

FEB 23 2001

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2001-02-23-HI-PEA-KUKUIOPAE

ENVIRONMENTAL ASSESSMENT

for

* ROAD CONSTRUCTION *

KUKUIOPAE SECTION, SOUTH KONA FOREST RESERVE

In accordance with

CHAPTER 343, HAWAII REVISED STATUTES

Proposed by:

State Department of Land and Natural Resources
Division of Forestry and Wildlife

February 2001

Project Name Road Construction, Kukuiopae Section,
South Kona Forest Reserve

Project Location South Kona District, Hawaii . . .
TMK: 8-7-1-01

Applicant State of Hawaii
Department of Land and Natural Resources
Division of Forestry and Wildlife

Approving Agency State Department of Land and Natural Resources

Agencies Consulted

Federal: U.S. Department of Interior
Fish and Wildlife Service
National Park Service
USGS, Biological Resources Division

State: Department of Land and Natural Resources
Division of Forestry and Wildlife
Division of Conservation and Resource Enforcement
Historic Preservation Division
Land Division
Office of Environmental Quality Control
Office of Hawaiian Affairs

County: Planning Department

Private: Big Island Bird Hunters
Bishop Museum
Conservation Council for Hawaii
C.Q. Yee Hop Ranch
Earth Justice Legal Defense Fund
Hawaii Audubon Society
National Wild Turkey Federation
Native Hawaiian Advisory Commission
Native Hawaiian Legal Corporation
Pig Hunters of Hawaii
Sierra Club, Moku Loa Group
The Nature Conservancy of Hawaii
Wildlife Conservation Association of Hawaii

Project Description

Summary: The Division of Forestry and Wildlife (DOFAW) proposes construction of a road to enable personnel overland access to the Kukuiopae Section of the South Kona Forest Reserve in order to conduct resource management activities. A minimum impact road will traverse through 150 meters of ohia (*Metrosideros polymorpha*) forest before connecting to an existing road, then it will follow the existing road until the current road's end, whereupon it will cut through another 120 meters of ohia forest before exiting onto a recent (1950) lava flow. The proposed road will travel along the 1950 lava flow mauka for 1.57 km before connecting to an existing road. The construction activities will impact a 20 foot wide swath for a 12 foot wide road using a D8 or D7 bulldozer. The project area is located within the boundaries of the Kukuiopae Section of the South Kona Forest Reserve. All project lands are ceded state lands and within the Conservation District zone, protected subzone, as designated by the State Land Use Commission. There is no County zoning associated with this project and the project lands are not located within the County's Special Management Area (SMA). Maps of the project area can be found in Appendix A.

Affected Environment

Flora:

The forests in this region consist primarily of native vegetation above the 2000 foot elevational contour. In the project area, the wet forest is dominated by ohia (*Metrosideros polymorpha*) up to 70 feet tall over a subcanopy (up to 50 feet) of kopiko (*Psychotria hawaiiensis*) and hame (*Antidesma platyphyllum*), and native tree ferns (*Cibotium* spp.). The understory is densely vegetated and contains several species of native ferns, shrubs, and the native vine ieie (*Freycinetia arborea*) is abundant. Alien plants such as Koster's curse (*Clidemia hirta*) and strawberry guava (*Psidium cattleianum*) are common constituents of this forest. No federally listed endangered or threatened plant species were observed within the proposed road corridor. See Appendix B for a complete list of plant species found within the project area.

Fauna:

Information about animals within the Kukuiopae section of the South Kona Forest Reserve is limited. A staff wildlife survey was conducted on July 27th, 2000 between 2300 and 2700 feet elevation and found a mixture of native and introduced bird species, with a greater abundance of native birds such as amakihi (*Hemignathus virens*) and apapane (*Himatione sanguinea*) at the higher elevations. Mosquitos in this area were abundant. A complete list of vertebrate species observed along the proposed road corridor is included in Appendix C. A complete list of malacological resources observed along the proposed road corridor is included in Appendix D.

