

**KAHIKINUI FOREST RESERVE  
COMMUNITY MANAGEMENT CONCEPTUAL PLAN**

**BY**

**KAHIKINUI FOREST PARTNERSHIP WORKING GROUP**

**PREPARED FOR  
DEPARTMENT OF HAWAIIAN HOME LANDS**

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## KAHIKINUI FOREST RESERVE COMMUNITY MANAGEMENT CONCEPTUAL PLAN

### VISION/MISSION STATEMENT:

The Kahikinui Forest Reserve Community Management Conceptual Plan is an important feature of the Maui beneficiary community initiative to resettle the Ahupua'a of Kahikinui.

Realizing the important and integral role the forest will play in the successful resettlement of this once great and significant ahupua'a, a group of individuals have taken on the responsibility of ensuring that this now barren and isolated area of land will one day return to the grandeur and natural splendor it once held.

This is indeed a long term plan. The realization of this vision --the resettlement and restoration of the ahupua'a of Kahikinui -- is dependent on a sustained effort spanning several generations. We hope that our mo'opuna will carry-on this legacy we leave for them. For it is for them -- for the perpetuation of Native Hawaiians as a people -- that this is dedicated. With this in mind, the Kahikinui Forest Partnership Working Group's mission is:

"To unite all Native Hawaiians and others to share in the vision that the great Ahupua'a of Kahikinui can be brought back to its former natural splendor, that all its forests ("Na Wao") will be protected and restored; that its Temples ("Heiau"), shrines ("Ahu") and burial grounds ("Kanu 'ana") will once again be held sacred; and that Native Hawaiians ("Na Kanaka Maoli") can once again live on this land in the spirit of harmony, peace, and balance with all that exist within ("Pono").

## **II. Guiding Principles: A Native Hawaiian Perspective**

The forests of Kahikinui evolved long before the arrival of the first Polynesians. It was these same forests that allowed native Hawaiians to exist and prosper on these lands. Native Hawaiians viewed certain upland forests as sacred areas reserved for their "Na Akua" ("Gods"). These forests were described as "Wao Akua" or alpine area thought to be inhabited only by spirits. Other forests were described as "Wao Kanaka" ("Forest of the People"). Certain forested areas were called "Wao Kele" ("Upland Rain belt Forests") some of which were restricted to bird catchers and medicinal practitioners ("Kahuna La'au Lapa'au").

Native Hawaiians, before the arrival of western explorers and traders, were, in their own unique and elegant way, forest managers employing skills and methods learned after generations of reverence, observation and stewardship of the resources offered by the islands' forests.

Forests played an extremely important role in pre-contact Hawai'i providing water, food, materials for shelter and clothing, and a diverse array of extremely unique plants for cultural, ceremonial and medicinal uses. Koa and ohia wood in general, were used as building materials while particular varieties of ohia were utilized for the carving of idols. Plants such as the ko'oko'olau were used for medicinal purposes.

These forests also provided habitat for a number of native birds such as the 'apapane, amakihi, and pueo. It will be important to consider the birds as a part of the whole of Kahikinui, not as separate from the forest. The continuation of the rich forests of Kahikinui will best provide for the well-being of the birds, and in turn the birds in their interactions with the forest plants and insects, will best provide for a continued, rich and healthy native forest in Kahikinui.

The Native Hawaiian approach to land use was to regard the land as a singular unit spanning from mountain summits to the ocean, known as an "ahupua'a". Those living in a ahupua'a (tenants) could acquire all their needs for basic survival within that land division: Fish ("i'a"), taro ("kalo"), medicinal herbs ("la'au lapa'au"), wood ("kumula'au") and stone for tool making and for the construction of their dwellings ("kauhale") and canoes ("wa'a").

The ahupua'a also provided water from its streams and springs. The kapu system regulated gathering and utilization of land and water by ahupua'a tenants so that these resources would not be depleted. As such, Native Hawaiians used the resources the ahupua'a offered and in turn cared for and protected these resources.



The forest management non-profit corporation will remain independent from other community development entities including those established within the ahupua'a of Kahikinui. This is proposed so that the protection and conservation goals established for the forest reserve may never be compromised.

As with other non-profits, the organization shall be governed by a board of directors of which its members shall be Maui Hawaiian Home Lands beneficiaries. An advisory committee comprised of technical experts in the field of forestry and conservation shall be organized to advise the board and staff on forest stewardship matters.

Upon the adoption of this plan, the Kahikinui Forest Partnership Working Group will develop criteria for the selection of board members and initiate a search to fill the board positions. Once this is completed, the newly formed board will organize it's advisory committee, begin fundraising, and establish qualification criteria for the forest management staff positions.

