



Prioritizing *Miconia calvescens*  
survey areas on O'ahu

Cal-IPC Symposium  
Friday, October 30<sup>th</sup>, 2015

Julia Parish

*Plant Conservation Manager*  
Catalina Island Conservancy













OISC

**O'AHU INVASIVE SPECIES COMMITTEE**

## County Based Invasive Species Committees

- Grassroots, island-based partnerships that work to protect each island
- Rapid response teams that target incipient, invasive species that are most threatening and most feasible to control
- Control, containment or eradication
- Support efforts of mandated Federal and State agencies
- Public outreach and education



**OISC**

**O'AHU INVASIVE SPECIES COMMITTEE**

**A voluntary partnership of private, government and non-profit organizations and individuals united to:**

- **Detect invasive species new to the island**
- **Prevent new invasive species infestations**
  - **Eradicate incipient invasive species**



# OISC

**O'AHU INVASIVE SPECIES COMMITTEE**

## Goals

- Early Detection & Rapid Response (EDRR)
- Watershed protection
- Conservation careers
- Pro-active public education about invasive species

## Strategies

- Prevention
- Control
- Eradication
- Outreach
- Host monthly volunteer events



# Oahu Invasive Species Committee

## OISC Plant Target Species

1. *Chromolaena odorata*
2. *Cortaderia selloana*
3. *Delairea odorata*
4. *Miconia calvenscens*
5. *Pennisetum setaceum*
6. *Rubus discolor*
7. *Senecio madagascariensis*
8. *Tibouchina herbacea*
9. *Tibouchina urvilleana*

## Pest Target Species

10. *Eleutherodactylus coqui*
11. *Oryctes rhinoceros*\*
12. *Wasmannia auropunctata*

## Early Detection Species

13. *Buddleia madagascariensis*
14. *Imperata cylindrica*
15. *Klambothrips myopori*
16. *Morella faya*\*

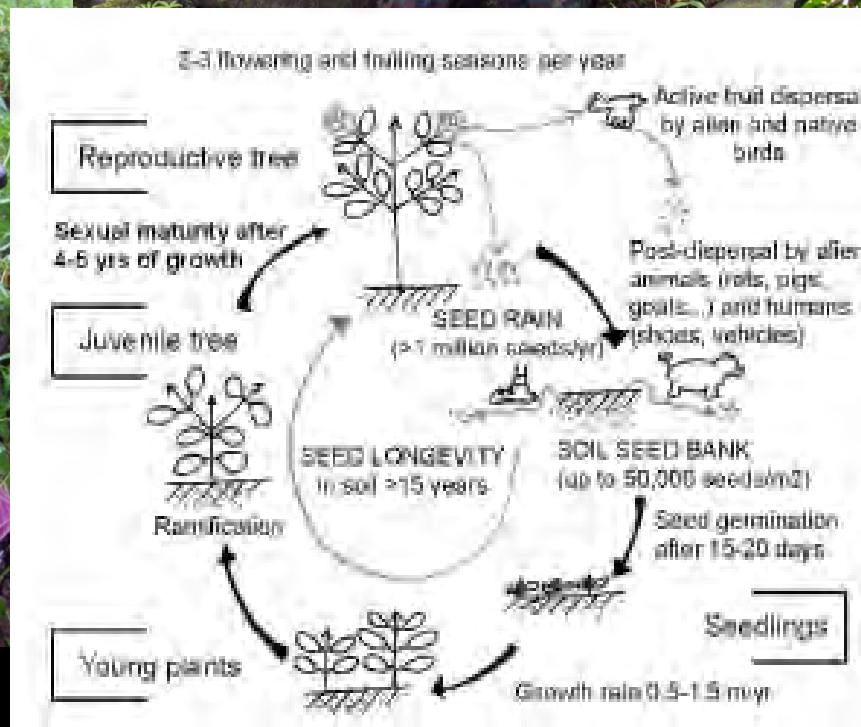
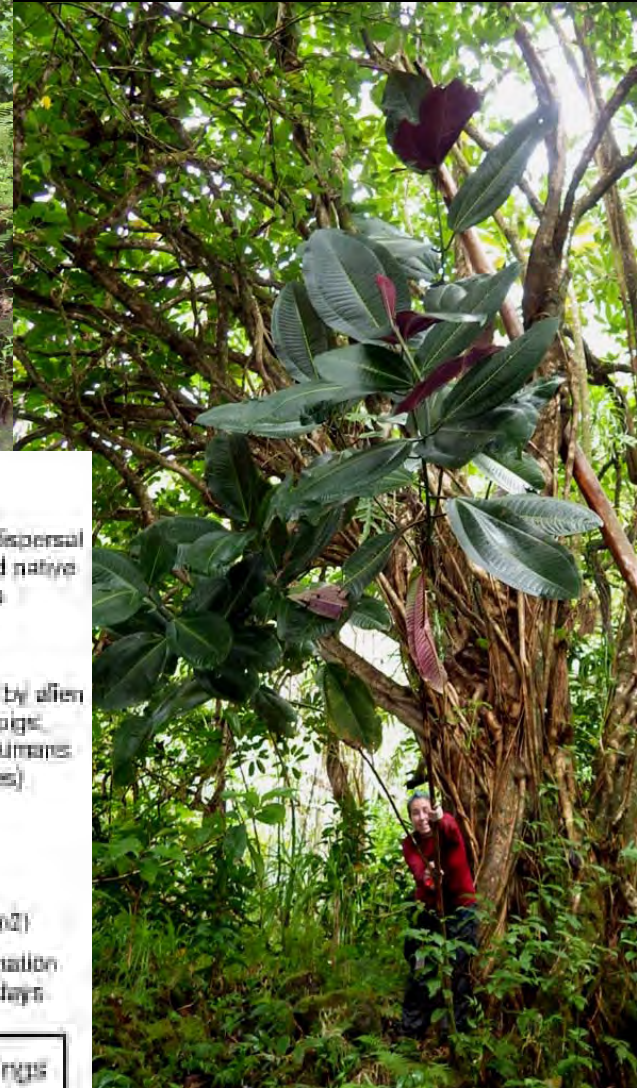
## Outreach & Volunteer Trip Target Species

17. *Ardisia virens*
18. *Melinis nerviglumis*
19. *Nassella tenuissima*
20. *Pennisetum villosum*
21. *Piper aduncum*
22. *Stromanthe tonckat*