Significant and Sensitive Habitats:

Though no endangered or threatened plant species was observed during surveys of the

proposed road corridor the two sections of closed-canopy ohia forest could be considered sensitive habitat for native birds and possibly the Hawaiian hoary bat. Although ohia lowland wet forest is still common in Hawaii, lowland wet forests are dwindling state-wide as land is converted to agricultural and other developmental uses. To minimize the road building impact the proposed road will be routed through as little of this forest as possible by utilizing the existing road where possible to reach the nearly barren 1950 lava flow.

Archaeological Sites:

No archaeological sites were observed by DOFAW staff during botanical and road alignment surveys. The State Historic Preservation Office has no record of sites in the area. A survey conducted by the State Historic Preservation Office detected no archaeological sites along the proposed road corridor.

Impacts Resulting from Project

Short Term Impacts:

The primary environmental impacts from this project will be those associated with construction of the road. Destruction of vegetation and ground disturbance will occur in a strip no more than 20 feet wide along the proposed road corridor. Noise and air pollution from a D8 or D7 bulldozer and from an increase in human activity will be unavoidable over a period of three to four weeks. The operation of the bulldozer may disturb native birds or bats in the immediate area. These impacts are discussed under mitigation.

Long Term Impacts:

Although no major long-term negative effects are expected, the potential exists for introduction of new weed species, and spread of weeds into areas disturbed by road construction. This possible impact is discussed under mitigation.

Socio-economic Impacts:

The primary impact will be increased vehicular traffic along the right-of-way through the Hawaiian Homestead lots below the forest reserve boundary. Additionally, in the future there may be designated hunting seasons for pig and goat, as well as organized feral cattle hunts to remove these animals from this section of the forest reserve. With increased access for the public to the forest reserve there is the potential for an increase in illegal activities such as marijuana growing, trespassing, and burglary of homes adjacent to the Kukuiopae access road. Vehicular traffic into the forest reserve proper will actually be curtailed by installing locked gates along the new road and by gating off currently existing access from private, adjacent land.

Cultural Impacts:

The cultural impacts of this project are positive. The public will have the potential for access to this section of the South Kona Forest Reserve where previously access was limited by private landowners adjacent to Kukuiope. With improved access, the public will be able to enter the forest reserve legally on foot for traditional gathering of forest resources if they have the necessary collecting permit issued by the Division of Forestry and Wildlife in Hilo or Kamuela.

Alternatives to Project

Several alternatives to this project have been identified and are discussed here.

Alternative #1: Proceed with the project as described. Build access road through two small (less than 200 meters length) sections of forest, utilizing existing roads and nearly barren lava flows where possible.

This is the preferred alternative as it is the most feasible and requires no authorization from private landholders.

Alternative #2: Establish easement to gain access to the Kukuiope section of the South Kona Forest Reserve through private lands further to the north.

This alternative is unlikely to be successful because of multiple ownerships.

Alternative #3: No Action

Implies continued neglect of forest resources for this section of South Kona Forest Reserve, and the acceptance of the inevitable degradation of these public resources. Agency and public access will be restricted under this alternative.

Mitigation Measures

The major impacts from this project are vegetation related. Damage to living native plants will be restricted to a 20 foot corridor along the proposed road alignment over a distance of 270 meters. Additional vegetation may be harmed along the 1.57 kilometer stretch of the 1950 lava flow though the vegetation on this flow is sparse. No endangered or threatened plant species were observed along the proposed road alignment. Weed introduction will be minimized by ensuring that all equipment, personal gear, etc., are clean before being taken into the project area. When the road is completed, DOFAW personnel will treat the roadway with herbicides to suppress and kill any alien plant species brought along the corridor during road construction.

No work in the forested area will be conducted in the months of April to August to minimize the impact to birds and possibly bats during their peak breeding and nesting period.

No archaeological sites have been seen within the area to be disturbed by road construction. Should any be discovered during construction, work will be halted and the proper authorities notified.

No endangered or threatened land snails were observed along the proposed road corridor. Should any be discovered during construction, work will be halted and the proper authorities notified.

Other impacts from this project include the potential increase in illegal activities (marijuana growing, trespassing, burglary of homes adjacent to the forest reserve) with the increased vehicular access to the lower boundary of the forest reserve. It is anticipated that the access corridor within the forest reserve will be gated and locked at all times in an effort to reduce these potential impacts.

Expected Determination

No significant negative impact on the environment is expected from this project.

