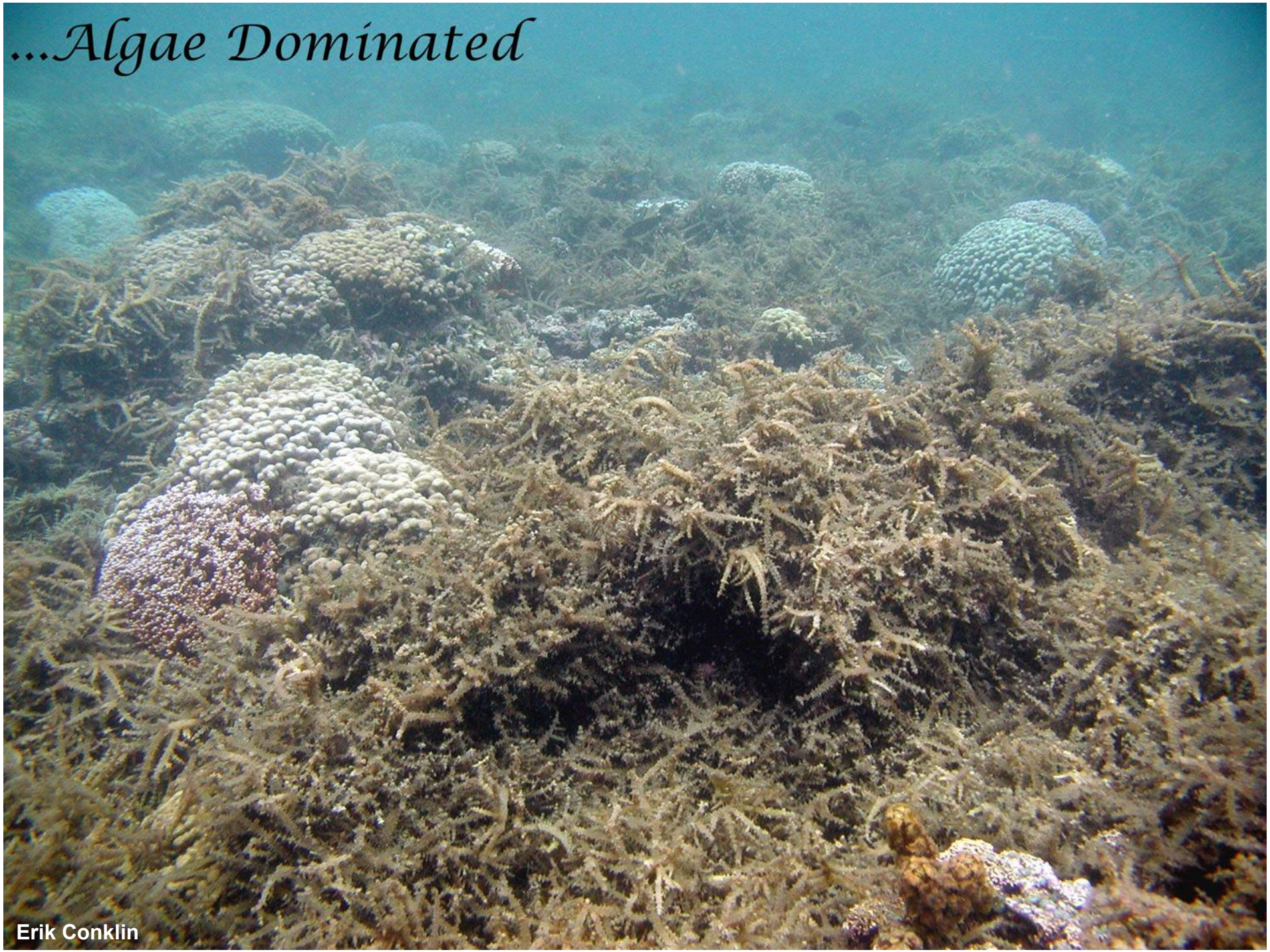
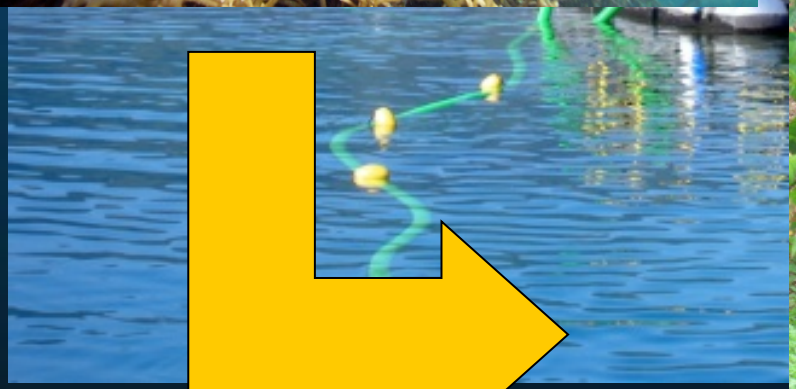
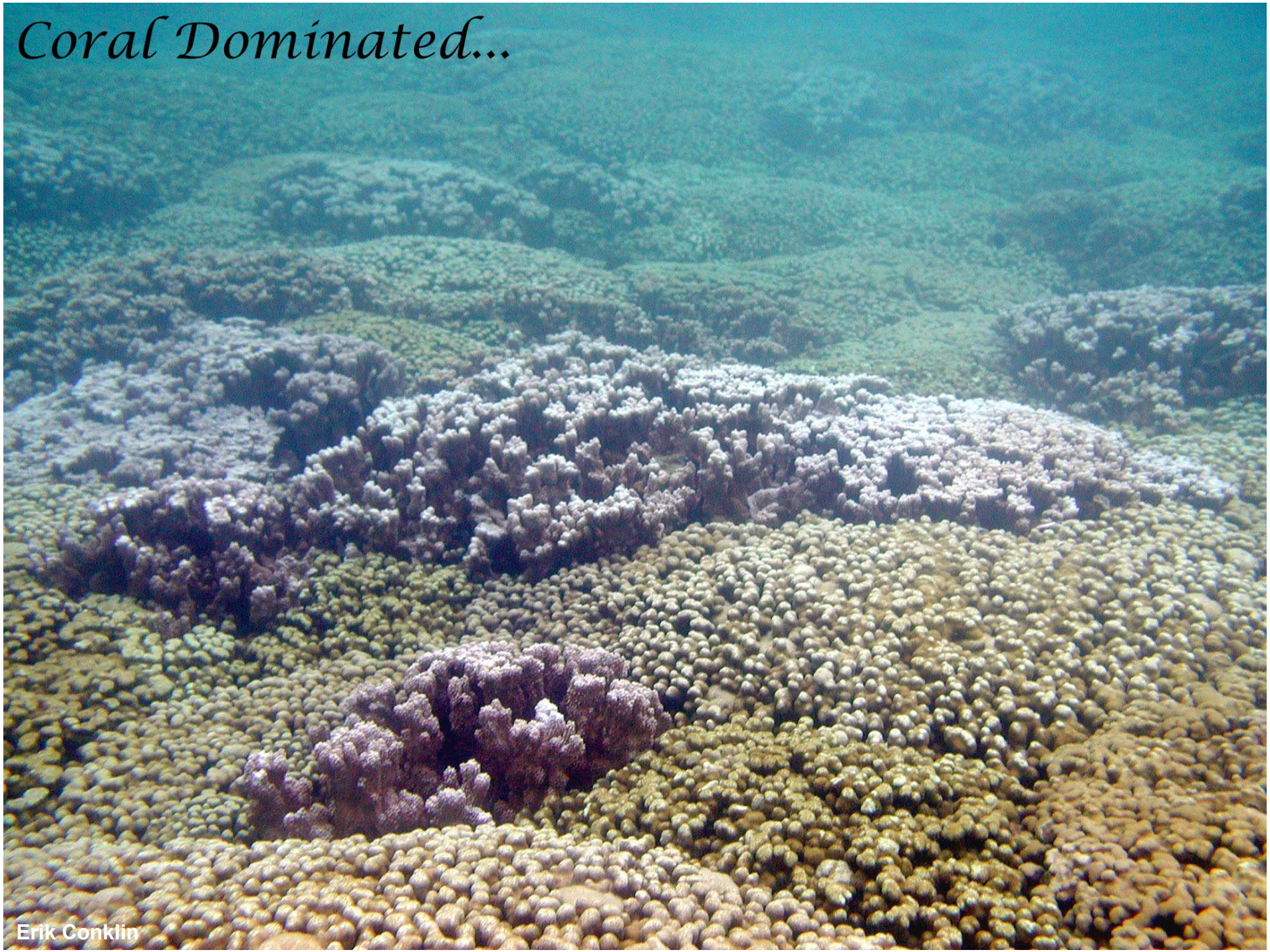

...Algae Dominated
Erik Conklin

Super Sucker Barges



Urchin Outplanting

Collector Urchin, *Tripneustes gratilla*


Coral Dominated...
Erik Conklin

Ballast Water/Hull Fouling

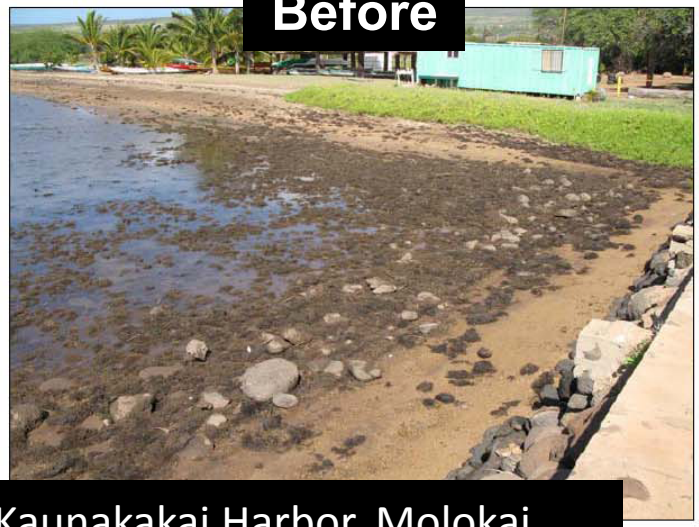
Marine Debris & Invasive Species

Photo: Steve Rumrill, Oregon DFW

Photo: Peter Grillo

Needs & Challenges

- Limited funding/capacity for work on outer islands
  - Hookweed on Maui
  - Snowflake coral on Kauai
  - Gorilla Ogo on Molokai
  - Upside down jellyfish on Molokai and Big Island
  - Port inspectors for hull fouling