# Miconia calvescens





# Miconia calvescens



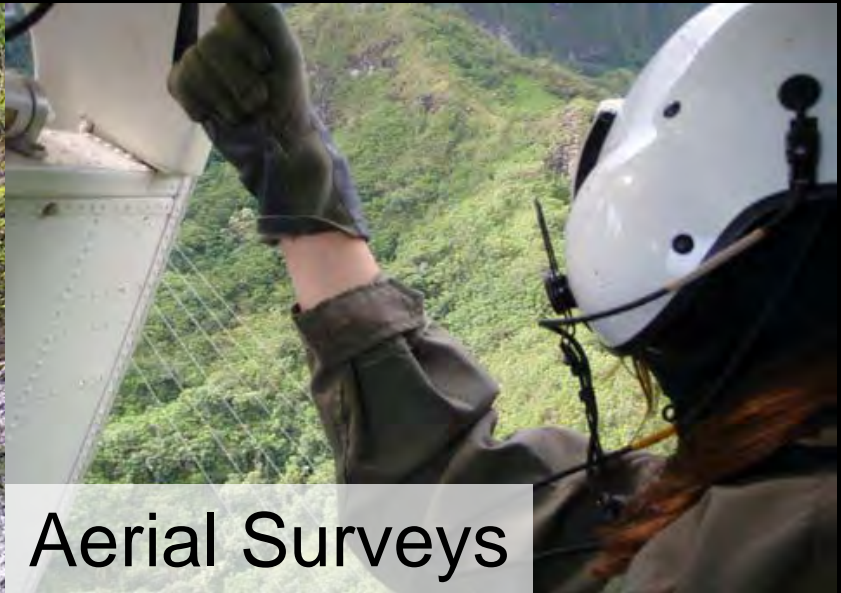
J. B. Friday

R. Smith





Ground Surveys



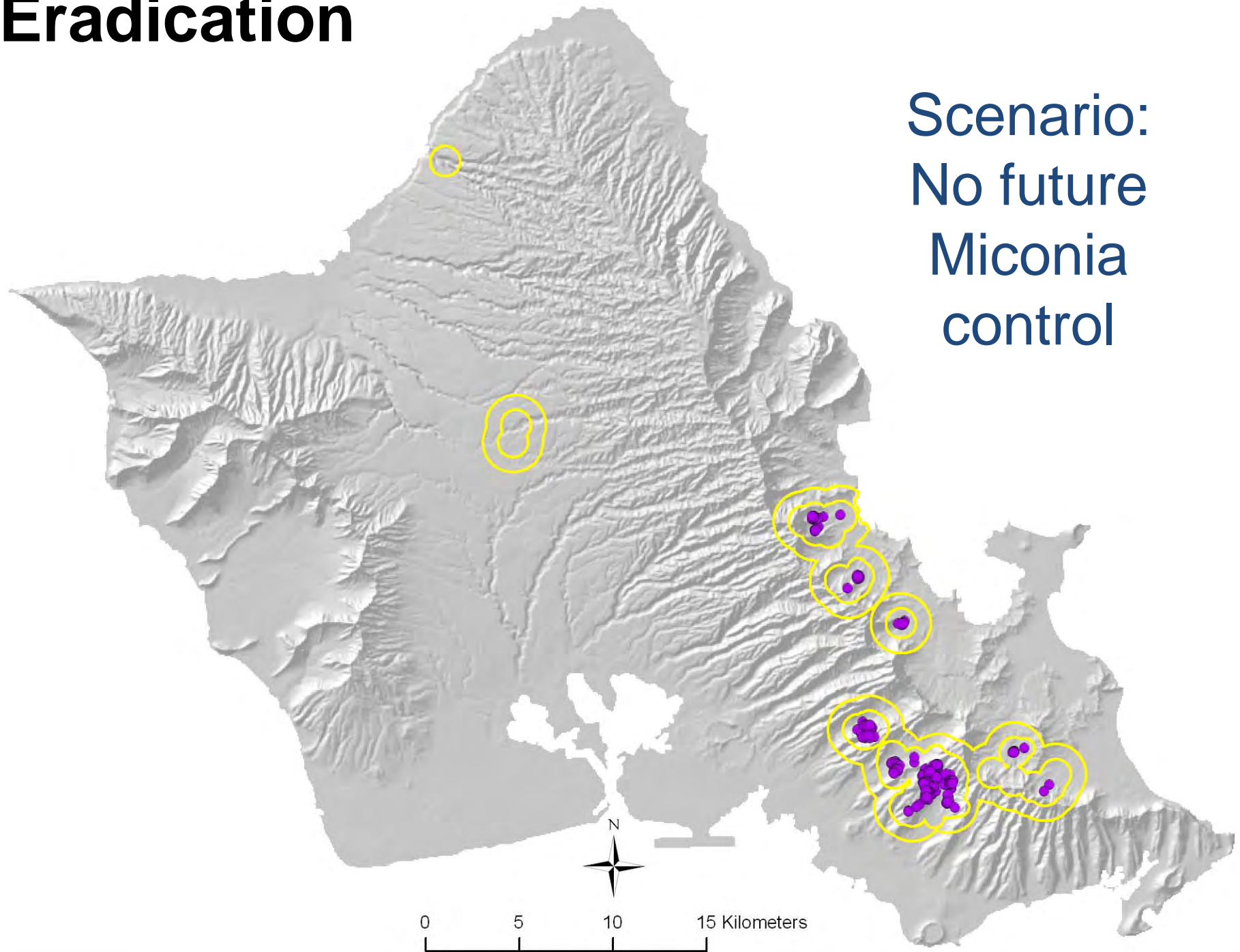
Aerial Surveys  
Control





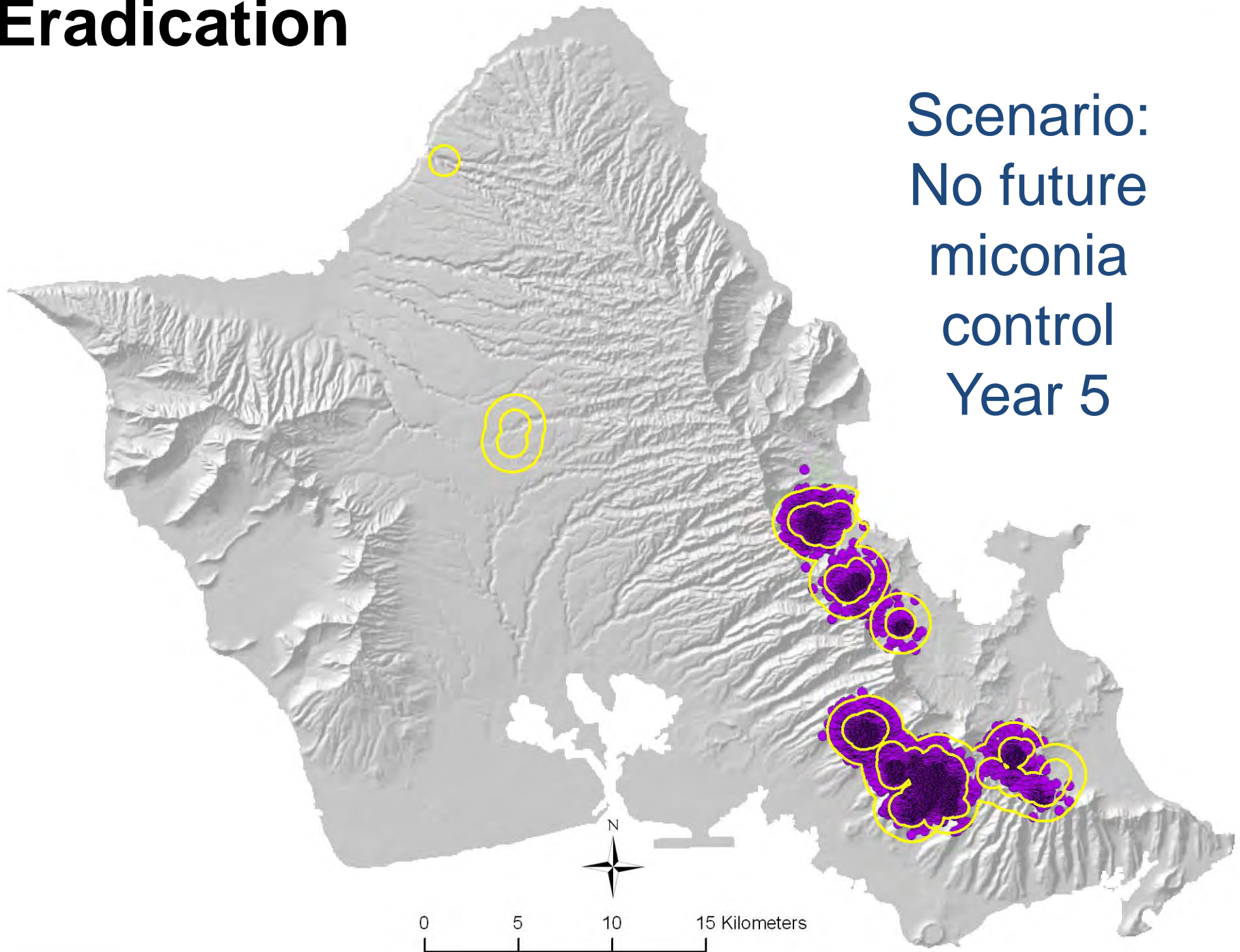
# Eradication

Scenario:  
No future  
Miconia  
control



# Eradication

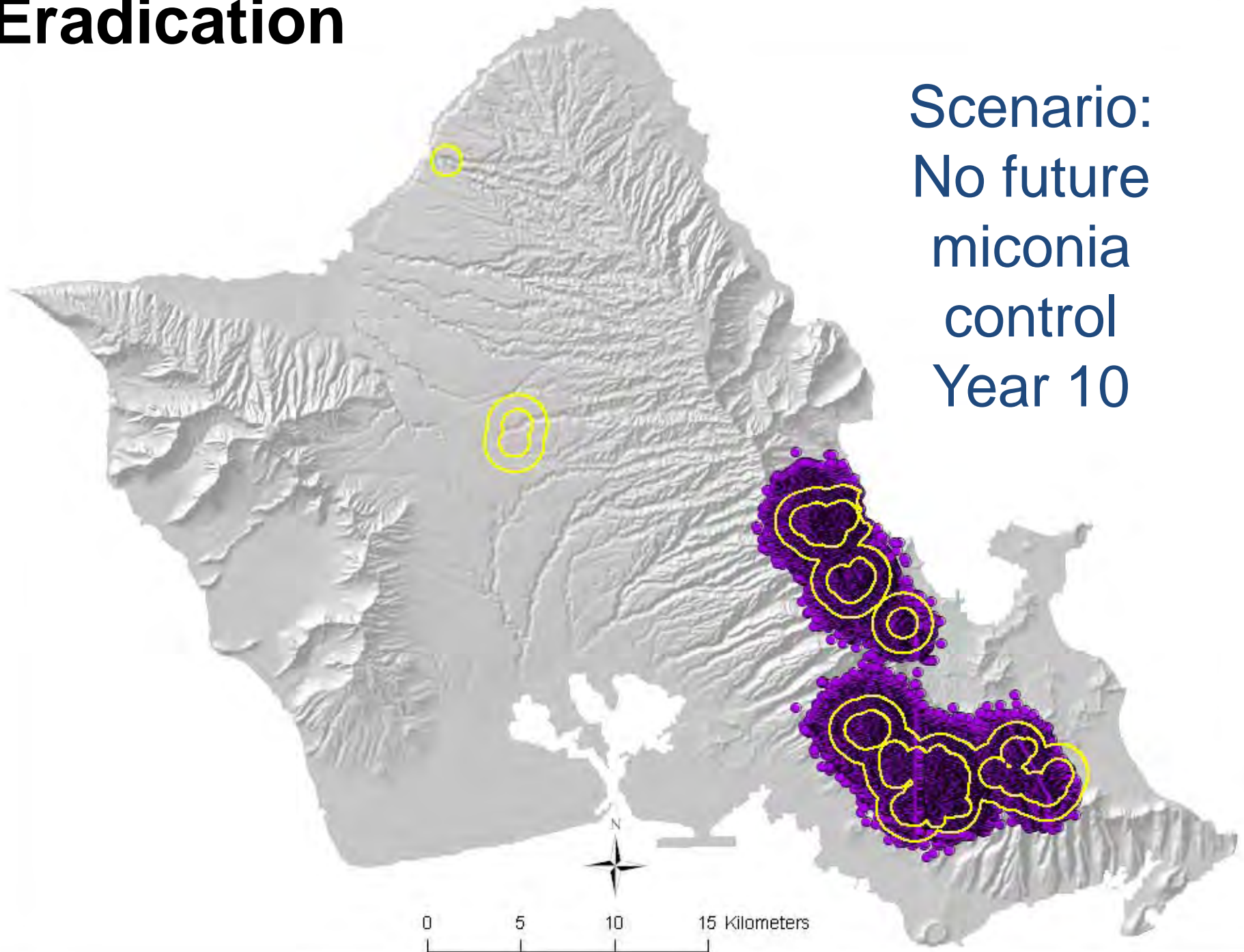
Scenario:  
No future  
miconia  
control  
Year 5