Findings and Reasons Supporting Expected Determination

The intent of the project is for forest resources management. Creating overland access to the Kukuioapae section of South Kona Forest Reserve will enable DOFAW personnel to care for the resources in the area without the *undue economic burden of flying into the area in helicopters* in order to maintain these resources. Additionally, the public will have access to the forest on foot for recreational purposes and for traditional gathering of forest resources.

Environmental Assessment Prepared By:

Lyman Perry
Botanist
Hawaii District
Division of Forestry and Wildlife
P.O. Box 4849
Hilo, HI 96720
(808) 974-4221
(808) 974-4226

E-mail: dofawhi@interpac.net

Sources of Biological Information:

DOFAW Hawaii Branch botanical and wildlife surveys 2000

Malacological survey by Lisa Hadway and Jon Giffin 2000

APPENDIX A

Map of Project Area (see next page for map)

N ↑



APPENDIX B
South Kona Forest Reserve
Kukuiopae Section

Survey Dates: May 2nd, 2000
 June 7th, 2000

Proposed Road Survey Plant Checklist, Forested Area 1920 - 2300 ft elevation

Key: D = Dominant, C = Common, O = Occasional, S = Scattered, U = Uncommon, LC = Localized
 Status: E = Endemic, I = Indigenous, X = non-native, E* = Endangered, SOC = Species of Concern,
 T = Threatened

TREES

<i>Antidesma platyphyllum</i>	hame	O	E
<i>Brousaissia arguta</i>	kanawao	O	E
<i>Carica papaya</i>	papaya	LC	X
<i>Hedyotis terminalis</i>	manono	O	E
<i>Ilex anomala</i>	kawau	O	E
<i>Melochia umbellata</i>		LC	X
<i>Metrosideros polymorpha</i>	ohia	C	E
<i>Musa sp.</i>	banana	LC	X
<i>Perrottetia sandwicensis</i>	olomea	O	E
<i>Persea americana</i>	avocado	U	X
<i>Pipturus albidus</i>	mamaki	O	E
<i>Psidium cattleianum</i>	strawberry guava	O	X
<i>Psidium guajava</i>	common guava	C	X
<i>Psychotria hawaiiensis</i> var. <i>hawaiiensis</i>	kopiko	C	E
<i>Psychotria hawaiiensis</i> var. <i>hillebrandii</i>	kopiko	C	E
<i>Schinus terebinthifolius</i>	Christmasberry	O,C	X

SHRUBS

<i>Abutilon pictum</i>	bell hibiscus	LC	X	
<i>Arthrostemma ciliatum</i>		LC	X	
<i>Clidemia hirta</i>	Koster's curse	O,C	X	
<i>Coffea arabica</i>	coffee	O	X	
<i>Cordyline fruticosa</i>	ti, ki	O,S	X	
<i>Cyrtandra menziesii</i>	haiwale	O	E	SOC
<i>Desmodium intortum</i>	beggarweed	C	X	
<i>Fuchsia magellanica</i>	hardy fuchsia	LC	X	
<i>Hyptis pectinata</i>	comb hyptis	LC	X	
<i>Pluchea symphitifolia</i>	sourbush	O	X	
<i>Senna occidentalis</i>	coffee senna	LC	X	
<i>Senna sp.</i>				

<i>Sida acuta</i>		O	X?
<i>Touchardia latifolia</i>	olona	O	E

HERBS

<i>Ageratum conyzoides</i>	maile hohono	C	X
<i>Castilleja arvensis</i>	Indian paintbrush	U	X
<i>Cuphea carthaginensis</i>	tarweed	U	X
<i>Coix lacryma-jobi</i>	Job's tears	O	X
<i>Crassocephalum crepidioides</i>		O	X
<i>Hedychium coronarium</i>	white ginger	O	X
<i>Hedychium gardnerianum</i>	kahili ginger	O	X
<i>Impatiens wallerana</i>	busy lizzy	LC	X
<i>Kalanchoe pinnata</i>	air plant	LC	X
<i>Oxalis corniculata</i>		O	X
<i>Pepperomia cookiana</i>		O	E
<i>Pepperomia macraei</i>		O	E
<i>Phaius tankervilleae</i>	Chinese ground orchid	O	X
<i>Plantago major</i>		O	X
<i>Rubus rosifolius</i>	thimbleberry	O	X

