

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

May 13, 2016

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

Land Board Members:

SUBJECT: REQUEST FOR AUTHORIZATION TO NEGOTIATE AND SIGN A  
CONTRACT(S) TO INSTALL A SMALL PREDATOR-PROOF FENCE  
WITHIN THE PAHOLE NATURAL AREA RESERVE TMK 1-6-8-001-  
002 OAHU

BACKGROUND

The Hawaiian Electric Company (HECO) has donated funds to the Department of Land and Natural Resources – Division of Forestry and Wildlife for the demolition and rebuild of a predator-proof enclosure (fence) that protects a population of the endangered Hawaiian tree snail species *Achatinella mustelina* (Exhibit 1), located in the Pahole Natural Area Reserve (Exhibit 2). These funds were donated in lieu of litigation and possible civil penalties for damage HECO caused to a population of endangered *A. mustelina*, in the Mt. Ka‘ala Natural Area Reserve, in April of 2011. Pahole was selected as an offsite mitigation area because the terrain on Mt. Kaala is not conducive to construction of this type of fence, and the Pahole snail populations are more critically imperiled.

The existing predator-proof enclosure was originally built in 1998 by the Hawaii Department of Land and Natural Resources to protect a genetically important population of Endangered *Achatinella mustelina* from predation by the invasive snail *Euglandina rosea*. The walls of the enclosure are composed of corrugated metal and the predator barrier consists of a trough of salt (Exhibit 3). While an effective barrier against *Euglandina rosea*, 17 years of continual salt exposure has begun to undermine the metal walls. In addition, this enclosure was never intended to keep out other predators like rats and Jackson’s chameleons, as the extent to which these predators negatively impact snail populations was discovered years after its construction.

The new predator-proof enclosure will be approximately 420 feet in circumference, slightly larger than the original structure. The basic design includes a solid wall barrier encircling snail habitat, with a rolled cap or hood at the top to exclude rats and chameleons. Three *Euglandina* barriers are attached to the exterior of the wall consisting of a flared 15° angled flange, solar-powered electrical wires, and an array of upside-down, cut copper wire mesh (Exhibit 4). The project will include ongoing weed control, the outplanting of native and rare plant species to enhance snail habitat, and the installation of a small water catchment system (<5,000 gallons).

Historically *Achatinella mustelina* occurred in locations throughout the Pahole Natural Area Reserve. Unfortunately, due to high predator load, the species has been extirpated from most areas within the NAR. Replacement of this original structure with a more effective predator-proof enclosure is essential to ensuring the continued existence of *Achatinella Mustelina* within the Pahole NAR.

The construction of the fence and the continued management of the structure were declared exempt by the chairperson from the preparation of an environmental assessment under the authority of Chapter 343, HRS and Chapter 11-200, HAR (Exhibit 5)

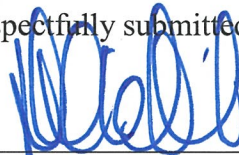
In order to expedite the contract(s) for this procurement, DOFAW requests that the Board delegate authority to the Chairperson to award, execute, and extend contract(s) for goods and services and other terms and conditions as may be prescribed by the Chairperson to best serve the interest of the State. One or more contracts will be awarded based on the lowest qualified bidder.

RECOMMENDATIONS:

That the Board:

- 1) Delegates authority to the Chairperson to:
  - a. Award, execute and extend contract(s) for goods and services, subject to the availability of funds and approval by the Department of the Attorney General.

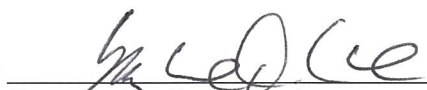
Respectfully submitted,



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David G. Smith, Administrator  
Division of Forestry and Wildlife

APPROVED FOR SUBMITTAL:



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Suzanne D. Case, Chairperson  
Board of Land and Natural Resources

- Exhibit 1. Photo of *Achatinella mustelina*
- Exhibit 2. Map
- Exhibit 3. Photo of existing fence
- Exhibit 4. Figure of new fence design
- Exhibit 5. Declaration of exemption



Exhibit 1. *Achatinella mustelina* from within the current Pahole predator-proof exclosure structure



