

# PROTECTING & RESTORING NATIVE ECOSYSTEMS BY MANAGING NON-NATIVE UNGULATES

## HAWAII VOLCANOES NATIONAL PARK

Dear Friends,

We are pleased to announce the availability of the draft plan and environmental impact statement (draft plan/DEIS) for protecting and restoring native ecosystems by managing non-native ungulates at Hawai'i Volcanoes National Park. Early in this process, we asked for your input on our stated goals for the plan, and the issues which could arise through its implementation.

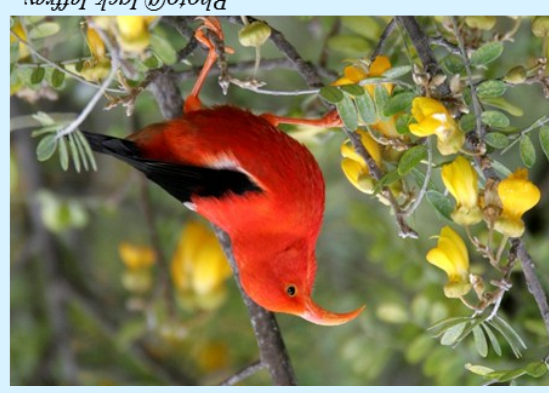
Using the feedback we received during that initial public scoping effort, and input from a team of scientists convened to inform the planning process, we developed a range of management alternatives for meeting those goals. We then analyzed the impacts of those alternatives on natural and cultural resources, and the broader human environment, and identified a preferred management option which we feel would provide the most flexibility to protect the special resources of Hawai'i Volcanoes National Park.

All of this information is now presented for your review in the draft plan/DEIS, which has been prepared in accordance with the National Environmental Policy Act, the Endangered Species Act, the National Historic Preservation Act, and other laws, policies, and regulations. Because your feedback is essential to the development of the final plan and DEIS, we are asking for your thoughtful review and comments by January 20, 2012.

As vital contributors to the planning process, we hope you take the opportunity to provide us your feedback, and if possible, join us at one of our upcoming public open house meetings.

Mahalo,

*Cindy Orlando*  
Cindy Orlando  
Superintendent  
Hawai'i Volcanoes National Park



Photo@JackJeffrey

### RESOURCES AT RISK



NPS photo

Non-native ungulates encourage the spread of diseases that threaten native bird species such as the rare 'iwi pictured above; impact plant species such as the endangered haukuahwi shown at right; and disturb soils through herbivory, trampling and uprooting as shown below.



NPS photo

### PROJECT BACKGROUND

Non-native ungulates, or mammals with hooves, are an issue of concern in Hawai'i because Hawaiian ecosystems evolved without large mammalian herbivores and are particularly vulnerable to the impacts of non-native ungulates. Goats, pigs, deer, sheep, mouflon sheep, and cattle destroy habitat, inhibit native forest regeneration and cause local extinctions of vulnerable species. Non-native ungulates detract from the natural conditions that contribute to the wilderness character of the park through the loss of native species and damage to the ecological integrity of the area. Non-native ungulates also have the potential to damage archaeological sites, cultural landscapes, and ethnographic resources.