VINES

<i>Cocculus trilobus</i>	huehue	O	E
<i>Delairia odorata</i>	German ivy	O	X
<i>Embelia pacifica</i>	kilinoe	U	E
<i>Freycinetia arborea</i>	ieie	C	E
<i>Ipomoea indica</i>	koali awa	C	I
<i>Passiflora ligularis</i>	sweet granadilla	O	X
<i>Smilax melastomifolia</i>	hoi kuahiwi	U	E

GRASSES and SEDGES

<i>Oplismenus hirtellus</i>	basketgrass	C	X
<i>Paspalum conjugatum</i>	Hilo grass	C	X
<i>Ehrharta stipoides</i>	meadow ricegrass	O	X
<i>Digitaria pentzii</i>	pangola grass	LC	X
<i>Poa pratensis</i>	Kentucky bluegrass	LC	X
<i>Schizachyrium condensatum</i>	bushy beardgrass	LC	X
<i>Melinis minutiflora</i>	molasses grass	LC	X

FERNS and FERN ALLIES

<i>Adenophorus tamariscinus</i>	wahine noho mauna	O	E
<i>Asplenium nidus</i>	bird's nest fern	O	I
<i>Asplenium cf polyodon</i>		U	E

<i>Blechnum occidentale</i>		O	X
<i>Christella dentata</i>	downy woodfern	O	X
<i>Christella parasitica</i>	woodfern	O	X
<i>Cibotium menziesii</i>	hapuu ii	C	E
<i>Cibotium glaucum</i>	hapuu pulu	C	E
<i>Cibotium chamissoi</i>	hapuu meu	O	E
<i>Deparia petersonii</i>		O	X
<i>Elaphoglossum alatum</i>		O	E
<i>Elaphoglossum crassifolium</i>		O	E
<i>Elaphoglossum hirtum</i>	ekaha	O,S	E
<i>Grammitis tenella</i>	mahinalua	O	E
<i>Mecodium recurvum</i>	ohia ku	O	E
<i>Microlepia strigosa</i>	palapalai	O	E
<i>Nephrolepis cordifolia</i>	sword fern	C	I
<i>Nephrolepis multiflora</i>	scaley sword fern	C	X
<i>Phlebodium aureum</i>		O	X
<i>Phymatosorus scolopendria</i>	lauae	O	X
<i>Pneumatopteris sandwicensis</i>		O	E
<i>Sadleria cyatheoides</i>	amau	O,S	E
<i>Sphaerocionium lanceolatum</i>	palai hinahina	O	E
<i>Sphenomeris chinensis</i>	palaa	O	I
<i>Vandenboschia cyrtotheca</i>		O	E
<i>Vandenboschia davaillioides</i>		O	E

1950 Lava Flow Species List

<i>Metrosideros polymorpha</i>	ohia	C,O	E
<i>Sadleria cyatheoides</i>	amau	O	E
<i>Psilotum nudum</i>	moa	O	I
<i>Huperzia phyllanthoides</i>		O	I
<i>Elaphoglossum sp.</i>		O	E
<i>Peperomia sp.</i>		O	E
<i>Dicranopteris linearis</i>	uluhe	O	I
<i>Lycopodium cernuum</i>	waiwaiole	O	I
<i>Nephrolepis cordifolia</i>		O	I
<i>Phlebodium aureum</i>		O	X
<i>Dubautia scabra</i>		O	E
<i>Hedyotis centranthoides</i>		O	E
<i>Racomitrium. languinosum</i>		C	
<i>Stereocaulon vulcani</i>		C	
<i>Usnea sp.</i>		C	

APPENDIX C

Vertebrate Species Observed along the Proposed Road Corridor, Kukuiope, South Kona

On July 27th, 2000 a mammal and bird survey was conducted in the South Kona Forest Reserve (Kukuiope section). Personnel involved were Miles Nakahara and Robert Covington (DOFAW West Hawaii wildlife staff). The survey was concentrated at the lower elevations of the forest reserve between 2300 - 2700 feet elevation.

While driving to the survey area, two steers were observed in the forest. Both animals appeared to be from someone's domestic herd, as ear tags were readily apparent. Fresh signs of feral cattle (*Bos taurus*) in the survey area were not observed, however, older signs (scat) were noticed.

