

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Forestry and Wildlife
Honolulu, Hawaii 96813

September 27, 2013

Chairperson and Members
Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

Land Board Members:

SUBJECT: REQUEST APPROVAL OF THE PU‘U MAKA‘ALA NATURAL AREA RESERVE MANAGEMENT PLAN, ACCEPTANCE OF THE FINAL ENVIRONMENTAL ASSESSMENT FOR THE SUBJECT PLAN AND ISSUANCE OF A FINDING OF NO SIGNIFICANT IMPACT FOR THE PROPOSED PROJECT, TMKs 1-8-12:03, 1-9-01:1, 2-4-8:19, 2-4-8:25(portion), and 2-4-008:09 (portion)

SUMMARY:

This submittal requests the Board approve a management plan for the Pu‘u Maka‘ala Natural Area Reserve (Reserve), accept the Final Environmental Assessment (FEA) for the subject plan and approve the issuance of a Finding of No Significant Impact (FONSI) for the project.

The Hawai‘i Department of Land and Natural Resources (DLNR) Division of Forestry and Wildlife (Division) Natural Area Reserves System (NARS) has developed a fifteen-year management plan for the Reserve. The purpose of the actions proposed in the plan is to manage threats to the integrity, diversity and functioning of Reserve ecosystems so that the unique natural and cultural resources are protected, maintained, and enhanced. Proposed management actions are needed to effectively reduce major threats to the Reserve as well as ensure the long-term protection of this important native forest ecosystem.

A copy of the FEA, with attached Reserve Management Plan has been separately provided to the Board Members. A copy of both these documents will be posted on the Land Board Website.

BACKGROUND:

The Reserve is situated on lands within the upper portions of Waiākea ahupua‘a of the South Hilo District and the kalana (sub-district) of ‘Ōla‘a within the District of Puna. It was formally established in 1981 by Governor’s Executive Order 3102 from lands withdrawn from the ‘Ōla‘a and Waiākea Forest Reserves. The original 12,106 acre (ac) (4,899 hectare (ha)) Reserve was created to protect native wet forest that provides habitat for native plants, invertebrates, and

birds. The addition of 6,600 acres (2,671 ha) of the Kūlani property was completed in November 2010 with the issuance of a Governor's Executive Order 4338. This new portion of the Reserve contains additional native habitats and species, including mesic forest ecosystems and high elevation habitat that contains existing populations of three critically endangered forest birds.

The Division is conducting ongoing planning efforts to develop and update management plans for various reserves in the NARS. This management plan updates the 1989 Management Plan to reflect management accomplishments and current management needs of this Reserve. Management plans are intended to be consistent across the State and serve to organize field management, assist in budgeting and funding concerns, and to incorporate the involvement of the public and partner organizations.

The Reserve management plan also includes a cultural study, prepared in 2004 by Kumu Pono Associates. He Mo'olelo 'Āina: A Cultural Study of the Pu'u Maka'ala Natural Area Reserve, District of Hilo and Puna, Island of Hawai'i, is a detailed study of historical and archival literature and limited oral history interviews and consultation with kama'āina and others with knowledge of the land.

Management actions proposed in this plan support the purpose for which the Reserve was established. NARS was created in 1971 by the Hawai'i State Legislature to "preserve in perpetuity specific land and water areas which support communities, as relatively unmodified as possible, of the natural flora and fauna, as well as geological sites, of Hawai'i (HRS § 195-1)." The legislature further found that these unique natural assets should be protected and preserved, both for the enjoyment of future generations and to provide baselines against which changes to Hawaii's environment can be measured.

The NARS presently consists of 20 reserves on five islands, encompassing more than 123,000 ac (49,776 ha) of the State's most unique ecosystems. The diverse areas found in the NARS range from marine and coastal environments to alpine desert, and from fresh lava flows to wet forests. These areas often serve as habitat for rare native plants and animals, many of which are on the verge of extinction. The NARS also include important watersheds, contributing to Hawaii's sources of drinking water. Finally, the NARS forms an important part of the scenic landscape and contributes to the natural beauty of Hawai'i, contributing to the islands' overall appeal to visitors. In addition to setting aside these areas as reserves, the NARS program strives to actively manage these reserves in order to preserve the unique characteristics that make these areas an integral part of the natural heritage of Hawai'i. Reflecting this, the mission of the NARS program is: "The NARS exists to ensure the highest level of stewardship for Hawaii's natural resources through acquisition, active management, and other strategies."