# Eradication

Scenario:  
No future  
miconia  
control  
Year 10

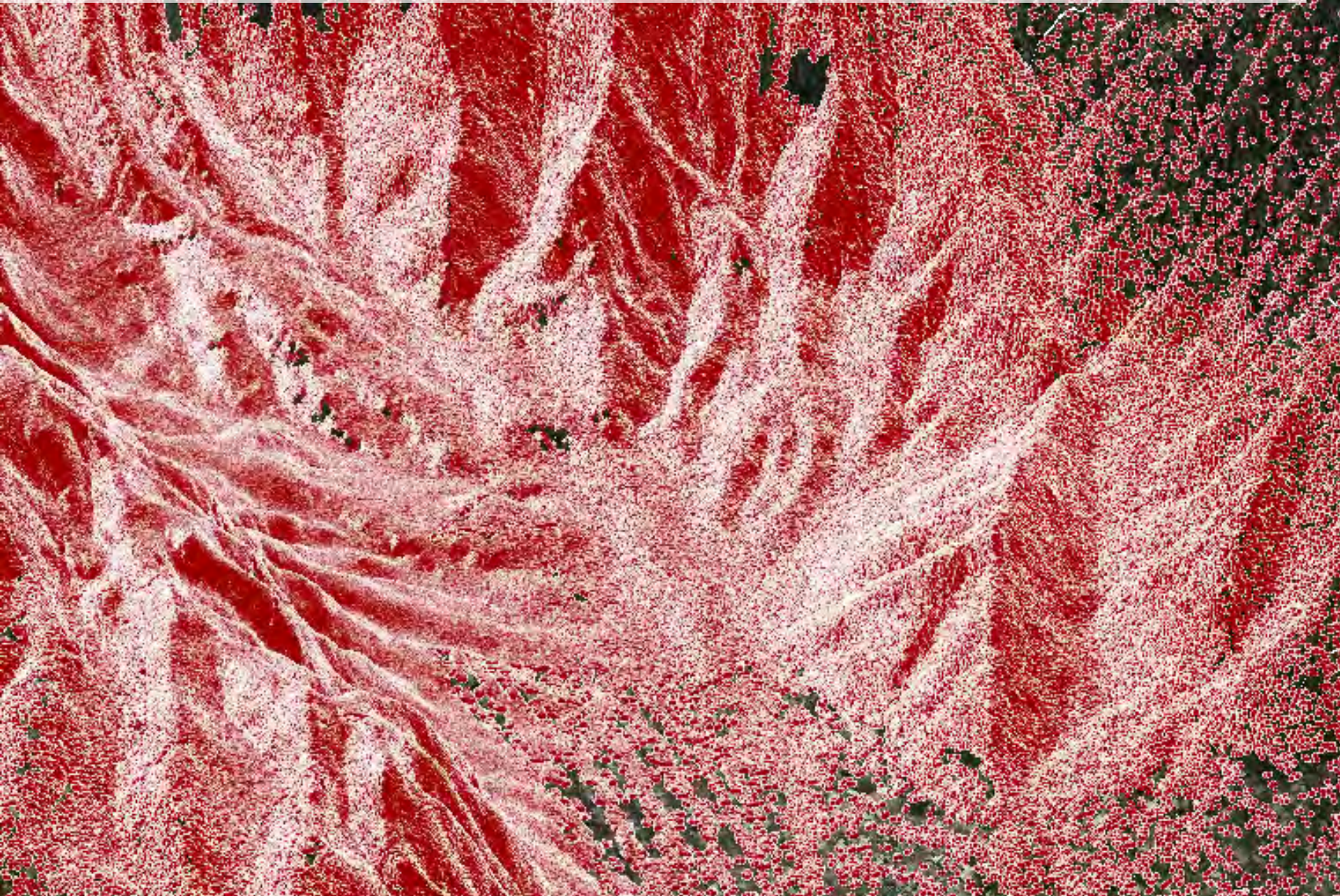


# Manoa Valley at Present



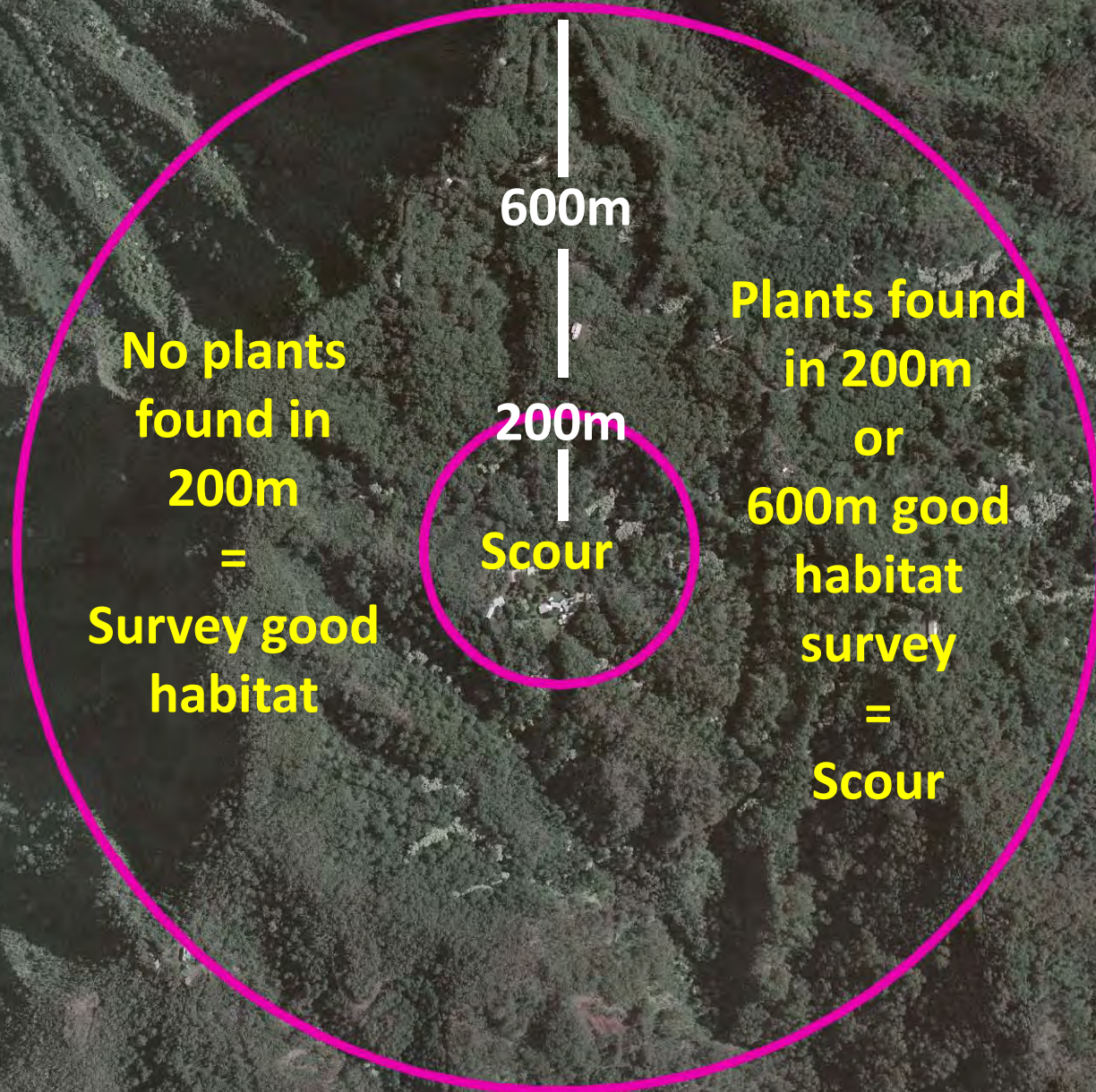


# No Miconia Control: 10yrs





# General survey decision