Maui (*Bonamia menziesii*; *Alectryon macrococcus*; *Cenchrus agrimonioides*; *Colubrina oppositifolia*; *Melicope mucronulata*; *Melicope adscendens*; *Melicope knudsenii*; *Flueggea neowawraea*);
- 2) it includes designated critical habitat for the Blackburn's Sphinx Moth (*Manduca blackburni*);
- 3) it includes mid-elevation native shrubland of a type and size unique on Maui; and
- 4) it provides high quality habitat for the outplanting of rare dryland forest plants.

The scientific value of the proposed addition is also high:

- 1) it provides a rare example of an unburned dryland community, which could be invaluable for future research relating to the regenerative capacity of this type of shrubland after fires;
- 2) it would protect a larger natural "transect," preserving the capacity for future study of the transitions between natural communities as elevation and moisture increase; and
- 3) it protects habitat for native invertebrates that are poorly studied, allowing for future research on these species; and

- 4) it would enable the Natural Area Reserve to encompass a greater range of sub-ecotypes and provide significantly more protection for this type of globally imperiled dryland eco-type as a whole.

The management value of the proposed addition is important enough to management of the existing Natural Area Reserve that the Division of Forestry and Wildlife has already received a right-of-entry to conduct conservation management on this land, including the construction of deer-proof fencing.

III. BACKGROUND/HISTORY

Past Land Use

The area described is State unencumbered land located in the Agricultural District. The entire tax map key parcel was leased to Ulupalakua Ranch for cattle grazing until 1994. However, much of the area proposed for addition to the Reserve was of limited value as pasture due to the rocky terrain, and as a result, it remained relatively un-grazed which allowed the native vegetation found there to remain mostly intact.

Present Land Use

The area proposed for addition to the Natural Area Reserve is currently not under lease and is vacant. In June, 2004, the Board of Land and Natural Resource granted the Division of Forestry and Wildlife a right-of-entry to conduct conservation management, and the Division began construction of ungulate-proof fencing around the perimeter during Fiscal Year 2006.

Cultural/Recreational Uses

An archaeological reconnaissance study was conducted by US Fish & Wildlife staff as part of the environmental assessment process for the Kanaio fencing project. This report includes the results of field surveys that covered the western section and the lower portion of the northern section of the proposed addition. The study reported:

Archaeological research in the uplands of Kanaio ahupua'a has been too limited to contribute substantially to an understanding of the area's settlement patterns. Nearby, an extensive inventory of the adjacent moku of Kahikinui exhibited dense site distribution in the upland zone, with few sites observed in the intermediate region and virtually no archaeological remains above 2800 feet above sea level. That study also noted a correlation between upland archaeological features and the substrate on which they were located, with a higher density of structures located on pahoehoe lava substrates where sparse soil development resulted in limited agricultural value. Such a building strategy may have been practices to keep clear for agricultural purposes those areas where soil was more fertile (i.e. the older, weathered a'a substrates with suitable solid deposition). On the NAR, the substrate is predominantly rough

a'a lava with some overlying soil, but only on its eastern boundary and the adjacent Ulupalakua Ranch has significant soil development occurred. Because Kanaio has experienced different geological processes than the neighboring Kahikinui moku and the available body of archaeological data is still relatively small, the value in applying the settlement pattern established at Kahikinui as a model for site distribution within the NAR is limited.

(Parks, 2003).

Along the western boundary, the study reported observing a remnant of an old east-west trending trail to the west of the fencing corridor. Other cultural features observed in the area include stacked rock cattle walls associated with ranching operations, some of which could date to the mid-1800s.

A cultural assessment conducted by CKM Cultural Resources recognized that the area from 'Ulupalakua to Kahikinui supported a population of 3,000 to 4,000 during pre-contact, who used the natural resources of the area for building materials, medicine, spiritual offerings, musical instruments, and weapons. After the introduction of cattle, many of the forested areas were destroyed.

Little legal recreational use currently occurs on the area proposed for addition to the Natural Area Reserve due to the limited access to the area and the restrictions on public activities on unencumbered land. Hunting is not allowed in this area, but poaching is likely occurring. In addition, all-terrain vehicle (ATV) riding is possibly occurring illegally on the western portion of the area.

Conservation History

There has been limited conservation effort focused on the proposed expansion area. Historically, the leeward dryland forest of Maui was one of the richest areas in native tree species in the State. Dr. Joseph Rock, in "The Indigenous Trees of the Hawaiian Islands," identified the Auwahi region on the southern slope of Haleakalā as one of the most important botanical sites in the islands, even though it had been seriously degraded by browsing by goats and cattle and by fire when he first saw it in 1910.