The overall management goal is to protect, maintain, and enhance the Reserve's unique natural, cultural, and geological resources. Proposed actions to achieve this goal include fencing, feral ungulate removal, weed control, habitat restoration, outplanting rare plants, monitoring, public access, outreach and education, fire management, enhanced enforcement and continued collaboration with partners. Long-term management of the forested watershed of the Reserve provides multiple benefits to the state including protection of the island's water resources and

undeveloped open space. The natural communities within the Reserve provide habitat for a diverse range of native plants and animals, from rare birds to endemic invertebrates, preserving Hawaii's biodiversity.

The primary threats to biodiversity and watershed integrity at the Reserve are feral ungulates (wild, hoofed animals such as pigs, sheep, goats and cattle), especially feral pigs (*Sus scrofa*) and non-native, invasive weeds. Other threats to the Reserve discussed in the management plan include other invasive animals, fire, disease, climate change, volcanic activity, and illegal human activity.

PROJECT DESCRIPTION:

The overall management goal is to manage threats to the integrity, diversity and functioning of the Reserve ecosystems so that the unique natural and cultural resources are protected, maintained, and enhanced. Management program objectives that support this overall goal include the following:

1. Ungulate Management - Preserve and protect native forest and watershed from feral ungulate damage by maintaining existing fenced units, increasing the total acreage of ungulate-free areas through the construction of four new fenced management units, and completely removing ungulates from all fenced management areas.
2. Weed Management - Protect intact native areas within the Reserve by eradicating incipient weeds along common invasion corridors (e.g. roads, trails, fences), and if possible, eradicate or contain select high priority weeds in fenced units within the Reserve.
3. Habitat Protection and Rare Species Restoration - Manage high quality forest habitats, rare, threatened and endangered plant and animal species at sustainable community and population levels.
4. Fire Prevention and Response - Employ appropriate fire management strategies including pre-suppression, suppression, and post-suppression rehabilitation to reduce wildfire occurrence and minimize wildfire impacts.
5. Monitoring - Monitor current status and trends of natural resources throughout the Reserve as part of a long-term monitoring program.
6. Public Access, Outreach and Education - Provide public access to Reserve and build public understanding and support for the Reserve and the state's unique native resources through outreach and education.
7. Enforcement - Ensure effective enforcement of laws that protect the Reserve.
8. Partnership Collaboration - Collaborate with external partners to support NARS mission and goals.
9. Infrastructure and Other Actions - Manage existing infrastructure within the Reserve and take other actions necessary to protect and effectively manage the Reserve.

ALTERNATIVES CONSIDERED:

Three alternatives are identified and discussed in the draft environmental assessment (DEA). Another alternative was considered, but was dismissed because it was not feasible to implement

during the time frame of this plan due to high cost. The Division has selected Alternative One for implementation because it avoids or minimizes potential negative impacts on natural and cultural resources while meeting management objectives for the Reserve.

1. **Alternative One - Implement Management Plan.** Implement identified management programs and actions over the anticipated 15 years to protect, maintain, and enhance the Reserve's unique natural, cultural, and geological resources. Fencing and ungulate removal will protect core areas of the Reserve from feral ungulates; invasive weed control will limit the habitat-modifying affects of these plants and keep forests intact and functioning; habitat protection and rare species restoration will protect and restore rare native habitats and recover endangered species; monitoring will assess the results of management and help to detect new threats; and outreach and education including trail improvement will improve understanding and appreciation of native species and ecosystems as well as provide recreational opportunities.

2. **Alternative Two - Implement Management Plan with modifications of the Army Road Management Unit Fencing and Interpretive Trail Development.** This alternative is the same as Alternative 1 with the exception of modifications to the implementation of one fencing project - the Army Road Unit and the elimination of the associated interpretive trail development project for the same area.

This alternative would meet management objectives for the Reserve but was not selected for implementation because it includes greater negative impacts to natural and cultural resources due to the need to bulldoze a new fence corridor approximately 8 feet wide rather than using the existing road corridor. Approximately 3 acres (1.2 ha) of forest would need to be cleared to create the new fence corridor.