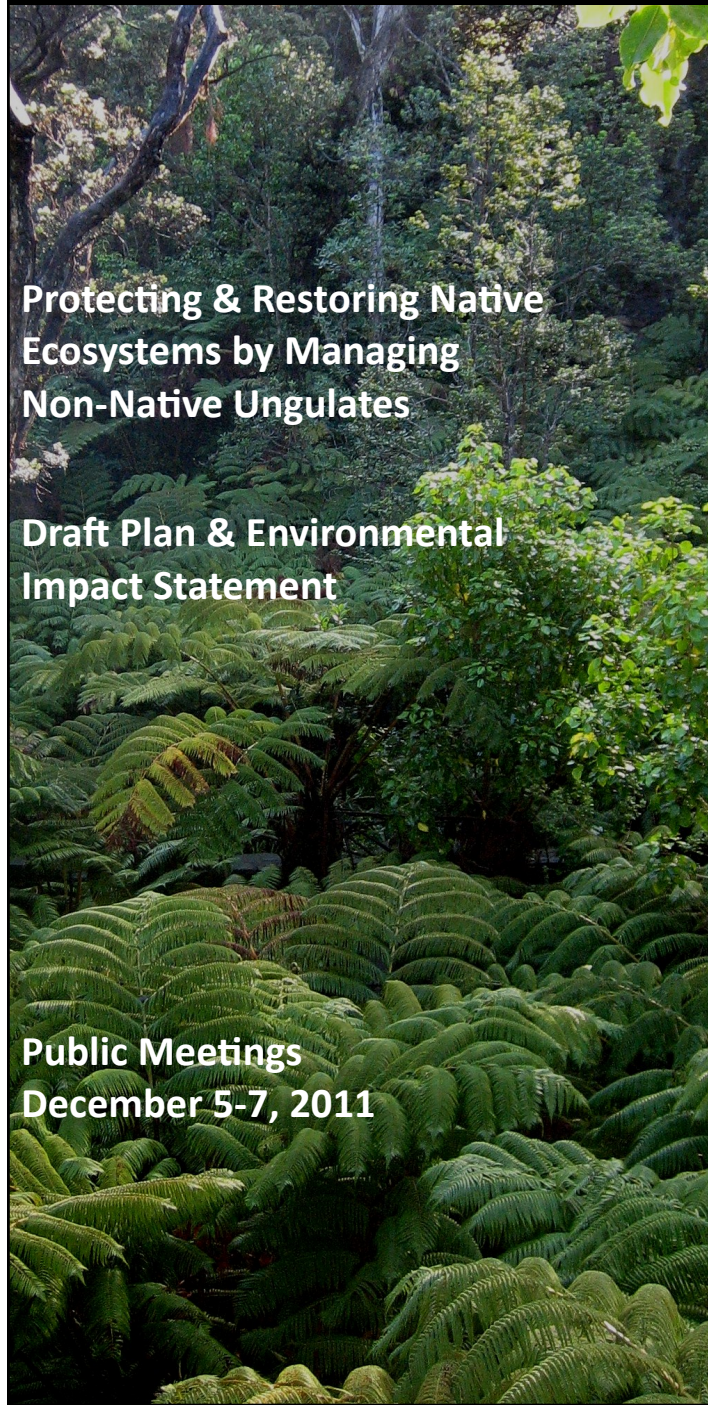
### PURPOSE OF AND NEED FOR ACTION

The purpose of this draft plan/DEIS at Hawai'i Volcanoes National Park is to develop a comprehensive and systematic framework for managing non-native ungulates that:

- supports long-term ecosystem protection;
- supports natural ecosystem recovery and provides desirable conditions for active ecosystem restoration; and
- supports protection and preservation of cultural resources.

A plan & DEIS is needed to address the impacts of non-native ungulates, which include: loss of native ecosystems, especially native plant and animal communities; loss of sensitive native species, including state- and federally-listed species; deterioration of wilderness character; and loss of irreplaceable cultural resources.

The park's most recent plan for non-native ungulate control was written over 30 years ago. The new plan & DEIS will provide a parkwide framework to systematically guide non-native ungulate management activities over the next decades that considers the recently acquired Kahuku unit and new invasive species challenges; and current NPS policy and guidance.



National Park Service  
U.S. Department of the Interior

Hawai'i Volcanoes National Park



## Protecting & Restoring Native Ecosystems by Managing Non-Native Ungulates

### Draft Plan & Environmental Impact Statement

### Public Meetings December 5-7, 2011

### HOW TO PARTICIPATE

The draft plan/DEIS will be available for public and agency review and comment until January 20, 2012. During this period, the public is invited to identify any issues or concerns they might have with the proposed plan.