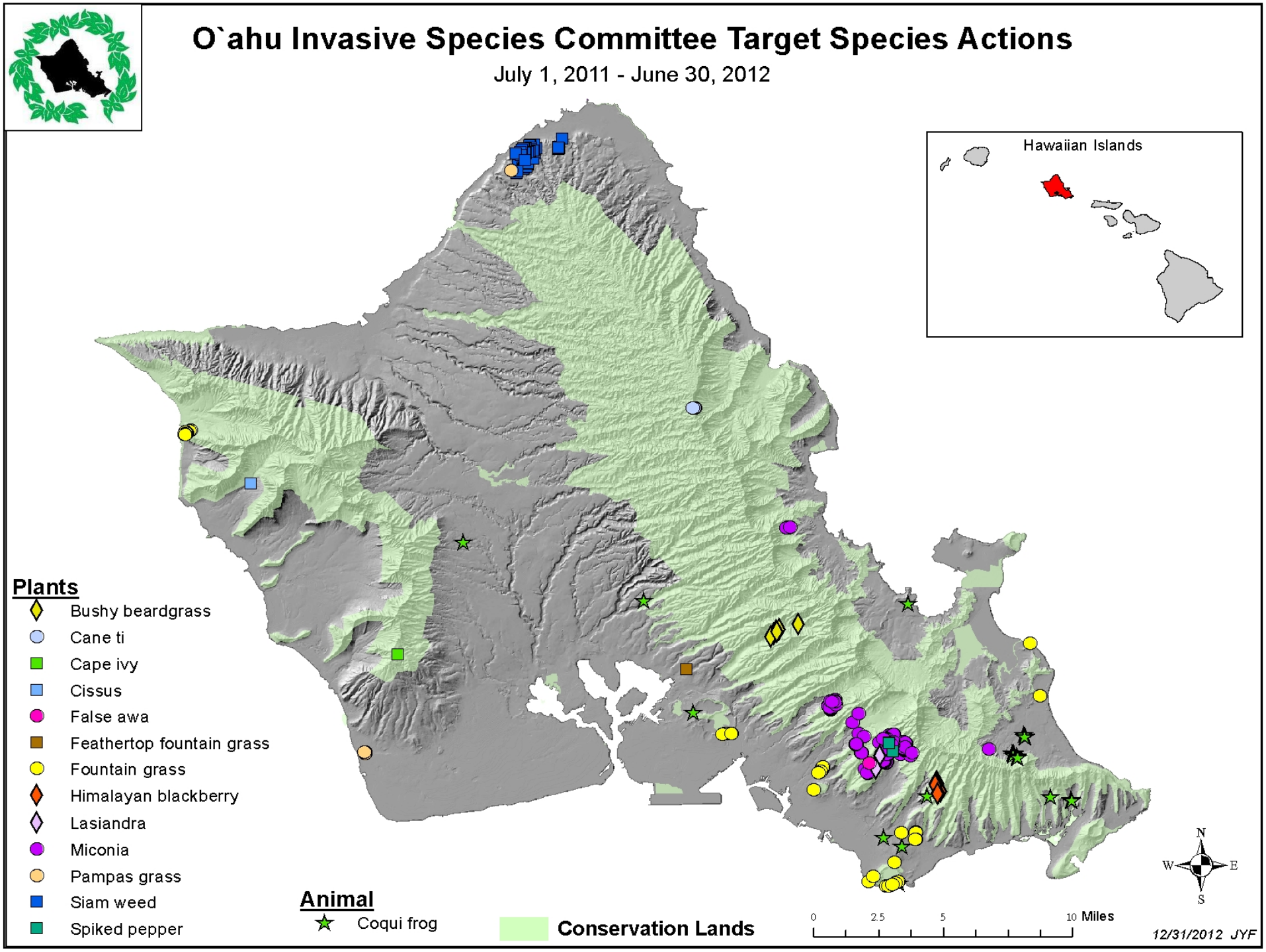


Kaunakakai Harbor, Molokai

OISC
O'AHU INVASIVE SPECIES COMMITTEE
Julia Parish
Operations Manager
Photo: Daniel Clark/USFWS

O`ahu Invasive Species Committee Target Species Actions

July 1, 2011 - June 30, 2012



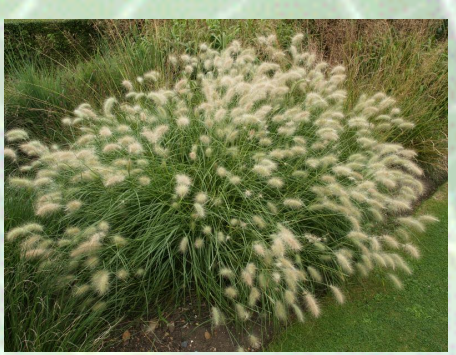
OISC Target Plant Species

Priority Target Species

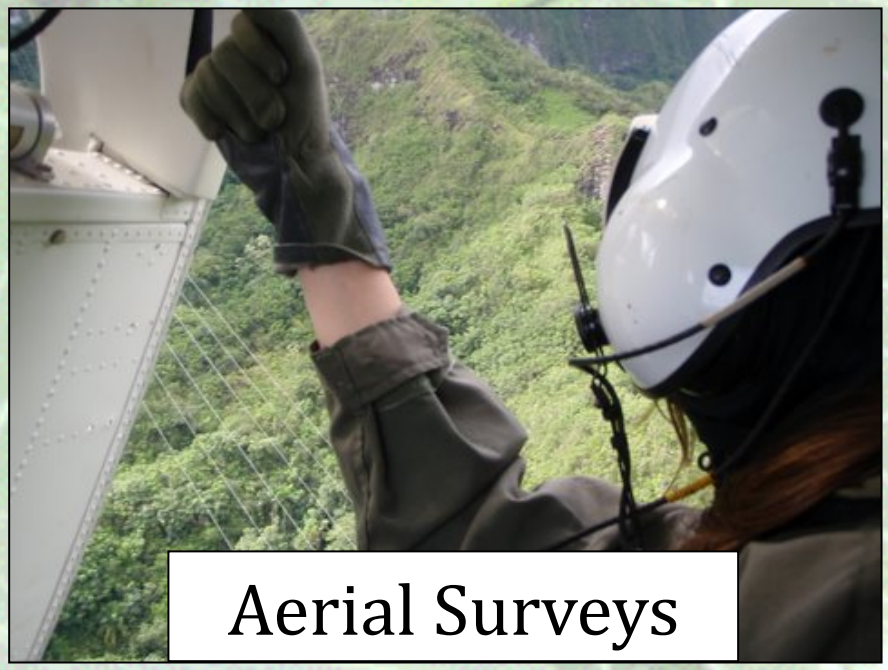
- Miconia
- Cane ti
- Cape ivy
- Fountain grass
- Himalayan blackberry
- Jerusalem thorn
- Lasiandra
- Pampas grass
- Siam weed
- Spike pepper

Rapid Response or Public Education Species

- Bay cedar
- Bushy beardgrass
- Cissus
- False ‘awa
- Feather top fountain grass
- Feathery senna
- Mexican feather grass