The Nature Conservancy, with cooperation from Ulupalakua Ranch, undertook one of the first efforts of conservation of Maui's dryland forest in the late 1960s, fencing an enclosure of several acres in Auwahi. However, dense growth of kikuyu grass (*Pennisetum clandestinum*) prevented any significant reproduction of the trees protected at that time. In the 1970s, Bob Hobdy, Assistant State Forester, and Robert Nelson of the U.S. Forest Service put together the first proposal to establish a State Natural Area Reserve in the Auwahi-Kanaio area. Rene Sylva explored the area in the 1970s, collecting seeds from the native dryland plants, and in the 1980s, Art Medeiros and Lloyd Loope conducted a field survey of native flora of the area and published a report that shared the knowledge gathered by themselves, Sylva, Hobdy and others.

Notable conclusions from the 1986 report included the following:

- 1) Of the 237 species of native flowering plants recorded in the study from current or historical sources, 46 (19%) were not found and are presumed extirpated from the study area and another 89 (38%) species were considered threatened with imminent extirpation or extinction.
- 2) The rich dryland flora of Maui is poorly represented within Haleakalā National Park.
- 3) The potential exists in several rich remnants of native dryland forest for long-term preservation of ecosystems. Fencing from feral goats is a necessity for preservation.

In 1990, building on this work and through the involvement and support of the Native Hawaiian Plant Society, Kanaio Natural Area Reserve was parceled out from TMK 2-1-003-050 to protect a large tract of dryland forest. Records from that time indicate that the main threat to the dryland forest was the presence of goats and pigs.

Previous Studies

There are no known studies specifically involving the area currently proposed for addition to the NAR.

IV. JUSTIFICATION (Specifics)

Scientific Value

Inclusion of the area proposed for addition would increase the scientific value of the existing NAR. For example, inclusion of the northern section would greatly enlarge the elevation and climate gradient represented in Kanaio NAR, allowing it to encompass ecotypes ranging from dry, low elevation lava desert to the mesic environment at the lower extent of the afternoon "fog belt." This gradient provides a natural "transect" that illustrates transitions between natural communities as elevation/moisture increase and includes range overlaps for several native plant species. Because the same lava flow underlies the entire area, it provides a "constant" useful for the study of ecosystem processes. The addition of this section to the NAR would increase the overall value of the NAR significantly.

Similar shrublands occur in other locations in Hawai'i, on substrates with a wide range of ages. The Kanaio example is intermediate between examples on geologically young substrates (Hawai'i) and older ones (Kaua'i). Comparison of these different areas may provide insight into patterns of plant succession and soil development.

Vegetation in the core area proposed for addition shows no sign of having burned. Wildland fire is not usually a "natural" component of most Hawaiian ecosystems, and the dryland shrub community is at high risk from fire and does not recover well. Unburned examples of dry land communities are increasingly rare; it is important that this example be protected for its' own sake, as well as to provide a benchmark with which to evaluate regeneration of shrublands that have burned.

Adding this area to the existing Natural Area Reserve is also important from a regional perspective, as it will connect the existing Reserve with the neighboring Auwahi Preserves at Pu'u Ouli on Ulupalakua Ranch as well as connect the existing Reserve to the recently formed Leeward Haleakalā Watershed Restoration Partnership. For the long-term conservation of the endangered plants/ecosystems of south Haleakalā to be successful, a large, contiguous block of secure habitat must be provided. This proposed addition to the NAR is also a logical site for establishment of new populations of many rare plants, for which the low elevation and dry conditions of the present NAR may not be appropriate.

Representativeness

The area proposed for addition contains a quality, intact example of native mid-elevation shrubland community, which was formerly widespread on south Maui.

Rarity (species or within the system)

Similar native shrublands are found in The Nature Conservancy of Hawai'i's Kamakou Preserve on Moloka'i, and at Kaupō Gap in Haleakalā National Park on Maui, as well as other locations. While the proposed addition to the NAR might be viewed as a "duplicate," dryland forest and shrublands are some of the most depleted and threatened plant communities in the State. Protecting these communities in multiple areas would mitigate the loss to the natural environment if one of the areas should burn. The Kanaio tract is also significant in that it is the only sizeable tract of undisturbed native vegetation remaining at this elevation (2700-4000') on the entire south slope of Haleakalā, as all surrounding lands have been deforested and converted to pasture.

In addition, the area proposed for addition to the NAR is considered critical habitat for threatened and endangered plants on Maui and as critical habitat for the Blackburn's Sphinx Moth. Final designation of critical habitat for the plants was published in the Federal Register on May 14, 2003 and final designation of critical habitat for the moth was published in the Federal Register on June 10, 2003. While none of the listed plants are currently confirmed as present, a more thorough survey conducted as part of initial management actions upon addition to the existing Reserve would provide more information. Moreover, the designation of critical habitat demonstrates that the area is suitable for reintroduction of many of these species. Finally, a plant species of concern, kauila (*Alphitonia ponderosa*), is known to occur within the area proposed for addition.

