



HAWAIIAN HOME LANDS

HAWAIIAN HOMES COMMISSION · DEPARTMENT OF HAWAIIAN HOME LANDS

Kahikinui Ungulate Management Plan F –2 Right of Entry to Ka ‘Ohana o Kahikinui

June 20, 2022

The purpose of this presentation for the Hawaiian Homes Commission is to provide information on:

- 1. Importance of Kahikinui Forest and Watershed**
- 2. Ungulate Management Plan - Methods and Timeline**
- 3. KOOK's Role in Plan Implementation**



Presentation Agenda

I. Background

- The Native Forest—what it was, importance, issues
- The Body of Literature, Work that has been completed, agreed upon solutions
- Data on the feral ungulate population
- Fencing as a primary management tool

II. Draft Ungulate Management Plan

- Brief overview
- Methods
- Timeline
- Partners

III. ROE to KOOK for Cattle Removal

- Working with community partners to capture and remove feral cattle
- Make use of cattle resource
- Involve KOOK in ungulate management of Kahikinui ahupua'a.



Kahikinui's Native Forest in Balance

The Native Forest on the Leeward Slopes of Haleakalā

- Striking in stature
- Rich in species
- Towering canopies of koa and 'ōhi'a
- Diverse understory trees, shrubs and ferns
- Complex and stable ecosystems that would extend to the ocean

...provided

- Vital link to Hawaiian cultural practices
- Captures and retains water--sustainable source of fresh water
- Biodiversity--Habitat for native plants and animals
- Tools and materials for settlement



The Destruction of the Native Forest

100+ Years of Ranching and Hundreds of Feral Ungulates Trigger Impacts that have Destroyed the Native Forest

Ungulate Behavior of Grazing and Trampling

- ✓ Exposes Roots
- ✓ Destroys Understory Plants
- ✓ Fragments Habitat
- ✓ Puts the System out of balance



The Destruction of the Native Forest

100+ Years of Ranching and Hundreds of Feral Ungulates Trigger Impacts that have Destroyed the Native Forest

- ✓ As the trees are destroyed, invasive species move in
- ✓ Disrupts the natural regeneration of canopy trees
- ✓ Destroys the native forest, habitat of endangered species
- ✓ Loss of ecological services





If We Lose the Native Forest ...

“Invisible Losses” ---

- Cultural Resources
- Cultural Traditions
- Cultural Practices
- Protocols
- Materials and Tools
- Food
- Medicine-Healers
Lā‘au Lapa‘au

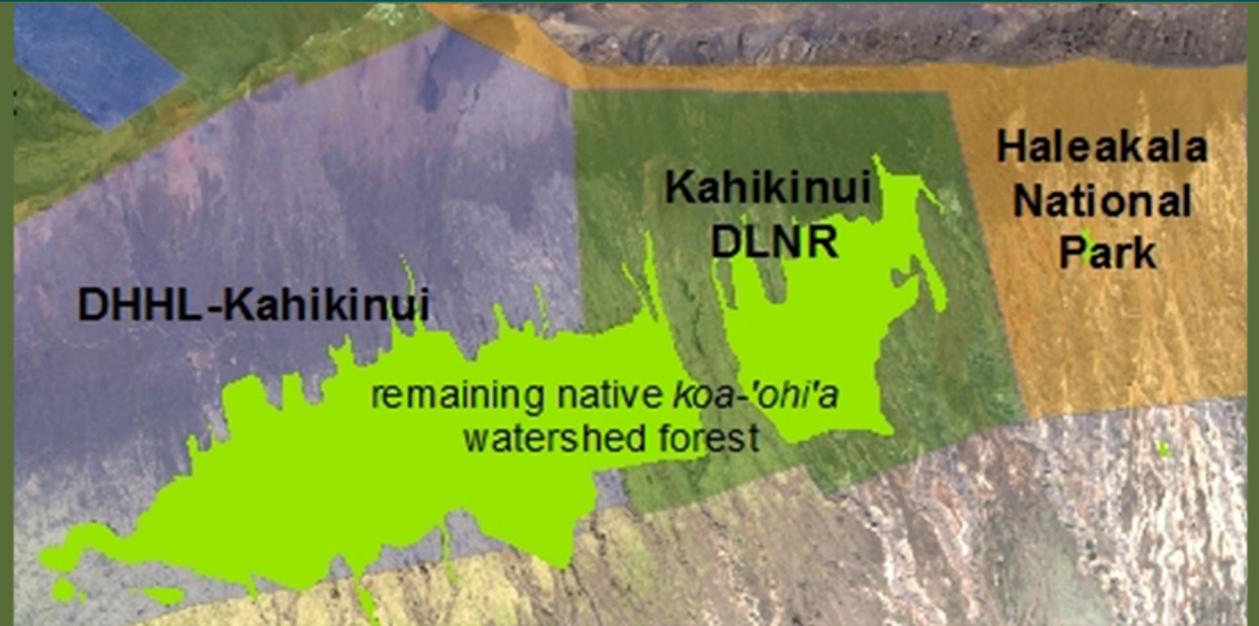
- Cultural Knowledge
- Native Intelligence
- Cultural Identity