The non-profit will then hire personnel to manage the forest reserve and to conduct further fundraising. The non-profit will conduct such fundraising within the Maui community and seek governmental and private grants available for forest stewardship. Other revenues will be derived from fees charged to non-beneficiary groups and individuals for the use of the forest for game management, gathering, and recreation.

Fundraising, along with all other uses of the Kahikinui Forest Reserve, shall be conducted in a safe, controlled, environmentally and socially responsible manner.

The Land Trust Alliance, a Washington DC-based umbrella organization, offers technical assistance and political support to land trusts across the USA. The Land Trust Alliance also offers liability coverage as part of their service to private non-profit conservation land management entities. If necessary, the non-profit may be able to seek insurance coverage under this umbrella.

The Kahikinui Forest Reserve is composed of three zones: Alpine Desert, Subalpine Shrublands, and the Koa-Ohia Cloud Belt (or mesic) Forest.

### 1. Alpine Desert

The alpine desert ("Wao Akua") ranges from the summit of Haleakala, elevation 10,000 to the 9,000 foot elevation. This community type is represented by a single native community found on East Maui and the island of Hawai'i. Annual precipitation is rather low, (usually averaging 30 to 50 inches) and falls primarily from October to March. Pukiawe-Ohelo shrubland extends into the alpine desert range as very scattered, low, wind sculptured shrubs and a very open community of ahinahina ("SILVERSWORD"), na'ena'e and kupaoa (*Dubautia menziesii* and *D. arborea*). Above 9,000 foot elevation, predominately on seemingly barren gravel and cinder, the proportion of plant cover is small and gives a nearly plant-free impression from afar.

Wao Akua was reserved for the spiritual entities and the "kinolau" (mortal forms) of the various forest deities. As such pre-contact Native Hawaiians did not frequent this particular area of Kahikinui.

### 2. Subalpine Scrubland

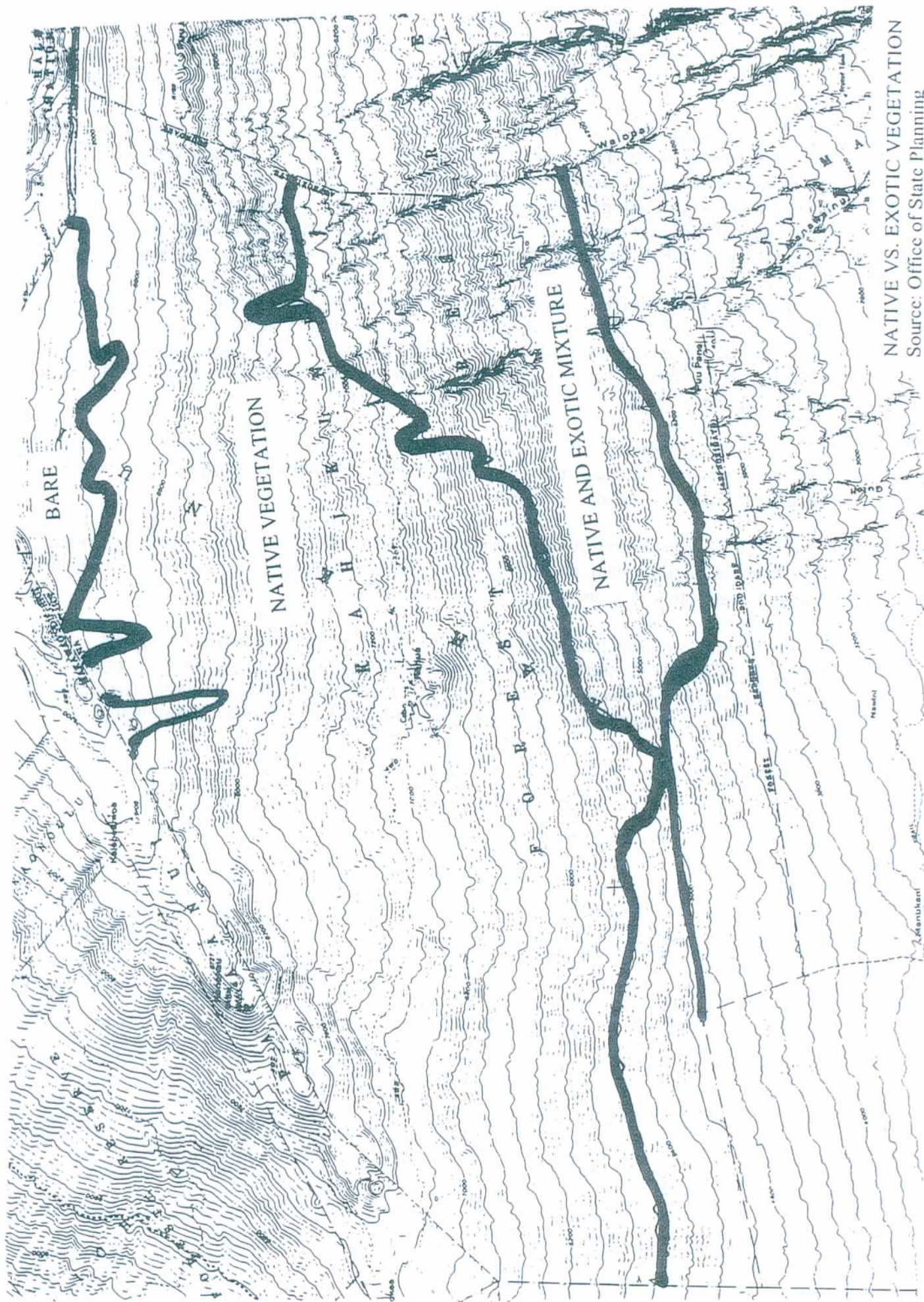
The subalpine ("Ka Wau") scrubland communities at 5,500 to 9,000 foot elevation on East Maui, Hualalai, Mauna Loa and Mauna Kea on the island of Hawai'i are the only areas in the Hawaiian archipelago that reach elevations permitting the development of subalpine vegetation. Annual rainfall is 20 to 60 inches, most of which falls between November and March. These communities are relatively species poor and are dominated by plants adapted to the dry, exposed conditions prevailing here. Most common in this zone are small leafed shrubs such as pukiawe, ohelo, a'ali'i, mamane, a few native grasses and sedges. Much of the ground surface remains unoccupied.