3. **Alternative Three - No Action.** This alternative does not meet management objectives for the Reserve and effectively accepts deterioration of unique natural and cultural resources by feral ungulates, invasive weeds and other threats. The no-action alternative fails to take advantage of existing funding opportunities to protect and restore native forest on public lands and fails to protect the Reserve from the damaging impact of feral pigs, weeds and other threats. With no action, the existing 'ōhi'a forest may eventually disappear, further reducing habitat for endangered plant and animal species, degrading the watershed, and depriving future generations the opportunity to appreciate these resources. Finally, the no-action alternative reduces the potential for success of affirmative conservation measures, such as outplanting rare plants, that are necessary for the long-term recovery of many species. This alternative is not consistent with the NARS's mandate as described in HRS Ch. 195, nor the overall mission of the DLNR to "Enhance, protect, conserve and manage Hawaii's unique and limited natural, cultural and historic resources held in public trust for current and future generations of visitors and the people of Hawaii nei in partnership with others from the public and private sectors."

IMPACT OF ACTION ALTERNATIVES

The Action Alternatives were evaluated with respect to their potential effects to the valued environmental components, which include biological resources, geology, climate, soil erosion,

watersheds, agriculture, economy, cultural resources, socioeconomic conditions, recreation, public health and scenic resources. Potential impacts evaluated are summarized below.

Biological Resources (Native Animal Species, Native Vegetation and Habitats)

- The overall impact under all both action alternatives would be beneficial. Fencing, ungulate removal, monitoring, and rare species reintroduction will directly benefit biological resources and reduce negative impacts posed by non-native, invasive species.
- Overall long-term impacts to native animal species are anticipated to be positive. The Reserve can serve as recovery and reintroduction site for native birds and is also federally designated as critical habitat for *Drosophila mulli*, a picture wing fly.
- Proposed management actions will create secure native habitats needed for the survival of rare or endangered species, as well as common native wildlife species that may be impacted by threats such as climate change and/or introduction of new diseases.
- Impacts to native vegetation and habitats due to fencing and ungulate control are anticipated to be positive. Delineating the boundary will prevent encroachment from adjoining properties and reduce illegal activities such as trash dumping and ATV use. The removal of feral ungulates will protect native vegetation and habitats.
- Management to protect watershed and native ecosystems will maintain overall forest health, which will increase resistance to threats such as fire, insects and disease. Increased early monitoring will better detect detrimental non-native insects and disease.

Soil and Water

- Both action alternatives include specific management objectives to preserve and enhance watershed values and provide substantial watershed benefit. Fencing and feral ungulate removal will reduce soil erosion, increase absorption, and reduce flooding. The native forest of the Reserve acts as a filter to clean and to cycle organic matter and nutrients, mitigate flood damage and prevent soil erosion and sediment run-off.
- Existing unimproved trails and four-wheel drive (4WD) roads are not currently regularly maintained, and these areas have erosion and soil runoff. The proposed trail improvements and conversion of a 4WD road to a pedestrian trail will reduce the incidence of soil erosion and runoff in sensitive habitats.

Air Pollution

- Minor impacts to air quality will result from use of helicopters, vehicles, and small power tools. Use of this equipment is temporary, of limited duration, and will not significantly contribute to air pollution.

Climate

- The forests of the Reserve store a large amount of carbon. Management actions to conserve such areas may provide communities with carbon credits for future consideration, and may also help mitigate the effects of climate change. Any impacts to climate would not be significant or negative.

Social Impacts

- Positive impacts of the alternatives to include protection of Reserve resources including water, culturally important plants for gathering, and scenic resources.
- Minor negative impacts include the reduction of acreage currently used for public hunting. The removal of Reserve lands from the public hunting acreage is not expected to have a significant impact on the overall availability of pig hunting opportunities.
- Minor negative impacts include periodic noise from helicopter flights, power tools, and other activity associated with fence and trail building as well as transporting staff to implement proposed management actions.
- There are also positive social impacts associated with re-opening of Kūlani Correctional Facility. In the past, inmates participated in work training, community service work and educational programs related to natural resources management, which benefited both the natural resources and the inmates. The Division supports reinitiating these successful programs in partnership with the Department of Public Safety.
- Impacts to access would be positive as the management plan proposes to maintain and/or expand access and use of the area for recreation and education.
- Education and outreach programs proposed in the management plan will have positive social impacts by educating a larger number of adults and children about the unique ecosystems and biodiversity of the Reserve. Improved trail management will enhance research and field trips to reinforce classroom curricula.
- The project will help restore and preserve the native vegetation of the Reserve which will positively impact scenic resources.

