

Everglades Cooperative Invasive Species Management Area (ECISMA)



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Everglades Region Biologist
Invasive Plant Management Section
Florida Fish and Wildlife Conservation Commission
&
Co-Chair
Everglades Cooperative Invasive Species Management Area

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Year Formed: 2006

How Were Our Geographic Boundaries Determined?

The Everglades Protection Area plus Big Cypress National Preserve, HoleyLand/Rotenberger WMA's, Miccosukee and Seminole Tribal Lands and South Miami-Dade Wetlands

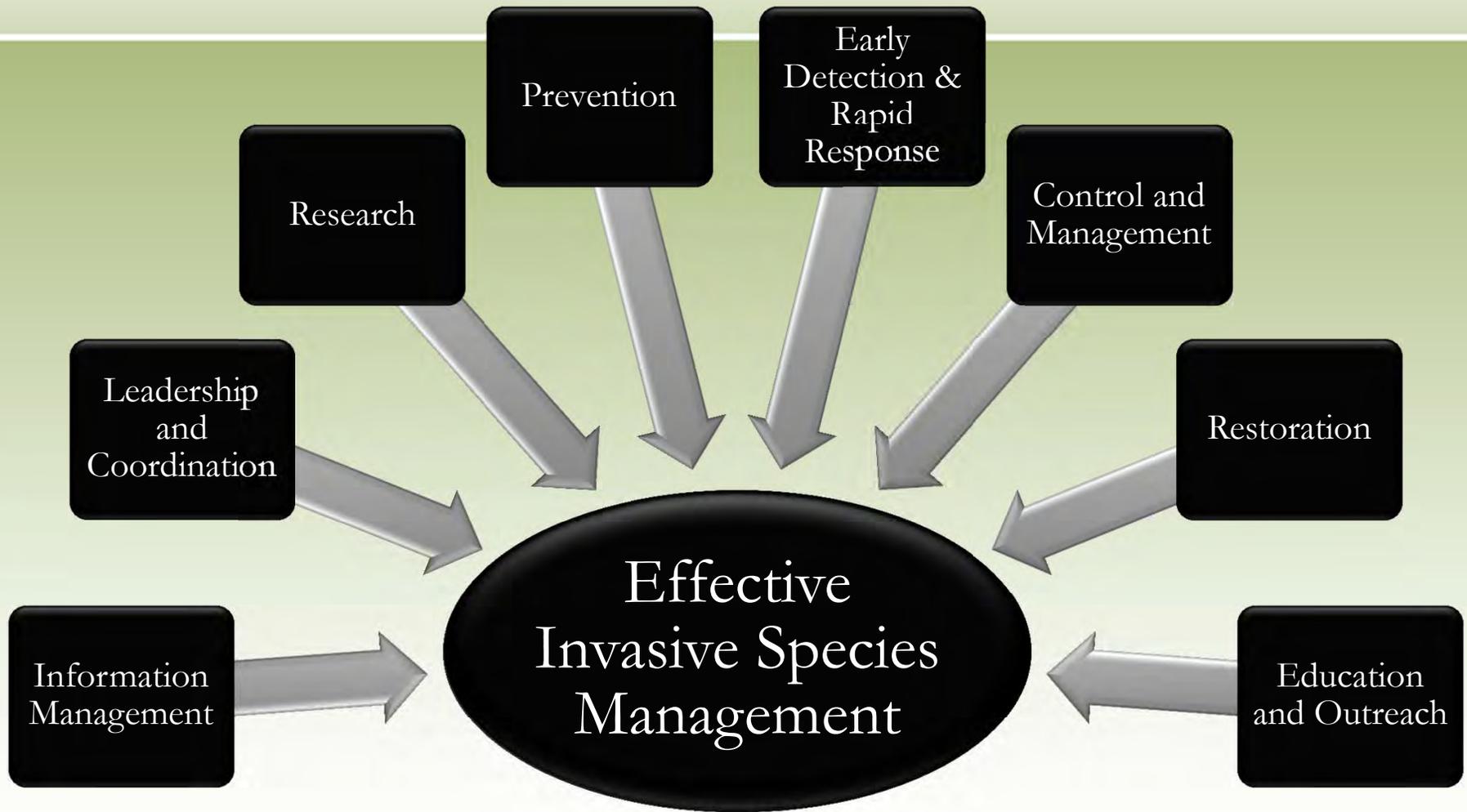
Who are our Partners?