Native Hawaiian traditional activities in this area was limited to certain times of the year for ceremonial purposes only. Gathering activities were limited to the flowering plants for visiting ali'i and hula.

### 3. Koa/Ohia Cloud-Belt Forest

Montane mesic forest ("Wao Kele") communities occur most widely in East Maui and Hawai'i Island at between the 3,000 to the 6,000 feet elevation. The climate is somewhat seasonal with an annual rainfall of 40 to 75 inches. The sub-strait ranges from weathered 'aa flows to trachyte, rocky mucks, silty loams, or deep volcanic ash soils. These forests consist of an open to closed uneven canopy of forty to sixty feet tall koa and ohia trees. The understory is dominated by pukiawe, the amau fern, and tree eco types of a'ali'i. Due





NATIVE VS. EXOTIC VEGETATION  
Source: Office of State Planning



## VII. Management Strategy

The HHL beneficiary community-based non-profit corporation will manage all activities in the forest, coordinate with neighboring land owners on fencing, game management and ungulate control, and maintain communication with DHHL.

Priority for the use of the Kahikinui Forest Reserve shall be all the beneficiaries of the Hawaiian Home Lands trust, in particular those who will resettle the ahupua'a of Kahikinui.

Consistent with the Ahupua'a Concept, the non-profit shall integrate those who resettle the ahupua'a into its forest management program and provide employment and volunteer opportunities. The non-profit will also provide volunteer opportunities to other beneficiary and non-beneficiary groups and individuals to participate in forest management activities.

The non-profit will conduct such fundraising with the Maui community and compete for governmental and private grants available for forest stewardship. Other revenues will be derived from fees charged to non-beneficiary groups and individuals for the use of the forest for hunting, gathering, and other recreational activities.