Economic Impacts

- Economic impacts of both action alternatives are neutral or positive and will result from the release of project funds into the State economy through the purchase of goods and services from local vendors, as well as employment for conservation workers and researchers and students from local universities and colleges.
- Tourists also enjoy natural areas, and trail improvements could have a positive economic impact on tourism as well as related businesses such as hotels and restaurants.

Cultural Impacts

- Potential impacts to cultural resources are primarily positive. Perpetuating and protecting the native forests not only benefits the native species that live there, but also protects the cultural significance of the area. The Reserve's native Hawaiian ecosystems and species are an essential part of the overall cultural-historical landscape. Protection and enhancement of the long-term survival of the natural resources through proposed management is the primary means to protect this valued cultural landscape.
- The Division has analyzed the potential for impacts to archaeological and historic sites and consulted with the State Historic Preservation Division (SHPD), which concurs with our determination of no effect.

Impacts of Alternative Two - This alternative would meet management objectives but includes greater negative impacts to natural and cultural resources due to the need to bulldoze a new fence corridor approximately 8 feet wide rather than using the existing road corridor. Approximately 3

acres (1.2 ha) of forest would need to be cleared to create the new fence corridor.

MITIGATION MEASURES

Mitigation measures discussed in the FEA are summarized below.

Biological Resources

- Locations for fence construction and aviaries will be surveyed prior to clearing and construction to avoid impacts to forest birds and nesting Hawaiian hawks. Final fence alignments will be selected to avoid large trees and nesting hawks.
- Fence alignment clearing or trimming of woody plant suitable for 'ōpe'ape'a (Hawaiian hoary bat) will not be conducted during the bat birthing and pup rearing season to minimize impacts to the endangered bat.
- Noise associated with the construction of fencing and trail improvement may temporarily disrupt the activities of native birds within the project area. However, the impact of construction noise on native birds is expected to be minimal and temporary.
- Maintenance of the fence line will include monitoring for the presence of potential negative interactions with native wildlife. If native wildlife is being injured, mitigation measures will be developed and implemented (e.g. adding visual barriers to the fencing).
- Invasive weed management using chemicals will avoid impacts to endangered species and sensitive habitats. All herbicide use will follow labeling requirements. Use of rodenticides and other toxic baits will be done in accordance with the toxicant registration. The Division will use approved baits with a low toxicity to non-target wildlife such as birds and enclosed bait stations to limit the availability of bait to rodents.
- For any biological resources (e.g. rare, threatened, endangered species/habitats) that may be impacted by proposed management actions, all work will cease and the appropriate agencies and organizations contacted for appropriate consultation.
- Construction of fencing, trails or aviaries will result in minimal disturbance to vegetation within a limited construction corridor as a result of the clearing and construction. Fence and trail corridors will be kept as narrow as possible (up to six feet (1.8 meters)). All hāpu'u removed will be replanted in adjacent areas. Alignments will be adjusted to avoid impacts to sensitive botanical resources (e.g. endangered plants) or large trees.
- Disturbance of native vegetation due to pooling or congregating of feral pigs along fences will be minimized because staff will be regularly monitoring fences and will implement appropriate ungulate control measures when needed.
- New fences will be aligned along existing 4WD roads where possible and follow local topography to minimize material transport and hand clearing costs. Prior to construction, alignments will be inspected for endangered plant species and archaeological features. If necessary, fence alignment will be shifted to avoid individual rare plants or features.
- Construction may create conditions suitable for the establishment of non-native invasive plants and animals. Reserve staff will follow sanitation procedures to minimize the introduction of non-native species and to reduce the possibility of establishment.
- Reserve staff will do regular follow-up monitoring and control of invasive species along fence/trail corridors post-construction as a part of ongoing maintenance programs.
- The use of biological controls to control non-native invasive species will be conducted in

strict accordance with state/federal protocols using approved biocontrol agents.