The Nature Conservancy, Miami-Dade County,, Florida Department of Agriculture and Consumer Services, Florida Department of Environmental Protection, Florida Department of Transportation, Florida Fish and Wildlife Conservation Commission, Florida Power and Light, Miccosukee Tribe of Indians of Florida, Seminole Tribe of Florida, South Florida Water Management District, U.S. Army Corps of Engineers, U.S. Department of Agriculture, U.S. Department of the Interior, U.S. Fish and Wildlife Service, U.S. National Park Service, Florida Department of Transportation, Fairchild Tropical Botanic Garden, the Everglades Foundation and Auburn University

What Is Our Mission?

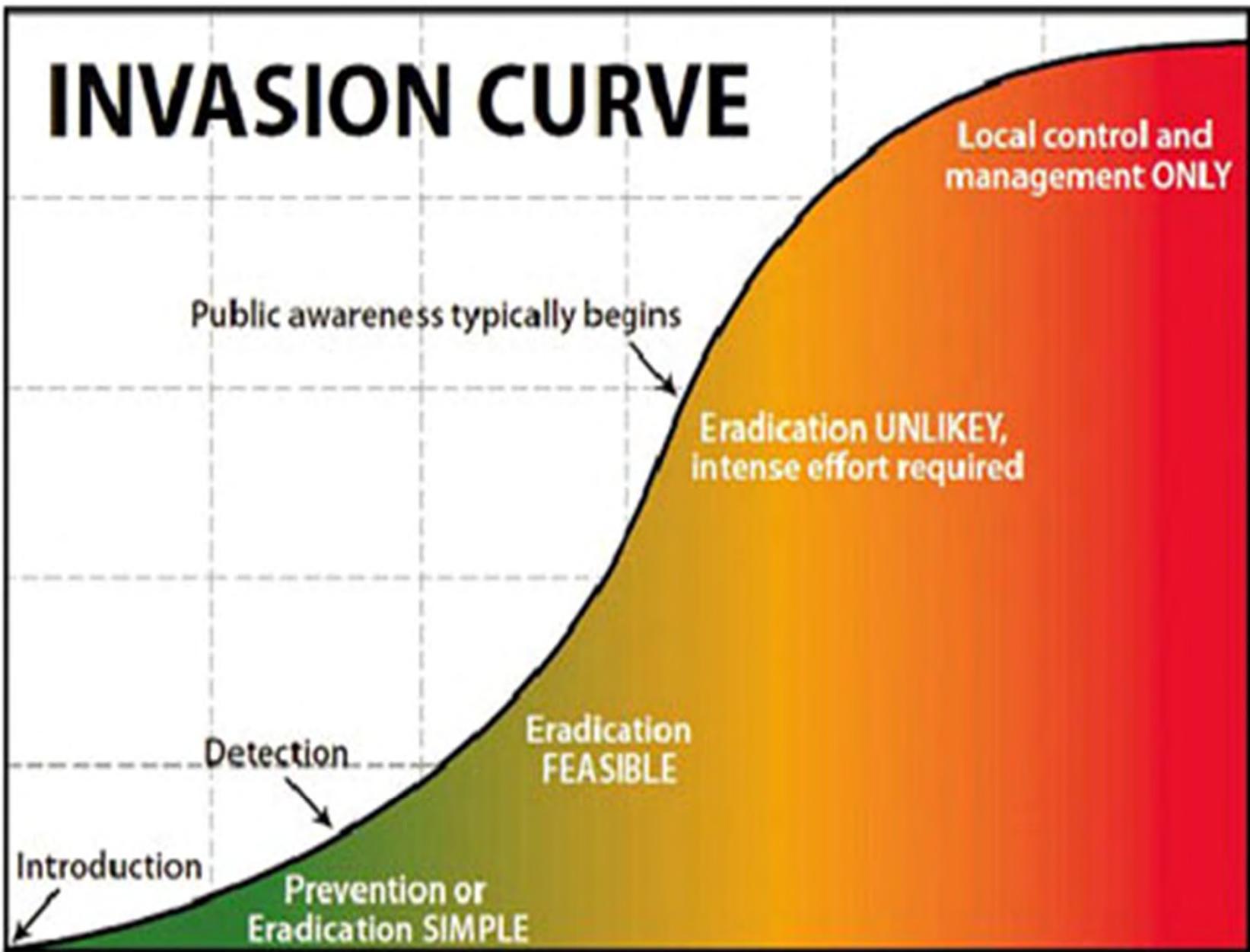
To improve the effectiveness of invasive species control by sharing information, innovation and technology across borders