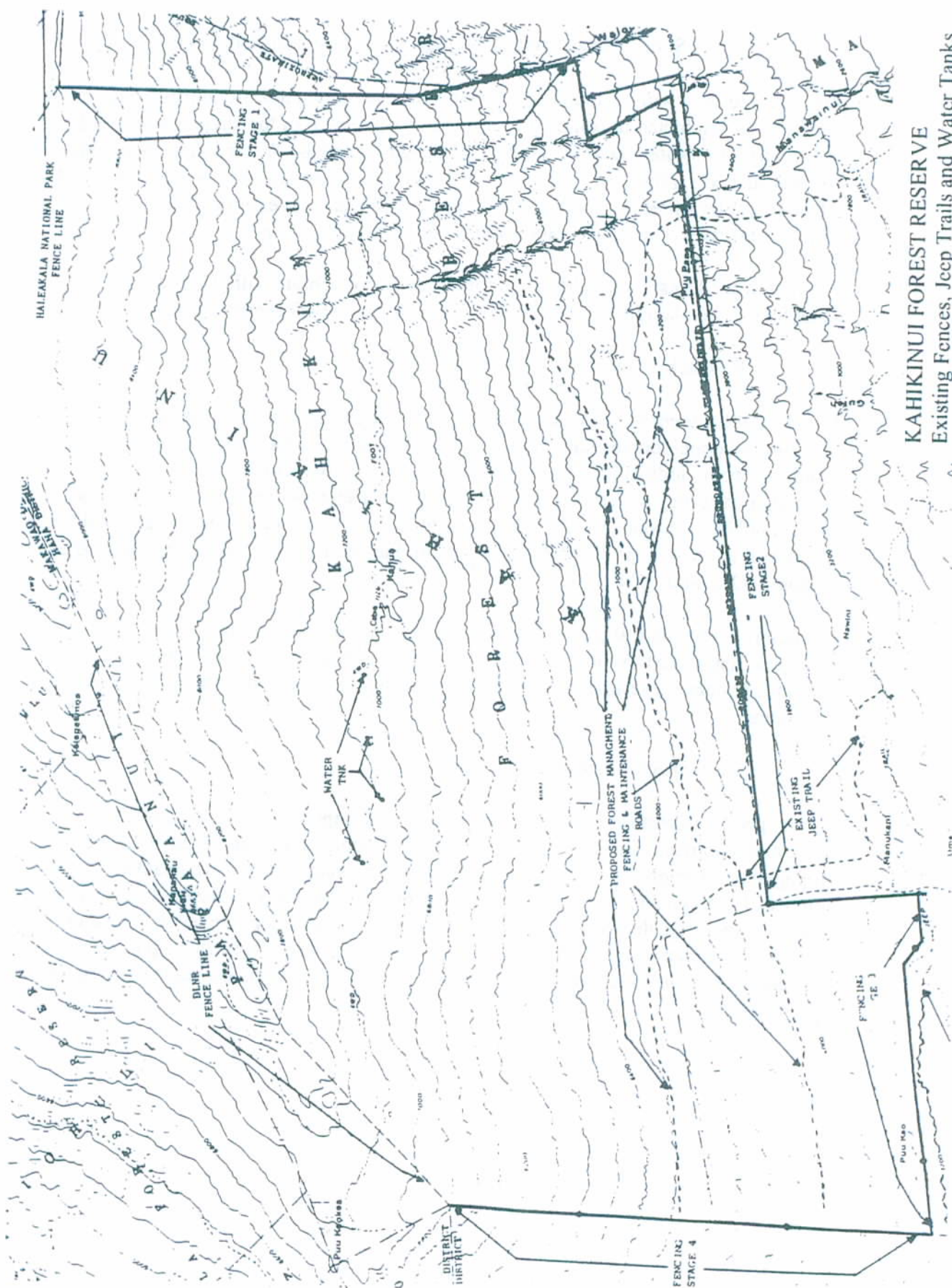
### A. Capital Improvements Program

Effective forest management and reforestation calls for an initial outlay of funds to complete the following needed improvements.

#### 1. On-Site Propagation Facility

Restoration of the koa/ohia forest begins with the starting of trees from seed. Seeds taken and germinated from trees found in the area to be forested shows the best success rate. Seeds germinated from koa on the Big Island and planted on Maui do not do as well as koa seeds taken from the same area on Maui. As such, the reforestation of the Kahikinui koa/ohia forest begins with seeds taken from Kahikinui and with the development of an on-site propagation facility.

It is proposed that a propagation facility be developed in an area protected from inclement weather. A parcel above Manukani at the 3,466 foot elevation adjacent to the Kahikinui forest reserve boundary would be an ideal location. This three-to-five acre site would provide the proper environment for plant propagation, prevent further alien plant and disease introductions, and allow ready access to the forest reserve. Due to the absence of water resources, catchment systems will need to be constructed. This activity will take place concurrently with the access road development and fencing.



## KAHIKINUI FOREST RESERVE

Existing Fences, Jeep Trails and Water Tanks  
Proposed Fences and Jeep Trails



Ungulate displacement can be accomplished by aerial and/or ground drives and hunts utilizing the game management club and the local community. Initial drive will consist of a combination of aerial and ground activity; beginning below Kahua cabin at the 6,000 foot elevation extending southeast to Pu'upane at extending southeast to Pu'upane at the 4,000 foot elevation to the fence line at the northeast corner of the forest reserve.

This activity will encompass approximately 1,000 acres and will be followed by monthly aerial surveys. Additional drives will be determined by results of the aerial surveys, in addition to a regulated community access schedule.

#### 9. Fire and Weed Control Programs

A fire prevention, suppression, and evacuation plan shall be developed. Linkages with forest fighting units will be forged.