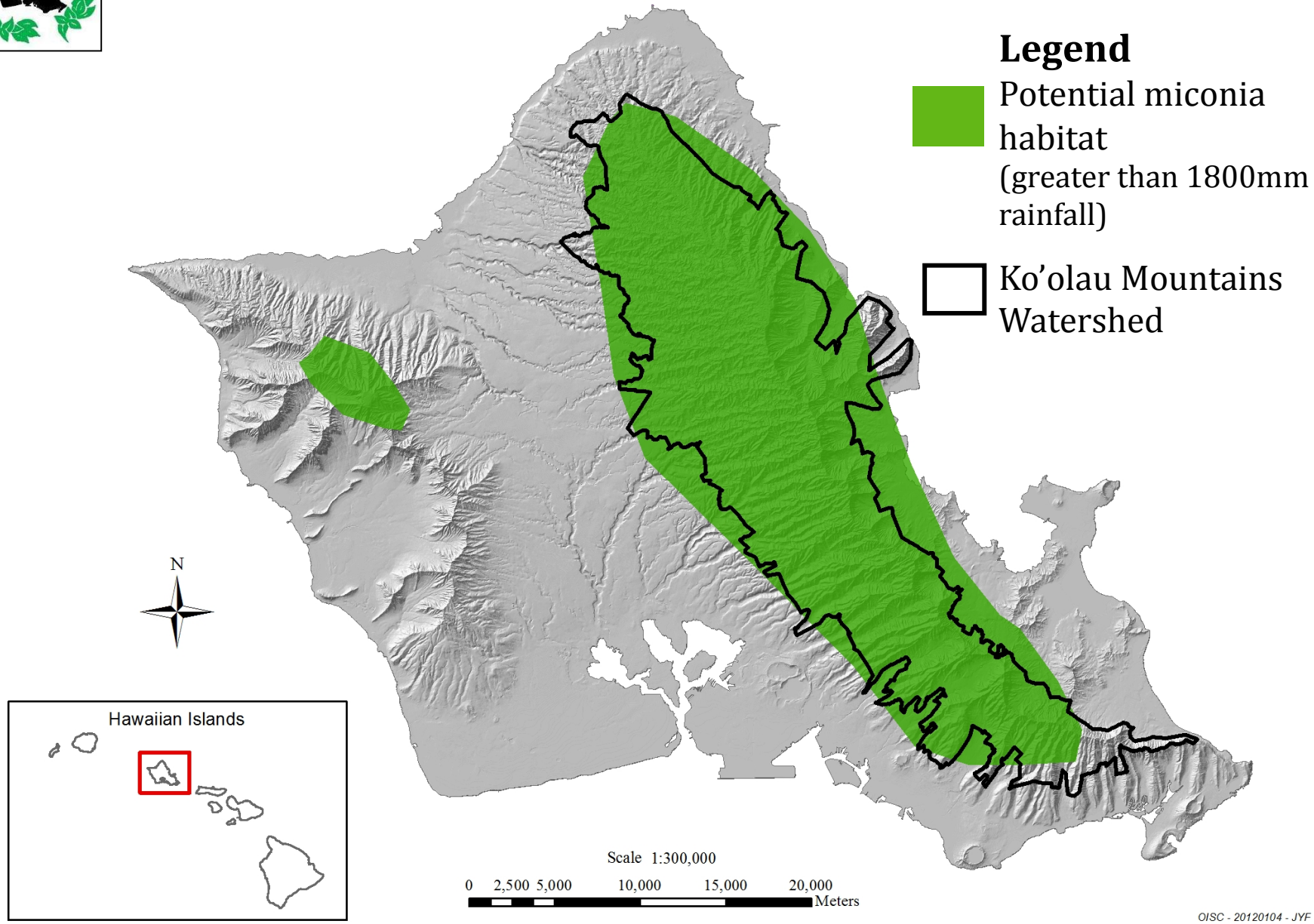
Ground Surveys


Aerial Surveys

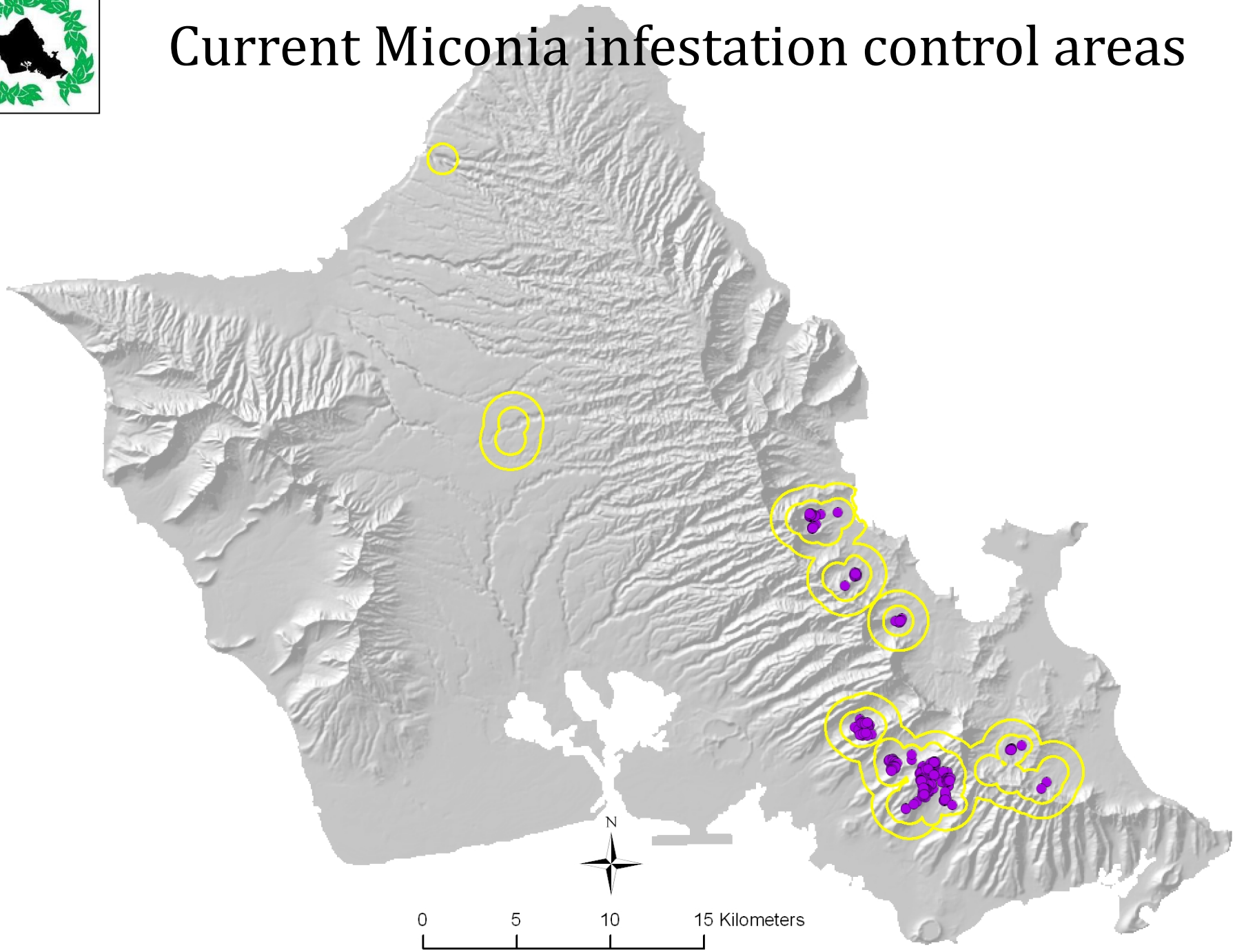
Control

Target: Miconia calvescens

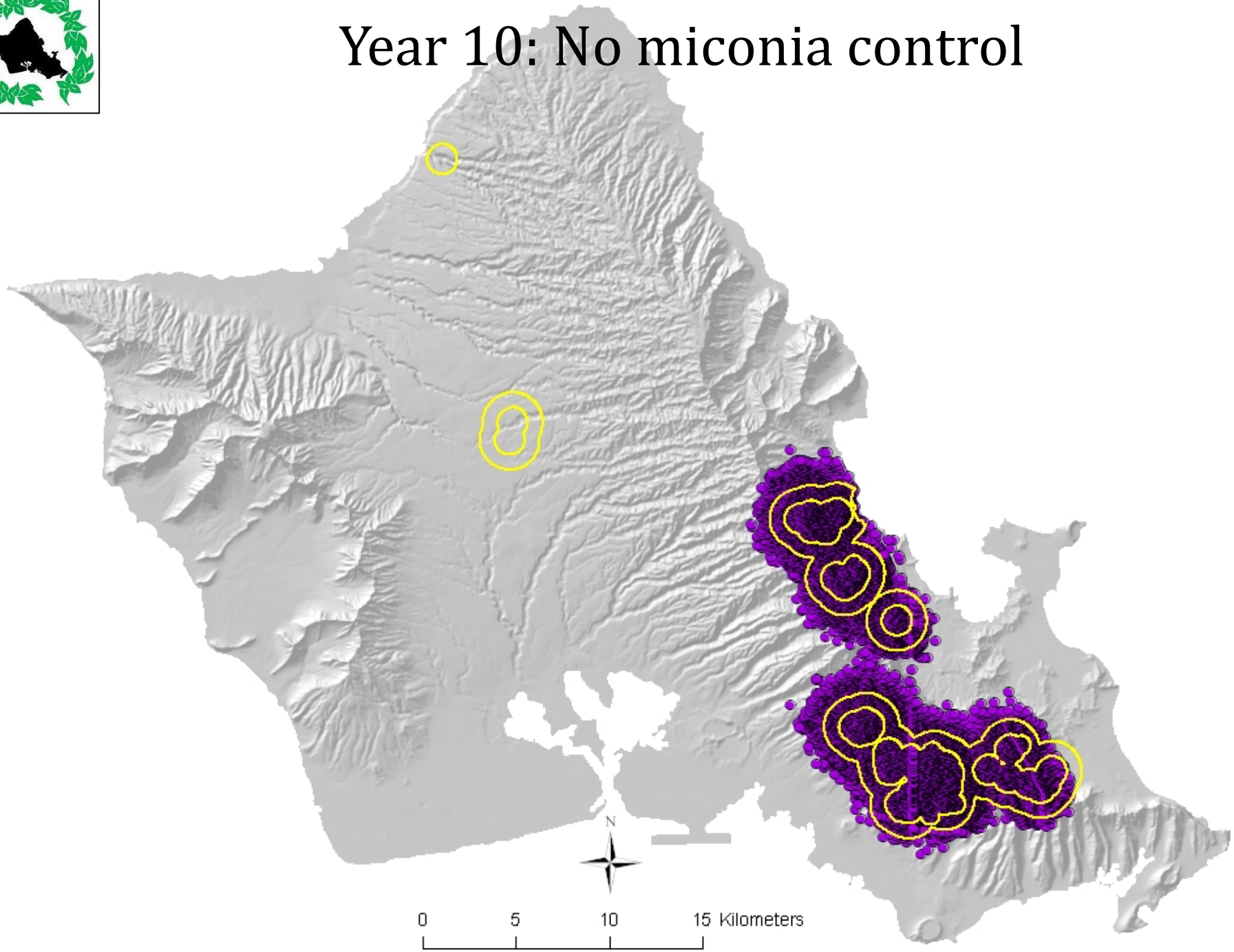
Potential Miconia habitat on Oahu



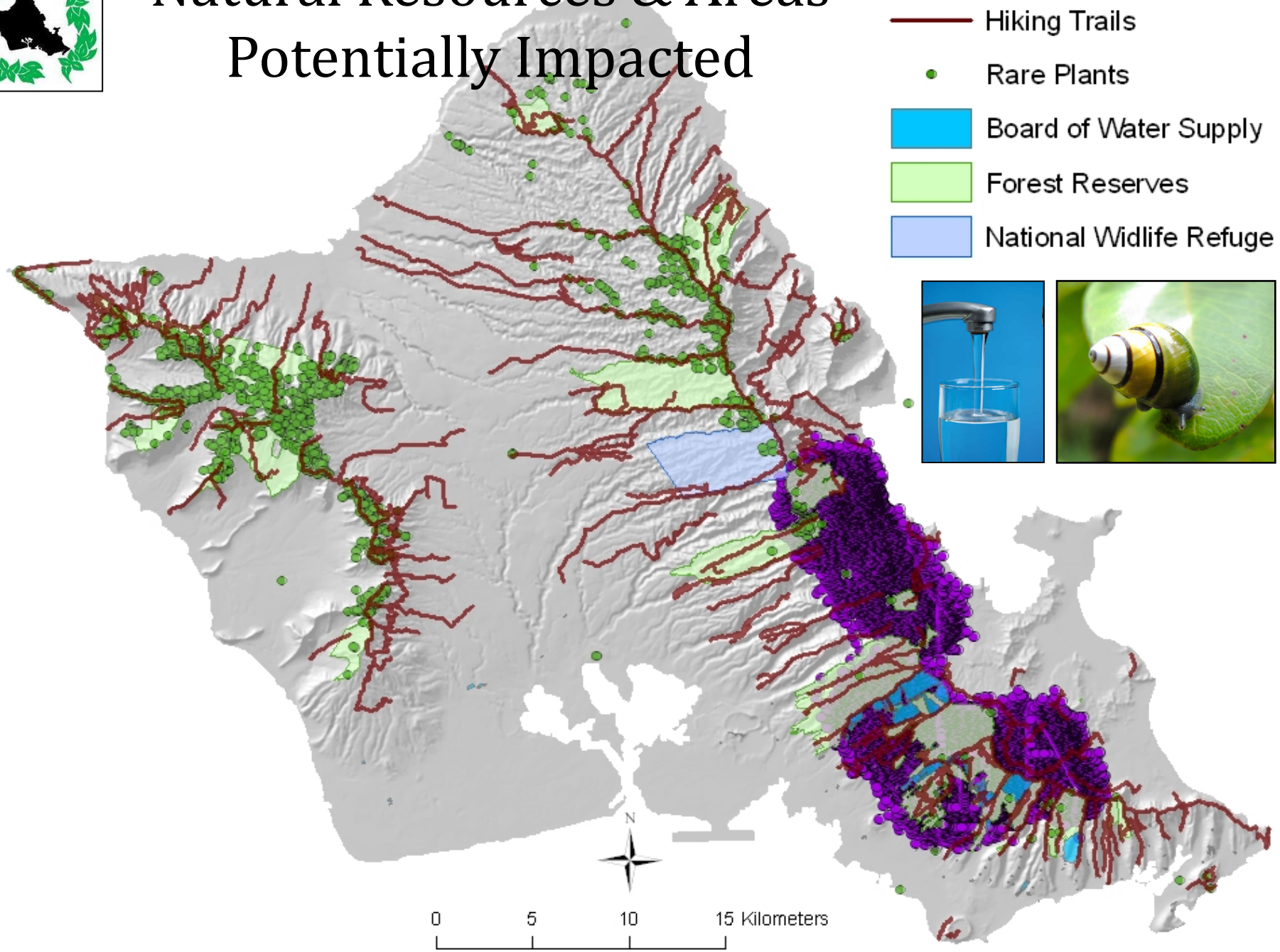
Current Miconia infestation control areas



Year 10: No miconia control



Natural Resources & Areas Potentially Impacted

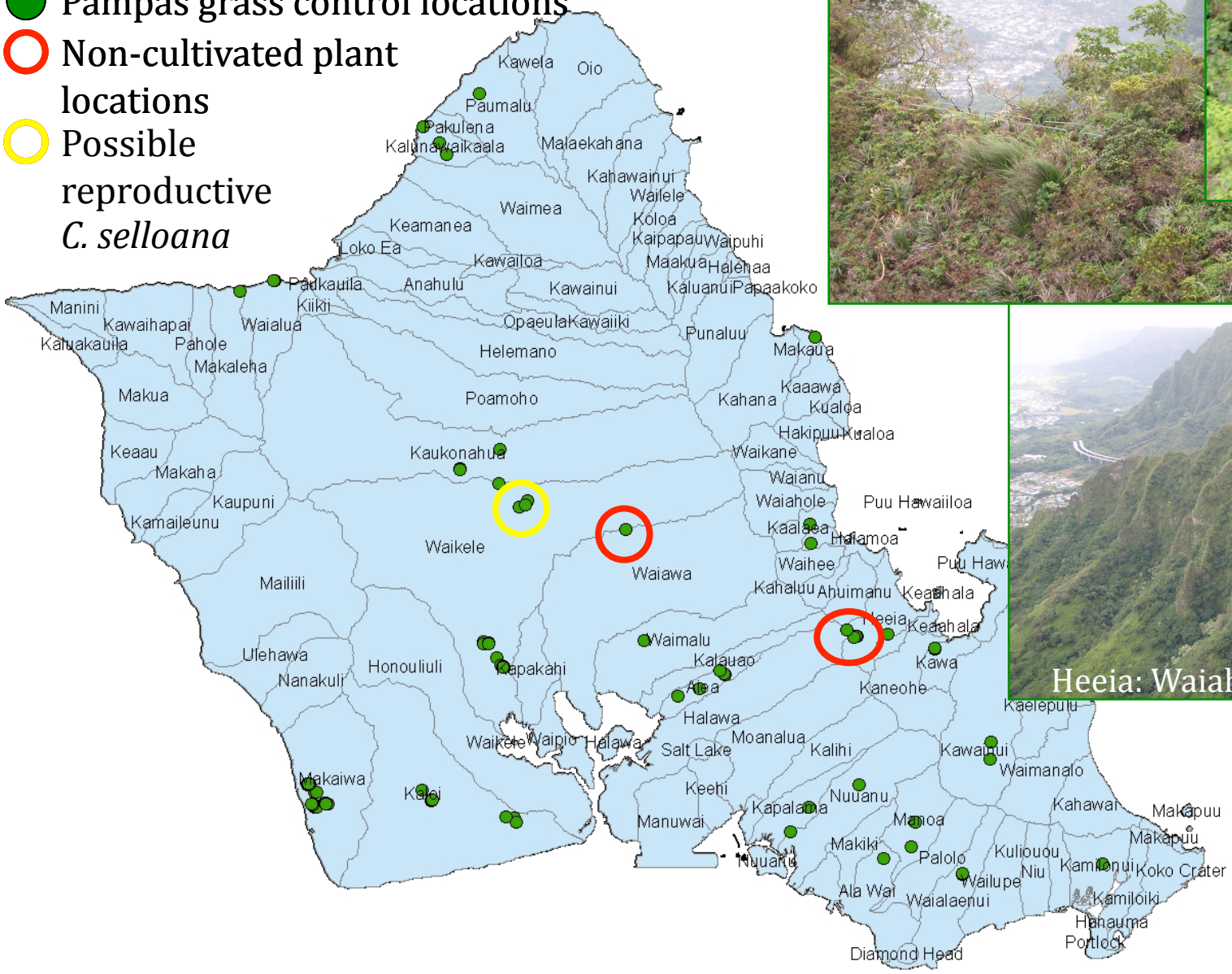


Other OISC targets:
Pampas grass

Strategy: Remove from cultivation before it spreads into the forest

Pampas Grass
(*Cortaderia selloana* & *C. jubata*)