INVASION CURVE

AREA INFESTED



CONTROL COSTS →

TIME →

ECISMA Priority Invasive Species Relevance to Everglades Restoration

Species	Potentially Impacted Performance Measures
<p>Lumnitzera racemosa</p> <p>Mikania micrantha</p>	<ul style="list-style-type: none"> •Estuarine Vegetation Mosaics •Freshwater Vegetation Mosaics •Ridge And Slough Community Sustainability
<p>Nile monitor lizards</p> <p>Tegu lizards</p>	<ul style="list-style-type: none"> •Juvenile Crocodile Survivorship •Juvenile Alligator Survivorship
<p>Invasive fishes</p>	<ul style="list-style-type: none"> •Regional Populations Of Fishes, Crayfish, Grass Shrimp and Amphibians •Lake Okeechobee Fish Population Density, Age Structure and Conditions
<p>North African Python</p>	<ul style="list-style-type: none"> •Juvenile Crocodile Survivorship •American Alligator Distribution, Size, Nesting and Condition •Hybridization with Burmese Python

Early Detection & Rapid Response Potential for Eradication: Feasible



ECISMA Early Detection Rapid Response Initiatives:

Lumnitzera Racemosa, “The Melaleuca of the mangroves.”

Discovered fairly early on in the invasion curve from a single introduction site
ECISMA initiated mapping and treatment workdays

Funding provided by Florida Fish and Wildlife Commission for initial treatment
by contract through the FWC Invasive Plant Management Section

Continue to lead periodic surveys at Fairchild Tropical Botanic Garden and
Matheson Hammock County Park

Funding provided by Florida Fish and Wildlife Commission for follow-up
treatment by contract through the FWC Invasive Plant Management Section

On track to eradicate *Lumnitzera racemosa* within next few years

Lumnitzera Racemosa

“The Melaleuca of the mangroves.”



Discovered fairly early on in the invasion curve from a single introduction site



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On track to eradicate *Lumnitzera racemosa* within next few years



Early Detection & Rapid Response Potential for Eradication: Unknown



ECISMA Early Detection Rapid Response Initiatives:

Mikania micrantha, “Mile a Minute Vine.” Federal Noxious Weed
Discovered within 10 years of introduction in the Redland Agricultural Area
Introduced to and mostly occurs on private lands
Initial response by FDACS, USDA and DPI
ECISMA initiated mapping and treatment workdays
Has spread into Miami-Dade County Natural Areas
Everglades National Park boundary is within miles of western most infestations
ECISMA continues to lead surveys to map and treat Mikania
No dedicated funding provided to date
Mikania micrantha is unlikely to be eradicated within next few years

Mikania micrantha

“Mile a Minute Vine” (Federal Noxious Weed)