The feral pig (*Sus scrofa*) numbers in the area seem to be very low as no fresh scat was observed and only in one small area was any fresh sign of pig activity found. Feral pig damage to plants in the area also looked old.

It should also be noted that the mosquito population, at the elevations mentioned, was extremely high.

Bird species observed within the area were a mixture of native and introduced. At the higher elevations the abundance of birds increased, and native birds were more notable. A quantitative survey was not conducted, however, the bird population overall was of moderate density. The following is a species list of birds observed (visually and/or audibly) within the area.

Common Name:	Scientific Name:	Species Abundance:
Japanese White-eye	<i>Zosterops japonicus</i>	high
House Finch	<i>Carpodacus mexicanus</i>	low
Red-billed Leothrix	<i>Leiothrix lutea</i>	moderate (lower elevation)
Northern Cardinal	<i>Cardinalis cardinalis</i>	high
Spotted Dove	<i>Streptopelia chinensis</i>	low
Amakihi	<i>Hemignathus virens</i>	low (lower elevation), moderate (higher elevation)
Apapane	<i>Himatione sanguinea</i>	low (lower elevation), moderate (higher elevation)
Iiwi	<i>Vestiaria coccinea</i>	low
Io	<i>Buteo solitarius</i>	low

APPENDIX D

Native Snail Survey of Proposed Road Corridor, Kukuiope, South Kona Forest Reserve

Conducted by Lisa Hadway, June 7th, 2000

Enclosed is a list of the snails that were observed in the South Kona Forest Reserve Kukuiope section during a survey conducted June 7th, 2000. Though all Hawaiian land snails are considered rare, none of the snails found on this survey are considered extremely rare or endangered. The sites surveyed for the proposed road alignment should pose no threat to the existing populations of snails found there. Snails were found in a variety of vegetation including but not limited to: icie (*Freycinetia arborea*), hame (*Antidesma platyphyllum*), kanawao (*Broussaissia arguta*), guava (*Psidium guajava*), olona (*Touchardia latifolia*), kopiko (*Psychotria hawaiiensis*), and ginger (*Hedychium* sp.).

Snail species observed in the Kukuiope Section, South Kona Forest Reserve

Family Achatinellidae

- 1) *Elasmias fuscum* endemic, Hawaiian chain
- 2) *Tornatellides* sp.?/*Tornatellaria* sp.? (these genera are virtually indistinguishable in the field) endemic, Hawaiian chain

Family Helicarionidae

- 3) *Philonesia* sp.? (likely *Philonesia gouveiana* which is described from the Honomalino area) endemic, Hawaii Island

Family Succineidae

- 4) *Succinea* sp.? (likely *Succinea protracta* described from Kau) endemic, Hawaii Island

Family Zonitidae

- 5) *Oxychilus alliarius* an introduced snail known as the "garlic snail".

APPENDIX E

Comment Letters and Agency Response

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



TIMOTHY E. JOHNS, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DEPUTIES
JANET E. KAWELO
LINNELL NISHIOKA

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamokile Boulevard
Kapolei, Hawaii 96707


AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES
ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS
WATER RESOURCE MANAGEMENT

December 6, 2000

MEMORANDUM

LOG NO: 26640 ✓
DOC NO: 0012PM01

TO: Jon G. Giffin, Branch Manager
Division of Forestry and Wildlife

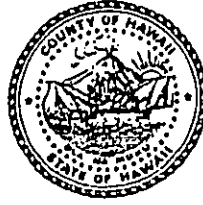
FROM: Don Hibbard, Administrator
State Historic Preservation Division 

SUBJECT: Draft Environmental Assessment for Road Construction at Kukuioape
Section of the South Kona Forest Reserve
Kukuioape, South Kona, Hawaii Island
TMK: 8-8-7:01

Thank you for your letter of November 14, 2000, and the opportunity to review and comment on the draft Environmental Assessment for the proposed road in the Kukuioape Section of the South Kona Forest Reserve. The draft EA notes that our office conducted an archaeological survey of the road alignment, a portion of which follows along the 1950 Mauna Loa lava flow. No historic sites were found in the survey. We thus believe that the proposed project will have "no effect" on significant historic sites. It is our understanding that if any such sites are found during road construction all work will be halted and our office will be immediately notified.