process



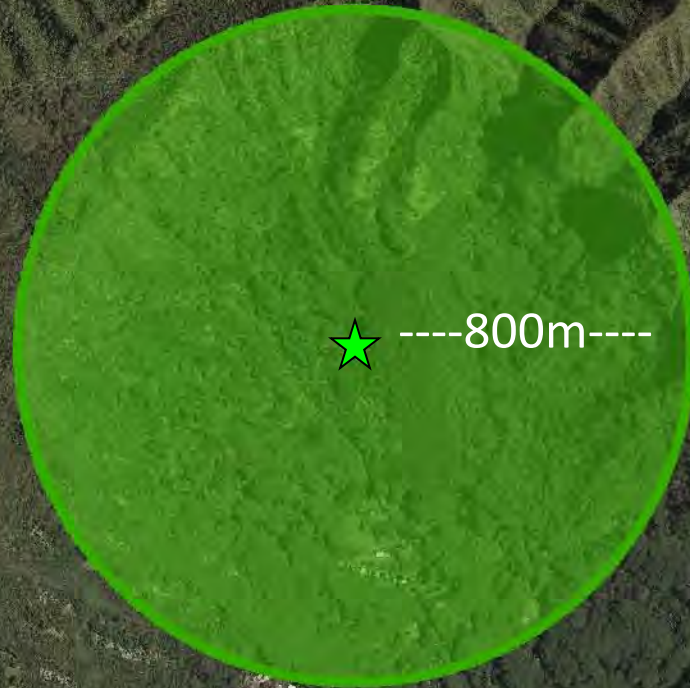


# Miconia location in Mānoa Valley





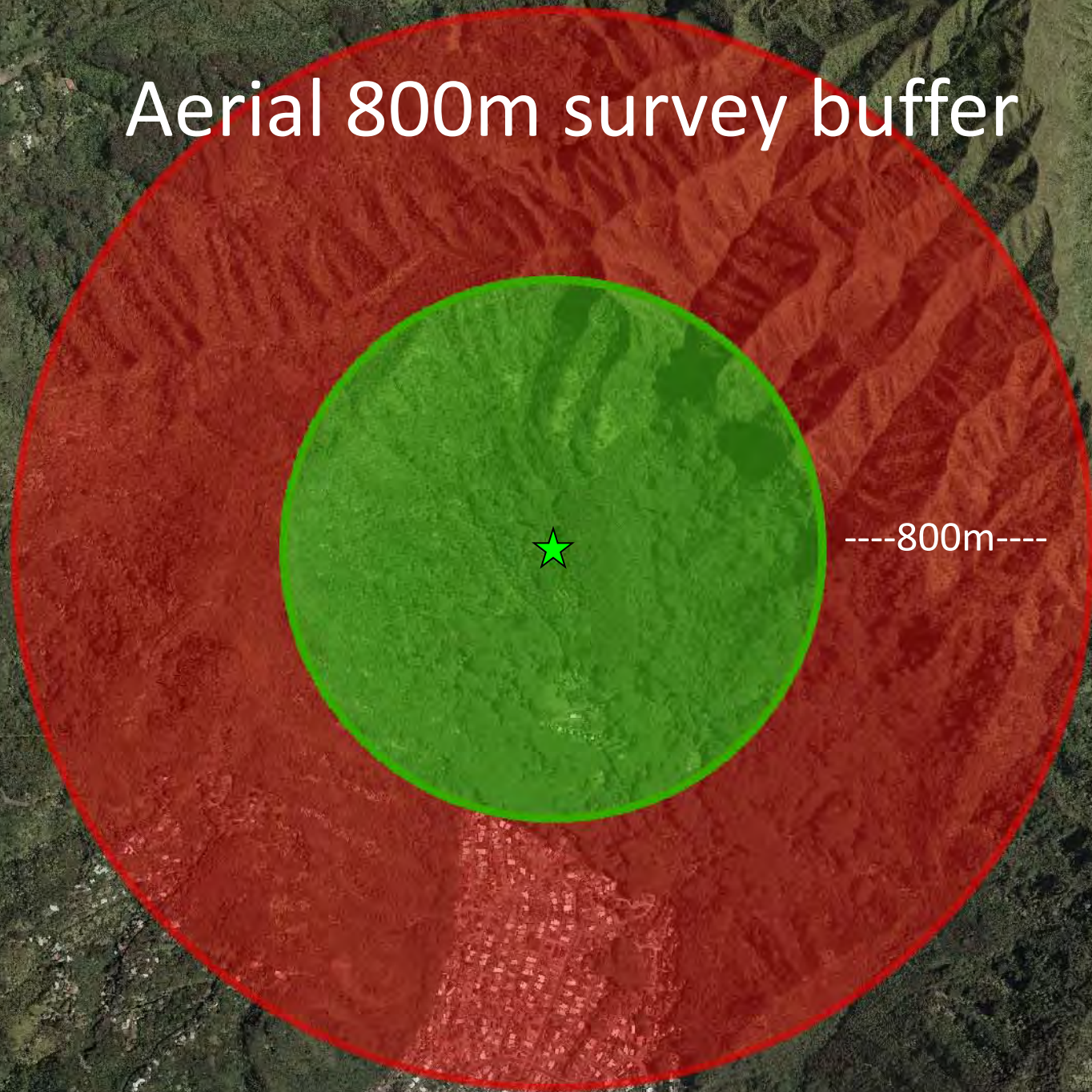
# Ground 800m survey buffer



★ ----800m----



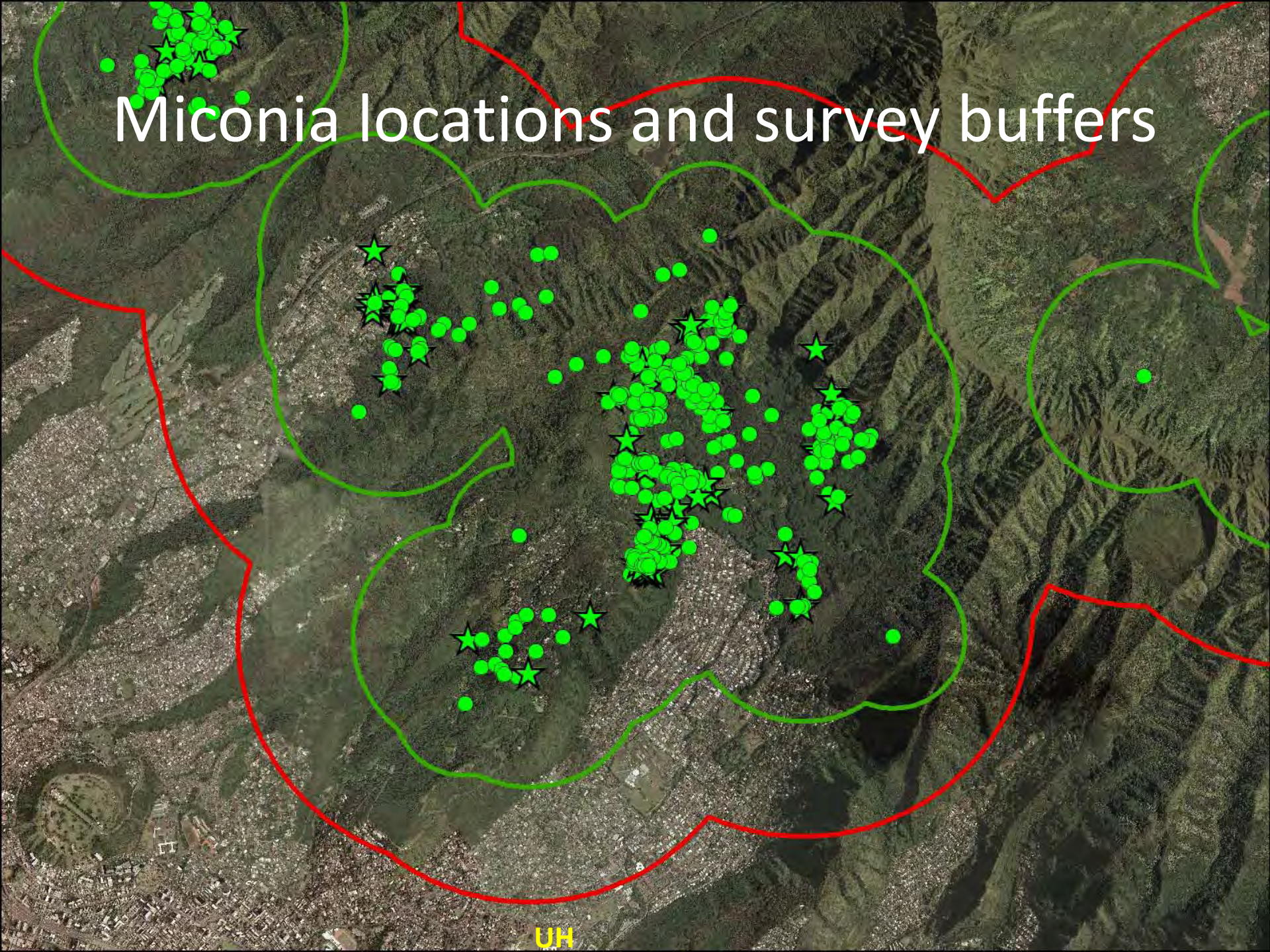