Discovered within 10 years of introduction in the Redland Agricultural Area



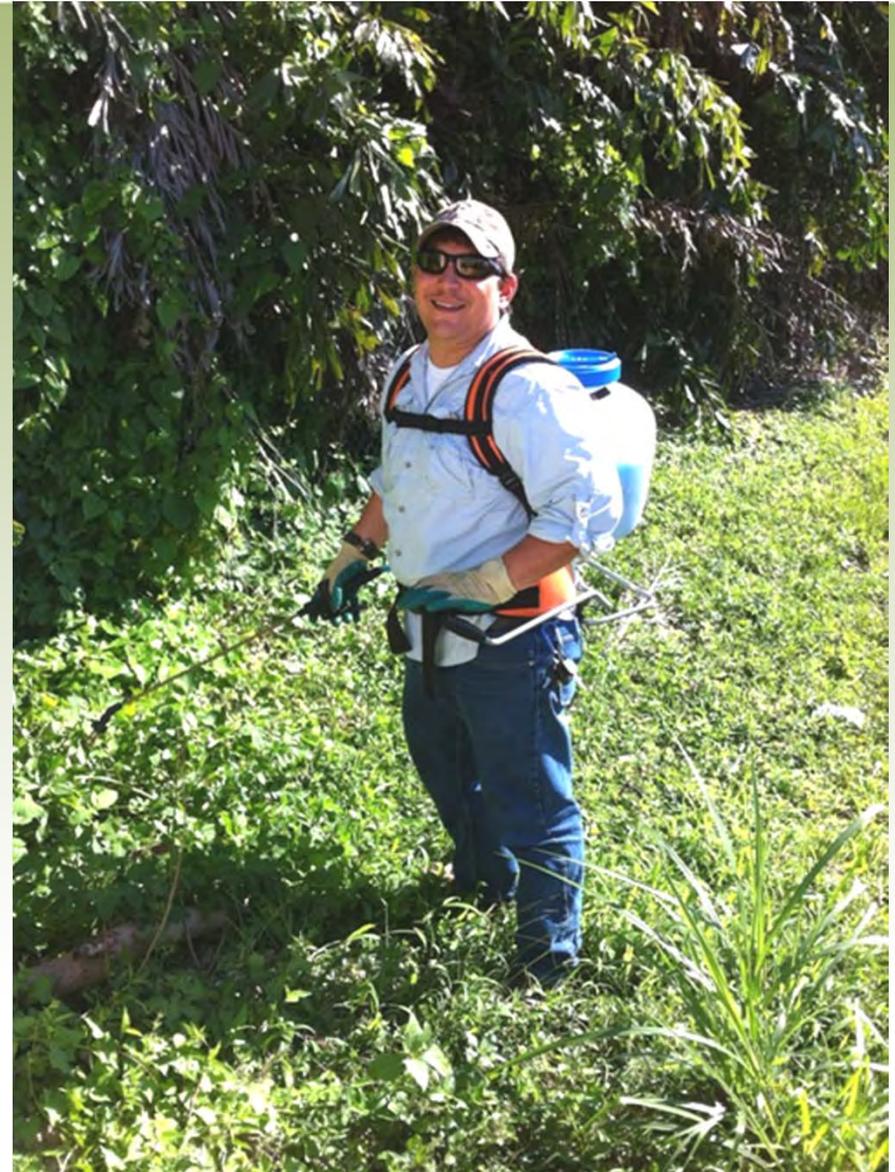
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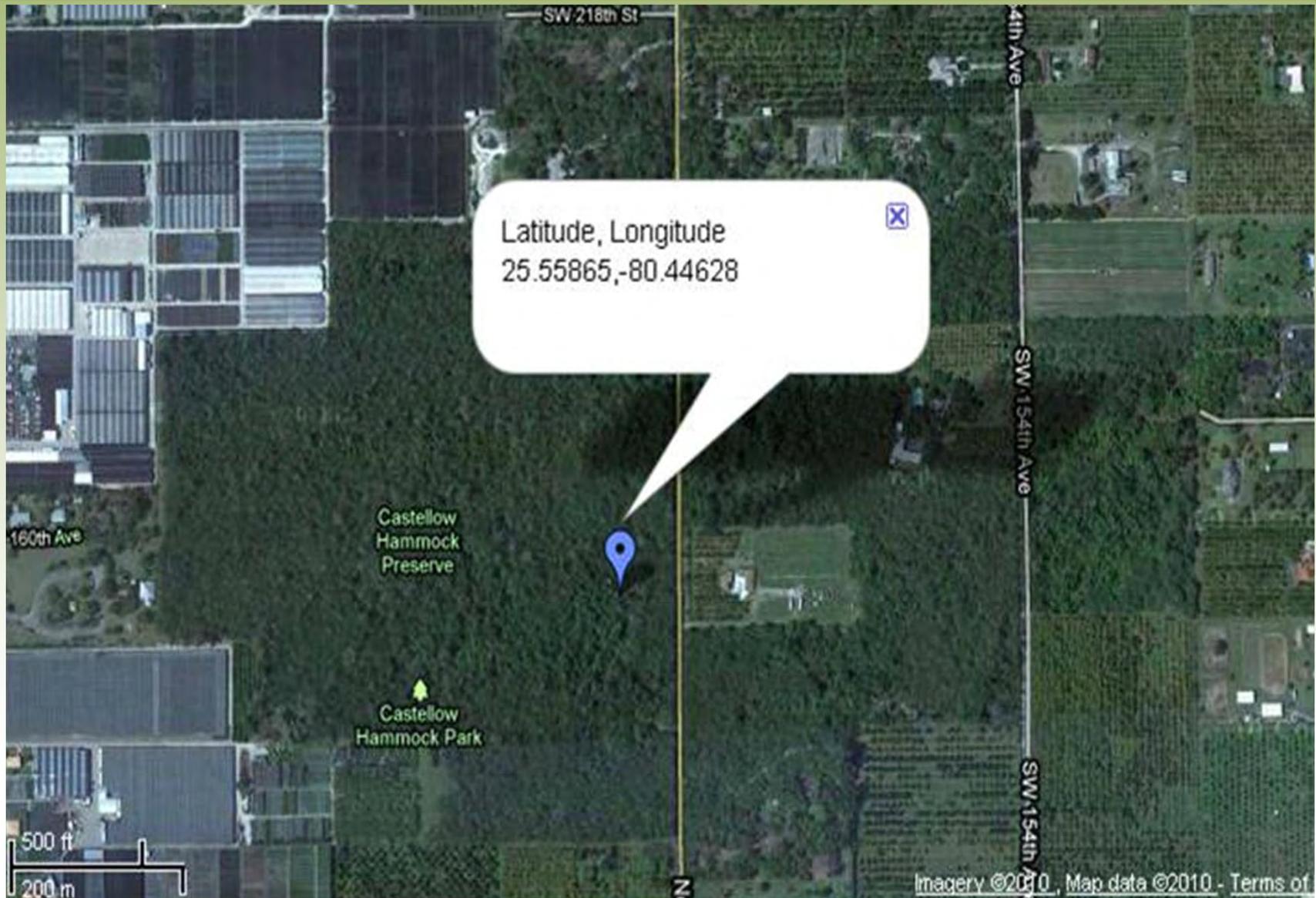
Initial response by FDACS, USDA and DPI