The Vision and Hope to Restore Kahikinui's Native Forest

- Outstanding Vista and Views
- Less than 10% of the original forest is still intact
- 65% of the existing koa forest is on Hawaiian Home Lands
- Native Hawaiian Residents—
Kuleana of Community Management



- ❖ Resettlement of Kahikinui Always Included the Restoration of the Forest
- ❖ The Vision: to restore traditional management principles and ensure the long-term sustainability of the forest to support the community.



Kahikinui Forest Reserve Community Management Conceptual Plan

**KAHIKINUI FOREST RESERVE
COMMUNITY MANAGEMENT CONCEPTUAL PLAN**

BY

KAHIKINUI FOREST PARTNERSHIP WORKING GROUP

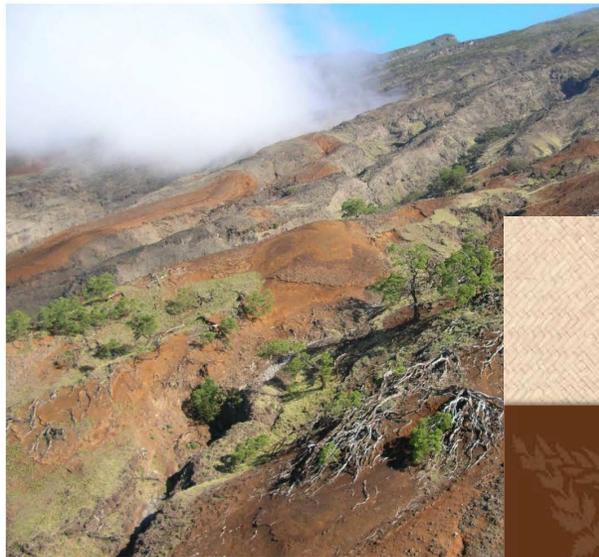
- In 1993-1995, as beneficiaries were organizing and developing plans for their Kuleana Settlement, one working committee was dedicated to the forest.
- Kahikinui Forest Partnership Working Group was a visionary group of kupuna, Hawaiian leaders, and scientists who developed the Kahikinui Forest Reserve Community Management Conceptual Plan.
- The Plan supported The Vision of a community working to ensure long-term sustainability of the forest to support the community.
- Central to the vision was a commitment to remove of all feral ungulates within the mauka 7,500-acre forest restoration area.
- Fencing within the restoration area would be needed.
- The Plan was approved by the Hawaiian Homes Commission in 1995.



The Leeward Haleakalā Watershed Restoration Partnership

Meetings continued, other guiding documents were developed and DHHL, KOOK, and LIFE signed on to the LHWRP.

Leeward Haleakalā Watershed Restoration Partnership Management Plan



May 2006 (1st Edition)
Prepared by Arthur C. Medeiros Ph.D., Erica vonAllmen, and Egnuff, Leeward Haleakalā Watershed Restoration Partnership, facilitated by Forest and Kim Starr.



Leeward Haleakalā Watershed
Maui, Hawaii
2018-2028 Management Plan



FINAL Supplemental Environmental Assessment
Kahikinui Koa Forest Protection
Nakula Ahupua'a, Island of Maui

TMK 2nd 1-8-001:005, 006

Prepared For:
State of Hawaii
Department of Land and Natural Resources

Kahikinui

Firewise Community Hazard Assessment

Completed December 2016



KAHIKINUI



REGIONAL PLAN

Designed and Developed By:
Wildfire Management Organization
A 501(c)(3) nonprofit organization
protecting Hawaii's communities and
resources from wildfire.