### PUBLIC OPEN HOUSE MEETING DATES

- |  |                   |
|--|-------------------|
| <b>Monday, December 5, 2011</b>  | <b>6 pm –8 pm</b> |
| Hawai'i Volcanoes National Park<br>Kilauea Visitor Center<br>One Crater Rim Drive<br>Hawai'i National Park, HI 96718 |                   |
| <b>Tuesday, December 6, 2011</b>   | <b>6 pm –8 pm</b> |
| Na'alehu Community Center<br>95-5635 Mamalahoa Hwy<br>Na'alehu, HI 96772   |                   |
| <b>Wednesday, December 7, 2011</b>   | <b>6 pm –8 pm</b> |
| Kona Outdoor Circle<br>76-6280 Kuakini Hwy<br>Kailua-Kona, HI 96740  |                   |

You may provide comments at one of our upcoming public open house meetings, or:

- Online at [http://www.parkplanning.nps.gov/havo\\_ecosystem\\_deis](http://www.parkplanning.nps.gov/havo_ecosystem_deis) (PREFERRED METHOD); or
- By mail to:  
  
Superintendent  
Hawai'i Volcanoes National Park  
P.O. Box 52  
Hawai'i National Park, HI 96718-0052.

Bulk comments in any format (hard copy or electronic) submitted on behalf of others will not be accepted. Before including your personal information in your comment, you should be aware that your entire comment – including your personal identifying information – may be publicly available at any time. Although you may request in your comment that we withhold your personal information from public review, we cannot guarantee that we will be able to do so.

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# ALTERNATIVES

This draft plan/DEIS presents and analyzes the potential impacts of five alternatives. These alternatives were developed as a result of project scoping by the public, other agencies, and the NPS. The alternatives are evaluated within the NEPA document for their potential impacts on the environment and park resources and values.

Upon conclusion of the decision-making process, one of the alternatives will become the plan for at least the next 15 to 20 years for protecting and restoring native ecosystems by managing non-native ungulates.

## Alternative A: No Action (Continue Existing Non-native Ungulate Management Activities)

- The NPS would continue current non-native ungulate management practices, which are informed by the 1974 resources management plan and subsequent amendments and other management decisions.
- Management would involve lethal removal of non-native ungulates coupled with the use of boundary and internal fences.
- Qualified volunteers would continue to be used to assist with certain ground shooting activities, and could be used for other non-native ungulate management activities.
- Implementation would rely on professional judgment, past experience, and scientific knowledge of NPS staff, but consistent application of management tools over time would be uncertain because there would be no parkwide strategy laid out in a comprehensive plan to guide future actions.

*Koa forest recovery following removal of non-native ungulates from the park's Mauna Loa Strip.*



*NPS photo*

## Alternative B: Comprehensive Management Plan that Uses Lethal Removal Techniques

- The NPS would continue use of current lethal removal techniques, similar to alternative A, within a parkwide comprehensive, systematic framework for managing non-native ungulates.
- Volunteer programs would continue, but modifications would be required for lethal removal programs to meet current NPS practices regarding the removal of meat or other parts of the animals.

## Alternative C: Comprehensive Management Plan that Maximizes Efficiency by Expanding Lethal Removal Techniques and Discontinuing the Use of Volunteers

- The NPS would implement a parkwide comprehensive, systematic management framework which expands the use of current lethal removal techniques to include new species and technologies (e.g., estrogen implants, cracker shells, use of snares and traps for species other than pigs).
- Volunteer participation in any non-native ungulate management practices would be discontinued with the aim of increasing the efficiency of management actions.

## Alternative D: Comprehensive Management Plan that Maximizes Flexibility of Management Techniques (NPS Preferred Alternative)

- Alternative D would result in a parkwide comprehensive, systematic management plan that would rely primarily on lethal techniques as described for alternative C, but non-lethal techniques such as relocation could also be considered.
- Volunteer programs would continue, but modifications would be required for lethal removal programs to meet current NPS practices as described for alternative B.