Biological/Ecological Design

Biological features of the area proposed for addition include native dominated dry/mesic shrubland with scattered native trees. The vegetation of the northern section is dense shrubland comprised primarily of pukiawe (*Styphelia*), a'ali'i (*Dodonaea*) and ulei (*Osteomeles*). Trees such as 'ohi'a (*Metrosideros*), olopua (*Nestegis*), 'ala'a (*Pouteria*), lama (*Diospyros*), kauila (*Alphitonia*) and naio (*Myoporum*) are scattered across the area, inhabiting sheltered sites such as the bottoms of lava channels. Native shrubs such as akoko (*Chamaesyce*) and 'akia (*Wikstroemia*) are locally common; an understory of native sedges and ferns persists in undisturbed areas. While some

portions of the area have been disturbed by grazing and/or fire, the rough rocky nature of the underlying lava flow and the dense brushy vegetation have so far acted as a natural barrier to the incursion of cattle and other ungulates. As a result, the "core" of this parcel is essentially pristine, in marked contrast to the surrounding pasture lands.

Noteworthy geological features include a fairly recent (<10,000 years) lava flow, slightly modified by erosion. The area exhibits a well developed flow channel and lava tube features. The mauka section is the upper extent of the lava flow that underlies much of the present Kanaio NAR. On the western side, the pahoehoe is thought likely to contain caves and lava tubes.

This area is also likely to be habitat for native invertebrates, both above ground and in caves. Many of these invertebrates are poorly studied. The endangered Blackburn's Sphinx Moth has been observed in the area, and other rare native invertebrates are likely present as well.

Size

The overall size of the proposed addition to Kanaio Natural Area Reserve is approximately 700 acres, 550 directly above and 150 to the west of the existing Reserve. Overall, the proposed addition would increase the size of Kanaio NAR by approximately one-third.

Threats (Human/Biological)

Threats to the area proposed for addition to the Natural Area Reserve include:

- grazing and trampling by feral ungulates, including goats, cattle, deer and pigs;
- invasion by non-native plants, including pasture grasses and the non-native tree species *Schinus*, *Bocconia*, and wattle; and
- fire.

Present Level of Protection

The area proposed for addition to the Reserve is within the Agricultural District and under the administration of the Land Division. The Division of Forestry and Wildlife received a right-of-entry to conduct conservation management on this land in June 2004 and would like to formalize this arrangement by officially adding the area to the existing Natural Area Reserve and bringing management of the land under the Natural Area Reserve Administrative Rules.

If the right-of-entry were revoked and this land were leased or sold in the future, the following uses are permitted in the Agricultural District and could harm the existing natural resources:

- cultivation of crops;
- game and fish propagation;
- raising of livestock;
- farm dwellings;
- public institutions and buildings necessary for agricultural practices;
- public and private open area types of recreational uses;

- utility lines and roadways;
- improvement of buildings or sites of historic or scenic interest;
- roadside stands for the sale of agricultural products;
- buildings and uses;
- agricultural parks; and
- wind energy facilities.

Long-term Ecological Viability

Expanding the existing NAR would increase its long-term ecological viability. By expanding the NAR to encompass a larger range of eco-types, it would provide greater protection for the dryland forest. By protecting additional native shrubland, the long-term ecological viability of this natural community is enhanced and better protected against the threat of fire.

In addition, the proposed addition would connect the existing Reserve to the neighboring Auwahi Preserves at Pu'u Ouli on Ulupalakua Ranch land, supporting ecosystem level conservation efforts by protecting a large, contiguous block of native habitat and facilitating future partnership efforts between the State and Ulupalakua Ranch. Also, addition of this section to the NAR would enhance the ability of Kanaio Natural Area Reserve to participate and contribute to conservation and restoration actions of the Leeward Haleakalā Watershed Restoration Partnership.

Environmental Consequences of No Action

The environmental consequence of no action would result in no protection for a declining native shrubland community; could limit future conservation efforts in partnership with Ulupalakua Ranch or with the recently established Leeward Haleakalā Watershed Restoration Partnership; and could increase costs associated with protecting the existing NAR.

Urgency

While some portions of the area have been disturbed by grazing and/or fire, the rough rocky nature of the underlying lava flow and the dense brushy vegetation have so far acted as a natural barrier to the incursion of cattle and other ungulates. Fire remains an ongoing threat, and the area is part of a larger parcel that is in the Land Division's land-lease portfolio. Invasive weeds, such as wattle, are beginning to invade the parcel and require management attention to protect the existing NAR. The critical state of Hawaii's dryland forest and shrublands gives the urgency to protect this area now.

V. MANAGEMENT NEEDS

Threats Requiring Management

As noted earlier, threats to the proposed addition to the Kanaio NAR include:

- grazing and trampling by feral ungulates, including goats, cattle, deer and pigs;
- invasion by non-native plants, including pasture grasses and the non-native tree species *Schinus*, *Bocconia*, and wattle; and

- fire.