Collaborators:

Department of Land and Natural Resources
Biology and Wildlife; Department of Hawaiian
Home Affairs; Maui Fire Department; Leeward Haleakalā
Watershed Restoration Partnership; Pacific Fire Exchange;
University of Hawaii at Manoa; Cooperative Extension,
Kahikinui;



Wildfire Management Organization

1000 Waihae Rd., Ste. 211

Maui, HI 96743

Phone: (808) 885-0900

Email: info@hawaiiwildfire.org

hawaiiwildfire.org



Work Completed from 1995

YEAR	ACTION/ACTIVITY
1995	-Kahikinui Forest Reserve Community Management Conceptual Plan -Final Environmental Assessment for the Kahikinui Kuleana Homestead Project
1998	Kuleana Homestead Program was codified in Administrative Rules.
1999	75 Kuleana Homestead Lot Leases for Pastoral Purposes were awarded.
2000	Ka 'Ohana o Kahikinui Community Based Economic Development & Makai Management Plan
2003	The Leeward Haleakala Watershed Restoration Partnership (LHWRP) Memorandum of Understanding (MOU) was signed by DHHL, LIFE, DLNR, and other landowners.
2004	DHHL, Maui Island Plan
2005	\$500,000 USFWS via DLNR funds LIFE for fence construction (Phase 1) Due to difficulties in contracting these funds were transferred to LHWRP in 2010
2006	LHWRP Management Plan
2008	Kahikinui Community Wildfire Protection Plan
2011	DHHL Kahikinui Regional Plan
2014	\$415,000 DLNR CIP funds LHWRP for fence construction (Phase 2)
2015	<ul style="list-style-type: none"> \$80,000 DLNR NARF funds LHWRP for fence materials (Phase 3) \$565,000 DLNR CIP funds LHWRP for fence construction (Phase 3) \$50,000 DLNR NARS funds LHWRP for planning and monitoring at Kahikinui.
2016-2017	<ul style="list-style-type: none"> \$400,000 DLNR CIP funding for internal fencing at DHHL

**\$ 2,010,000+ for
Fence Construction
(outside funding)**



The Ungulate-Proof Fence

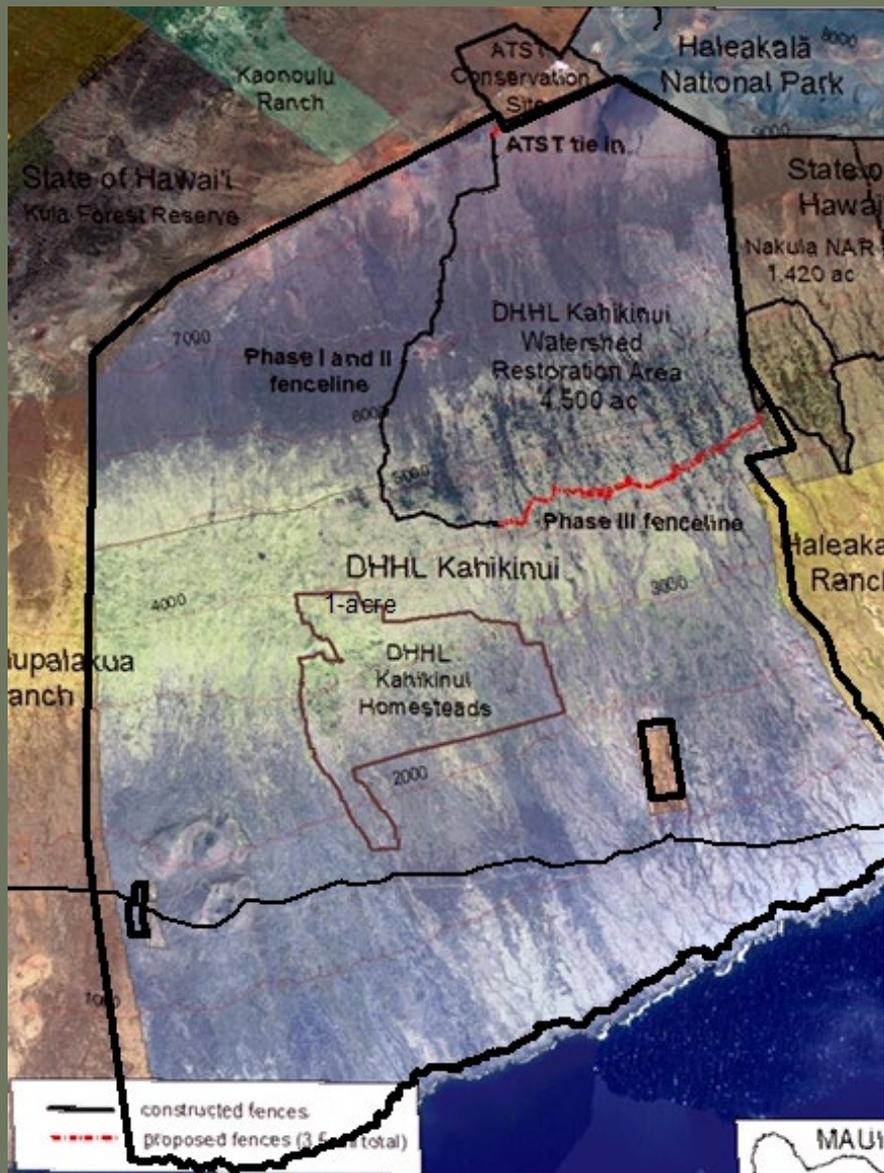
Fencing is a proven method of reforestation...