PM:jk

Harry Kim
Mayor



Christopher J. Yuen
Director

County of Hawaii

PLANNING DEPARTMENT
25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252
(808) 961-8288 • Fax (808) 961-8742

December 12, 2000

Mr. Jon G. Giffin
Department of Land and Natural Resources
Division of Forestry and Wildlife
P.O. Box 4849
Hilo, HI 96720

Dear Mr. Giffin:

Comments on the Preparation of a Draft Environmental Assessment
Project: Road Construction at Kukuiopae, South Kona Forest Reserve
TMK: 8-7-1: 1

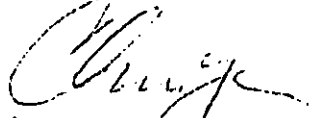
Thank you for your memo dated November 14, 2000, requesting comments regarding the preparation of a draft environmental assessment for the proposed road construction at Kukuiopae, South Kona Forest Reserve. As discussed with Mr. Lyman Perry, we note that the correct TMK is 8-7-1: 1 and not 8-8-7: 1. We have the following comments to offer:

1. The parcel is designated Conservation by the State Land Use Commission.
2. There is no County Zoning associated with this property.
3. The project is not located within the County's Special Management Area (SMA).

Mr. Jon G. Giffin
Department of Land and Natural Resources
Division of Forestry and Wildlife
Page 2
December 12, 2000

If you have any questions, please call Phyllis Fujimoto of this office at 961-8288.

Sincerely,



Christopher J. Yuen
Planning Director

PF:pak
p:\wpwin60\phyllis\LDLNR01.doc

cc: Ms. Genevieve Salmonson, Office of Environmental Quality Control

PHONE (808) 594-1888



FAX (808) 594-1865

STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

December 26, 2000

Jon G. Giffin
State Dept. of Land and Natural Resources
Division of Forestry and Wildlife
P.O. Box 4849
Hilo, HI96720

Re: Road Construction, Kukuiope Section, South Kona Forest Reserve

Dear Mr. Giffin,

Thank you for the opportunity to comment on the proposed construction of an overland access to the Kukuiope Section of the South Kona Forest Reserve.

OHA has several concerns that center around the fact that the environmental assessment addresses only the short-term impact of building the road, and does not address the long-term impacts that will be caused by traffic on the road, increased access to a relatively pristine forest, and the introduction of additional foreign species caused by opening a corridor through a relatively pristine forest. Furthermore, the EA does not state whether this road will be temporary or permanent. The EA states that the access corridor will be gated and locked at all times, yet one of the reasons for doing the project is to increase public access the forest. The EA does not state how or if access will be controlled. Finally, the main reason for building the road is to allow DOFAW personnel access for on-going management of the forest, yet the

benefits of this access to public (ensuring maintenance of endangered and threatened species, foreign plant eradication, feral cow and pig management, etc) are not addressed. All of these unanswered questions add to OHA's concerns about this project.

OHA's first concern is that a road through a relatively pristine forest will introduce more foreign species into the area. While only small sections of road will be built to connect already existing roads, the potential for additional traffic to introduce more foreign species is not addressed. Mitigation measures suggest that the road will be treated with herbicides once construction has been completed. However, after the initial herbicide treatment, no further mitigation measures are proposed. The long-term impacts caused by traffic, increased use of the forest and the creation of a corridor for foreign birds and animals are not addressed at all. Yet, foreign seeds brought in by vehicular traffic, foot traffic and alien species will cause much more damage in the long run than the building of the road. OHA believes that the long-term impacts of the road need to be addressed.

Opening the road will allow more people to access the forest for recreation and "traditional gathering of forest resources." The EA states that this is a plus in the cultural column for this project. However, as mentioned above, the increase in traffic through the forest will introduce foreign species and could lead to the depletion of "traditional . . . forest resources." Additionally, will gathering be controlled in any way to ensure maintenance of species? OHA suggests that the DOFAW work with the Ilioulaokalani Coalition and the major traditional healing groups on Hawai'i to develop adequate access and gathering plans before the forest is depleted of its resources. While OHA does not necessarily oppose increased access to the forest, we do not think that the impact of increased access has been adequately addressed in this environmental assessment.