Aerial 800m survey buffer



---800m---



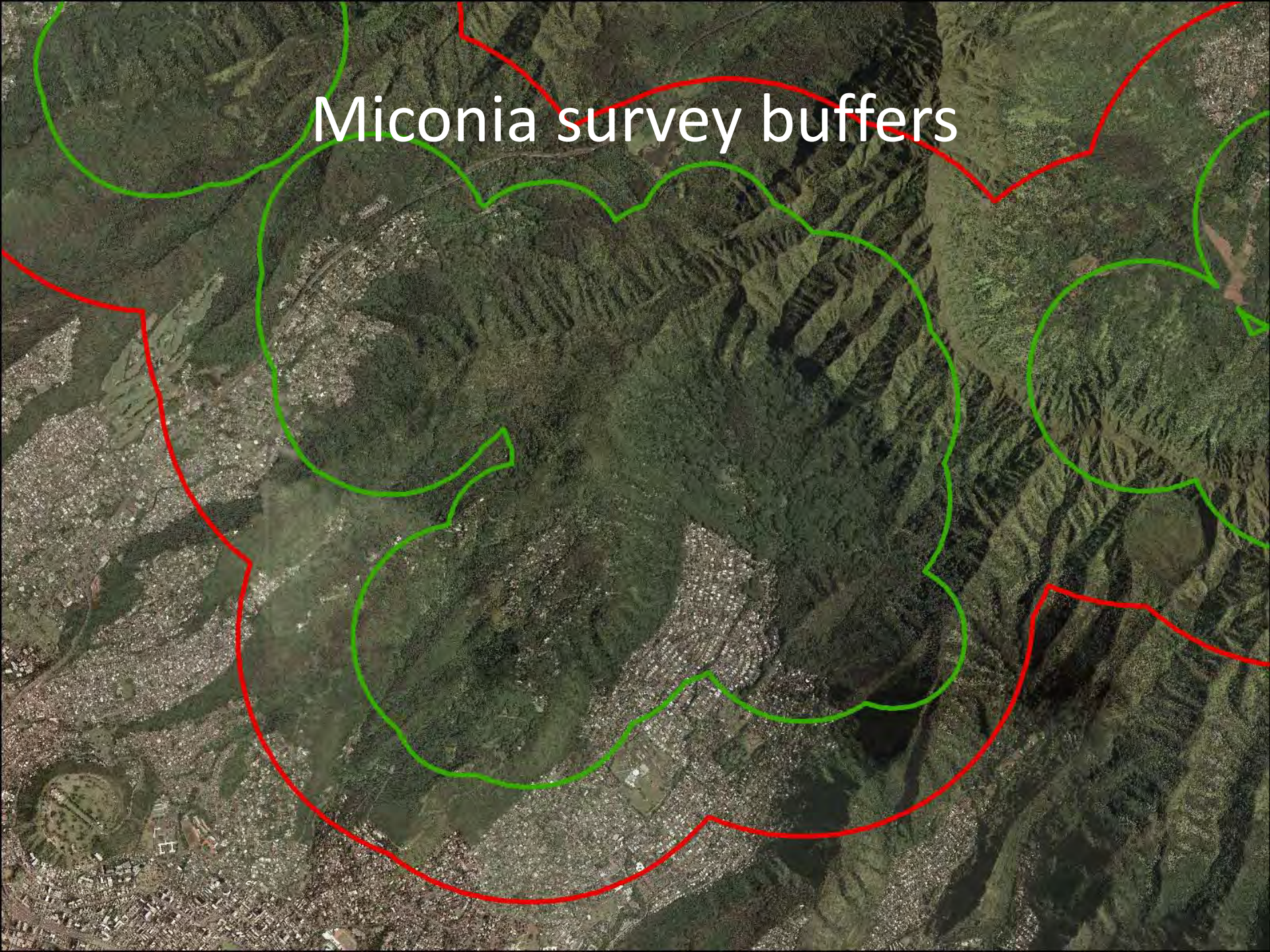
# Miconia locations and survey buffers



UH



# Miconia survey buffers

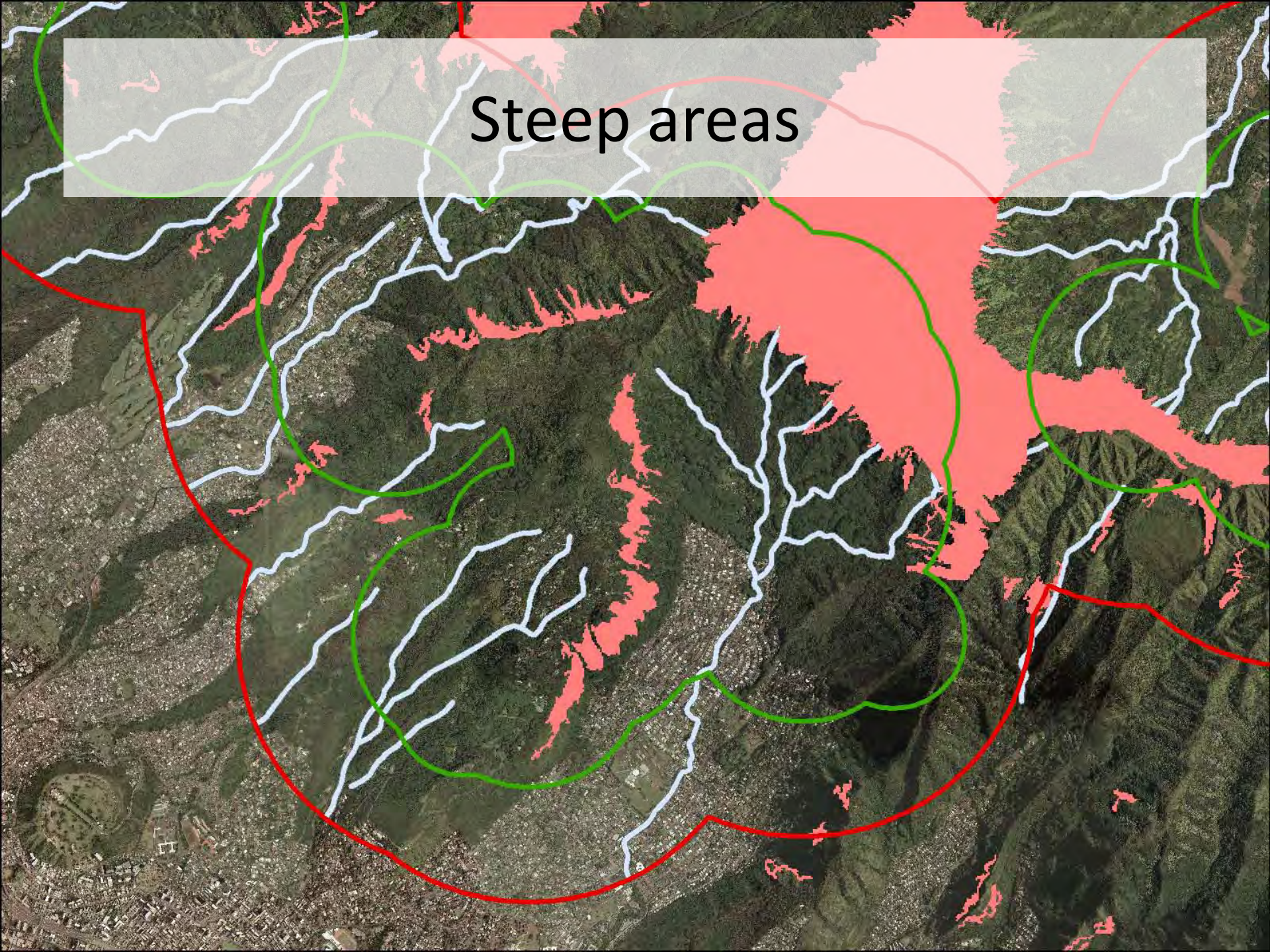






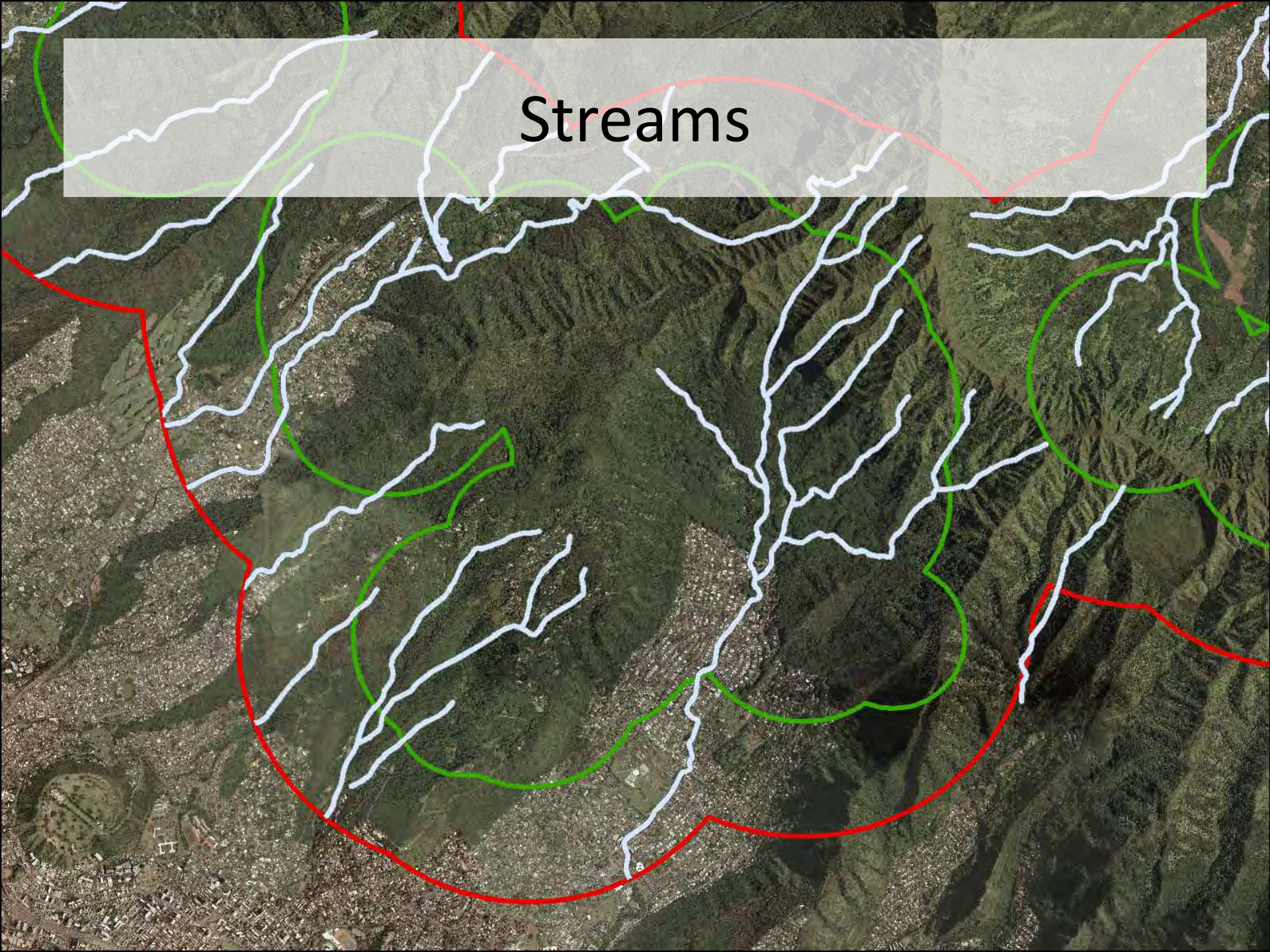


