March 8, 2013

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

Land Board Members:

SUBJECT: ACCEPTANCE OF A HEARING MASTER’S REPORT, WITHDRAWAL OF APPROXIMATELY 376 ACRES FROM SACRED FALLS STATE PARK AND SET ASIDE AS THE KALUANUI NATURAL AREA RESERVE, TMK 5-3-11:09 por, OAHU

BACKGROUND:

Approximately 376 acres of a portion of parcel 09 of TMK: 5-3-11 is proposed as the Kaluanui Natural Area Reserve (NAR), under the Division of Forestry and Wildlife (DOFAW). Attachment 1 contains maps and a description of important stream, rare species, and watershed resources that led to this nomination.

Sacred Falls (Kaluanui) State Park is comprised of an entire ahupua’a from the Koolau summit to the ocean, within Kaluanui valley. The area proposed as a NAR is the mauka (upland) portion of Sacred Falls (Kaluanui) State Park above Kaliuwaa (the falls). This designation does not include the Sacred Falls (Kaluanui) trail and will not affect the closed status of that trail.

In 1999, after a fatal rockslide at the base of Kaliuwaa resulted in closure of the park, the Division of State Parks has been working with the community and contracted with Oceanit Laboratories to assess the area’s risks and plan for the future uses of the park.

Community planning has focused on the public use of the park’s lower section and the draft Master Plan supports the NAR designation for the area above Kaliuwa’a and beyond.

On June 4, 2012, the NAR Commission approved DOFAW’s recommendation for the Kaluanui NAR. The Division of State Parks is in concurrence with this designation and agrees to the set aside of parklands to DOFAW. Additionally, conservation management actions to protect the remaining native dominated vegetation are being planned.

Approval to hold a public hearing was granted by the Board of Land and Natural Resources on October 12, 2012. Notice of public hearing was published pursuant to §195. A press release and notice of the hearing was issued to newspapers and to interested parties. A public hearing was held on January 23, 2013 in Hauula. DLNR staff and 5 members of the
public attended. Testimony from individuals included: 5 in support, 0 in opposition. Attachment 2 contains the hearing master’s report as well as the full text of the testimony received on the proposal.

DISCUSSION

The Division of Forestry and Wildlife (DOFAW) recommends this area to fulfill the NARS’ mission 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 Hawaii. Designation of this area as a NAR will add representative samples of the natural communities found on the windward Koolau Mountains.

CHAPTER 343 – ENVIRONMENTAL ASSESSMENT:

This action before the Board represents a transfer in management jurisdiction and does not constituted a use of State lands or funds, and therefore, this action is exempt from the provisions of Chapter 343, HRS, relating to environmental impact statements. The Division of Forestry and Wildlife shall be responsible for compliance with Chapter 343, HRS, as amended for NARS program activities on the land that are not otherwise included in existing environmental compliance documents for that parcel. Pursuant to HAR § 11-200-8, foreseeable uses of the State lands by the NARS program include:

Exemption Class: DLNR, Division of Forestry and Wildlife, Class 1, Item 8

Exempt Item Description: Weed, brush and noxious tree control using hand tools, small motorized equipment (chainsaws and weedeaters), and approved herbicides on DOFAW program areas, campsites, picnic grounds, viewpoints, baseyards, wildlife water units, trails, captive propagation facilities, arboreta, plant nurseries, checking stations, and public use facilities.

Exemption Class: DLNR, Division of Forestry and Wildlife, Class 1, Item 17

Exempt Item Description: Animal damage control actions, when needed to maintain resource values, in Division of Forestry and Wildlife (DOFAW) program areas, including application of approved rodenticides, and ungulate removal.

Exemption Class: Department of Land and Natural Resources Class 3, Item 1

Exempt Item Description: Fences around or to manage threatened or endangered plants; covered and open areas for endangered species, game birds and mammals; auxiliary buildings for food storage, equipment storage, incubators and brooders; open-top breeding and release pens, field aviaries and hacking boxes; and for watershed and native forest management and restoration. Fences shall contain step-overs or other features that permit pedestrian access for cultural and recreational use.

Exemption Class: Department of Land and Natural Resources Class 3, Item 2
Exempt Item Description: Cabins, resident workers’ quarters, warehouse workshops, mobile camping structures, weather stations, checking stations for hunters, hikers, and campers; meat safes, viewing kiosks and platforms, wildlife viewing towers, sanitary facilities, trail shelters, equipment shelters, fire equipment caches, arboreta, and plant nurseries.