OHA is specifically concerned about possible long-term effects on traditional medicinal plants. The possibility that this road project could impact traditional healers' ability to collect their medicinal plants has not been addressed. Additionally, the effect of herbicides on native medicinal and lei plants are not addressed. If herbicides are to be used more often than once, how will they affect traditional medicinal and lei plants? The introduction of a road, with concurrent pollution and the introduction of foreign species could have a detrimental affect on medicinal plants. While most of these plants are not threatened or endangered, they play an important role in assuring that Hawaiians can maintain their cultural practices. Again, OHA would argue that the impact on native plants and the possible repercussions of those impacts have not been adequately addressed.

Finally, the forest is home to several native bird species, and possibly the 'Io or Hawaiian Hawk and the 'ope'ape'a, or Hawaiian hoary bat. Again, OHA would argue that long-term impact or increased access to the forest on these species is not addressed in the EA. OHA would suggest that evening studies be done to assess the impact on the 'ope'ape'a, and that the EA address possible long-term impacts to each of the species affected.

Places with names in Hawai'i usually means that a place has some significance. Kukuiopae means "The kukui grove of Pa'e" (Pukui, *Place Names of Hawai'i*). Pa'e was an unknown chief who supposedly planted the grove. Since kukui groves often mark burial sites, all contractors should be prepared to find burials or archaeological remains.

If you have questions, please call Pua Aiu, policy analyst at 594-1931.

Sincerely,

A handwritten signature in cursive script that reads "Colin Kippen, Jr." with "(for)" written below it.

Colin Kippen, Jr.
Deputy Administrator, Hawaiian Rights Division

Cc: BOT
Randy Ogata, Chair

State of Hawaii
Department of Land and Natural Resources
Division of Forestry and Wildlife
Attn: Lyman Perry/Botanist
P.O. Box 4849
Hilo, Hi. 96720

Dear Mr. Perry,

I have received and reviewed the Draft Environmental Assessment titled "Road Construction at Kukuiopae Section, South Kona Forest Reserve". Thank you for your prompt forwarding of the document. My interest in the project is one of general concern as a South Kona resident. I also have legal access to this section of Forest Reserve through an adjacent fee simple parcel in Kolo and have entered for recreational purposes (i.e. Unit B hunting) occasionally.

I am in general agreement with both the goals and the scope of this project. I believe DOFAW access and limited public access to these State lands will result in better management practices. Having walked the existing and proposed road corridor, above the 2000 foot elevation level, I agree that the proposed route and use of currently existing roads minimizes damage to the forest. I urge strict compliance with your Mitigation Measures Section of the DEA, especially regarding weed introduction. In my own visits to the Forest Reserve from the adjacent parcel (TMK 8-7-13-36) I wear coveralls below the 1800 foot elevation level which I remove before entering the native forest above.

The DEA mentions designated hunting seasons for feral pig and goat as well as organized hunts for feral cattle. As a licensed hunter (2001-04259) I would be happy for the opportunity to participate in such activities. Because of the lack of perimeter fencing in this section of Forest Reserve I do not believe that a feral mammal snaring program is appropriate. Besides the ease with which replacement populations can enter the unfenced reserve there is a liability issue if stray domestic stock is snared.

Although this letter will reach you after the December 29, 2000 deadline, please feel free to include it in your files. Also, as I requested during our last telephone conversation, I would like copies of the letters and any other material received from the agencies and individuals consulted during the public commentary period. Perhaps a revision of the DEA could include this material.

Sincerely,

 1/10/01

Larry Rose
P.O. Box 558
Kealahou, Hi. 96750



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE
P.O. BOX 4849
HILO, HAWAII 96720
(808) 974-4221
FAX (808) 974-4226

February 7th, 2001

Colin Kippen, Jr.
Deputy Administrator, Hawaiian Rights Division
State of Hawaii, Office of Hawaiian Affairs
711 Kapiolani Boulevard, Suite 500
Honolulu, HI 96813

Dear Sir,

Earlier this year you responded to a request for comments on the Draft Environmental Assessment for road construction at Kukuiopae, South Kona Forest Reserve, Hawaii. The final Environmental Assessment will be published shortly and we would like to thank you for taking the time to review the draft. Below we respond to your comments regarding this project.