The planned perimeter fencing of the existing Reserve and this area would provide the primary management action needed and give the needed protection against feral ungulates. Additional protective management would involve weed control and fire protection.

Administrative (size, boundaries, access: roads & trails, maps more specific than in introduction, TMKs)

The overall size of the proposed addition to Kanaio NAR is approximately 700 acres, approximately 550 acres directly mauka of the existing Reserve and 150 acres directly to the west. The entire area proposed for addition is State-owned, unencumbered lands currently under the administration of DLNR, Land Division as part of TMK 2-1-3-50.

The northern and eastern boundary of the addition is the existing State TMK boundary. The lower western boundary is the existing State TMK boundary. The upper western boundary would be finalized in cooperation with Land Division.

Access to the area proposed for addition is from Highway 11 and by existing four-wheel drive roads through Ulupalakua Ranch land.

VI. PUBLIC SUPPORT

Agencies, Organizations, and Individuals Contacted

A public hearing was held on September 1, 2004 on Maui pursuant to HRS § 195-4(b), and legal notice for the public hearing was published in the Honolulu Star Bulletin, Maui News, the Garden Island, the Hawai'i Tribune-Herald, and the West Hawai'i Today on August 11, 2004.

The following agencies, organizations, and individuals were contacted by mail, provided a draft of the proposal to expand Kanaio NAR, and informed about the public hearing.

- Natural Resource Conservation Service
- US Fish and Wildlife Service
- US Geological Survey, Biological Resources Division
- US National Park Service, Haleakala National Park
- Office of Hawaiian Affairs
- State Department of Agriculture
- State Department of Hawaiian Home Lands
- State Department of Land and Natural Resources
- Natural Area Reserves Commission
- Maui County Department of Planning
- Maui County Department of Public Works
- Maui County Department of Water Supply
- Ulupalakua Ranch

- Leeward Haleakalā Watershed Restoration Partnership
- West Maui Mountains Watershed Partnership
- East Maui Watershed Partnership
- Friends of Haleakalā
- Maui Invasive Species Committee
- Native Hawaiian Plant Society
- Sierra Club, Maui Group
- Central Maui Hawaiian Civic Club
- Haleakala Ranch
- Maui Nui Botanical Gardens
- Conservation Council of Hawaii
- Na Kapuna O Maui
- The Nature Conservancy of Hawaii
- Bishop Museum, Hawaii Biological Survey
- Kahea – the Hawaiian Environmental Alliance
- Kahikinui Game and Land Ohana
- Kaupo Wildlife Club
- Living Indigenous Forest Ecosystems (LIFE)
- Ka Ohana O Kahikinui
- State Senator J. Kalani English
- State Representative Kika Bukoski
- Charles Kauluwehi Maxwell
- Edward Uwekoolani
- Dr. Robert Robichaux
- Chuck Chimera

Stakeholder Identification

Potential stakeholders include:

- County of Maui
- surrounding landowners, such as Ulupalakua Ranch; DLNR, Land Division; DHHL; owners of inholdings
- Leeward Haleakalā Watershed Restoration Partnership
- Department of Hawaiian Home Lands
- LIFE (Living Indigenous Forest Ecosystems)
- Ka Ohana o Kahikinui
- USGS/BRD
- FWS
- Haleakalā National Park

Approximately 35 people attended the public hearing of September 1, 2004. The following people provided oral testimony in support of the proposal:

- Troy Helmer
- Jim Crow
- Chuck Chimera

- Danny Borin
- Art Medeiros
- Jeff Munoz.

Oral testimony in support of the proposal was received after the hearing from the US Fish and Wildlife Service. In addition, neighboring landowner Ulupalakua Ranch has long been supportive of the addition of the northern section to the NAR.

Six people testified against the proposal at the public hearing: Charles Maxwell, Sr., Kawika Davidson, David Dutro, Bruce Faulker, Edward Uwekoolani, and Keala Hahn. Testimony in opposition to the expansion had three main themes:

- challenge to the State's ownership of Kanaio NAR;
- opposition to the planned conservation fencing; and
- opposition to dedicated conservation management of this area, rather than management for recreational public use.

Support Letters

Written letters in support of the proposal was received by the following:

- Joan Morris
- Ann Emmsley
- Forest and Kim Starr
- The Nature Conservancy
- Wendi Adamek
- Lee Altenberg
- Erica VonAllmen
- Christopher Brosius, West Maui Mountains Watershed Partnership Coordinator
- Tamara Sherrill.

Written testimony against the proposal was received from Bruce Faulkner and Wilbert Yee. Both letters objected to the future management of this area as a Natural Area Reserve rather than as a recreational area open for unlimited public use.

A summary of all testimony received, both oral and written, is included as Exhibit B. The written comment letters received by the Department are being made part of the administrative file at Division of Forestry and Wildlife and are available for public review upon request.