# Pahole NAR

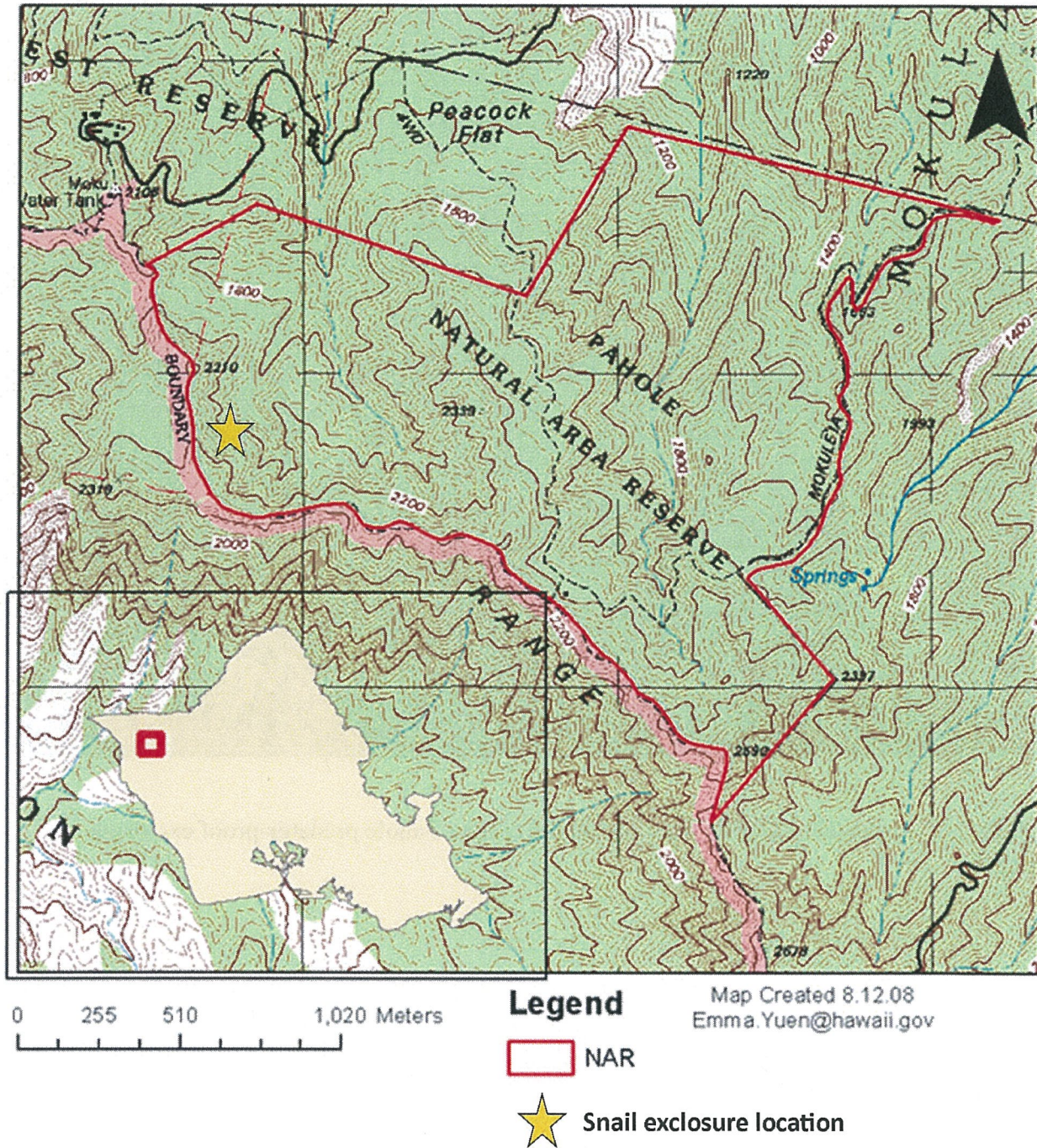


Exhibit 2. Map of predator-proof fence location within the Pahole NAR





Exhibit 3. Current Pahole predator-proof enclosure structure. This structure was completed in 1998. Note rust and corrosion as a result of continual salt exposure.