Steep areas



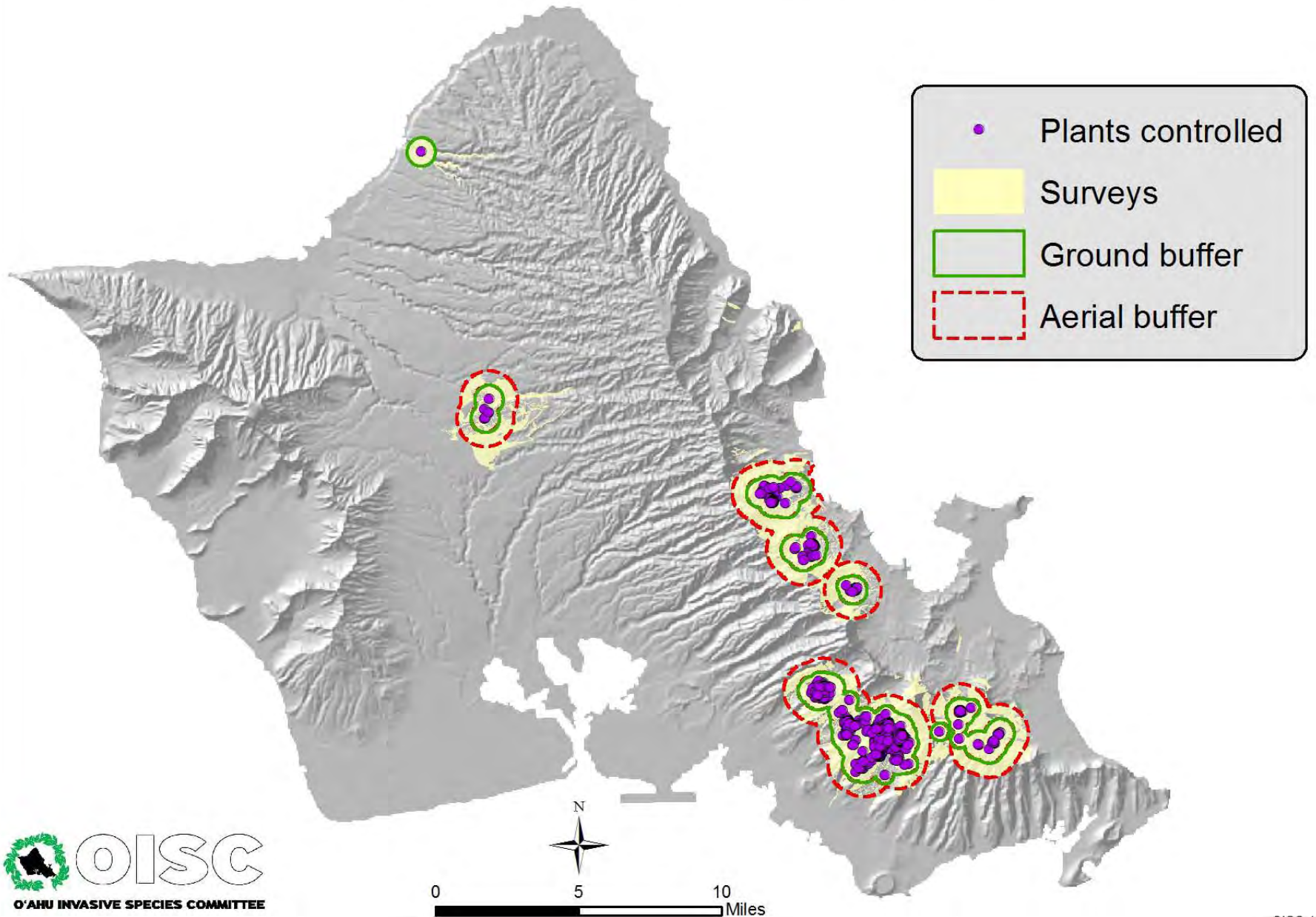


# Streams





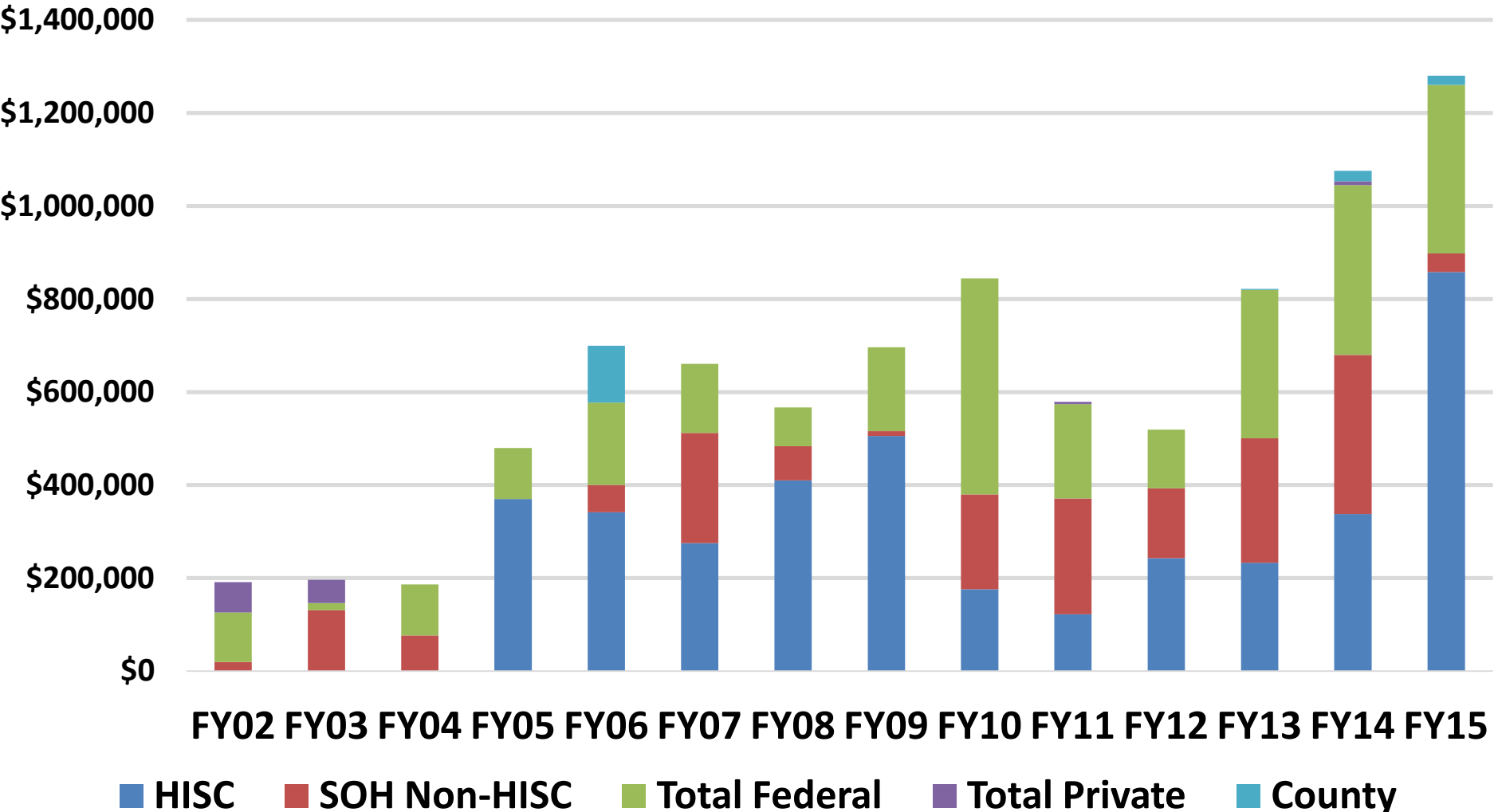
# Miconia controlled and survey areas



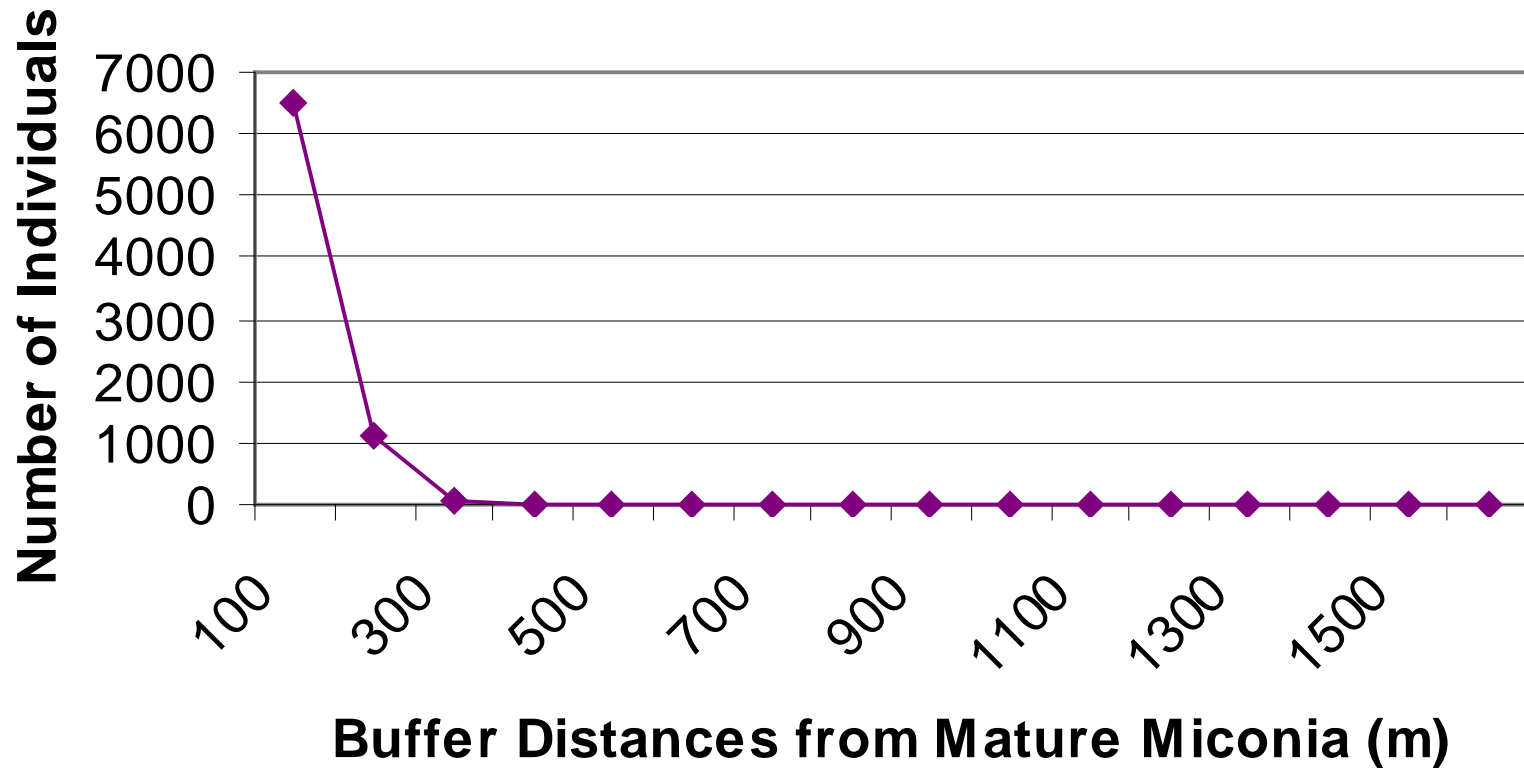


# OISC Funding

Totals by Funder