Concern number 1: Increased access to a relatively pristine forest:

Vehicular access will actually be curtailed by gating off an existing dead-end road into the forest, and by gating off access from adjacent, private lands. Access by foot will not be restricted. The forest is already degraded by the presence of feral cattle and alien plant populations. The Division of Forestry and Wildlife needs access to this area to perform alien ungulate and plant control. The introduction of additional foreign species caused by opening a road corridor is unavoidable, however, if these already existing populations of introduced animals and plants are left unchecked, the forest will suffer further decline even if no additional roadway is constructed in this area.

Concern number 2: Long-term impacts of traffic on the road:

Access will be restricted by gating the Division of Forestry and Wildlife's legal access. There will be no vehicular access without a permit until we are able to delineate the legal boundaries. There is currently overland access by foot and vehicle via existing access routes from adjacent parcels of land to the north and east of the Kukuiopae section. Both access routes will be blocked to prevent vehicular access when our legal access road is constructed. There will actually be less vehicular access to this area after DOFAW has installed locked gates at certain locations. Once the boundaries of the

Kukuiopae section of the South Kona Forest Reserve are delineated, vehicular access may be allowed for special hunting seasons.

Concern number 3: EA does not state whether the road will be temporary or permanent:

The access road will be permanent and steps will be taken to block off any other access routes that are in place now (see comment above).

Concern number 4: Increased access to the forest to gather forest resources could lead to a depletion of those resources, will this be controlled in any way?

The Division of Forestry and Wildlife has a permitting process in place for gathering of forest resources in order to control and prevent depletion of those resources. This permitting process has been in place for years whereby an applicant gets a permit for a specific amount of plant material to be collected. Staff of the Division of Forestry and Wildlife periodically review permit requests to determine if a particular area or particular natural resource are in danger of becoming depleted.

Concern number 5: Possible long-term effects on traditional medicinal plants with respect to repeated treatment of the roadway with herbicides:

Herbicide applications along the roadway will directly target non-native plants and there should be no damage done to native medicinal and lei plants. No medicinal plants were observed on or in existing roadways that will be a part of the Division of Forestry and Wildlife's access to the Kukuiopae section of the South Kona Forest Reserve. The section of roadway that will have to be cleared through the native forest does contain plants that could be used medicinally and for lei-making. Aside from the initial clearing of this corridor to create these sections of road, no native medicinal or lei plants will be harmed by herbicide as they are not species that are targeted for control.

Concern number 6: Long-term impact of increased access to the forest on Hawaiian hawk and the Hawaiian Hoary Bat has not been addressed:

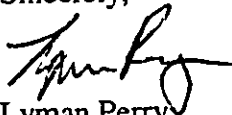
The Division of Forestry and Wildlife conducted surveys in the area to look for presence of the Hawaiian Hawk and hawk nests and found neither along the road corridor. Long-term effects on the Hawaiian hawk by this increased access by the general public on foot are negligible. If large areas of potential roosting and nesting trees were removed then there would be significant impacts to Hawaiian hawks in the area. The area that will be disturbed is small, and a greater threat to the Hawaiian hawk in this area is the proliferation of feral cattle in the forest, which can kill trees by trampling roots, consuming large amounts of vegetation and exacerbating soil erosion, thereby degrading the hawk's habitat. Without the construction of the proposed roadway, the feral cattle population will have a negative long-term effect on the habitat of the Hawaiian hawk. DOFAW believes that not constructing the road will have a more deleterious long-term effect on the forest than if we are to proceed with creating the infrastructure necessary to manage the forest for native plants and animals.

Surveys were also conducted for the Hawaiian hoary bat along the road corridor and trees in

the corridor were checked for presence of roosting bats and found neither. DOFAW plans to complete the road construction before the bat breeding season begins so that these activities will not negatively effect the hoary bat's breeding success.

We hope that you find our responses to your concerns adequate. If you have additional questions please contact Lyman Perry, Hawaii District Botanist at (808) 974-4221.

Sincerely,



Lyman Perry

Division of Forestry and Wildlife

P.O. Box 4849

Hilo, HI 96720