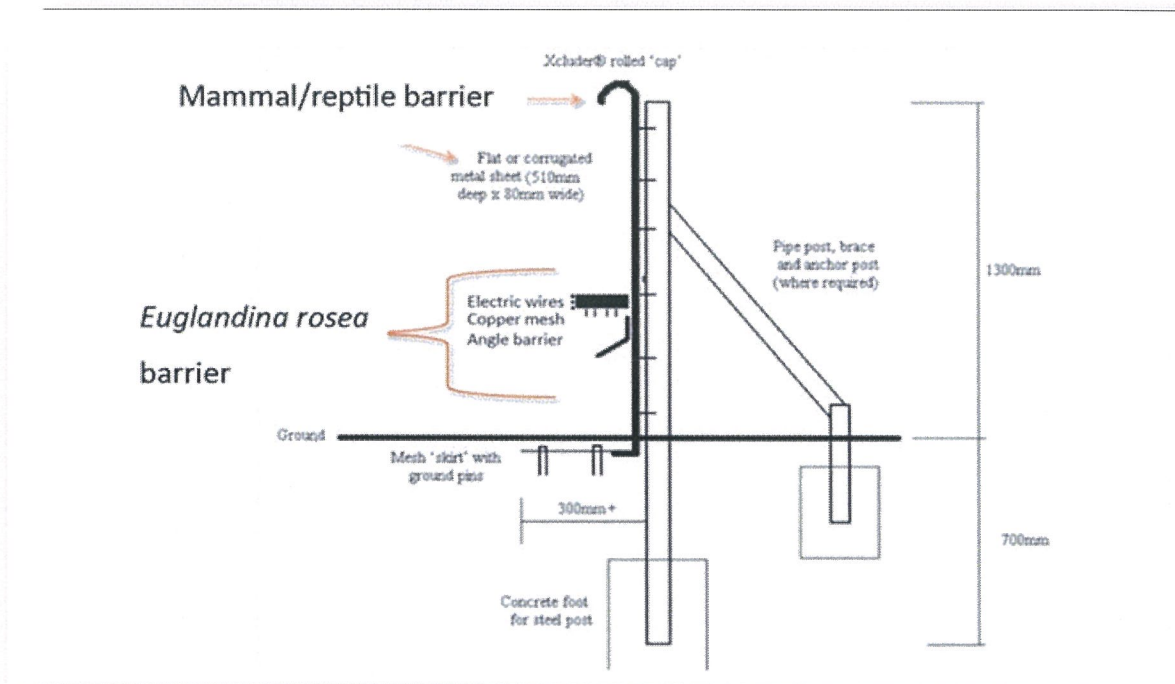


Exhibit 4. New predator-proof enclosure design with barriers effective against all known predators.



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

April 13, 2016

DECLARATION OF EXEMPTION  
from the preparation of an environmental assessment under the authority of  
Chapter 343, HRS and Chapter 11-200, HAR

**Project Title:** Pahole NAR, Predator-Proof Snail Enclosure

**Project Description:**

The Hawaiian Electric Company (HECO) has donated funds to the Department of Land and Natural Resources – Division of Forestry and Wildlife for the demolition and rebuild of a predator-proof enclosure (fence) that protects a population of the endangered Hawaiian tree snail species *Achatinella mustelina* (Attachment D), located in the Pahole Natural Area Reserve (Attachment A, TMK 1-6-8-001-002). These funds were donated in lieu of litigation and possible civil penalties for damage HECO caused to a population of endangered *A. mustelina*, in the Mt. Ka‘ala Natural Area Reserve, in April of 2011. Pahole was selected as an offsite mitigation area because the terrain on Mt. Kaala is not conducive to construction of this type of fence, and the Pahole snail populations are more critically imperiled.

The existing predator-proof enclosure was originally built in 1998 by the Hawaii Department of Land and Natural Resources to protect a genetically important population of Endangered *Achatinella mustelina* from predation by the invasive predatory snail *Euglandina rosea*. The walls of the enclosure are composed of corrugated metal and the predator barrier consists of a trough of salt (Attachment B). While an effective barrier against *Euglandina rosea*, 17 years of continual salt exposure has begun to undermine the metal walls. In addition, this enclosure was never intended to keep out other predators like rats and Jackson’s chameleons, as the extent to which these predators negatively impact snail populations was discovered years after its construction.

The new predator-proof enclosure will be approximately 420 feet in circumference, slightly larger than the original structure. The basic design includes a solid wall barrier encircling snail habitat, with a rolled cap or hood at the top to exclude rats and chameleons. Three *Euglandina* barriers are attached to the exterior of the wall consisting of a flared 15° angled flange, solar-powered electrical wires, and an array of upside-down, cut copper wire mesh (Attachment C). The project will include ongoing weed control, the outplanting of native and rare plant species to enhance snail habitat, and the installation of a small water catchment system (<5,000 gallons).

Historically *Achatinella mustelina* occurred in locations throughout the Pahole Natural Area Reserve. Unfortunately, due to high predator load, the species has been extirpated from most areas within the NAR, except from within the interior of the current enclosure structure, where they continue to thrive. Replacement of this original structure with a more effective predator-proof fence is essential to ensuring the continued existence of *Achatinella Mustelina* within the Pahole NAR.

**Consultation:**

DLNR-DOFAW staff monitors the existing enclosure on a monthly basis. The snail population inside is monitored on a quarterly basis. The proposed line for the new fence has been surveyed by DLNR-DOFAW staff and was found to contain no rare species of plants or animals. DLNR-DOFAW has consulted with Oahu Army Natural Resources staff who conduct offsite conservation mitigation in the reserve, as well as NARS staff regarding the new enclosure structure. All are in strong support. In addition, the U.S. Fish and Wildlife Service (USFWS) recommended this project for mitigation of the Hawaiian Electric Service disturbance to the Mt. Kaala snail population described above. All in situ endangered snail conservation work, such as that described here, is covered by our state Section 6 Cooperative Agreement with the USFWS. Because the predator-proof enclosure structure will be relatively small (420 ft. circumference), it will not interfere with hiker or management staff access to trails or other portions of the reserve. To protect the habitat and the snail population inside the enclosure, access to the interior will be by state permit only.