- Pampas grass control locations
- Non-cultivated plant locations
- Possible reproductive *C. selloana*



Heeia: Waiahole Forest Reserve

Partnerships: Hawaii Department of Agriculture & DLNR DoFAW

Coqui frog
Eleutherodactylus coqui

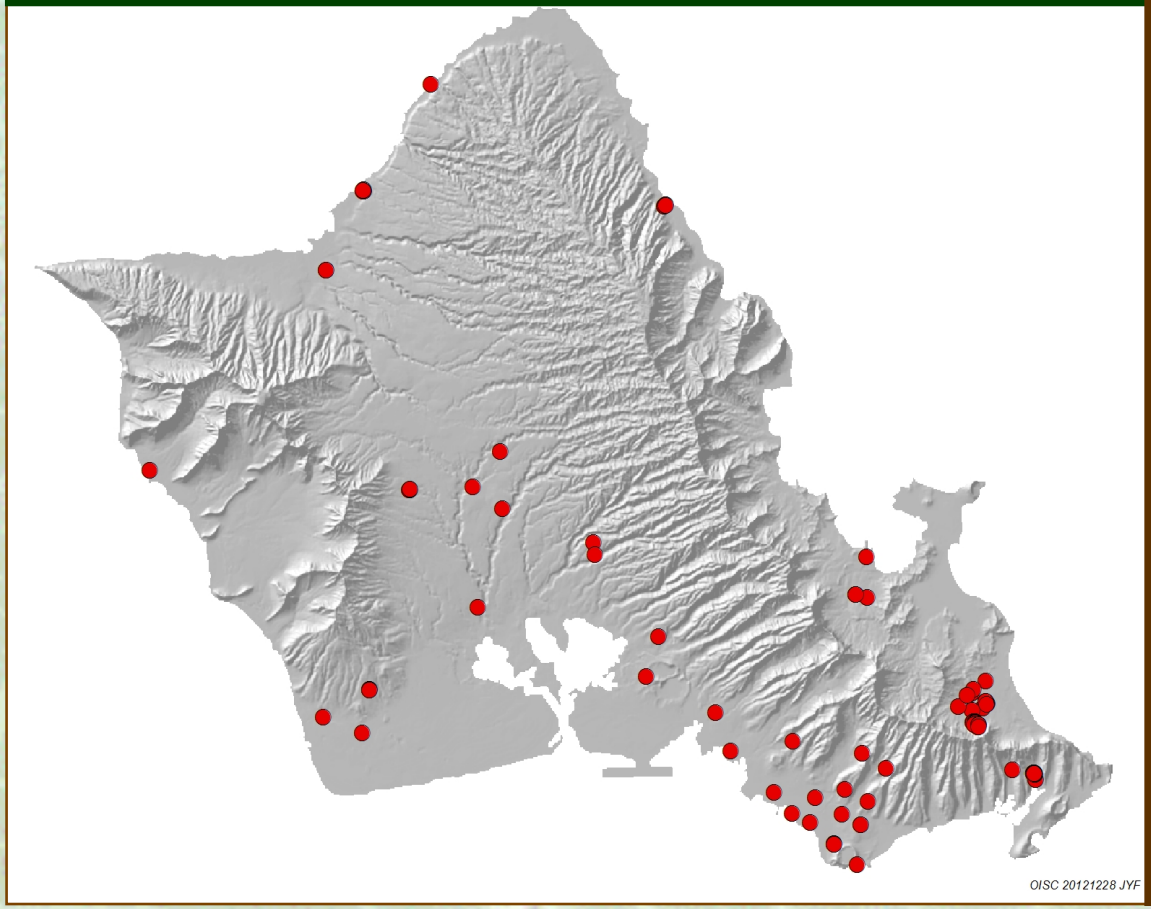
Little fire ant
Wasmannia auropunctata

HAWAII DEPARTMENT OF AGRICULTURE

Department of Land and Natural Resources
State of Hawaii

Coqui frog *Eleutherodactylus coqui*

Coqui Frogs collected by OISC January 2008—December 2012

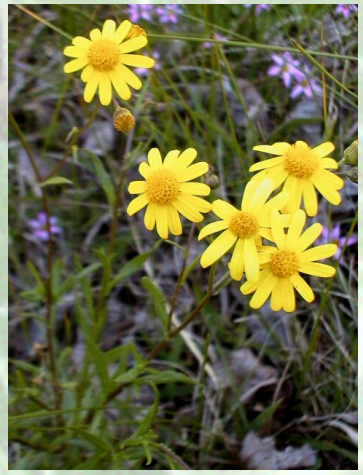


Frogs continue to arrive on O‘ahu because:

- Established on Hawai‘i Island.
- Plants required to be treated with citric acid, but some frogs survive treatment.
- Frogs arrive on non-plant items that are not treated.

Target Species Eradication Successes

- Fire tree (*Morella faya*) in the Ko'olau mountains
- Fire weed (*Senecio madagascariensis*)
- Cogon grass (*Imperata cylindrica*)
- Smoke bush (*Buddleja madagascariensis*)



OISC Staff & Funding

Department of Land and Natural Resources
State of Hawaii

City and County of Honolulu
State of Hawaii

Department of Transportation
State of Hawaii

U.S. Fish & Wildlife Service
Department of the Interior

Forest Service
U S
Department of Agriculture

Department of the Navy
United States of America

O'ahu Army Natural Resource Program

Hawaii Invasive Species Council
HISC

SWCA
Environmental Consultants
Sound Science. Creative Solutions.

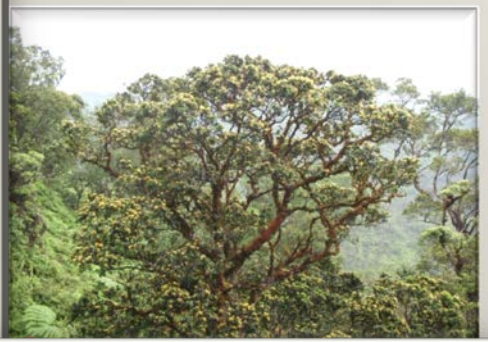
OISC

O'AHU INVASIVE SPECIES COMMITTEE

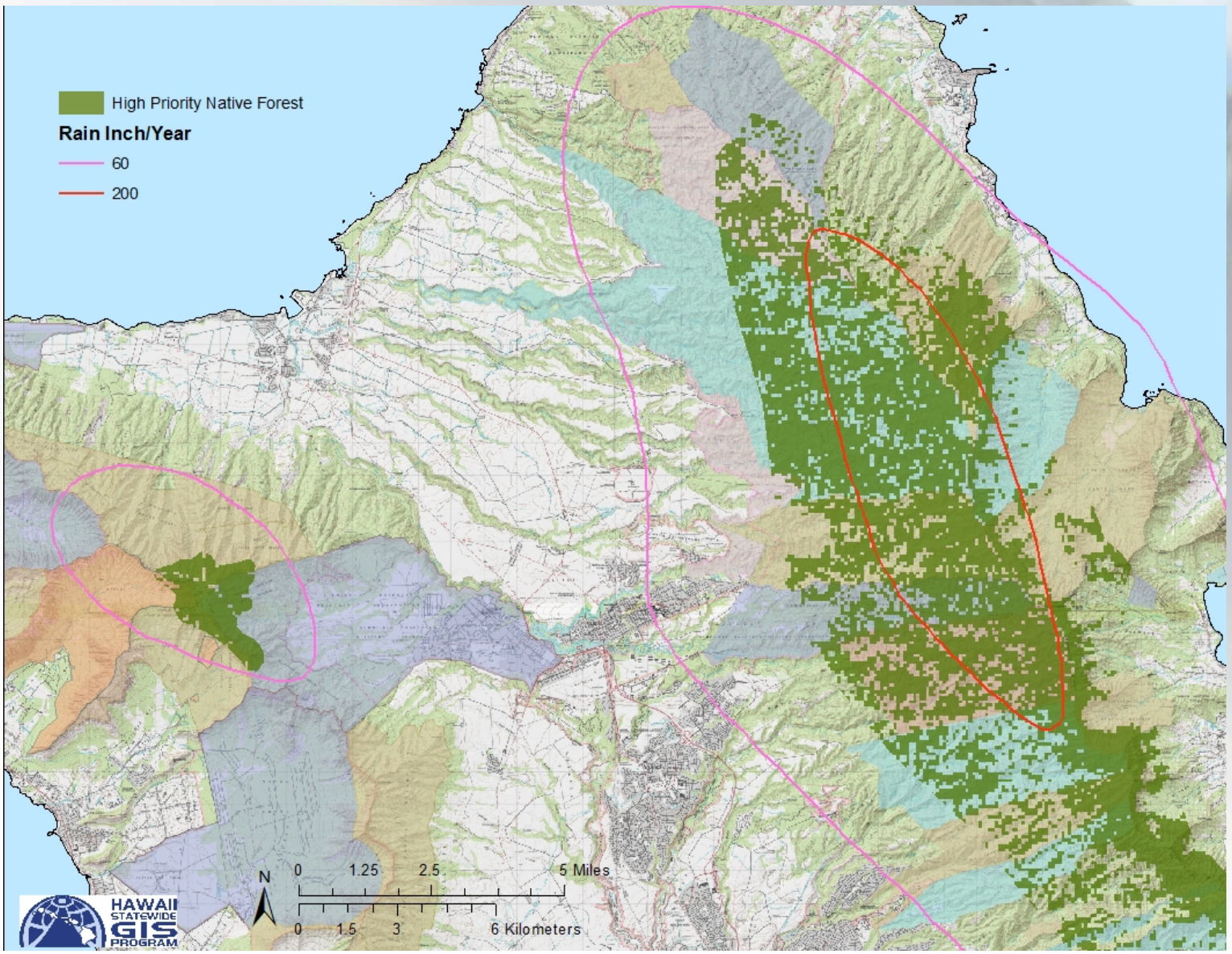
Mahalo for your support and kokua

Julia Parish
Operations Manager
808.292.6691
jparish@hawaii.edu
www.oahuisc.org

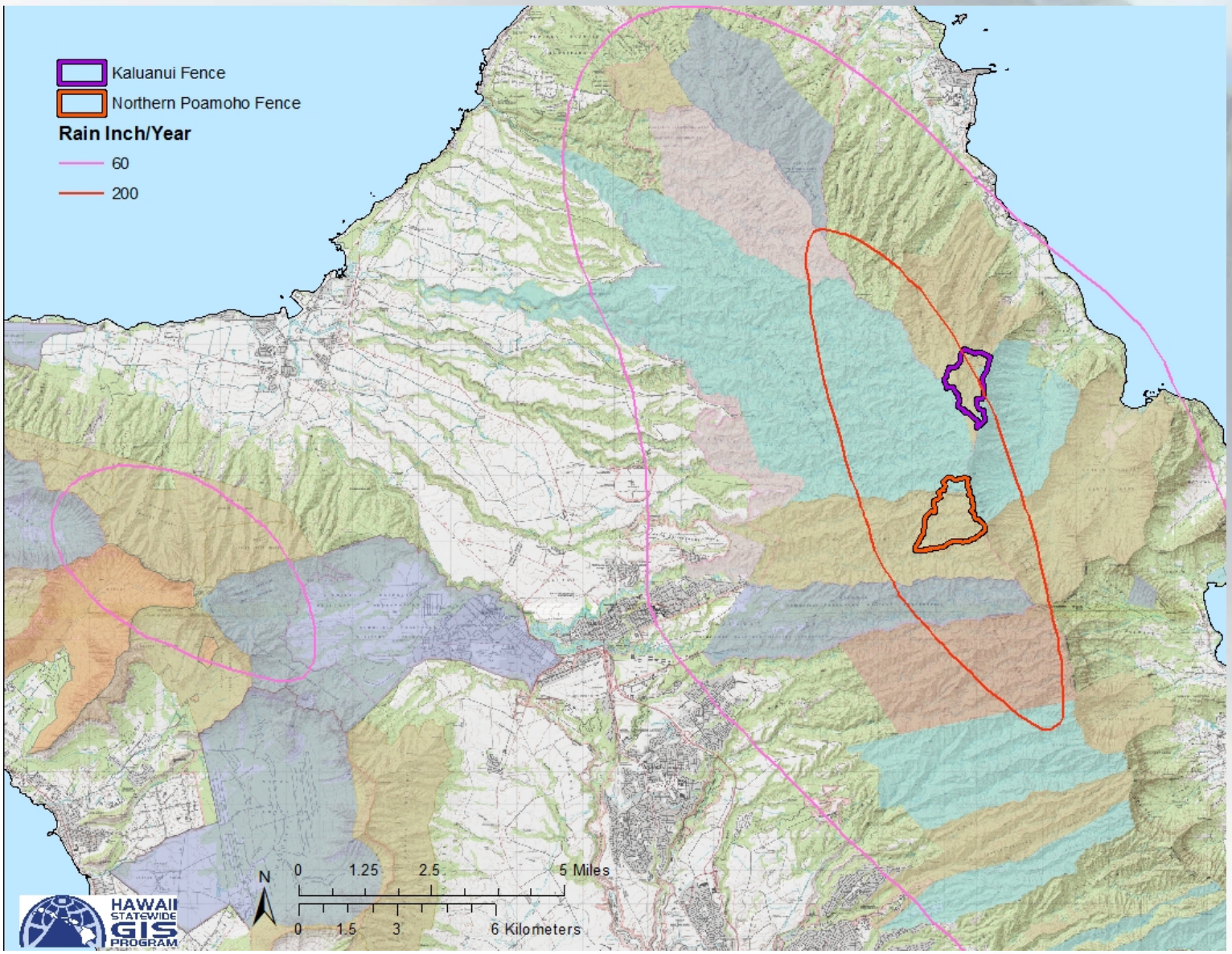
O‘ahu Watershed Protection



Native Forest and Rainfall



Watershed Initiative Fences – Phase 1