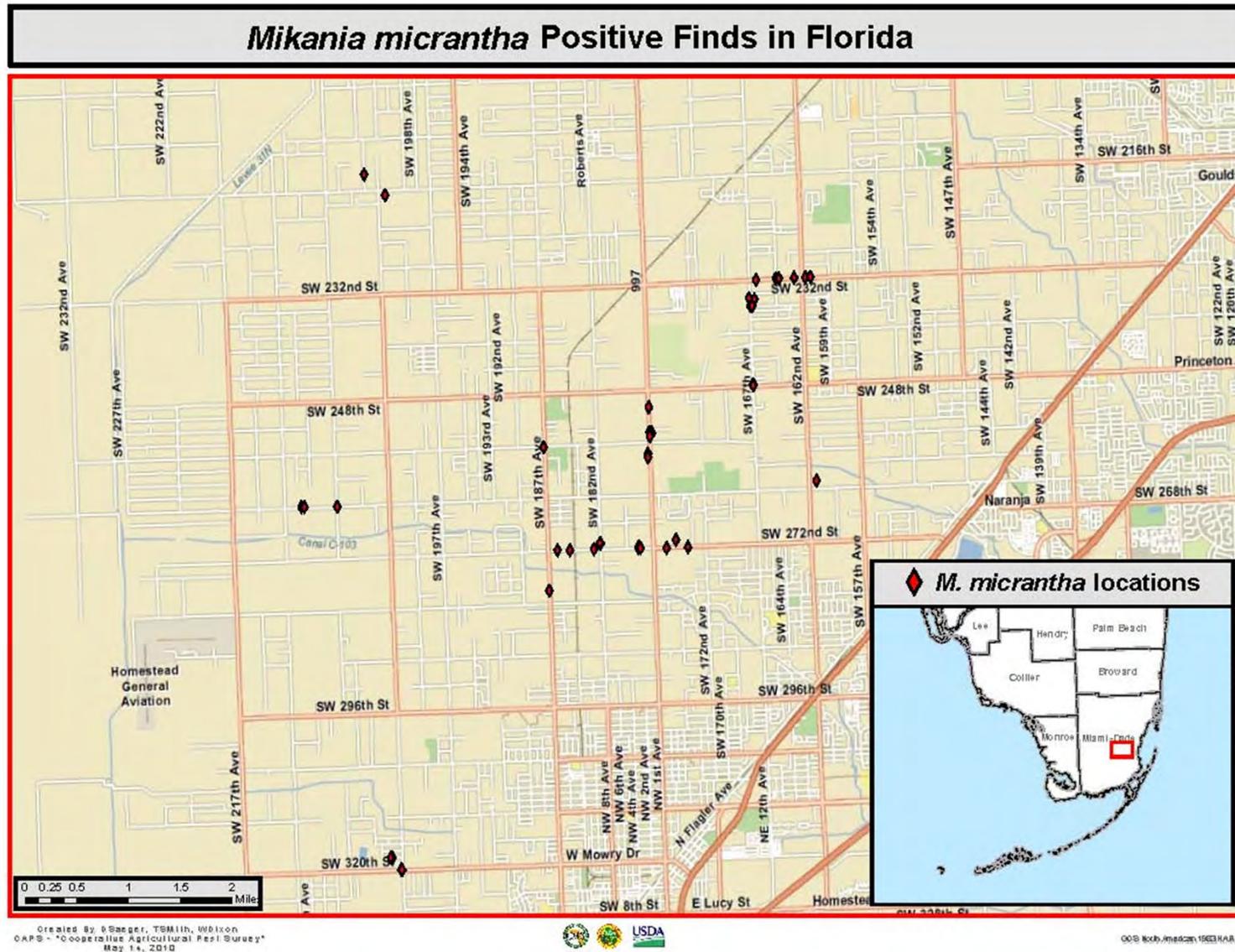
ECISMA initiated mapping and treatment workdays