An assessment of the impact of alien species will be conducted. Areas most heavily impacted or threatened by weeds will be prioritized and methods for eradication evaluated and selected.

Fire prevention and the prevention of intentional or accidental introduction of unwanted animals, insects or weeds to the forest reserve will be part of the educational information given to all who access the forest reserve.

#### 10. Fundraising Program

An important feature of this proposal is that this is the first effort in recent history where Native Hawaiians will manage a forest reserve/watershed within an intact ahupua'a for the benefit of a new Native Hawaiian community resettling the ahupua'a. As such, substantial community support from all sectors can be anticipated.

Fundraising may occur within or outside of the Kahikinui Forest Reserve. The game management club is anticipated to be a major source of revenues. Other fundraising activities may include grant seeking and public fundraising campaigns. Use of the forest reserve for fundraising activities such as guided tours, camp outs, orienteering, selected harvesting and gathering, rounding up and selling of goats, scientific research, and other uses could be considered provided that these activities are consistent with the rehabilitation of Native Hawaiian and the conservation values reflected in this plan.

- 2) Continue for six miles from the existing jeep trail above Manukani into the forest reserve between 4,300 to the 5,000 foot elevation via a switchback route.
- 3) Continue for 3 miles from the existing jeep trail at Manawainui into the most intact section of the koa/ohia forest from the 2,800 to the 5,000 foot elevation.
- 4) Continue for 2.0 miles 1,000 feet above the southern boundary, running parallel at the 4,400 foot elevation beginning above Manukani and ending at the western boundary of Kahikinui.
- 5) Continue for 3.5 miles west beginning at the 5,200 foot elevation above Manukani and ending at the western boundary adjacent to Ulupalakua Ranch's Auahi property.

## **PHASE II**

### **Access Monitoring and Ungulate Control Measures: (6/97-5/98)**

- 1) Construct a 2.5 mile hog wire fence at the upper northeastern boundary of the Kahikinui Forest Reserve. This fence would connect to the existing Haleakala National Park fence line at the 9,300 foot elevation down to the fenced koa forest at the 6,000 foot elevation at the head of the Waiopai gulch. This fence will block access of feral goats from the Nakula lands where there is a large concentration of goats.
- 2) Construct 5.2 miles hog wire fence along the southern boundary between the Forest Reserve and Kahikinui's resettlement area between 4,000 and the 4,200 foot elevation.
- 3) Construct 2.5 miles hog wire fence from the southwest boundary between the forest reserve above Manukani at the 4,300 foot elevation to the 3,200 foot elevation at the Western boundary at Ulupalakua Ranch's Auahi property.
- 4) Construct 2 miles of hog wire fence along the western boundary between Ulupalakua's Auahi district and HHL's Lualailua district, starting from the existing state fence line at the 6,800 foot elevation down to the forest reserve boundary at the 3,600 foot elevation.



## Kahikinui Forest Reserve

### Lists of Significant Birds, Insects and Plants.

#### Native Birds (10 species)

The following native birds have been recently observed at the Kahikinui forest Reserve:

'Tiwi	not found in Kahikinui in 1980 but now present.
'Apapane	abundant Kahikinui in forest areas.
'Amakihi	abundant Kahikinui in forest areas.
'Alauahio (Maui)	uncommon, scattered in forest areas.
Pueo	common in forest & open areas.
Kolea	winter resident.
Koa'e kea	resident shorelines & vertical cliffs.
'Ulili	winter resident of shore and streams.
Nene:	ENDANGERED uncommon, but resident upper forest edges and in pastures to $\approx$ 3000.
'Ua'u:	ENDANGERED uses area as traveler to/from Crater

Note: Insufficient current surveys to detect: 'Akohekohe, 'Akepa and Maui Parrotbill. (All endangered species potentially in Kahikinui.)

#### Non-native Birds (24 species):

Barn Owl	Black Francolin	Gray Francolin
Chukar	California Quail	Wild Turkey
Peafowl	Ring-necked Pheasant	Eurasian Skylark
Hwamei	Japanese Bushwarbler	Red-billed Leiothrix
Cattle Egrets	Japanese White-eye	Warbling Silverbill
Rock Dove	Zebra Dove	Common Myna
House Finch	Northern Mockingbird	Northern Cardinal
Spotted Dove	Nutmeg Mannikin.	

#### Insects

While many native and non-native insects inhabit the Kahikinui Forest Reserve, two native insects were observed on June 23, 1995:

Koa Butterfly (Veoa blackburnii)	
Koa Bug (True bugs: Hemiptera)	sc. name not know, this insect is considered rare .