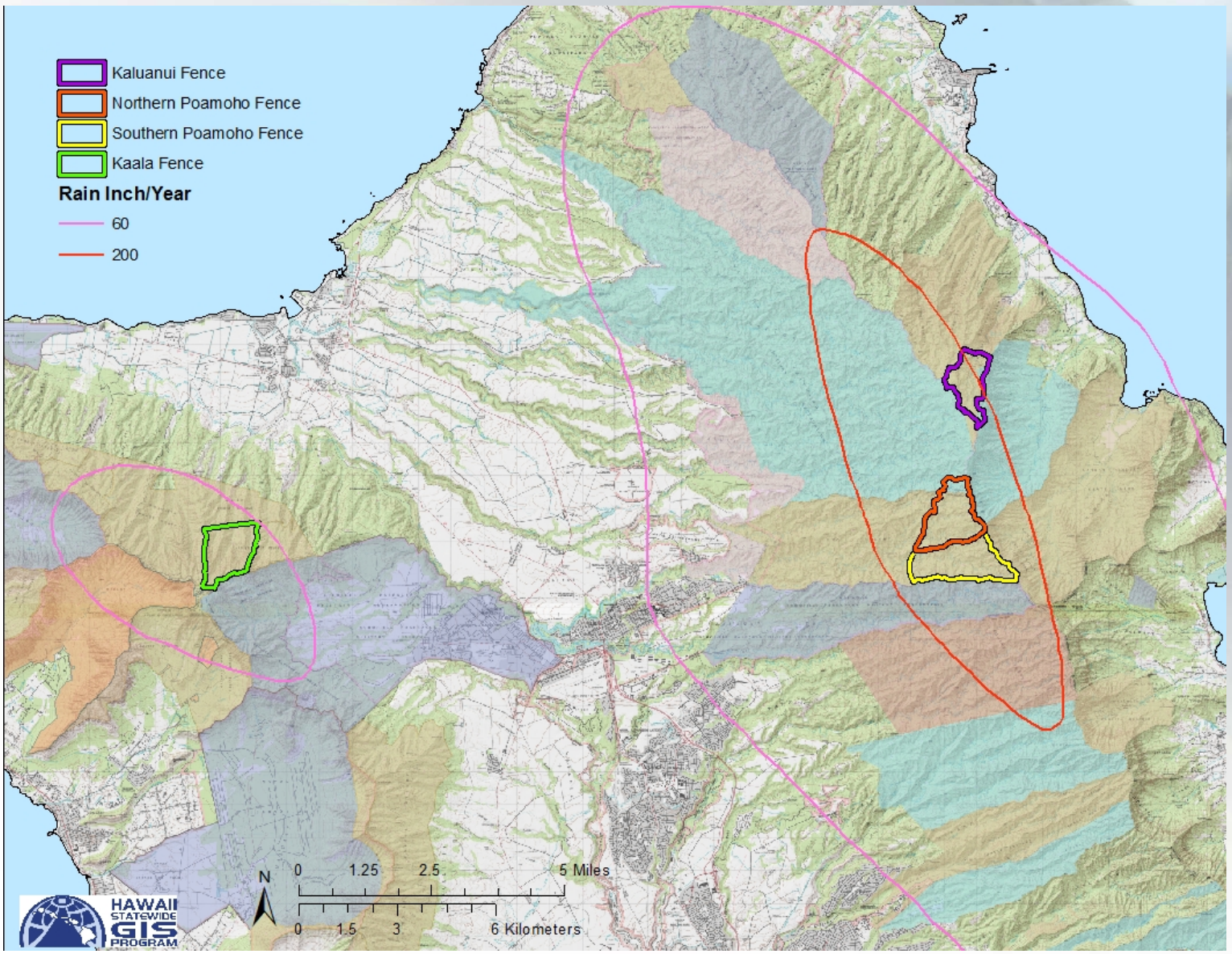
Poamoho Phase 1

- Protects 650 acres of critical watershed on Forest Reserve and Private lands
- $500,000 State CIP
- $300,000 US Forest Service Grant
- $200,000 DOD In-Kind Services
- Home to 38 rare plants and animals.
- Proposed Natural Area Reserve.
- Public Hunting Area and Na Ala Hele Trail.

Kaluanui Phase 1

- Protects 450 acres of critical watershed.
- $200,000 State Watershed Partnership Grant
- $200,000 US Fish and Wildlife Service Grant
- Home to Oahu's last undisturbed stream.
- Proposed Natural Area Reserve
- Not a designated public hunting area.

Watershed Initiative Fences – Phase 2



Poamoho Phase 2

- 750 acres of critical watershed on Forest Reserve.
- Total Protected Watershed Area at Poamoho :

  1,400 acres
- *$500,000* needed funding

Kaluanui Phase 2

- *$100,000* needed funding to finish 450 acre unit

Kaʻala Phase 1

- Protects 600 acres of critical watershed.
- *$500,000* funding needed
- Natural Area Reserve

In Summary

Total funds secured for O'ahu Phase 1 fences:

$1,400,000 ($700K State, $700K Federal)

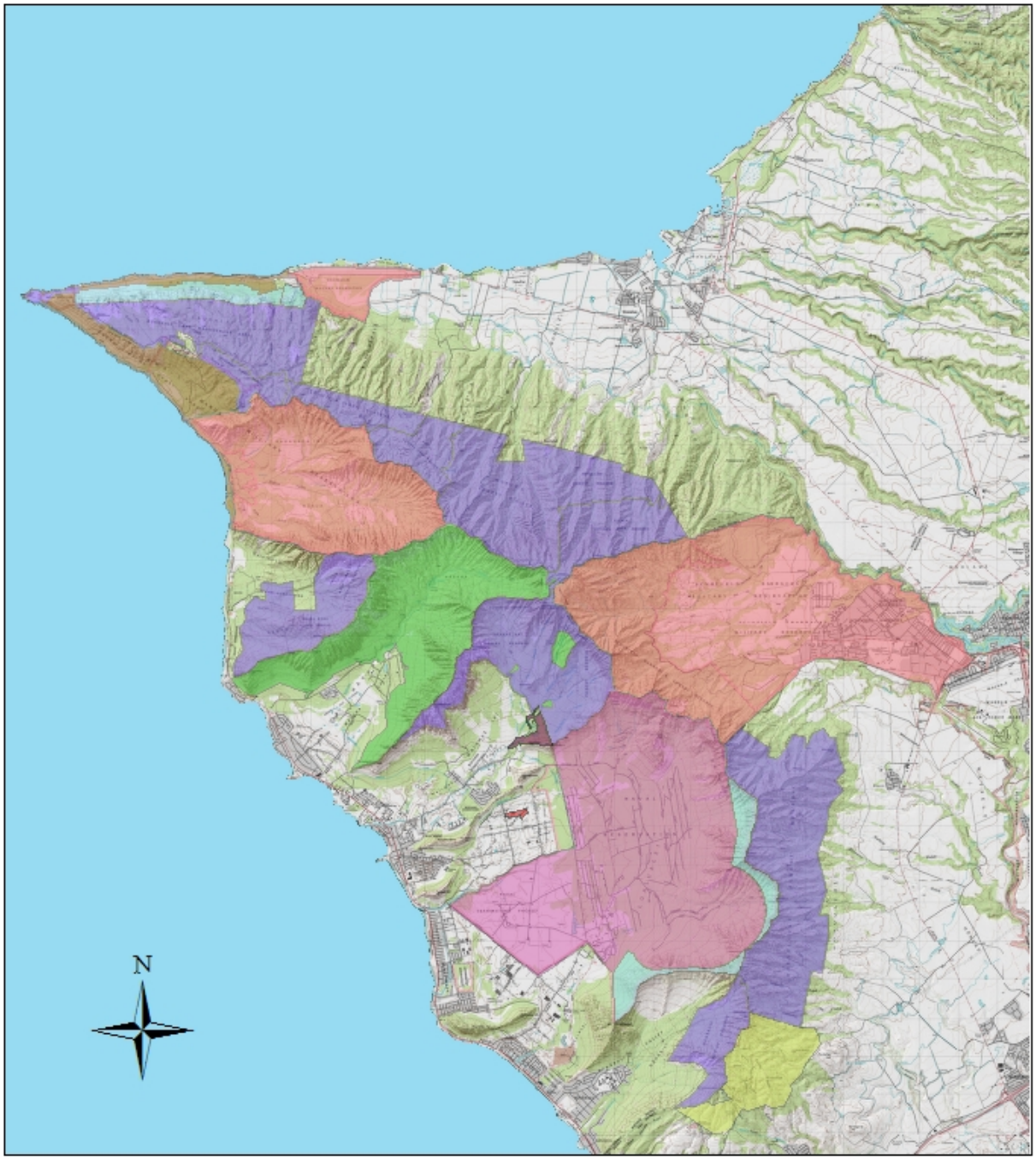
Total funds needed for O'ahu Phase 2 fences*:*

$1,100,000

MAHALO!
No Kakou Ke Kuleana
The Responsibility is OURS.