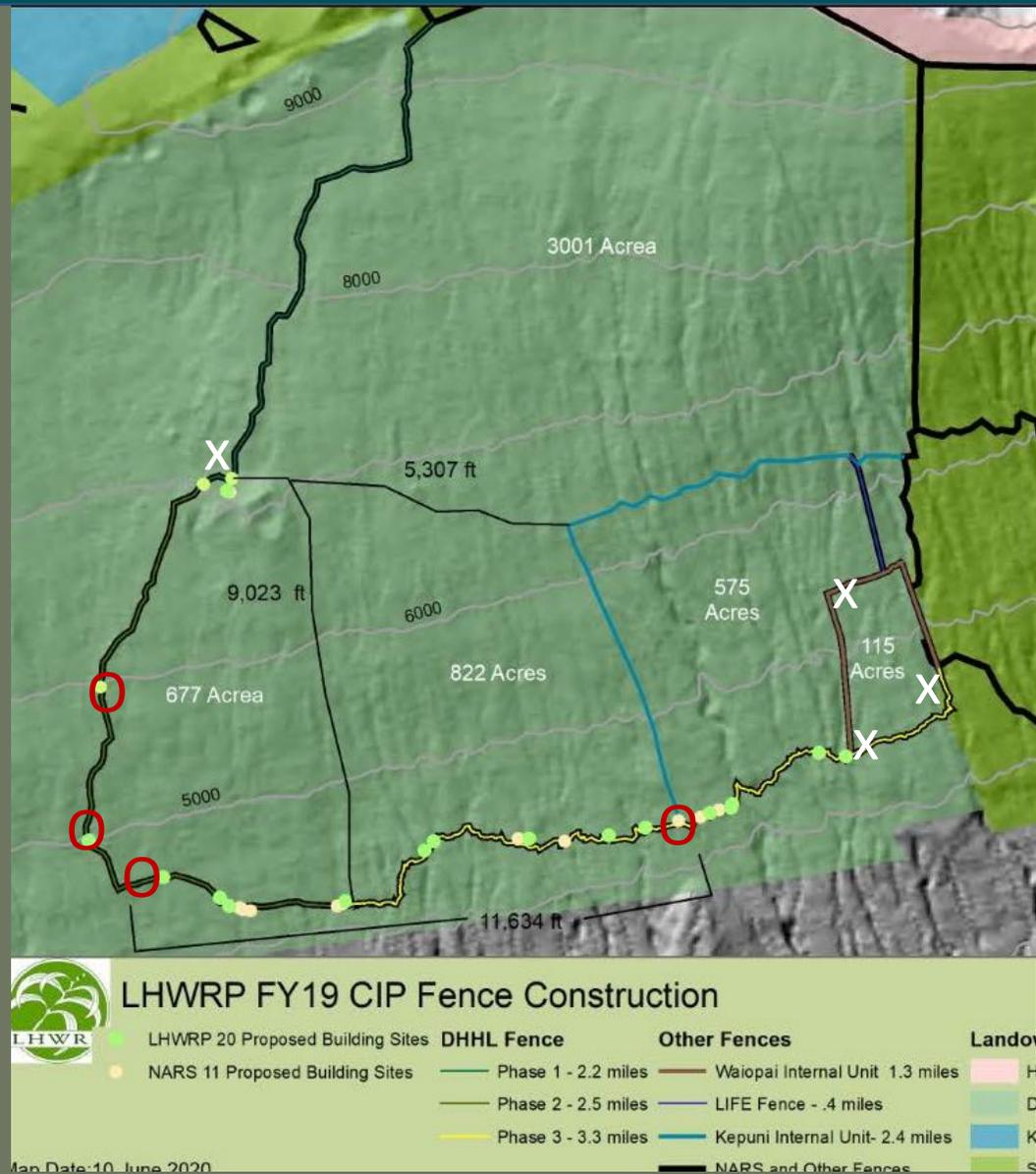
...but it has been challenging.