VII. BIBLIOGRAPHY/REFERENCES

- CKM Cultural Resources. 2003. A Native Hawaiian Traditional Cultural Practices Assessment for Kanaio Natural Area Reserve.
- Department of Land and Natural Resources, Division of Forestry and Wildlife, Maui Branch. 2002 – 2007. personal communications.
- Department of Land & Natural Resources, Division of Forestry and Wildlife.

2003. Final Environmental Assessment: Natural Resource Conservation Project - Kanaio Natural Area Reserve. Honolulu, HI.
- Parks, Virginia. 2003. Kanaio Natural Area Reserve Ungulate Exclusion Fence Project: Cultural Resources Investigation. U.S. Fish and Wildlife Service; Sherwood, OR.
 - U.S. Department of the Interior, Fish & Wildlife Service. Final Rule: Designation of Critical Habitat for 60 Plant Species from the Islands of Maui and Kahoolawe, Hawaii. May 14, 2003. 68 FR 25933.
 - U.S. Department of the Interior, Fish & Wildlife Service. Final Rule: Designation of Critical Habitat for the Blackburn's Sphinx Moth. June 10, 2003. 68 FR 34710.
 - . Undated (1989?). Proposal for Kanaio Natural Area Reserve. Available from Department of Land and Natural Resources, Division of Forestry and Wildlife.

VII. ABSTRACT

An abstract of the area proposed for expansion was prepared by the abstractor for the Department of Land and Natural Resources, Division of Forestry and Wildlife, and is made part of the administrative file at the Division of Forestry and Wildlife.

LINDA LINGLE
GOVERNOR OF HAWAII



**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES**

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COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
PROGRAMS
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

September 3, 2008

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

Land Board Members:

SUBJECT: MASTER'S REPORT ON PUBLIC HEARING

In accordance with the Notice of Public Hearing published in the Honolulu Star Bulletin, The Garden Island, The Hawai'i Tribune Herald, West Hawai'i Today, and The Maui News, on August 11, 2004, and as authorized by the Board of Land and Natural Resources, I have conducted a public hearing relative to the proposed designation of a portion of TMK 2-1-003-050 into the Natural Area Reserves System as part of Kanaio Natural Area Reserve. This hearing took place on Wednesday, September 1, 2004, at 7:00pm at the Eddie Tam Memorial Complex, 931 Makawao Avenue, Makawao, HI 96793.

The hearing was called to order at 7:00pm, and the proposal was summarized, followed by a hearing and recording of public testimony according to the list of people who have signed up to present testimony. Attached is an exhibit of the oral testimony received at the hearing, as well as written testimony received.

William Evanson

Natural Area Reserves System Maui Manager

**SUMMARY OF PUBLIC TESTIMONY – PROPOSED EXPANSION TO KANAIO NAR
Public Hearing – September 1, 2004**

Charles Maxwell, Sr.

I am a Hawaiian Cultural specialist and Chair of the Maui Island Burial Council. I made a cultural assessment of this property, which was not included in the proposal. I want the record to show that first, I object to this hearing not being recorded (note: the hearing was not recorded due to technical difficulties with the recording equipment). Second, these lands are trust lands, that belonged to the last Queen, Lili'uokalani. I would think that DLNR would have the respect to protect cultural resources. I am in favor of flora and fauna, but I am not in favor of tearing up lava for a fence line. Lava is the essence of Pele. Though it has been thousands of years, we are still children of Pele. People need to know that this area was run with cattle. Once Mr. Uwekoolani wanted to homestead, the State took action. It was an illegal takeover. By Executive Order, the State took away Mr. Uwekoolani's property though there are no threatened or endangered species on his property. As a Native Hawaiian, I find this puzzling. DLNR is a poor steward of the land. How can we trust DLNR to build a fence and not tear up the land? You want to manage to protect threatened and endangered species, but don't forget Native Hawaiians – we are an endangered species too. Mr. Uwekoolani has no money to fight the State. I insist that the State take all means available to put up the fence in a spiritually and culturally appropriate method.

Troy Helmer

I am here because of the hunting aspect. The Natural Area Reserve is a non-hunting area. By building a fence, it will stop deer migration. Deer are doing damage to Hawaiian sites and the fencing will slow deer down. With fencing, DLNR often uses hunters to go in and assist with animal removal, so for hunting reasons, a fence may be good. If we want to save archaeological sites, a fence may be a good idea to slow the deer down. Deer started at Red Hill, now there are over to East Maui Watershed Partnership lands and moving into Kaupo. This may be opening opportunities for hunters. Most of the area is ungrazeable. There are some archaeological sites within the area. The goats below the road are atrocious. They wipe out everything, so protecting is a good idea.

Jim Crow

I help administer the Americorps program and am in favor of the proposal. I would like the NAR to expand closer to the good work being done in Auwahi by Art Medeiros.