Exemption Class: Department of Land and Natural Resources Class 4, Item 1

Exempt Item Description: Establishment of helispots.

Exemption Class: Department of Land and Natural Resources Class 4, Item 7

Exempt Item Description: Establish temporary or permanent vegetative cover including trees, shrubs and grasses for landscaping, reforestation, soil stabilization, and wildlife habitat.

Exemption Class: Department of Land and Natural Resources Class 5, Item 2

Exempt Item Description: Game and non-game wildlife surveys, inventory studies, new transect lines, photographing, recording, sampling, collection and captive propagation (involves walking, driving, and flying in the field, helicopters, light aircraft), use of nets and firearms, temporary traps including snares, mist nets, corral traps, drop door traps or leg hold traps.


RECOMMENDATIONS: That the Board:

1) Accept the Hearing Master’s Report (Attachment 2).

2) Approve of and recommend to the Governor the issuance of an executive order withdrawing approximately 376 acres from the Sacred Falls (Kaluanui) State Park, TMK 5-3-11:09 por, Kaluanui, Oahu and further subject to the following:
   a. The standard terms and conditions of the most current executive order form, as may be amended from time to time;
   b. Disapproval by the Legislature by two-thirds vote of either the House of Representatives or the Senate or by a majority vote by both in any regular or special session next following the date of the setting aside;
   c. Review and approval by the Department of the Attorney General; and
   d. Such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.

3) Approve of and recommend to the Governor the issuance of an executive order setting aside approximately 376 acres, TMK 5-3-11:09 por, Kaluanui, Oahu, to the State of Hawaii, Department of Land and Natural Resources, Division of Forestry and Wildlife, for the Kaluanui Natural Area Reserve, under the terms and conditions
cited above, which are by reference incorporated herein and subject further to the following:

a. The standard terms and conditions of the most current executive order form, as may be amended from time to time;
b. Disapproval by the Legislature by two-thirds vote of either the House of Representatives or the Senate or by a majority vote by both in any regular or special session next following the date of the setting aside;
c. Review and approval by the Department of the Attorney General; and
d. Such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.

Respectfully Submitted,

[Signature]

ROGER H. IMOTO, Administrator
Division of Forestry and Wildlife

APPROVED FOR SUBMITTAL:

[Signature]

WILLIAM J. AILA, JR., Chairperson

Attachments
I EXECUTIVE SUMMARY

The mauka (upland) portion of Sacred Falls State Park, on the island of O‘ahu, is proposed for inclusion in the State of Hawai‘i Natural Area Reserve System (NARS). This area does not include the Sacred Falls trail and will not affect the closed status of that trail. The Kaluanui NAR will contain unique lowland wet ecosystems in the windward Ko‘olau mountains, including a stream with outstanding biodiversity.

II INTRODUCTION (General)

This Reserve would include an area of approximately 376 acres of the Kaluanui valley mauka of Kaliuwa’a falls (Sacred Falls) up to and over the Ko‘olau crest in the Ko‘olauloa and Waialua districts, in portion of TMK 5-3-11:09 por (See attached map).

Kaluanui stream is very biologically rich as one of the few unaltered streams on O‘ahu, and contains the full assortment of native fishes. The proposed NAR contains ʻōhiʻa and uluhe-dominated forests (US Dept. of Interior, 2006).

The inclusion of this area into the NARS would increase the representation of Oʻahu’s lowland wet and wet cliff ecosystems which are found in only tiny sections of existing Oʻahu Reserves (Ecoregional Planning Team, TNC, 2006).

There are records of twenty-nine endangered, candidate, or species of concern in the area (See Appendix 1). The proposed Reserve falls within Federally designated Critical Habitat for twelve plant species.

Geologically, this area is a steep amphitheater-headed valley. Four small tributaries feed Kaluanui stream. From the headwaters, the valley becomes much steeper around the 487m (1600ft) elevation, where a series of large waterfalls begin, which is the makai (lowest elevation) boundary of the proposed Reserve.

III BACKGROUND AND HISTORY

Past Land Use and Conservation History

While the lower section of Kaluanui valley outside of the proposed Reserve has many archeological signs of inhabitation and cultivation from pre-European times, there is little evidence of use mauka of Kaliuwa’a falls (Yent, et al. 1981).