Current Status of Fencing ≈ 4,500 acres



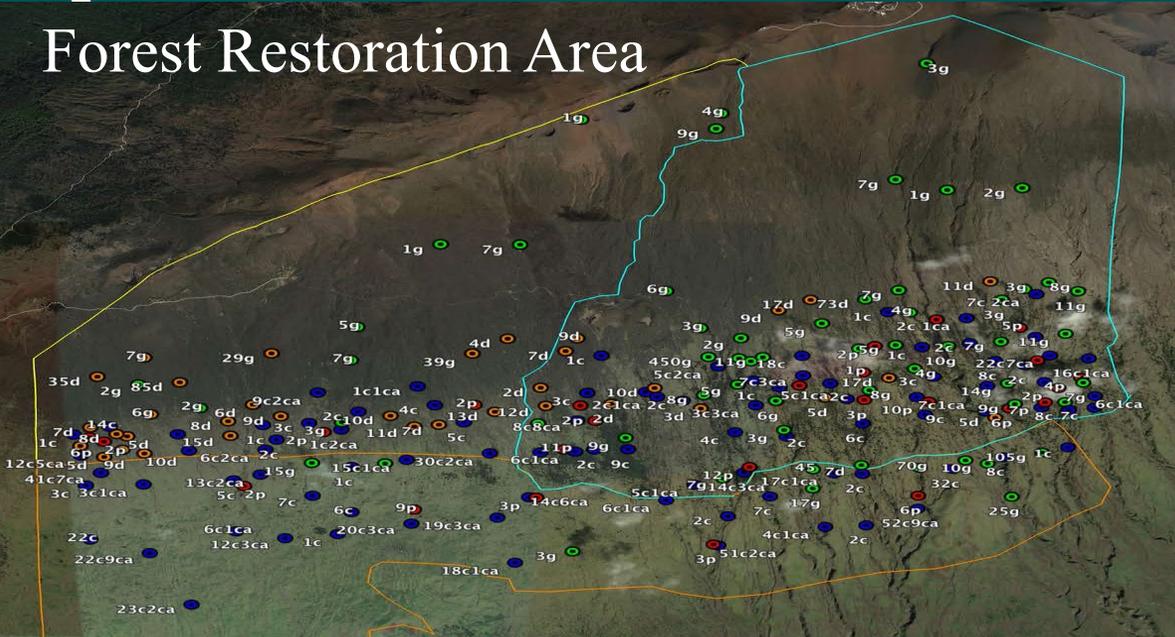
- Current Needs
- Fence Repairs
 - Closure of Intentional Openings = ○
 - 4WD Access Roads
 - Water Troughs
 - Salt Licks