Chuck Chimera

I am a student at UH and did research in Kanaio. It is a really nice area for Hawaiian plants. I am also a part-time guide for tourists. People recognize that the island is a special, unique place. They ask about plants, and if you are on the south side of the island, Kanaio is the first place to go where you can point and say – here's a native plant, here's another Hawaiian plant. There are not too many places left like this. I strongly support adding this area to the existing NAR – because the rest of the dryland forest is gone. The State has this chance, and protecting this area is the right thing to do.

Kawika Davidson

I like in Haiku and am a lessee in Kahikinui. I am president of the hunting club and on the Board of Ka Ohana O Kahikinui. I notice that there are fences all over. There has to be a way to manage without fencing. I feel like Hawaiians are getting cut out all over again. The map says this area is "Kanaio Homesteads," which indicates that Hawaiians were there once. Why not use local folks and local control. We no longer have area to roam. There is a question of royal patents – these homesteads were likely owned by someone once. Fences cut out the ahupuaa. Local organizations would like to manage this area the way the hunting club does the top of Kahikinui. There is a fence there, but we could manage without the fence. I also request the State to research the original owners.

Danny Borin

I am in support of the proposal. The dryland forest is so degraded and needs as much protection as possible. There are few areas like it left.

Art Medeiros

I have spent 23 years as a biologist out in the Kanaio area. I am in favor of the proposal. The dryland forest is so endangered – it only appears as tiny splotches on a map. I respectfully disagree with Kawika about fences. It's sad that we need them, but without fencing, there would be no Hawaiian plants. If we value these species, we need to dedicate small portions of land as kapu. I totally agree with the need for Hawaiian homelands, but believe that Hawaiian plants need kapu – and need to be protected where they are. The other option to fencing is complete eradication of feral animals. I wish it weren't so, but some places need this type of protection to survive.

David Dutro

I am against fencing. My wife is Hawaiian, an Uwekoolani girl. When they first purchased the right to enter the land, they talked to the State who said they had no interest, Ulupalakua owns the land. Then they went to Ulupalakua, who said fine. Then the State said there were threatened and endangered species on the land and to get off. That's not fair.

Bruce Faulkner

I am against fencing. Once ungulates are gone, the non-natives enter and overrun the native plants. I am more in favor of isolated fences around individual plants, because it's easier to manage. Also, for aesthetic purposes, I believe a 10-foot fence would be an eyesore.

Edward Uwekoolani

I was born and raised in Kanaio. I know that area intimately. My ancestors lived there. My genealogy goes back 26 generations. But I am not here for that. The issue is the proposed new area. Regarding fencing, I agree with everything everyone has said. That's an issue that will come up if this area is added. Hawaiians are so few. Many of the people will not come forward at meetings like this because they feel no one will listen. So, I will speak for them as well. Regarding this new proposal, I can only say I hope the Department has done its homework before floating this proposal, because I do not want another similar situation as occurred with my family. I would suggest the Department have another hearing with more information than what is here tonight. When you look at the map, I recognize many names, because I lived at Kanaio.

Keaweopala was my 4x great-grandfather, the reigning monarch. Kanaio was his ahupuaa. Many names are my ancestors. Many families are still there that have claims to the land behind Kanaio. Regarding the expansion, we need more information. I do not believe the information is sufficient to make an argument that species need protection. Animals (with the exception of axis deer) were our food. Until the cattle came in. And now we have the deer. So, to say that animals will destroy the area – they probably have already. I know many hunters are looking for trophy, not meat. So, because of my own disagreement with the Department and until we have a final conclusion, we need more information on what's going on and how the Department plans to fence off the new part.

Jeff Munoz

I've lived in upper Kanaio for the past 25 years near the proposed expansion area. I agree with everyone – it is a rare area with rare plants. It was my hobby to study with Rene Sylva and his pioneering work. You can still see his work. I don't agree with the way the fencing is proposed, especially if it's bulldozed. You can see it is powerful land and you must work in harmony. Ribbons out there are not good – they do not follow the land but bisect natural flows. If that's the alignment, it will cause more damage. Maybe the fence is needed, but it needs to be done in a sensitive aesthetic way that honors the Hawaiian people. I encourage DLNR to go back and do more homework. I want more information on materials and how the fence will look like. I also have other concerns in the area – the misuse of ATVs and motorcycles. I have a hard time dealing with it. Nobody owns the land – it is foolish to think you can because of nature. But we have to be good stewards. I am a caretaker. The motorcycle intrusion is often local folks who are doing the heavy damage. So, I am in favor a fence because it may curtail some of this activity – we are not preventing access by walking. There are now furrows in the cinder hills, so a fence could help. I would like to see all of us working together, because I would like a place for kids to go. There are ways to enjoy the land without tearing it up. I support a fence if it is done pono. Otherwise, I do not want it. The vine problem is getting serious. I am unsure how fencing or cattle can address it. *Glycinia* is spreading rapidly and is more of a threat to the natives than axis deer.