Has spread into Miami-Dade County Natural Areas



Everglades National Park boundary is within miles of western most infestations



ECISMA continues to lead surveys to map and treat Mikania



No dedicated funding provided to date



Mikania micrantha is unlikely to be eradicated within next few years



Early Detection & Rapid Response Potential for Eradication: Unlikely



ECISMA Early Detection Rapid Response Initiatives:

Varanus niloticus , Nile monitor lizards

Reproducing population established within 10 years of discovery (estimated)

Large, carnivorous lizards, depredate Nile crocodile nests in Africa

ECISMA initiated EDRR, surveys, mapping and cooperative trapping effort

Biscayne National Park and Turkey Point nuclear power plant boundaries are within miles of documented sightings or collections

Second reproducing population discovered in Palm Beach County within miles of Loxahatchee National Wildlife Refuge

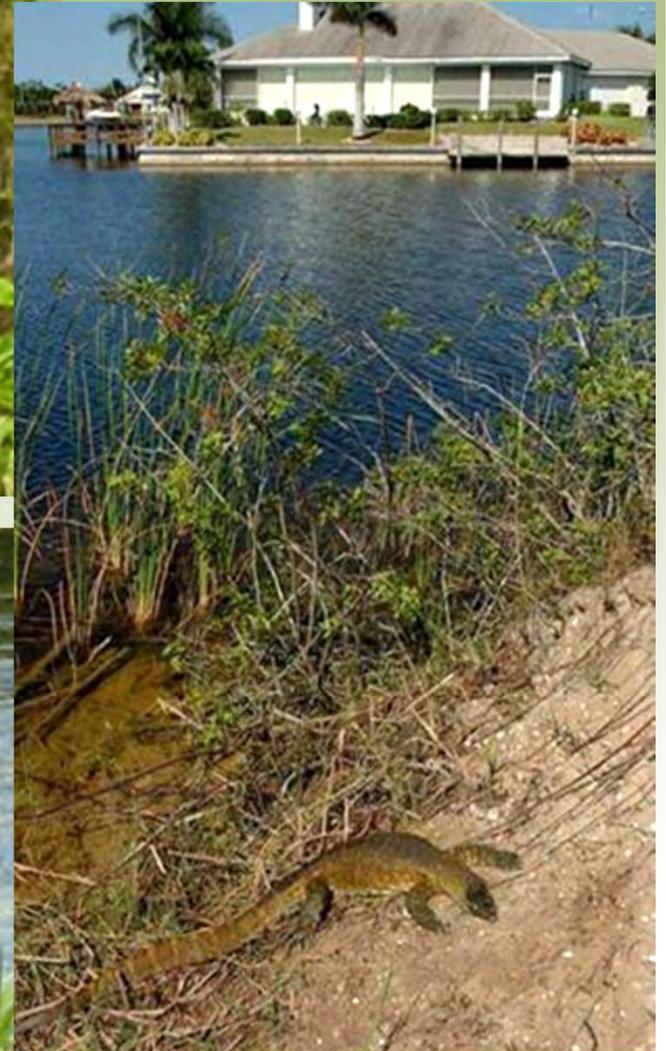
ECISMA has responded to sightings in Broward County

