


### Presentation Overview

- ❖ What is an HCP and why do we need one?
- ❖ Plan Area and Action Area
- ❖ Covered Activities
- ❖ Covered Species
- ❖ Avoidance/Minimization and Mitigation
- ❖ Schedule

### Need for a North Kona Game Mammal HCP

- ❖ DLNR is mandated to provide public hunting opportunities as well as protection of endangered species
- ❖ Hunting is a popular activity for many Hawaii residents
- ❖ Use of state and federal funds (Pittman Robertson Funds) for game management



### HRS §171-3 and 183D Game Management


- ❖ HRS §171-3 mandates that DLNR manage and administer forests, forest reserves, wildlife, wildlife sanctuaries, game management areas, public hunting areas, Natural Area Reserves (NARs), and other functions assigned by law.
- ❖ HRS §183D-2 mandates that DLNR manage and administer the wildlife and wildlife resources of the State which, by definition, includes both game and non-game species.
- ❖ §183D-3 further mandates that DLNR adopt rules protecting, conserving, monitoring, propagating, and harvesting wildlife
- ❖ Under §183D-4, DLNR is given the authority to maintain, manage, and operate game management areas, wildlife sanctuaries, and public hunting areas for these purposes.

### Why do we need an HCP?

- ❖ Take of endangered species is illegal under state and federal law.
- ❖ An ITL (Incidental Take License) authorizes take that is incidental to activities (e.g. game management) that are otherwise legal.
- ❖ A HCP must accompany an ITL

### State HCP:HRS 195D

**Take** = to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect endangered or threatened species of aquatic life or wildlife, or **to cut, collect, uproot, destroy, injure, or possess endangered or threatened species of aquatic life or land plants**, or to attempt to engage in any such conduct



State HCP:HRS 195D

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- ❖ Increase **survival and recovery** of the covered species

State HCP:HRS 195D

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- ❖ Increase survival and recovery
  - ❖ **Considers full range of the species** on the island so that cumulative impacts can be assessed

State HCP:HRS 195D

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- ❖ No **loss of genetic representation** of the affected population

State HCP:HRS 195D

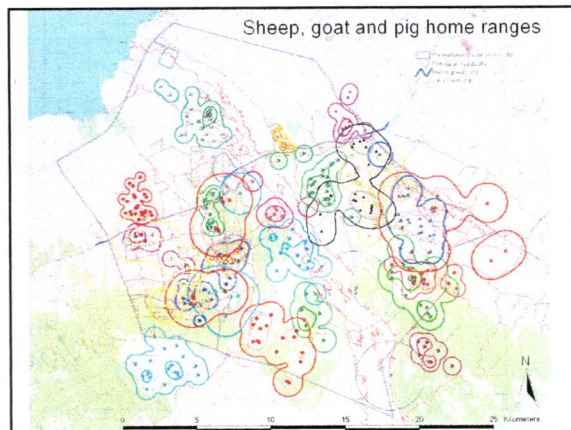
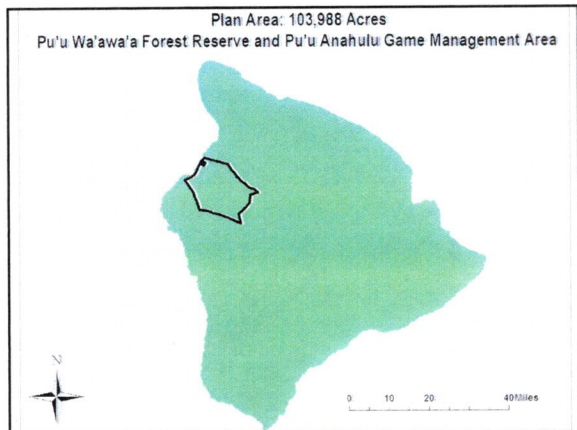
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- ❖ No loss of genetic representation of the affected population
  - ❖ Must provide **funding** to implement the HCP and continue monitoring

State HCP:HRS 195D

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- ❖ Covers both **plants** and animals

State HCP:HRS 195D

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- ❖ Covers both plants and animals
  - ❖ The cumulative impacts must provide **net environmental benefit**