Keala Hann

I am against the State taking over the land. This is trust land that belongs to the Hawaiian people. This just creates more hate. Give back the land so Native Hawaiians can be caretakers. There has been enough theft.

Written testimony received

Joan Morris (dated August 31, 2004)

“I am in favor of the Kanaio Natural Area Reserve expansion, addition of this property is important for the scientific value of the protected plant and animal species from the lowlands and up.”

Ann Emmsley, Maui Community College Agriculture Program Coordinator (dated August 31, 2004)

“I would like to support the proposed expansion of the Kanaio Natural Area Preserve. This area is ideal for protection since it contains some relatively intact dryland plant communities, is adjacent to the Auwahi preserve, and is mostly unsuitable for agriculture, pasture, or residential

development. It has value as a research, teaching and management area. So I urge the DLNR to expand this reserve on Haleakala while the opportunity still exists.

Forest and Kim Starr (August 31, 2004)

"We are supportive of this effort to expand the Kanaio Natural Area Reserve. We have witnessed first hand the devastation of the native Hawaiian plants and animals currently occurring in Kanaio. We have also witnessed the spectacular recovery of native Hawaiian ecosystems with proper management. This expansion makes sense and should have happened 100 years ago. In 1902, there was a similar call to action, to protect the remaining Hawaiian forests, albeit on a much grander scale. Some of the wisdom was heeded. However, protection of Hawaiian dry land forests has, for the most part, yet to happen. We hope folks in the year 2106 can look back and say 2004 was the year efforts were initiated to protect these rapidly dwindling native Hawaiian resources."

The Nature Conservancy (dated September 1, 2004)

In support of the proposal to expand the NAR. "The addition of these parcels to the Kanaio NAR would protect portions of Hawaiian tropical dry forest; an ecological community some estimate has shrunk to perhaps 10% of its original range. This is an extremely rare, native-dominated mid-elevation community that is threatened primarily by fire and non-native browsing mammals. These particular parcels are especially notable because they are the only relatively large tracts of undisturbed native vegetation remaining at this elevation on the south slope of Haleakala."

Wendi Adamek (dated September 1, 2004)

"I am writing in support of the proposed designation of an additional portion of land into the Kanaio Natural Area Reserve. I attended the hearing on September 1st in Makawao and I read through the draft proposal, and I find the arguments advanced in favor of this addition to be very convincing. Arguments I find especially compelling have to do with 1) the importance of preserving a rare example of unburned dryland community, and 2) the desirability of constructing the proposed perimeter fence off the lava flow, thereby decreasing costs and minimizing disturbance to the native shrublands on the flow. I was born and raised in the islands, and my family has been involved in native plant conservation efforts for a decade or more. I have only been to the Auwahi preserves twice and to the Pu'u-o-Kali once, but it was very easy to see the contrast between the protected and unprotected lands. I am convinced of the effectiveness of the proposed approach to habitat restoration. While it is extremely difficult to draft a proposal that will please everyone, I feel that this proposal is backed by solid research and a respect for the importance of partnership with a range of concerned groups and organizations."

Lee Altenberg (dated September 1, 2004)

I am writing to express my most ardent support for the proposal to expand the Kanaio Natural Area Reserve. To my mind, the only thing of note about this proposal is that it has taken so long for this remnant of the critically endangered Hawaii dryland forest ecosystem to receive NAR status. The decision in the 1990s to lease it for grazing is incomprehensible to my mind. My research area is evolution, and so I am afforded an appreciation of the world-class uniqueness of the Kanaio habitat that not all others would be aware of. The 19th century viewpoint saw Hawaii as just so much 'unused resource' awaiting improvement and utilization by the industrious. The

21st century viewpoint is that Hawaii's ecosystems are unique products of millions of years of adaptive evolution which if we lose, we lose forever, and which has more value as a living treasure than as a source of hamburger. Regrettably, the 20th century only partially advanced towards this viewpoint, and the remnants of the 19th century viewpoint still walk the halls of State and local government. The proposal to add the candidate tracts of land to the Kanaio NAR is, I hope, a harbinger for future advances in Hawaii's conservation. With the inclusion of this acreage in the NAR, of course many possibilities become opened up for its care and restoration. I would mention that a deer-proof fence could prove to be a key component to not only protecting the NAR from grazing, but protecting east Maui from the spread of axis deer from the population centers in central Maui. In meetings of the Maui Axis Deer Group Natural Resources Working Group, then-councilman, now Mayor, Alan Arakawa proposed that a fence be built from sea to summit as a barrier to the migration of axis deer into East Maui. A deer-proof fence along the Kanaio NAR could form a core to such a barrier. Whatever opposition you may encounter to the proposal needs to be met with the perspective of future generations, not the provincial interests of the moment."