No dedicated management funding provided to date

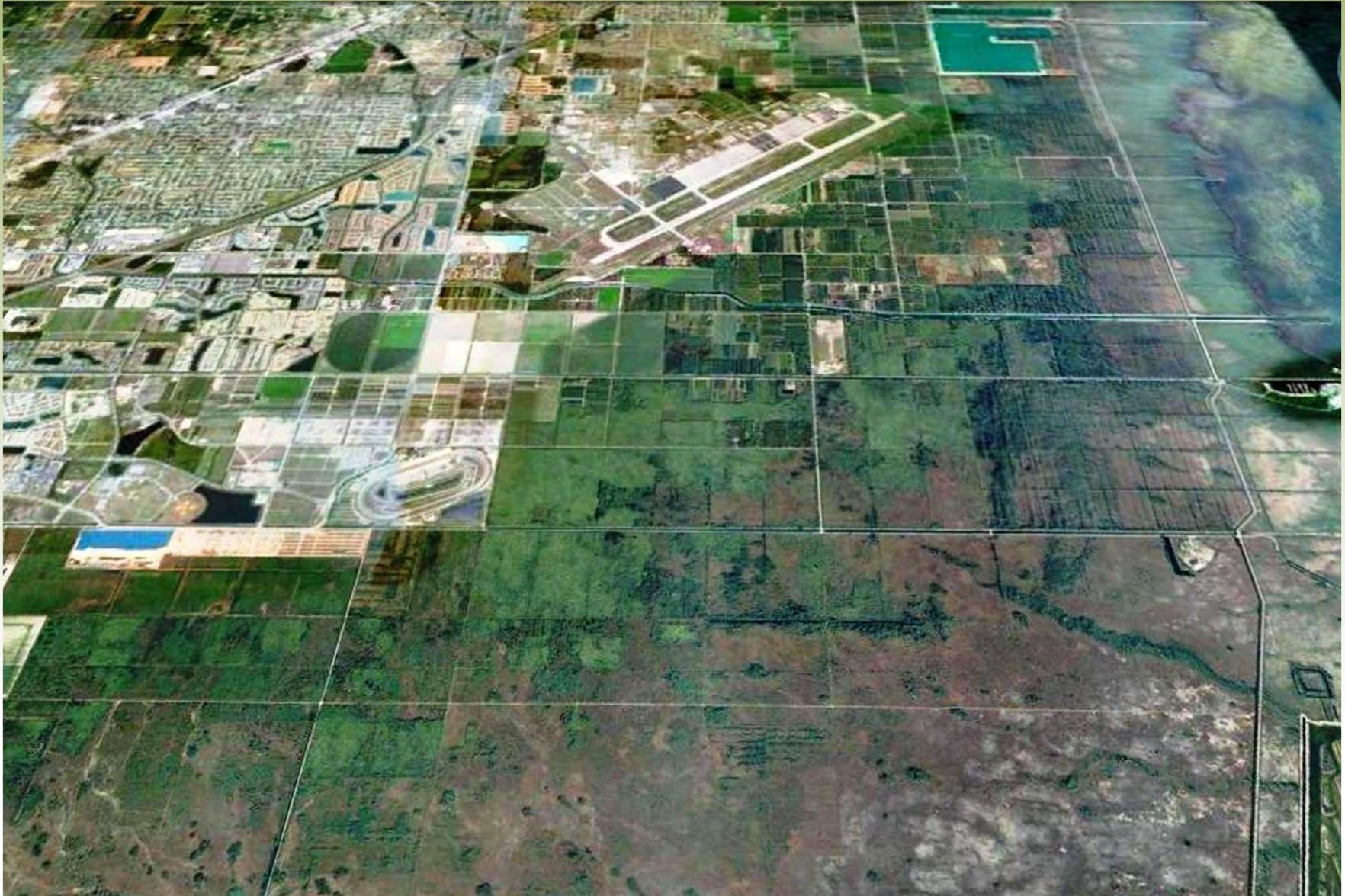
Eradiation is unlikely

Varanus niloticus

Nile monitor lizards



Reproducing population established within 10 years of discovery (estimated)