Soil and Water

- Best Management Practices (BMPs) for Maintaining Water Quality in Hawai'i (1996) will be incorporated to minimize any potential runoff and erosion. Specific BMPs include: locating corridors to fit topography and minimize alterations to the natural features; provision of dips and water bars to minimize erosion; avoidance of the diversion of water from natural drainages; keeping grades at less than 10%, except where unavoidable; and other measures as needed.
- Pesticide usage will be in full compliance with State and Federal regulations with staff trained on its safe preparation and application thereby reducing the potential for negative impacts to soil and/or watershed.

Air pollution - No mitigation is necessary.

Climate - No mitigation is necessary.

Social Impacts

- Noise producing activities will be done during daylight hours and for short durations in generally remote areas, mitigating potential noise disturbance.
- The presence of large areas open for public hunting in and adjacent to the Reserve, the phased nature of proposed fencing and ungulate control, and the use of public hunters to assist in initial feral pig control and trapping and release of pigs into public hunting areas will mitigate any potential impacts to hunters.
- Additional mitigation to minimize impacts on public hunting includes enhancing opportunities for public hunting through acquisition and improved access to appropriate public and private lands.
- Maintaining current access trails and improving trails and signage will mitigate potential negative impacts such as people getting lost, accidental introduction of invasive species, soil erosion or disturbance to sensitive areas.
- Public access to the area will not be negatively affected by fencing because gates, fence ladders or crossovers will be installed at trails and access points along fences to facilitate access for hikers, hunters, gatherers, researchers, and others who are using the area.

Economic Impacts - No mitigation is necessary.

Cultural Impacts

- The Division will incorporate SHPD recommended mitigation measures. If possible evidence of past human activity is observed during management activities; Staff will contact the SHPD Hilo office and report the find. SHPD staff will assist in determining the age, function and significance of the find and in determining appropriate mitigation. If the find is determined to have, or potentially have traditional cultural value, consultation with Native Hawaiian Organizations and knowledgeable individuals will also occur during planning of mitigation/protection measures.

Alternative Two Mitigation Measures - Alternative Two would require greater mitigation measures as described above to protect natural and cultural resources due to impacts of bulldozing a fence corridor (e.g. surveys for rare species, invasive plant control in a wider corridor etc).

PUBLIC OUTREACH

The Division incorporated the involvement of the public and partner organizations throughout the plan development and compliance process. The Natural Area Reserve Commission was consulted at a public meeting on September 20, 2010. Early consultation letters (November 2010) requesting information and comments were sent to over 200 agencies, organizations and individuals (complete list of individuals and organizations contacted for early consultation are included in the FEA). The FEA includes a summary and discussion of comments received as well as copies of the early consultation comment letters.

The DEA for the Pu‘u Maka‘ala Natural Area Reserve Management Plan was published in the Office of Environmental Quality Control (OEQC) Bulletin of January 8, 2012. The FEA includes copies of all written comments received in response to the DEA during the 30-day comment period as well as the responses of the Division to each letter.

SUMMARY OF COMMENTS AND RESPONSES

The Division received 74 written comments on the DEA for the Plan during the public comment period (64 supporting, 7 opposing and 3 neutral) and prepared responses for all written comments. All written comments and responses are included in the FEA. In addition, the Division was sent 34 pages of a petition with 710 signatures “to stop taking prime hunting land in the Kūlani area away from Hawai‘i residents.”

The following provides a brief summary of the major comments received and responses provided grouped in general themes:

Theme: Support for the management plan and protection and management of watershed, native species and ecosystems.

Response: Thank you for your support and comments.

Theme: Concern/opposition to fencing and ungulate control and any restriction on hunting in the Reserve for various reasons (pigs as food source, gathering rights, taking of prime hunting lands, ungulates a natural resource that should be preserved, ungulates are not a threat to native ecosystems, etc).

Response: The Division is entrusted with managing the natural resources of the Reserve, which are primarily center on watershed protection. Management actions proposed for the Reserve are widely accepted practices for protecting and restoring watershed health, native forest habitat and rare species from threats such as feral ungulates and invasive species.

East Hawai‘i contains the most public hunting area in the state (approximately 262,775 acres).