**Exemption Determination:**

On November 13, 2015 the Board of Land and Natural Resources delegated authority to the Chairperson to declare actions which are included in the Department-wide exemption list (June 5, 2015) exempt from the preparation of an environmental assessment. Activities and actions associated with the Pahole NAR predator-proof snail enclosure fall under the following exemption classes and exemption descriptions:

[EXEMPTION CLASSES AND DESCRIPTIONS BEGIN ON NEXT PAGE]

### **Exemption Class 2**

*Replacement or reconstruction of existing structure and facilities where the new structure will be located generally on the same site and will have substantially the same purpose, capacity, density, height, and dimensions as the structure replaced.*

1. Replacement or reconstruction of existing Department structures and facilities, including baseyards, offices, cabins, sheds, and fencing.

### **Exemption Class 3**

*Construction and location of single new, small facilities or structures and the alteration and modification of same and installation of new, small, equipment and facilities and the alteration and modification of same....*

1. Fences around or to manage rare, threatened or endangered plants, covered or open areas for endangered species, game birds and mammals, auxiliary buildings for food or 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.
7. Water catchment systems with less than 20,000 gallon capacity and above ground, non-destructive irrigation systems.
10. Installation of weatherports and radio repeaters and other similar communications equipment and related infrastructure for natural resource management purposes or for emergency response.

### **Exemption Class 4**

*Minor alteration in the conditions of land, water, or vegetation.*

6. Minor vegetation clearing and management, including mowing, pruning, trimming, and application of federal and state approved herbicides in conformance with label instructions.
8. Removal of invasive vegetation utilizing cutting, mowing, application of federal and state approved herbicides in conformance with label instructions, distribution of biocontrol agents approved by the State of Hawaii, and other approved methods.
12. Establish temporary or permanent vegetative cover including trees, shrubs, grasses, and sod for landscaping, reforestation, soil stabilization, watershed protection, native wildlife habitat, native ecosystem restoration, and rare plant preservation; provided, however, that this exemption shall not apply to vegetation that is likely to be invasive or for tree plantings for which harvesting is planned or is reasonably foreseeable.
13. Gathering plant seed, cuttings, or other vegetative matter for propagation.



16. Control of pests utilizing federal and state approved pesticides, herbicides, fungicides, and toxicants in conformance with label instructions; traps, snares, lures, and repellents; distribution of biocontrol agents approved by the state of Hawaii; and other approved methods.
22. Natural resource management actions that the Department declares are designed specifically to monitor, conserve, or enhance the status of native species or native species' habitats, such as removal of introduced vegetation, reintroduction of native species into their historic range, or construction of fencing. This exemption would not apply to biocontrol of invasive species or commercial logging.

#### **Exemption Class 5**

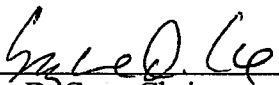
*Basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource.*

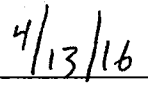
1. Conduct surveys or collect data on existing environmental conditions (e.g. noise, air quality, water flow, water quality, etc.).
2. Non-destructive data collection and inventory, including field, aerial and satellite surveying and mapping.
5. Installation of climatological stations and equipment and streamflow gaging stations and equipment, and other similar equipment necessary to measure environmental factors and collect data.
13. Research or experimental management actions that the Department declares are designed specifically to monitor, conserve, or enhance native species or native species' habitat.
15. Game and non-game wildlife surveys, vegetation and rare plant surveys, aquatic life surveys, inventory studies, new transect lines, photographing, recording, sampling, collection, culture, and captive propagation.
17. The reintroduction or supplementation (e.g., stocking) of native, formerly native, or established species into suitable habitat within their historic or established range, where no or negligible environmental disturbances are anticipated.

**Cumulative Impacts of Actions in the Same Place and Impacts with Respect to the Sensitive Environment Will Not Be Significant.**

**Date of Final Agency Exemption List: June 5, 2015**

*I have considered the potential effects of the above listed project as provided by Chapter 343, HRS and Chapter 11-200 HAR. I declare that this project will probably have minimal or no significant effect on the environment and is therefore exempt from the preparation of an environmental assessment under the above exemption classes.*

  
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Suzanne D. Case, Chairperson  
Department of Land and Natural Resources

  
\_\_\_\_\_  
Date

- Attachment A: Map of project area
- Attachment B: Photo of current predator-proof enclosure structure
- Attachment C: Diagram of new predator-proof enclosure design
- Attachment D: Photo of *Achatinella mustelina*