*NPS photo*

## Alternative E: Comprehensive Management Plan that Increases Flexibility of Management Techniques While Limiting the Use of Volunteers

- The NPS would implement a comprehensive, systematic management plan that relies primarily on lethal techniques, but as with alternative D, also considers non-lethal techniques such as relocation.
- To provide a full range of alternatives, qualified volunteers would not be used for ground shooting activities, but could be used for other non-native ungulate management activities.

### Actions Common to Alternatives B through E:

- A progression of management phases, monitoring, and considerations for the use of management tools;
- A population objective of zero non-native ungulates, or as low as practicable in managed areas;
- Complete boundary fencing for Kahuku and 'Ōla'a rainforest; and
- The potential use of localized internal fencing to assist in the control of non-native ungulates.

# WHERE CAN I VIEW THE DRAFT PLAN/DEIS?

- Digital copies are available for download online at [http://www.parkplanning.nps.gov/havo\\_ecosystem\\_deis](http://www.parkplanning.nps.gov/havo_ecosystem_deis).

- Hardcopies of the draft plan/DEIS will be available for viewing at the following locations:

**Hawai'i Volcanoes National Park  
Kilauea Visitor Center**  
One Crater Rim Drive  
Hawai'i National Park, HI 96718

**North Kohala Public Library**  
54-3645 Akoni Pule Hwy  
Kapa'au, HI 96755

**Hilo Public Library**  
300 Waianuenue Avenue  
Hilo, HI 96720

**Holualoa Public Library**  
76-5909 Mamalahoa Hwy  
Holualoa, HI 96725

**Honoka'a Public Library**  
45-3380 Mamane Street Bldg #3  
Honoka'a, HI 96727



*NPS photo*



*NPS photo*

*Native plant recovery in 'Ōla'a rainforest sixteen years following exclusion of non-native feral pigs inside a fenced unit is pictured at left. Vegetation and soils continue to be impacted just outside the fenced unit pictured at right.*

**Kailua-Kona Public Library**  
75-138 Hualalai Rd.  
Kailua-Kona, HI 96740

**Kea'au Public Library**  
16-571 Kea'au-Pahoa Road  
Kea'u, HI 96749

**Kealahou Public Library**  
81-6619 Mamalahoa Hwy  
Kealahou, HI 96750

**Laupahoehoe Public Library**  
35-2065 Old Mamalahoa Hwy  
Laupahoehoe, HI 96764

**Mountain View Public Library**  
18-1235 Volcano Hwy  
Mountain View, HI 96771

**Na'alehu Public Library**  
95-5669 Mamalahoa Hwy  
Na'alehu, HI 96772

**Pahala Public Library**  
96-315 Pikake Street  
Pahala, HI 96777

**Pahoa Public Library**  
15-3070 Pahoa-Kalapana Road  
Pahoa, HI 96778

**Thelma Parker Public Library**  
67-1209 Mamalahoa Hwy  
Kamuela, HI 96743-8429

- CDs and a limited number of hard copies of the draft plan/DEIS are available by request. If you would like a copy, please contact:

**Superintendent**  
Hawai'i Volcanoes National Park  
P.O. Box 52  
Hawai'i National Park, HI 96718-0052  
Telephone 808-985-6026



*NPS photo*

*The endangered Ka'u silversword in bloom. Highly susceptible to being eaten by non-native ungulates, this individual survived to maturity inside a fenced enclosure on Mauna Loa inside the park.*

## Estimated Schedule for Completion of the Final Plan/EIS

DATES	PLANNING PHASE
Release of Environmental Protection Agency Notice of Availability through January 20, 2012	Public review and comment on draft plan/DEIS
Winter 2011 to Spring 2012	Analyze public comments, prepare final plan/EIS
Summer 2012	Release final plan/EIS
Summer 2012	Issue Record of Decision; begin plan implementation