Approximately 5,000 ac (2,023 ha) are proposed for fencing and feral pig removal (approximately 2% of the land area available for public hunting area in East Hawai‘i. The removal of these NAR lands from the public hunting acreage is not expected to have a major effect or significant impact on the overall availability of pig hunting opportunities because large areas of accessible public hunting with ample pig habitat exist on adjacent lands. Areas accessible for pig hunting from Stainback Highway including the neighboring Forest Reserves (Upper Waiākea, Waiākea and portions of ‘Ōla‘a), as well as a large portion of the NAR not currently proposed for fencing will still provide 73,337 acres for hunting. The supply of feral pigs from accessible public hunting areas nearby with ample, suitable pig habitat is expected to provide a sustainable, social and economic resource well into the future. Public hunting will help with the initial suppression of feral animals within fenced areas. At the same time, additional tools for animal reduction may be employed to remove all the animals from within fenced areas including staff hunting, corral traps and release of pigs to public hunting areas, snaring and other approved methods. The phased nature of proposed fencing and ungulate control projects over the fifteen years time-frame of this plan, the use of public hunters to assist in initial feral pig control and trapping and release of pigs into public hunting areas will mitigate any potential impacts to hunters.

Additional mitigation to minimize impacts on public hunting includes enhancing opportunities for public hunting through acquisition and improved access to appropriate public and private lands. In 2011, DOFAW established a new DOFAW Access and Acquisitions Program and hired a full time coordinator. Current projects in East Hawai‘i include verifying the existence/condition of Hilo, Hamakua and Ka‘ū Forest Reserve access routes used by hunters, formalizing agreements to ensure their continued use by the public and development of new access routes.

Theme: Concerns about restrictions to public access.

Response: The Division will not be restricting public access to this area. Public access for recreational or cultural uses is allowed in all portions of the Reserve (Hawai‘i Administrative Rules 13-209), and the Management Plan describes trails that will be developed to enhance public access. The Division is improving access for pedestrians in the 3.3 miles of the Army Road area by eliminating vehicle use as there are limited opportunities for hiking along Stainback Highway whereas there are over 100 miles of roads available for vehicle and/or pedestrian access above North Kūlani Road in Pu‘u Maka‘ala NAR, Upper Waiākea FR, and Waiākea FR. Plans for the Army Road area include trail improvement, rest areas, covered picnic tables and interpretive signs. In addition, pedestrian access will be improved to the portions of Kūlani which are part of the Reserve (which were previously off limits entirely to public access). Several new trails totaling over eight miles will be developed for pedestrians (two in the Kūlani area) and one in Wright Rd.

Theme: Support for expansion of areas proposed for fencing to include the entire NAR.

Response: This alternative is not feasible with the anticipated funding within the current time frame of the Management Plan. In addition, this area is not currently as high a priority for fencing as the areas identified in the preferred alternative. Implementing the preferred alternative does not limit the Division from implementing additional conservation actions in the NAR in the

future.

Theme: Propose changes to game management policy (e.g. de-regulate invasive ungulates as game mammals) to improve consistency with policies of controlling ungulates to protect natural resources.

Response: Addressing broader game management policy is beyond the scope of this Management Plan. The Division recognizes that conditions for game mammal hunting should be non-restrictive in areas designated for protection. The proposed rule changes for game mammal reflect this need through the proposed changes to the NARS and other areas. In areas where control of game mammals is the management goal, the proposed rule changes are meant to increase game mammal harvest for natural resource protection, consistent with the Division's statutory mandates for the protection of natural resources. The Division recognizes that these changes do not encompass all of the sensitive areas and will be conducting additional analysis to determine which areas warrant further changes to the rules.

Theme: Recommendations for additional lands to be added to the Reserve.

Response: The Management Plan focuses on management of areas already designated part of the existing Pu'u Maka'ala NAR. The addition on the pasture portions is specifically mentioned in the plan because this area has already been recommended by the NARS Commission for inclusion in the NAR. The Division thanks you for your suggestions for additional expansion options for the NAR. We invite you to submit a nomination to the NARS Commission, and these suggestions will be studied and considered and may be recommended to the governor for inclusion within the Reserve.

Theme: Propose use of the Reserve to produce revenue from hunting tourism.