The Castle Trail which leads through the area was blazed in 1906, which was extended throughout the summit in the 1930s (Ball, 2000).

The State acquired the park from Bishop Estate in 1977 after proposed private development plans led to the Legislature appropriating funds for the acquisition.

Since the designation of the park, the area has been monitored by various scientists from DLNR, as well as the U.S. Army’s Natural Resources Program, Bishop Museum, and other conservation and data-collection entities. In 1990 the Hawai‘i Stream Assessment ranked Kaluanui an “Outstanding” stream, and following in 1998, was nominated by the Multi-Attribute Prioritization of Streams as a Potential Heritage Stream (Hawai‘i Watershed Atlas, 2008).
In 1999, after a fatal rockslide in the lower section, the park became closed. Subsequently, the Division of State Parks has involved the community as well as contracted Oceanit Laboratories to assess the risks and to plan for the future of the park.

Recently, portions of the very southernmost tip at the Ko‘olau crest have been fenced to remove feral pigs as part of the U.S. Army’s Natural Resources Program’s Pe‘ahinai‘a and Helemano Exclosures. These adjacent exclosures, which together enclose an area of 275 acres, cover approximately 64 acres of State Park land.

**Present Land Use and Access**

State Parks has conducted a community planning process for the Park, which has focused mainly on the lower section of the park. However the Kaluanui Master Plan recommends that the “DLNR and community designate a large portion of the park a NAR” (Oceanit, 2004, p. 15).

Access to all areas of Sacred Falls State Park is closed to the general public. Access to the proposed Reserve requires at the minimum a five-mile round-trip hike and an elevation gain of 2,200 ft through various unofficial, unmaintained, long, and difficult trails. These accesses require landowner permission as they traverse private property.

**Cultural/Recreational Uses**

This area contains plants and animals that Hawaiians traditionally collect for practical, medicinal, decorative, and spiritual uses (Gutmanis, 1979, Krohn, 1978). Some of these plants and animals are considered sacred to certain gods or because they are associated with cultural practices (Kanahele, 1986). Preservation of these species is essential to the continuation of traditional Hawaiian cultural practice.

Lower in the valley, outside of the proposed Reserve is Sacred Falls or Kaliuwa’a. The Kaliuwa’a chute is legendary as originating from a deity named Kamapua’a, who leaned on the side of the valley to escape from Olopana, the King of O‘ahu.

Currently, some intrepid hikers visit this area. As this area is not part of a hunting unit, no information is known about poaching in the park above the falls.

**Previous Studies**

Kaluanui stream has been surveyed at least a dozen times since 1929; however most have sampled the lower reaches of the stream outside the NAR boundary (Parham et. al., 2008).

Biological and archeological survey efforts for the Division of State Parks have focused on the lower section of the park. However, botanical surveys over the years have located various rare plant and snail population data, which is listed in Appendix 1. Ko‘olau Mountains Watershed Partnership has obtained high resolution aerial mapping of the area, which aids in determining invasive species populations.

IV JUSTIFICATION (Specifics)

**Scientific Value**

Kaluanui is scientifically significant for its perennial undiverted stream, and largely intact lowland wet forests and cliffs, which contain rare plant, damselfly, and snail populations. Preservation of these biological resources will allow future generations to study and learn
about a native Hawaiian ecosystem in the windward Koʻolau mountains.

Representativeness
Kaluanui NAR represents a windward Koʻolau mountain stream and forest ecosystem. Hawaiʻi Revised Statutes Chapter 195 established the NARS “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 Hawaiʻi.” Currently, no NARS exist in the Koʻolau mountains, however an area on the leeward Koʻolau Mountains named Poamoho has also been nominated as a NAR.

The current and proposed Oʻahu NARS do not contain the stream resources and many of the rare plant and snail species found in the proposed Kaluanui NAR.

Natural Communities and their Status
Lower portions of the proposed reserve have been invaded by Psidium cattleianum (Strawberry Guava), which thins out further mauka and is only occasionally seen as individual trees at the Koʻolau crest. Clidemia hirta is also prevalent in the lower sections, especially near the stream bed, and can be found throughout the proposed Reserve. Despite these major threats, as well as the threats posed by less established alien species, a relatively intact native ecosystem remains, especially in the mauka regions.