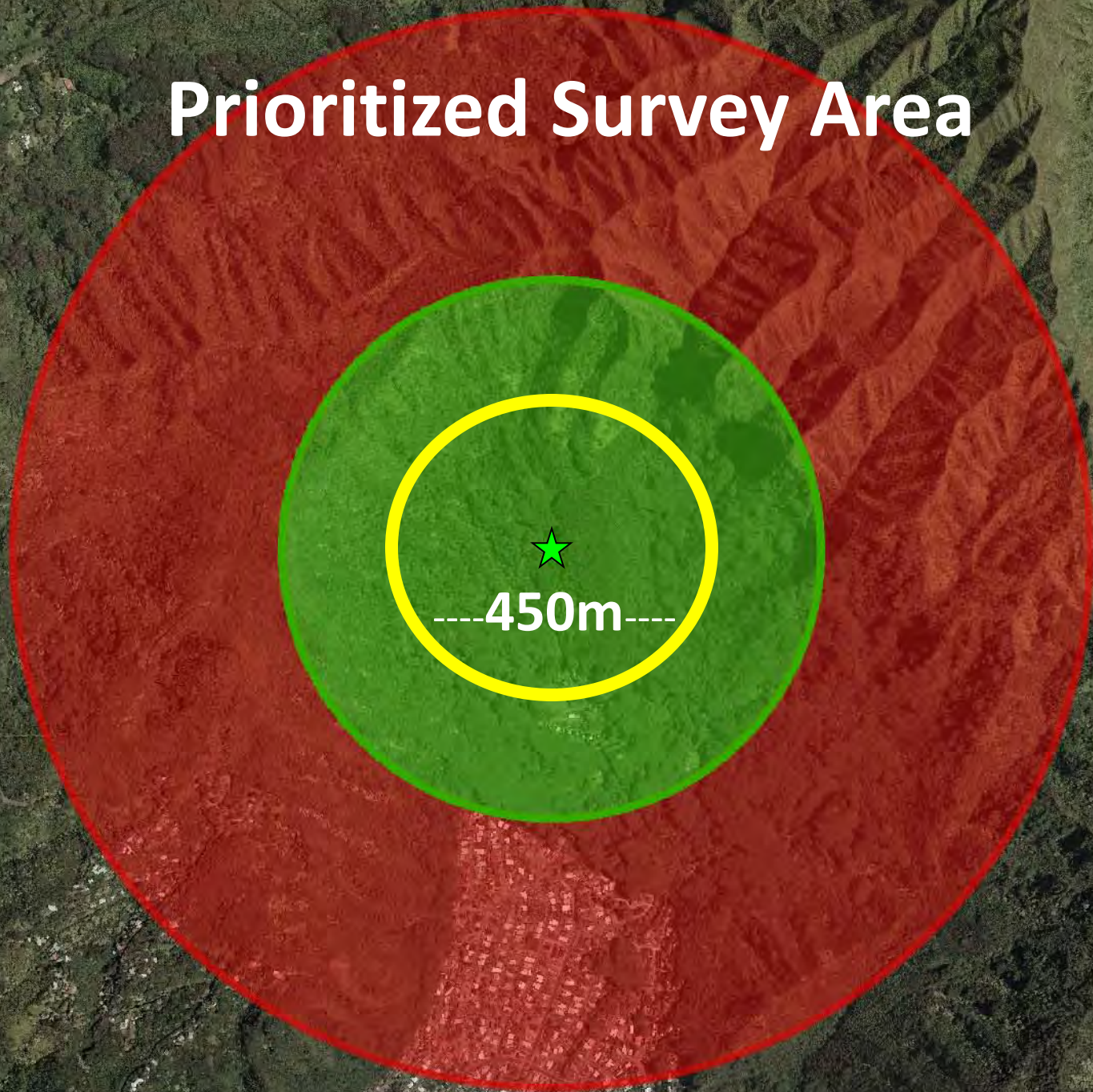




- 100% of immature plants fall within 1600 m of nearest mature plant
- 99% fall within 400 m of nearest mature plant
- Greatest distance between an immature plant and the nearest mature was 1587 meters.