Response: Use of the Reserve to produce revenue from hunting tourism is not compatible with the overall purpose and need for the project. The purpose of the actions proposed in the plan is to manage threats to the integrity, diversity and functioning of the Reserve's ecosystems so that the unique natural and cultural resources are protected, maintained, and enhanced. Feral pigs are one of the major threats to the Reserve.

Theme: The Cultural Study is not correct in the regards to the discussion of pigs and hunting.

Response: The Division used the most recently available information and knowledge to evaluate the cultural, historical, and archeological significance of the project area and impacts of proposed actions. The cultural study included in the EA found that traditional hunting practices were primarily limited to birds, and review of over 60,000 native Hawaiian land documents dating from 1846-1910 revealed many references to pua'a (pigs), but nearly every reference was in the context of them being near home and being cared for (raised), not hunted.

Theme: Concerns about the reintroduction of 'Alalā (not appropriate habitat, limiting public access, focus on single species rather than ecosystem).

Response: While the release of the 'Alalā is indeed focused on a single species, many actions needed for the 'Alalā will also benefit other species and native ecosystems in the area (e.g. predator removal, weed removal, restoration and habitat management). Kūlani and adjacent partnership lands already provides existing infrastructure (e.g. roads, buildings) that can help support human activities related to 'Alalā release, including enforcement actions against people

who may potentially try to harm released birds. In addition, many areas are already fenced and free of feral ungulates. While Kūlani is not documented as historical habitat for ‘Alalā, it provides the appropriate type of habitat, is adjacent to documented historic habitat, and adjacent landowners are committed to working with the Division to provide for habitat protection, restoration actions and potential expansion of ‘Alalā range into drier habitats of Keauhou and Hawai‘i Volcanoes National Park. The Division will not restrict public access into the Reserve due to the reintroduction of ‘Alalā.

DISCUSSION:

The Division of Forestry and Wildlife has reviewed the DEA for the subject project as well as the comments received during the 30-day public comment period, and anticipates a FONSI determination. Proposed actions are expected to have primarily positive effects on the environment. No significant adverse effects to the biological resources, geology, climate, soil erosion, watersheds, agriculture, economy, cultural resources, socioeconomic conditions, recreation, public health and scenic resources are anticipated.

The Division is conducting ongoing planning efforts to develop and update management plans for various reserves in the NARS. This management plan updates the 1989 Management Plan to reflect management accomplishments and current management needs of this Reserve. Management plans are intended to be consistent across the State and serve to organize field management, assist in budgeting and funding concerns, and to incorporate the involvement of the public and partner organizations.

The Division will periodically prepare management plans for Board review and approval. Board approval of the Pu‘u Maka‘ala Natural Area Reserve Management Plan is intended to trigger some or all of the following actions:

1. Division efforts to secure operational and planning funding for plan objectives.
2. Prioritized implementation of plan objectives by the Division.
3. Periodic solicitation of requests for proposals or bids for implementation of plan objectives, including issuance of permits, licenses, or contracts (Hawai‘i Administrative Rules §13-104-22), as necessary.

The planning and compliance documents prepared for Reserve conform with the purpose of the Natural Area Reserve System and Pu‘u Maka‘ala Natural Area Reserve, in particular as stated in Hawai‘i Revised Statutes (HRS § 195-1) and associated Hawai‘i Administrative Rules (HAR§ 13-209), to preserve in perpetuity specific land and water areas which support communities, as relatively unmodified as possible, of the natural flora and fauna, as well as geological sites, of Hawai‘i.

RECOMMENDATIONS:

That the Board of Land and Natural Resources:

1. Approve the Pu'u Maka'ala Natural Area Reserve Management Plan as a guiding document for the management of the subject reserve.
2. Accept the Final Environmental Assessment for the Pu'u Maka'ala Natural Area Reserve Management Plan.
3. Based on review of the Final Environmental Assessment and the comments received during the 30-day public comment period and the Division of Forestry and Wildlife's responses, find that the project will not have a significant effect on the environmental, economic and/or cultural resources of the area and approve the issuance of a finding of no significant impact for the proposed project.
4. Authorize the Chairperson to publish a finding of no significant impact for the proposed project in the Office of Environmental Quality Control's The Environmental Notice.

Respectfully submitted,



Roger Imoto, Administrator

APPROVED FOR SUBMITTAL:



William J. Aila, Chairperson