The lower and middle reaches of Kaluanui stream have been invaded by 23 recorded alien aquatic species. However, only one – Macrobrachium lar (Tahitian prawn) has been recorded in the upper reaches of the stream, and none from the headwaters (Parham et. al, 2008). It is likely that waterfalls such as Kaliuwaʻa act as natural barriers to the spread of many of these non-native species.

Rarity
Appendix 1 lists the 29 rare plant and invertebrate species that have been recorded in the proposed Reserve. The stream ecosystem itself is rare, as one of the only undiverted and unchannelized streams left on Oʻahu.

Biological/Ecological Design
The boundaries of the proposed Reserve were designed to include where native – dominated vegetation exists and follows natural boundaries of ridgelines. The lower boundary terminates at the first large waterfall of Kaluanui stream.

Location and Size
The east side roughly follows a ridge separating Punaluʻu valley, and a 64-acre sliver of the parcel also extends over the Koʻolau crest over to the leeward side. From there, the parcel’s boundary does not follow natural features until approximately the 2,600 ft elevation, which is also at the point of the intersection of the Castle Trail. From there, the boundary roughly follows the ridge that divides Kaluanui Valley from Punaiki gulch to the West.

The makai boundaries terminate at two prominent hills at the 2,260 ft elevation on the west side of Kaluanui valley, and 2,440 ft elevation on the east side of the valley. These boundaries include most of the portion of the Castle Trail that is within the valley.
Threats (Human/Biological)
High priority threats to Kaluanui ecosystems are invasive plant species and feral pigs. Additionally, rats and predatory invertebrates such as the Euglandina rosea threaten the native snail species, and native plants. Introduction of aquatic insects and fishes is also a threat to the high quality stream.

The Ko‘olau Mountains Watershed Partnership (KMWP) has specifically prioritized the protection of the Kaluanui drainage from feral ungulates. Their management plan’s summary of recommended actions for their feral animal program includes “Expand upon established fencing exclosures, in areas such as... Upper Kaluanui” (KMWP, 2002).

Present Level of Protection
The proposed NAR is in the Conservation District, Protective and Limited subzones.

In 1999, the area became part of the Ko‘olau Mountains Watershed Partnership, a voluntary alliance of landowners and land managers committed to the common value of protecting forested watersheds for water recharge, and other ecosystem services through collaborative management.

On-the-ground conservation efforts have been concentrated at the Ko‘olau summit crest region of the proposed Reserve, which includes the work done by KMWP and the O‘ahu Army’s Natural Resources Program.

Long-term Ecological Viability/Environmental Consequences of No Action/Urgency
Designating this important core section of lowland wet forest, cliff, and stream as a NAR would enhance the ability of the System to participate and contribute to conservation and restoration actions across the entire watershed.

As this area has already experienced native species extinctions, and contains many species that are in danger of extinction, it is projected that no management action would lead to eventual loss of additional species.

V. MANAGEMENT NEEDS

Threats Requiring Management
Management priorities include removing feral pigs, which trample and devour vegetation and spread the seeds of invasive weeds. Removal of invasive plant species is also a very high priority management action. Removing or reducing the amounts of predatory mammals and invertebrates, such as rats and the cannibal snail Euglandia rosea, is needed near the existing snail and rare plant populations. Outplanting may be needed to preserve populations of very rare and endangered species. Infrastructure to support management may also be required, including helicopter landing zones, weatherports/cabins, monitoring equipment, and trails.

VI. PUBLIC SUPPORT

Agencies, Organizations, and Individuals Contacted*
*Interested parties will be notified and a formal public hearing and comment period will occur for this nomination pursuant to Hawaii Revised Statutes § 195-4.
VII. BIBLIOGRAPHY/REFERENCES


Reddick, P. Sacred Falls State Park. Prepared for DLNR, Division of State Parks, Outdoor Recreation and Historic Sites.


Emglud, R. et al. 2003. Systematic Inventory of Rare and Alien Aquatic Species in Selected O‘ahu, Maui, and Hawai‘i Island stream, Hawai‘i Biological Survey.