Yumi Miyata
WMWP Coordinator

WMWP Landowners

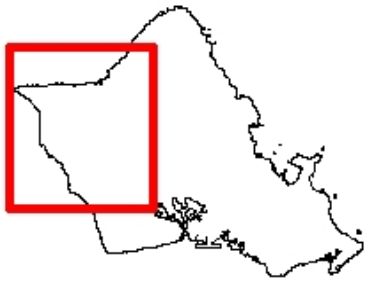


Legend

WMWP Landowners

- DLNR F&W
- DLNR Land Division
- DLNR State Parks
- Gill Olson
- HBWS
- Kaala Farms
- NAVY
- USAG-HI
- WCRC (Ma'o Farms)

0 1 2 3 4 Miles

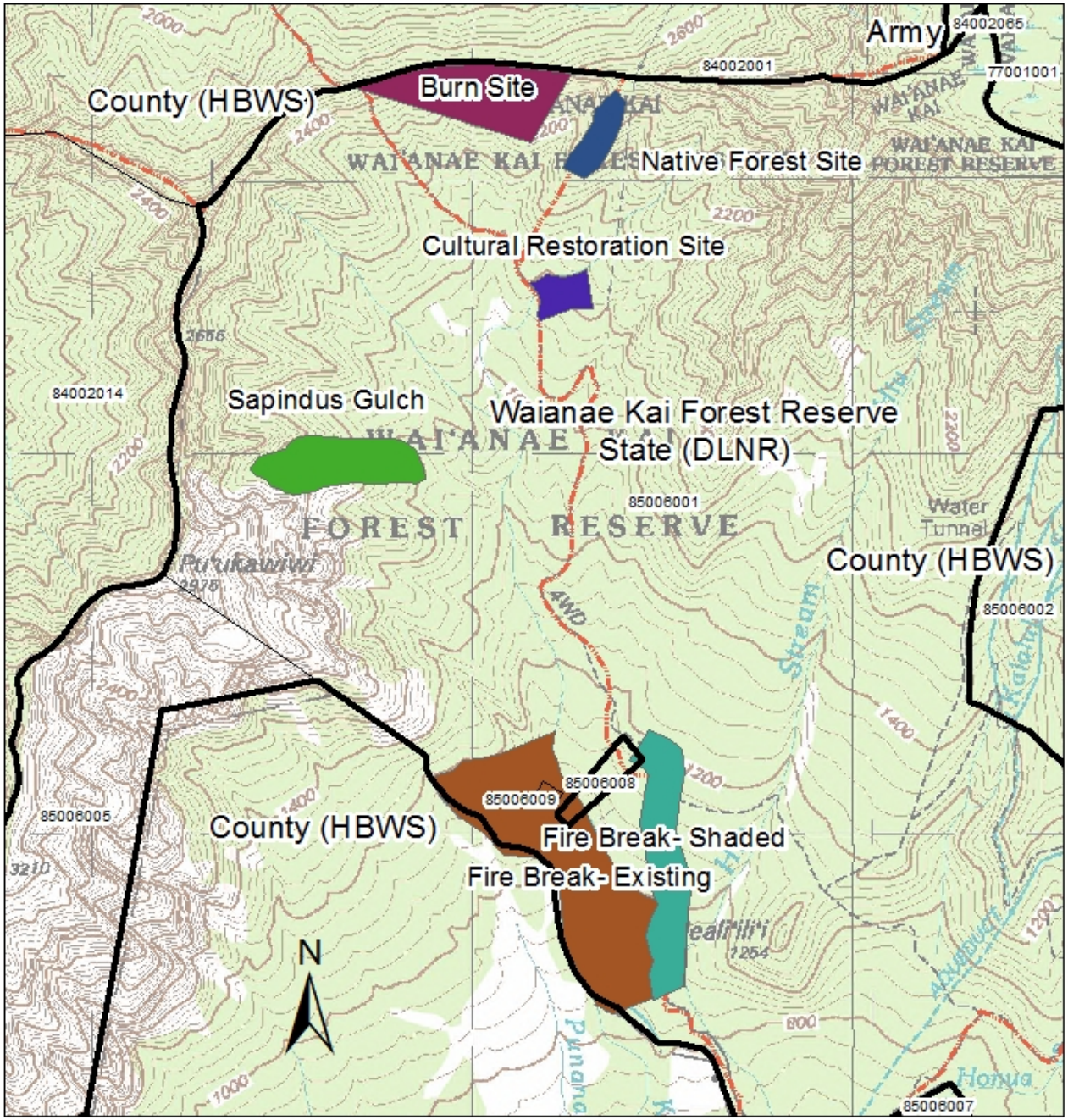


Our Kuleana

- Aerial Imagery analysis on 8,400 acres in WMWP priority areas (invasive species)
- Feral Goat Aerial Survey and Report
- Removal of over 6,000 invasive weeds
- Reforestation Program
- Construction and management of schoolyard nurseries
- Seed collection
- Volunteer programs with middle and high schools on Oahu
- Draft Management Plan
- WMWP Priority Areas

WMWP

Project Areas

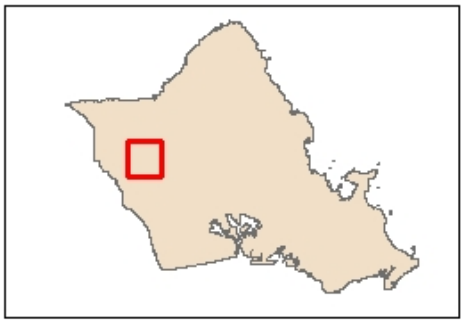


Legend

Proposed Outplanting Areas

- Burn Site
- Cultural Restoration Site
- Fire Break- Existing
- Fire Break- Shaded
- Native Forest Site
- Sapindus Gulch
- WMWP Landowners
- Oahu Trails

0 0.125 0.25 0.5 Miles

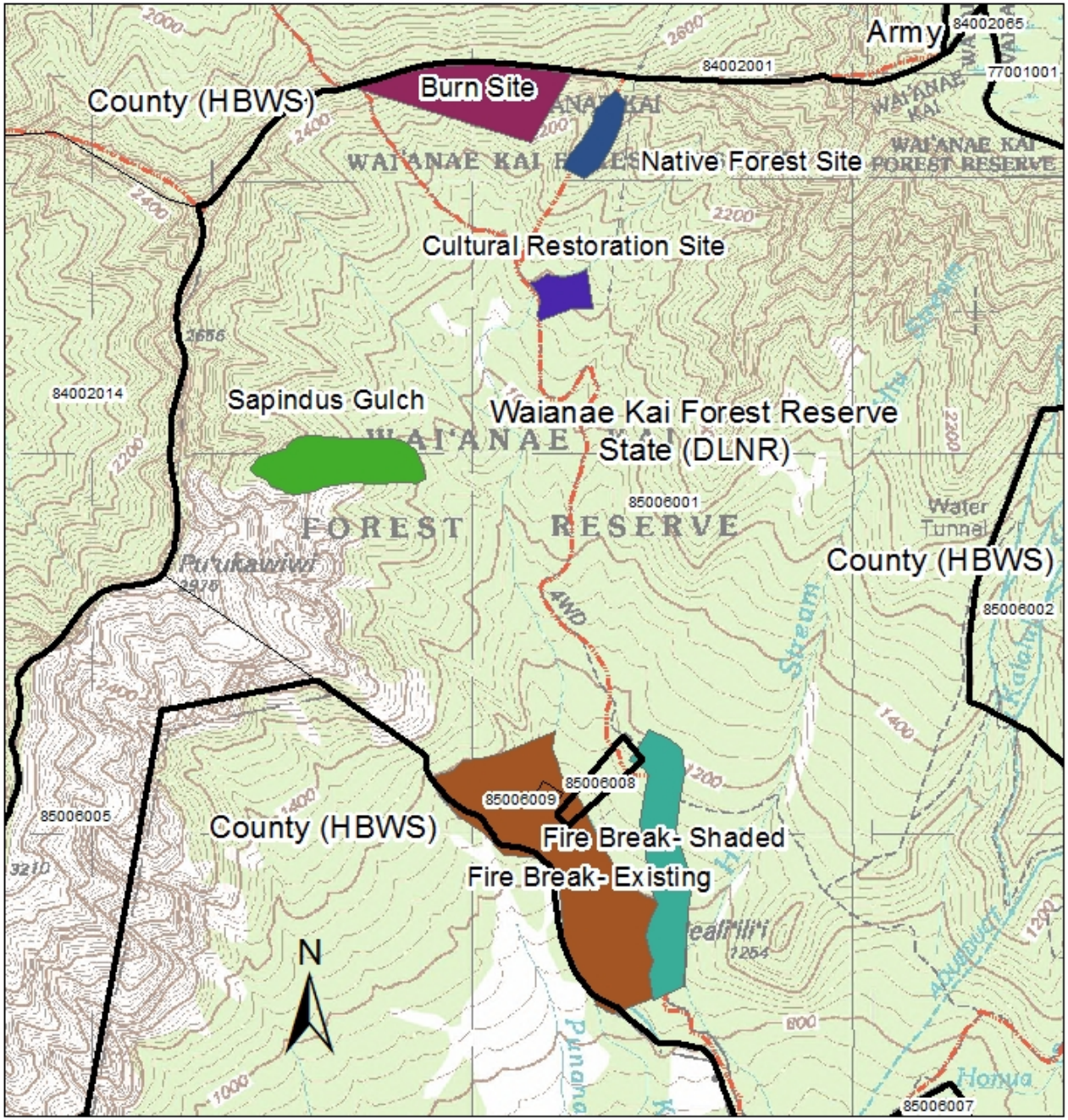


Community Involvement and Voluntary Stewardship

- Schoolyard Nurseries and Service Learning
  - Mililani Middle School
  - Kapolei High School
  - Nanakuli High School
  - Pearl City High School
  - Waianae High School

WMWP

Project Areas

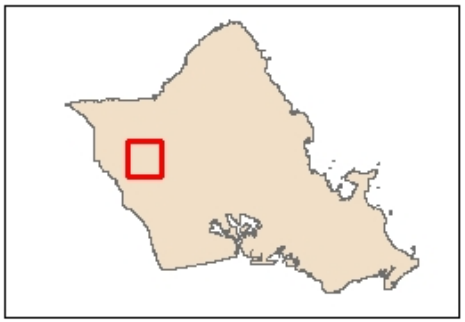


Legend

Proposed Outplanting Areas

- Burn Site
- Cultural Restoration Site
- Fire Break- Existing
- Fire Break- Shaded
- Native Forest Site
- Sapindus Gulch
- WMWP Landowners
- Oahu Trails