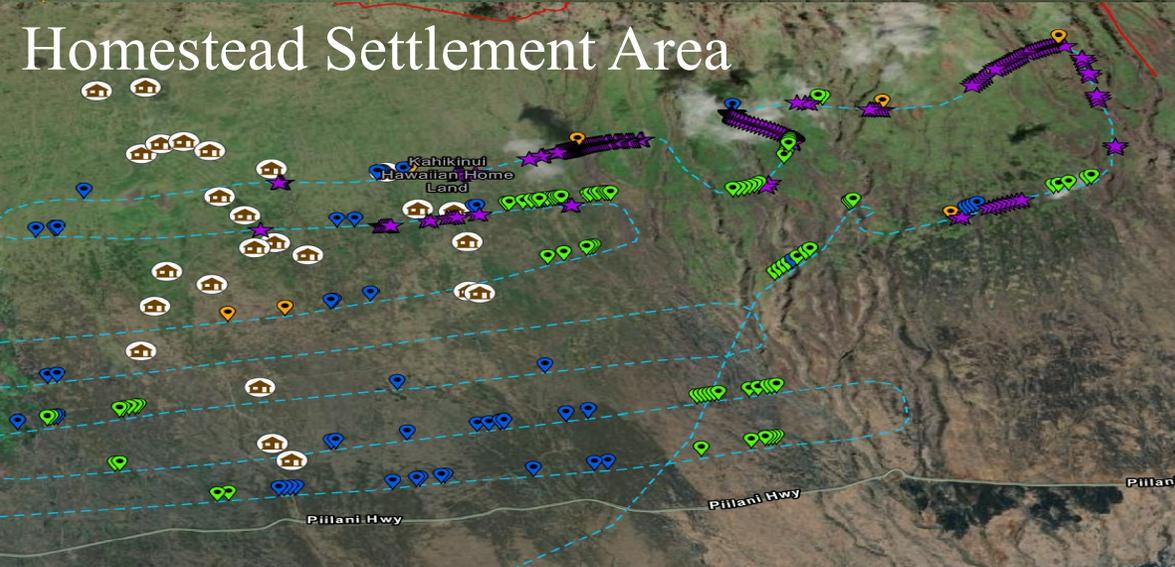


Focus on the Ungulate Population

Forest Restoration Area



Homestead Settlement Area



Aerial Surveys Conducted

Year	Cattle	Calves	Goats	Deer	Pigs
2009	294				
2011	650				
2016					
-Forest Restoration Area	988	114	1324	449	124
-Within Fenced Area	389		931	131	89
2021-Homestead Area	363		771	214	25

Number of Feral Cattle Surveyed





Draft Kahikinui Ungulate Management Plan

GOAL: **Restoration of the Native Forest at Kahikinui**

PURPOSE AND USE:

1. To communicate and get agreement on the actions to be taken (Transparency)
2. To coordinate and guide actions to ensure success

METHOD/APPROACH:

1. Establishes Management Zones
2. Identifies management goals and ungulate control objectives for each Zone
3. Identifies ungulate removal target numbers over an 18-month period
4. Accommodates different ungulate removal methods and values