# Appendix 1

## Rare Species Recorded in the Proposed Kaluanui NAR

| Scientific Name | Common Name | Federal Status | Last Obs. | Type | PEP
|-----------------|-------------|----------------|----------|------|-----
| Plantago princeps var. longibracteata | Ale | E | 1976 | Plant |
| Viola oahuensis | | E | 2009 | Plant |
| Myrsine juddii | Kōlea | E | 1997 | Plant |
| Pteris ligidatei | | E | 2011 | Plant |
| Hesperomannia arborescens | | E | 1997 | Plant |
| Cyanea acuminata | ‘Ōhā, Hāhā, ‘Ōhā wai | E | 2011 | Plant |
| Tetraplasandra gymnocarpa | ‘Ohe ‘ohe | E | 2009 | Plant |
| Gardenia manii | Nānū, Nā’ū | E | 2001 | Plant |
| Chamaesyce rockii | ‘Akoko | E | 2011 | Plant |
| Cyrtandra viridiflora | Ha ‘iwale, Kanawao Ke ‘okē’o | E | 2001 | Plant |
| Phylllostegia hirsuta | | E | 2011 | Plant |
| Pteralyxia macrocarpa | Kaulu | E | 1995 | Plant |
| Cyanea lanceolata ssp. calycina | | E | 2009 | Plant |
| Cyanea calycina | ‘Ōhā, Hāhā, ‘Ōhā wai | C | 2011 | Plant |
| Joinvillea ascendens ssp. ascendens | ‘Ohe | C | 1999 | Plant |
| Platydesma cornuta var. cornuta | Pilo kea | E | 1997 | Plant |
| Bidens campylotheta ssp. campylotheta | Ko ‘oko’olau, Kōko’olau | SOC | 1988 | Plant |
| Cyanea purpurellifolia | ‘Ōhā, Hāhā, ‘Ōhā wai | E | 1997 | Plant |
| Lobelia gaudichaudii ssp. Gaudichaudii | | SOC | 2001 | Plant |
| Lentipes concolor | | SOC | 1990 | Fish |
| Megalagron nigrohamatum nigrolineatum | | E | 2011 | Insect |
| Achatinella pulcherrima | | E | 1993 | Snail |
| Achatinella decipiens | | E | 2011 | Snail |
| Achatinella bulimoides | | E | 2011 | Snail |
| Achatinella sowerbyana | | E | 2011 | Snail |
| Cyanea st. johnii | | E | 2011 | Plant |
| Megalagron oceanicum | | E | 2011 | Insect |
| Lobelia oahuensis | | E | 2009 | Plant |
| Anoectochilus sandvicensis | | SOC | 2011 | Plant |
Federal Status: E = Endangered, C = Candidate for Listing, SOC = Species of concern
PEP:** Plant Extinction Prevention species (fewer than 50 individuals remaining in the wild)

Proposed Kaluanui NAR

Legend

Proposed Kaluanui NAR
February 8, 2013

Chairperson and Members
Board of Land and Natural Resources
State of Hawai‘i
Honolulu, Hawai‘i

Land Board Members:

SUBJECT: MASTER’S REPORT ON PUBLIC HEARING

In accordance with the Notice of Public Hearing published in the Honolulu Star Advertiser, December 14, 2012, and as authorized by the Board of Land and Natural Resources, I have conducted a public hearing relative to the proposed set aside of approximately 376 acres as the Kaluanui Natural Area Reserve, withdrawn from Sacred Falls (Kaluanui) State Park, TMK 5-3-11:09 por, Kaluanui, Oahu. The hearing was held on January 23, 2013 at 6:00pm at the Queen Liliuokalani Children’s Center, 53-516 Kamehameha Highway, Hauula, HI 96717.

DLNR Staff
Marigold Zoll, DOFAW
David Smith, DOFAW
Betsy Gagne, DOFAW
Emma Yuen, DOFAW
Lauren Tanaka, State Parks

Hearing Attendees
Barbara Kahana, Hauula
Creighton Matoon, Hauula
Kent Fonomoana, Kahuku
Aliitasi Ponder, Kahuku
Winona Kaniho, Kaaawa

Public Testimony Received

Barbara Kahana: I support the effort.

Creighton Matoon: I support the proposal and would urge there be adequate funding to operate the program.

Kent Fonomoana: I support the proposal and echo Creighton’s comments with the caveat that it not be a PLDC thing.

Aliitasi Ponder: I support the proposal. It’s very reassuring to know there is a group of people dedicated to keep the best of what we have stays that way. I’m happy to provide whatever support I can.
Winona Kaniho: I support the proposal but there is just a few here from the community, so this is just my personal comment, not for the community.

No written testimony was received.

[Signature]

Marigold Zoll,
Natural Area Reserves System Oahu Manager