0 0.125 0.25 0.5 Miles

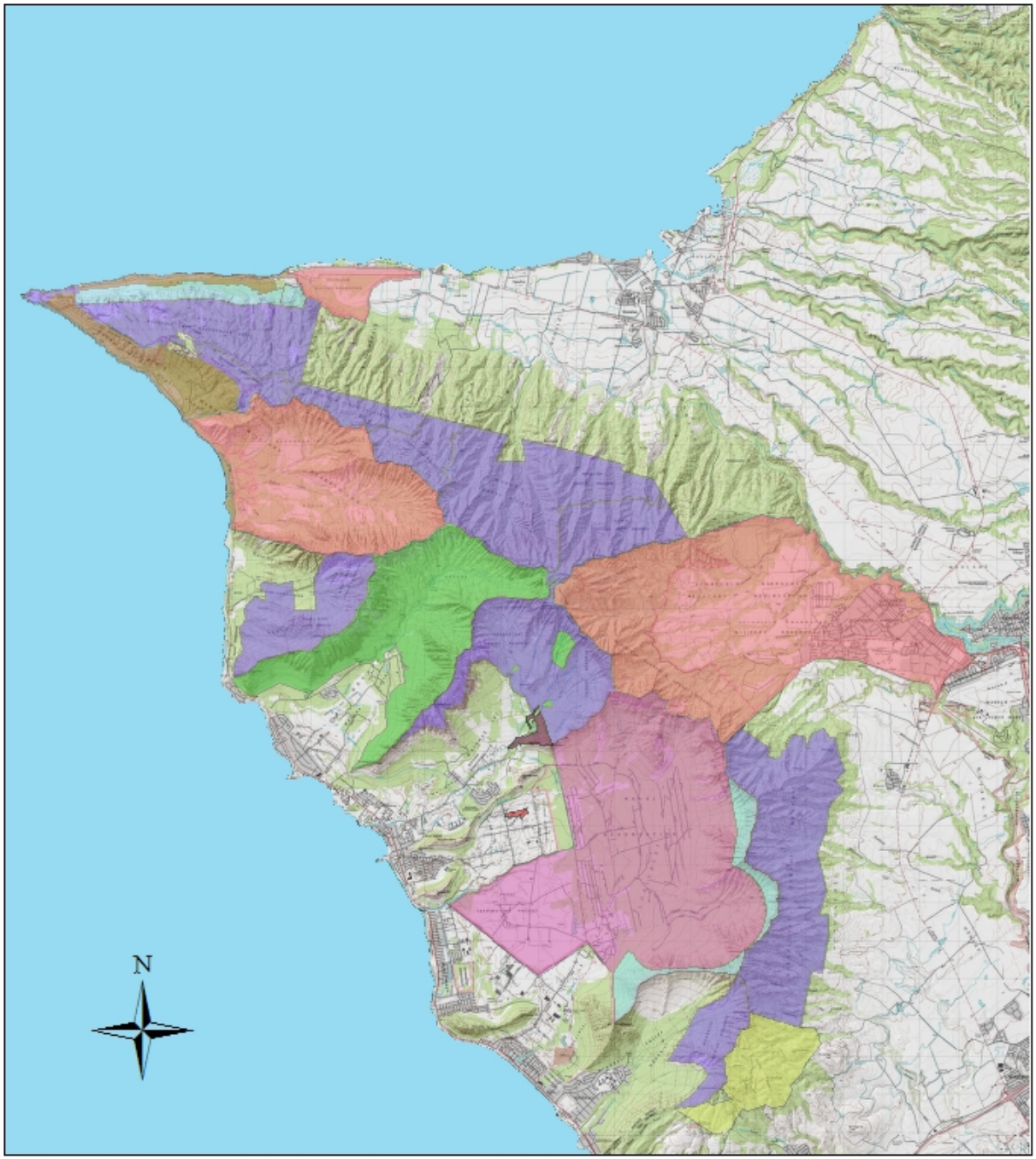


Community Involvement and Voluntary Stewardship

- Hoʻomau Ke Ola- "Heal the land, heal the people"
  - Invasive species removal
  - Seed collection
  - Native plant restoration

- Connecting the Navy with the community
  - Invasive species management and native plant restoration
  - Community education and involvement
  - Cultural practitioner access
  - Threatened and Endangered Species Management

WMWP Landowners

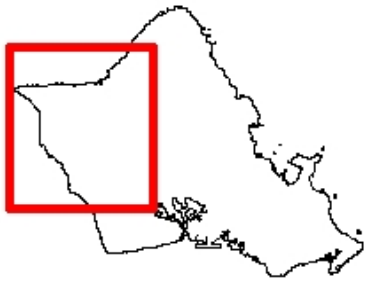


Legend

WMWP Landowners

- DLNR F&W
- DLNR Land Division
- DLNR State Parks
- Gill Olson
- HBWS
- Kaala Farms
- NAVY
- USAG-HI
- WCRC (Ma'o Farms)

0 1 2 3 4 Miles



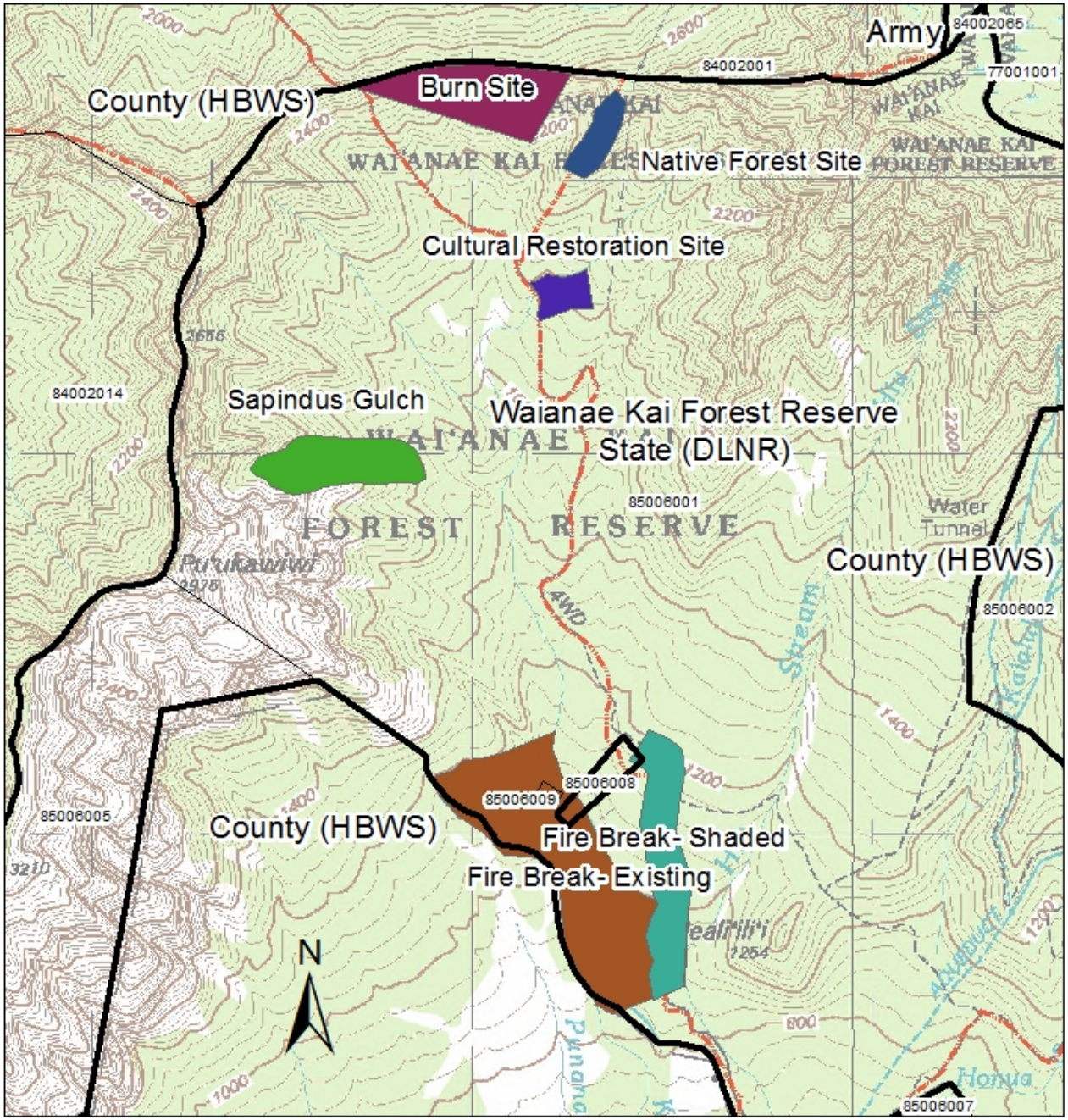
Community Involvement and Voluntary Stewardship

- Cultural Restoration Site
  - Invasive species removal
  - Cultural plant restoration

- Lo‘i and Auwai Restoration
  - Invasive species removal
  - Fire mitigation and forest restoration

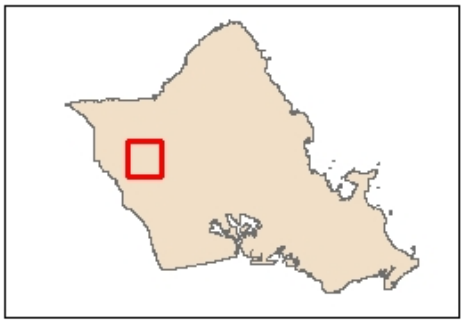
WMWP

Project Areas



Legend

Proposed Outplanting Areas

- Burn Site
- Cultural Restoration Site
- Fire Break- Existing
- Fire Break- Shaded
- Native Forest Site
- Sapindus Gulch
- WMWP Landowners
- Oahu Trails

0 0.125 0.25 0.5 Miles