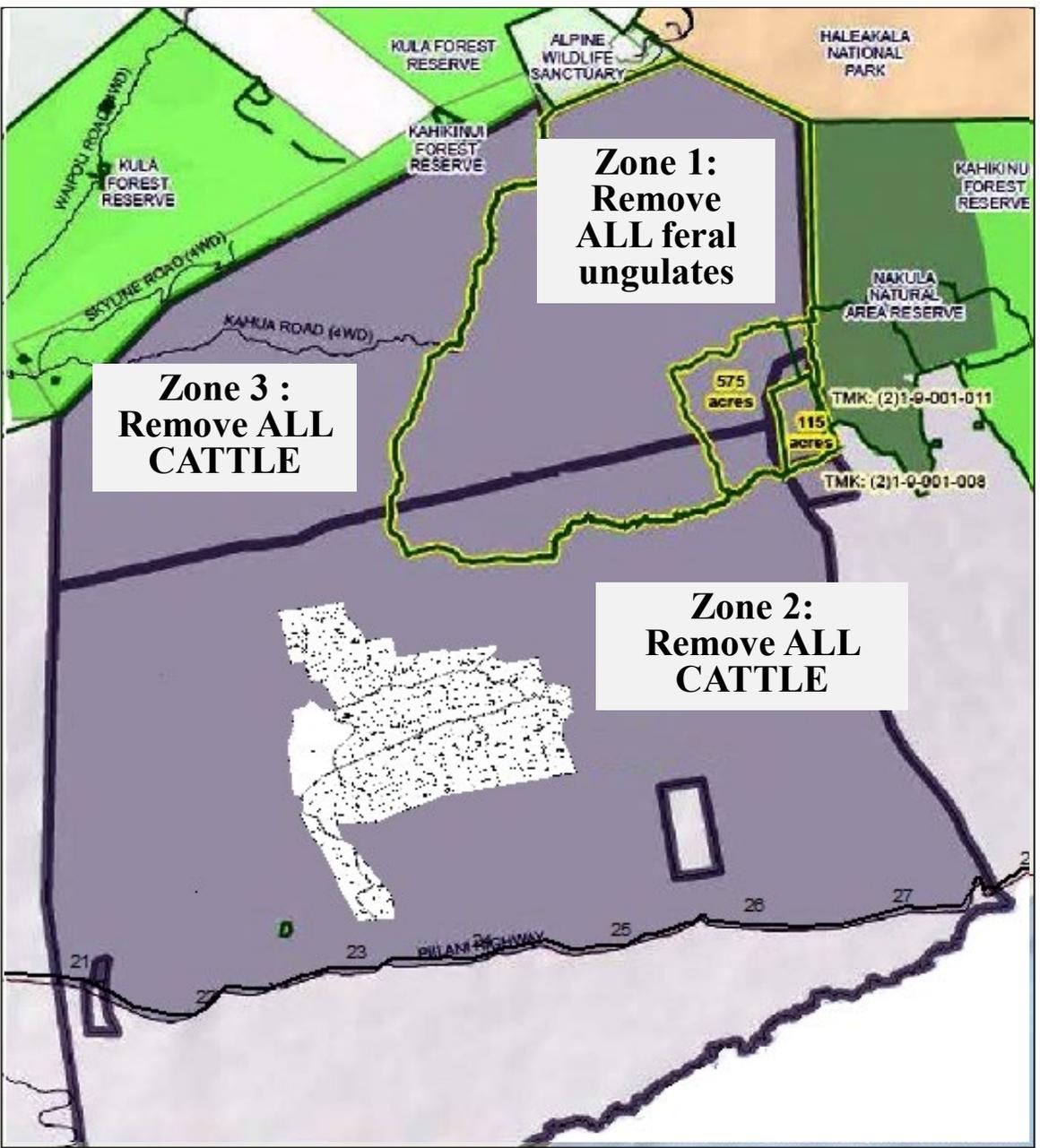


Draft Kahikinui Ungulate Management Plan

GUIDING PRINCIPLES:

1. Ungulates must be removed at a pace that exceeds the rate of reproduction.
 - To meet specific goals in each management zone over 18 months
2. To the extent practical, animals removed will be used for food or to provide direct benefits to beneficiaries.
3. Each method of ungulate removal will be safe, feasible, and effective.

Ungulate Management Zones and Ungulate Control Objectives



**Zone 1:
Remove ALL feral ungulates**

**Zone 3 :
Remove ALL CATTLE**

**Zone 2:
Remove ALL CATTLE**

Zone	Location	Management Goal	Ungulate Control Objective
1	Wao Akua Area within the 4,500 acres fence	Restore forest and watershed.	Remove <u>all</u> feral ungulates within fence
2	Area surrounding community	Public safety, prevent damage to homes and infrastructure	Remove all feral cattle
3	Mauka unfenced area	Reduce ungulate impacts to natural resources	Remove all feral cattle



Ungulate Management Methods

1. Fencing
2. Community Roundup & Corralling (Live Capture)
3. Helicopter Assisted Community Harvest
4. Driving (out of Zone 1)
5. Aerial Control



Ungulate Management Methods

1. Fencing

Description

- Zone 1 is fenced with an 8' hog wire fence; no plans to fence Zones 2 and 3
- Fencing represents a large capital investment and must be maintained
- Allows management of ungulates



Ungulate Management Methods

2. Community Round Up & Corralling (Live Capture)

Description

- Ka Ohana O Kahikinui (KOOK) will work with community partners to capture and remove animals live.
- Partners would corral and drive cattle into traps where the fence was left open with horses, ATVs, or with the assistance of other herding animals.
- Cattle captured will be documented and ownership transferred from DHHL to KOOK before transport off DHHL lands.
- A portion of the animals captured will be designated for Ka Ohana O Kahikinui for beneficiary use.



Ungulate Management Methods

2. Community Round Up & Corralling (Live Capture)

Benefits

- Capable partners who are willing and able to remove feral cattle at little to no cost or liability to DHHL or Ka 'Ohana o Kahikinui
- The Method is safe and does not involve the use of firearms
- This method is successfully used on other DHHL lands.

Challenges

- Coordination is needed to manage multiple partners
- Partners need to be able cover operational costs
- Limited roads and infrastructure (traps, fence lines, water)



Ungulate Management Methods

3. Helicopter-Assisted Community Harvest

Description

- Helicopter works with on the ground hunters to transport carcasses to where they can be processed by the community.
- Intensive coordination and safety measures are required.
- Animals must be processed immediately for food safety.
- Meat cannot be sold.
- Helicopter use is expensive.



Ungulate Management Methods

3. Helicopter-Assisted Community Harvest

Benefits

- Meat resources available for Maui Beneficiaries
- This method has been successful, with past efforts removing over 30 cattle per event
- Helicopter assistance allows for targeting remote cattle that are difficult to harvest with other methods.

Challenges

- Helicopter use is expensive, inherently hazardous and needs a special skillset
- Significant coordination is needed between helicopter(s), ground crew and community processing cattle for events to be efficient and successful.
- To be considered this method needs dedicated funding and plan that addresses and mitigates all safety concerns.



Ungulate Management Methods

4. Driving

Description

- Ungulates may be driven using ground or aerial methods. Driving animals provides a means to move animals from one location to another.
- This method will be used to drive ungulates out of Zone 1, thus reducing the number of animals that would require aerial control.
- Discretion must be used to not push ungulates to areas where they will be a nuisance.



Ungulate Management Methods

5. Aerial Control

Description

- Involves firearms to dispatch animals from a helicopter.
- DLNR has agreed to cover the costs for aerial control operations and DLNR staff will conduct the operations and follow strict State protocols for safety
- This is a **last resort** method if other methods have not met the ungulate removal targets.
- Aerial control will only be employed in Zone 1.