Erica vonAllmen (September 2, 2004)

"I am totally in support of the expansion of the current NARS upslope and the future fencing of that parcel. For the last six years, I have been fortunate enough to work up at Auwahi. I really appreciated that area because it is so different and remains as one of the richest native dryland forests on Maui. As I have come to know the area more intimately, I realize the values those lava flows hold. They are remnant pockets of biological richness that used to be found covering the entire southern slope of Haleakala, and therefore sources for the future of restoration. Weeds are marching their way out to the southern slope, and I feel that this parcel provides an excellent buffer from weeds. If we are able to hold a wall at the edge of Ulupalakua Ranch to incoming weeds, it will save so much time and resources for the future of dryland forest restoration."

Christopher Brosius, West Maui Mountains Watershed Partnership Coordinator (dated September 3, 2004)

"I would like to express my support of the expansion of Kanaio NAR and would be willing to go on record with the following comments. The Kanaio NAR at present and the area of proposed expansion contains a unique biological richness on the island of Maui and in the State of Hawaii which I have witnessed first hand. I support and believe in ALL the merits behind the proposed expansion. I would like to bring special attention to those merits which pertain to the area's value to leeward East Maui as a whole. Conservation of Kanaio, now, would help secure our ability to restore the heavily impacted adjacent landscape. The proposed addition is a genetic repository for the native flora and fauna of leeward East Maui which has been reduced to a fraction of its former complexity. Now with the creation of the Leeward Haleakala Watershed Restoration Partnership, the importance and value in preserving that repository can be realized as it is called upon as a seedbank and a guiding reference point to which leeward Maui restoration projects can be based. In short, the benefits of acquiring the proposed area and fencing the whole will have a multiplier effect for the entire leeward community. Ultimately, this action could enhance the biological, cultural, economic, and water resources of the region.

Tamara Sherrill (dated September 3, 2004)

"I was unable to attend the hearing on September 1, so this letter is to express my support of the proposal to designate a portion of TMK 2-1-003-050 into the Natural Area Reserve System as part of Kanaio Natural Area Reserve. Adding the proposed area to the reserve would not only benefit the efforts of the NAR to protect the last remnants of a native ecosystem but would also be a wise move in light of its linking the NAR to the Auwahi preserve. Mahalo for the work you do."

Bruce Faulkner (dated September 12, 2004)

"I am writing to voice my opposition to the proposed extension of the Kanaio Natural Area Reserve System ... I believe that the original plan was to acquire the westerly section of property and following the existing top Northern boundary. At the meeting it was now proposed to acquire an additional Northern Mauka section (approximately 400-600 acres) which happens to be the most usable section of the State land TMK #II-1-003-050. It was stated at the meeting that the State would fence the area and eradicate any game mammals in the area. This concept of land management needs reform. Fencing in large land areas and slaughtering some of our islands resources (game mammals) is a poor management policy and contradiction to resource management! We need to work towards a more balanced approach to resource management. What we have seen in the past is a massive intrusion of nonnative plants in many areas where our game animals are removed. There is also the increased risk of fire as the vegetation dries out in the summer months. Conversely, I have asked on several occasions to be able to hunt in the existing Kanaio NARS area but was told there were very few animals in this area. Now there is a need to fence it and expand the area? Furthermore, the proposed land area is one of the only pieces of State land in the Kanaio that remain open space. This is public land and should remain for public use in perpetuity! Once NARS gets control of the land they will restrict public access and use. This property has many possible recreational uses that include hiking, horseback riding, hunting, mountain bike riding, and or possibly camping areas. The upper area was at one time used for commercial bird hunting and would be well suited for a GMA. It is pastoral and has limited native vegetation. I think more research is necessary. Furthermore, there was some question as to the ownership of these ceded lands. The State needs to come up with a better management plan if you want public support for this use of this public land. I believe the general public is against this use 'taking.' Please don't be swayed by a few 'leafers' who make a living trying to save vegetation that has been growing here since before their arrival to our islands! They are jut looking out for their jobs. Let's exercise some common sense for a chance and work towards a more balanced management plan for public use."

Wilbert Yee, Kaupo Wildlife Club (dated September 29, 2004)

"I am writing you on behalf of our club membership to voice our opposition to the proposed extension of the Kanaio Natural Area Reserve System. Our club is made up of approximately 100 members from all social and economic strata. We believe in the preservation of open space. To expand this area of public land and fence it would be very intrusive to the area. Much of the appeal of the Kanaio area is the fact that it remains open space. If there is genuine concern for game animals in the area, we would be willing to help manage them through club hunting efforts. Most of us in the club recognize this area as supporting very little game but we would be willing to help rather than fencing this pristine part of Maui. This is public land and should be used by

the public with limited restrictions. The State should be looking at possible recreational uses that will benefit the public rather than fulfilling an individual's dream."

Oral comments received

US Fish & Wildlife Service (date: September 29, 2004)

FWS shared their support for the proposal, which provides expanded protection for designated critical habitat for the Blackburn's Sphinx Moth (*Manduca blackburni*).