# Prioritized Survey Area

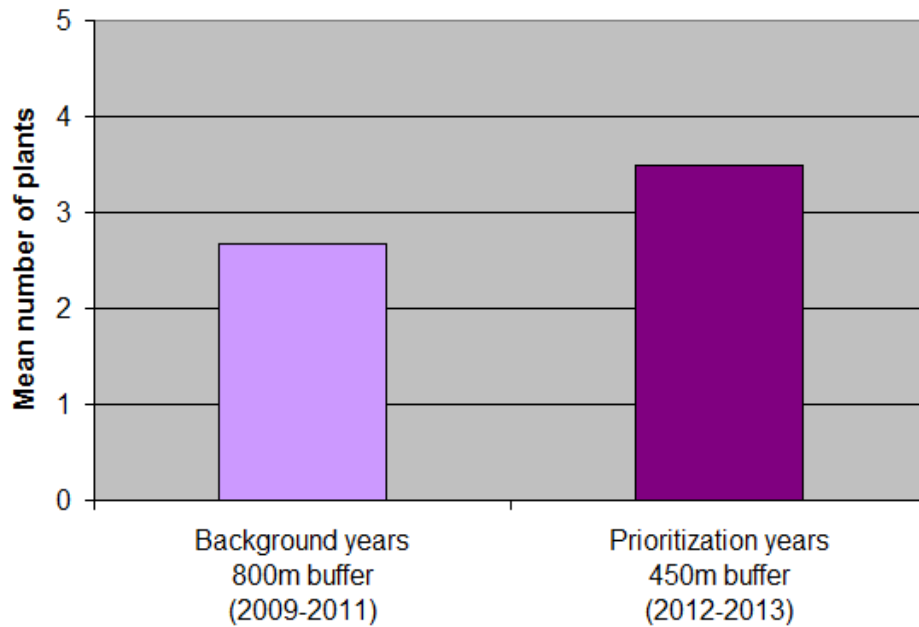


450m

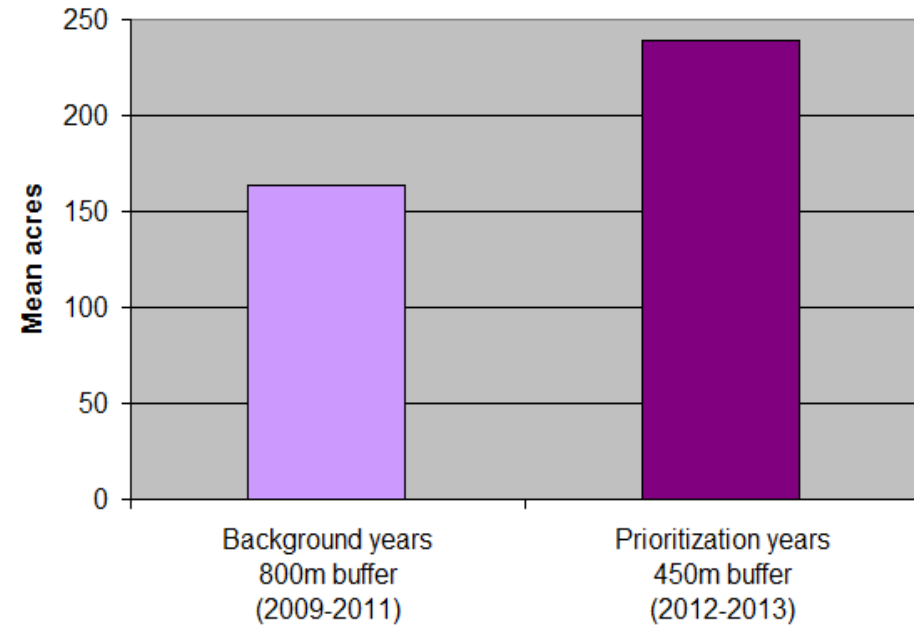


# Reprioritization Results

**Mature miconia treated**



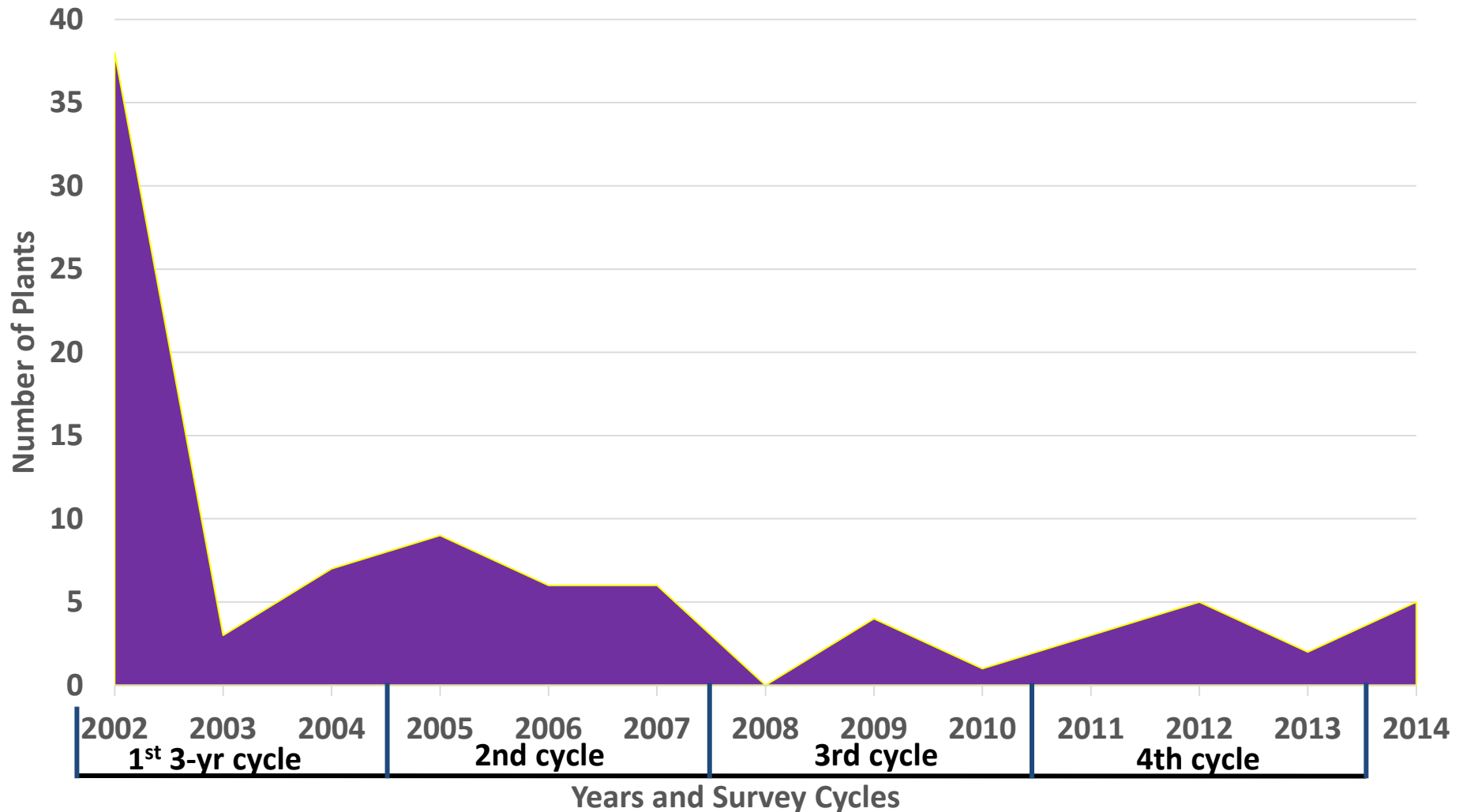
**Miconia ground survey area expansion**





# Treatment Trends Over Survey Cycles

## Mature Miconia Controlled on Oahu





# Lessons Learned

- Rapid delimitation
- Collect good data – analyze mature & immature plants
- Consistent funding
- Reprioritization adequate short term management

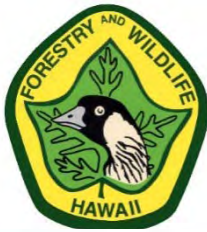




# Mahalo nui loa



- Jean Fujikawa, Rachel Neville and all OISC staff, past and present
- ISC Managers: Teya, Springer, Lori, Keren and Bill
- Dr. David Duffy – Pacific Cooperative Studies Unit







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