Ungulate Management Methods

5. Aerial Control

Benefits

- Highly effective, safe and efficient method of ungulate removal
- Can be used in the most remote areas
- Immediate reduction of ungulates, allows for immediate restoration

Challenges

- Many people are opposed to the waste of meat resources, especially cattle.
- Safety regulations require public notifications, which invites opposition.

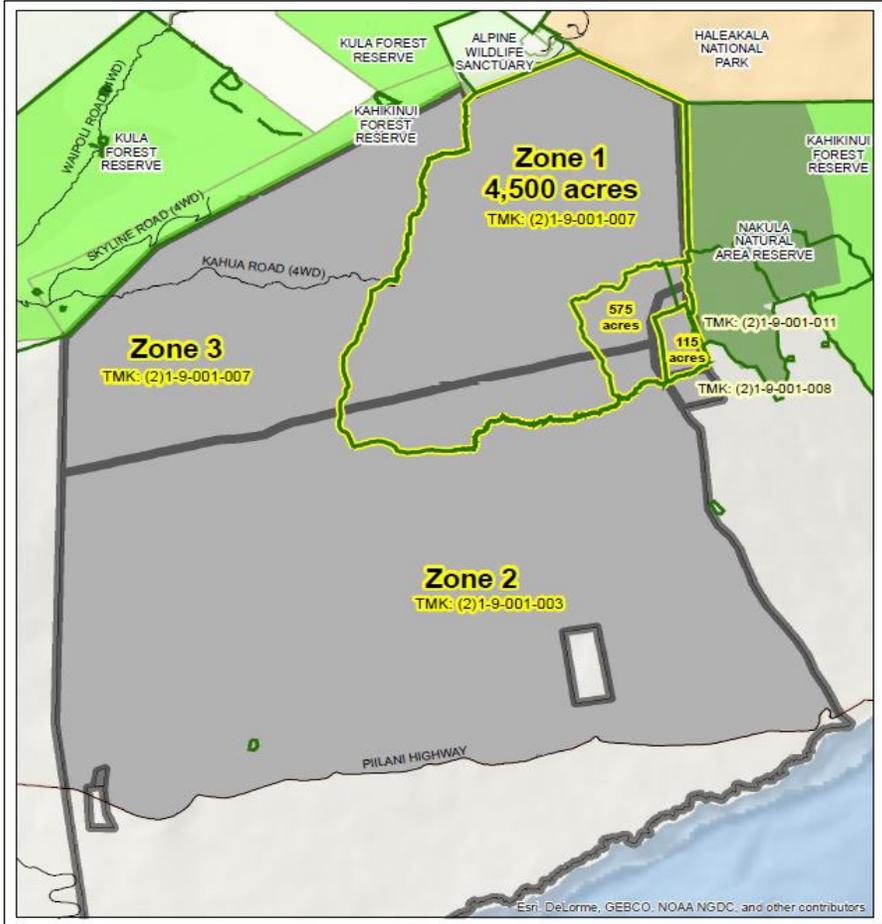


Proposed Schedule of Operations

UNGULATES	MONTH																		
	Aug. 1st	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
CATTLE	Live Capture--Zone 1, 2, 3						Live Capture--Zones 2 and 3												
				Helicopter Harvests			Helicopter Harvests--Zone 3												
							Aerial Control--Zone 1 (only if needed)												
DEER																			
							Aerial Control--Zone 1 (only if needed)												
GOATS	Potential Live Capture--Zone 1,2,3						Potetial Live Capture--Zones 2 and 3												
	Aerial Control--Sub-Alpine only						Aerial Control--Zone 1												
PIGS																			
							Aerial Control--Zone 1 (only if needed)												



Right-of-Entry to KOOK



- Allows for beneficiary access and use of resources.
- Allows for KOOK to be involved the restoration of Kahikinui's native forest.
 - Consistent with the Kuleana Homestead Program
 - Consistent with Homestead Leases and DCC&Rs
 - Supports community resource management
- Allows KOOK to work with community partners to remove feral cattle from Kahikinui



Roles and Responsibilities under the ROE

KOOK:

- Secure partners and agreements for cattle removal
- Assist with meat distribution
- Assist DHHL in verification of cattle removed

DHHL:

- Assist KOOK with reviewing proposals and developing partner agreements
- Coordinate and schedule field operations
- Verification of cattle and transfer ownership to KOOK
- Manage publicity and social media and provide clear messaging