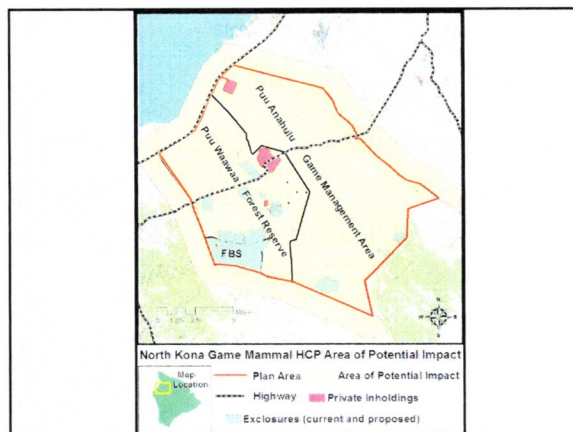


## Home Range Sizes

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- ❖ Mean female sheep = 9.35 km<sup>2</sup>
- ❖ Mean male sheep = 12.02 km<sup>2</sup>
- ❖ Goats = 16.30 km<sup>2</sup>

\* Selected largest home range size (goats) and used to create area of impact around PWW and PAH border = 2.25 km

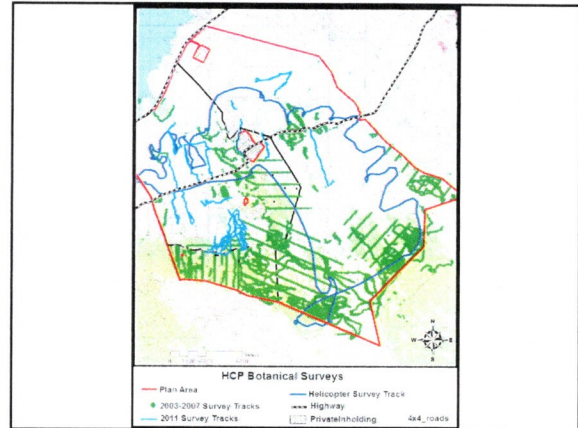


## Covered Activities

- ❖ **Hunting and Harvest** (PR funds)
- ❖ **Game Habitat Enhancement** (State funds)
  - Food plots
  - Mineral supplementation
- ❖ **Game Infrastructure**
  - Guzzlers and troughs (State funds)
  - Informational signage (PR funds)
  - Hunter check stations (PR funds)

## Covered Activities

- ❖ **Game Mammal Population Augmentation** (State funds)
- ❖ **Fire Management**
  - Maintenance of access roads and fuel breaks (PR funds)
  - Cattle grazing
  - Prescribed burns



### Covered Species

**Plants:**  
*Asplenium peruvianum* var. *insulare*  
 Hala pepe (*Chrysodracon hawaiiensis*)  
 Kauila (*Colubrina oppositifolia*)  
 Hanohano (*Haplostachys haplostachya*)  
 Ma'o hau hele (*Hibiscus brackenridgei* subsp. *brackenridgei*)  
 Koki'o (*Kokia drynarioides*)  
 Uhiuhi (*Mezoneuron kavaiense*)  
*Neraudia ovata*  
 'Aiea (*Nothocestrum breviflorum*)  
 Po'e (*Portulacca sclerocarpa*) (2014)  
 Hawaiian Catchfly (*Silene lanceolata*)  
 Pōpōlo kū mai (*Solanum incompletum*)  
*Stenogyne angustifolia*  
 A'e (*Zanthoxylum dipetalum* var. *tomentosum*)  
 A'e (*Zanthoxylum hawaiiensis*)

**Insect:**  
 Blackburn's Sphinx moth (*Manduca blackburni*)

### Avoidance, Minimization, and Mitigation

<p><b>Avoidance and Minimization</b></p> <ul style="list-style-type: none"> <li>• Exclosures</li> <li>• Fire management</li> <li>• Scheduled fuel break and road maintenance</li> </ul>	<p><b>Mitigation</b></p> <ul style="list-style-type: none"> <li>• Outplanting of Covered Species towards mitigation goal in exclosures</li> <li>• Support Research</li> </ul>
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### Exclosure Rational

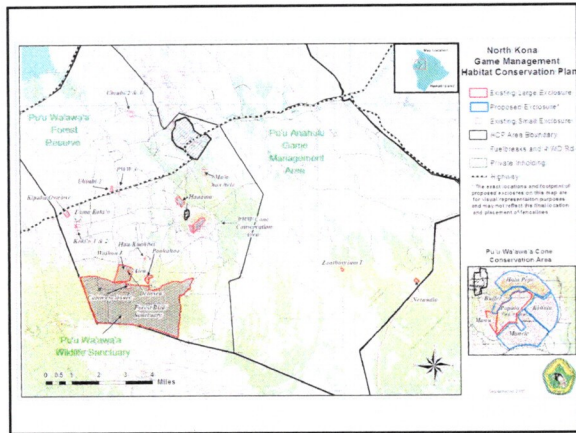
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❖ Exclosures contain:

- 75% of known endangered plants covered under the HCP
- locally rare species and species of concern
- remnant forests with best remaining canopy
- Unique cultural or biological features, eg lava tube systems or historical ranching features

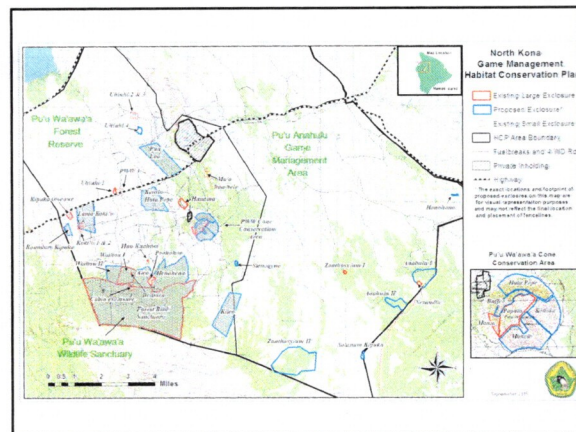
### Existing Exclosures

- ❖ All units within PWW (except 2 ten acre units in PAH)
- ❖ 11 units totaling 4,180 acres fenced
- ❖ Current units = 4% of the Plan Area
- ❖ Many small individual plant fences ('Aiea, A'e, Hala pepe, etc)



### Proposed Enclosures

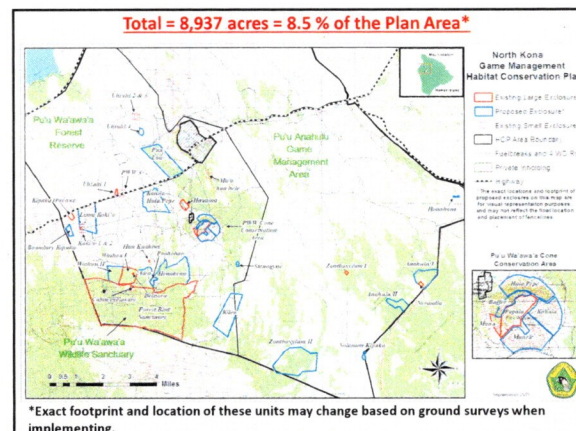
- ❖ Units in PWW and PAH
- ❖ PWW management Plan (approved) = 3,400 acres



### Proposed Enclosures

- ❖ Units in PWW and PAH
- ❖ PWW management Plan (approved)=3,400 acres
- ❖ HCP proposed = additional 1,357 acres

**Total proposed = 4,757 acres = 4.5 % of the Plan Area**



### HCP Implementation Phasing

- ❖ Phase 1 (years 0-8): Avoidance and Minimization
  - Installation of Avoidance and Minimization fences (protect existing plant populations)
  - Initiate enclosure management
  - Full survey of each Covered plant species within enclosures (within a year of installation)
  - Initiate annual monitoring in enclosures
  - Begin mitigation in enclosures
  - Timed road clearing to avoid BSM take

\*Exact footprint and location of these units may change based on ground surveys when implementing.

## HCP Implementation Phasing

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- ❖ Phase 2: (years 6-15): Mitigation
  - Installation of remaining Mitigation enclosures
  - Initiate enclosure management and outplanting to mitigation goals
  - Initiate mitigation monitoring
  - Initiate monitoring for BSM on 'Aiea outplants

## HCP Implementation Phasing

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- ❖ Phase 3: (years 16-25): Maintenance
  - Fence any remaining unfenced enclosures
  - Continued monitoring
  - Adaptive management based on monitoring results
- ❖ **Permit Duration: 25 years with the potential to renew based on overall success**

## Public Review and Comment Period

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- ❖ 120 days: November 8<sup>th</sup> until ~~February 28<sup>th</sup>~~ *march 7*, 2016
- ❖ Document can be downloaded here: enter in website
- ❖ To request a printed copy, email:
  - Edith Adkins
  - Edith.d.adkins@hawaii.gov
- ❖ Public meeting date to be determined

## Public Review and Comment Period

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**Comments can be sent to:**  
Department of Land and Natural Resources  
Division of Forestry and Wildlife  
1151 Punchbowl Street Room 325  
Honolulu, HI, 96813  
Attn: Conservation Initiatives Coordinator, Afsheen Siddiqi  
**Or email:**  
Afsheen.A.Siddiqi@hawaii.gov