Large, carnivorous lizards, depredate Nile crocodile nests in Africa



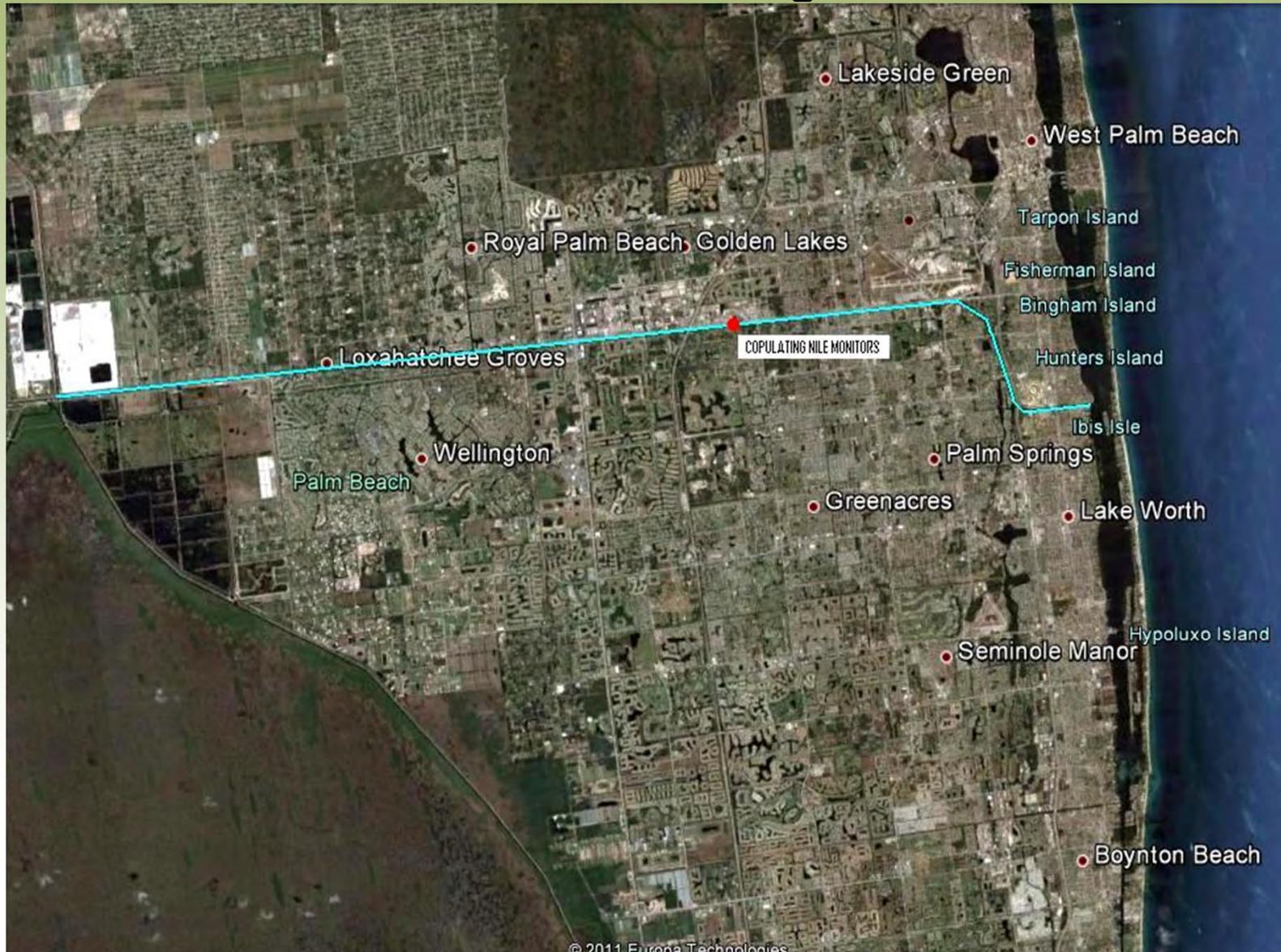
ECISMA initiated EDRR, surveys, mapping and cooperative trapping effort



Biscayne National Park and Turkey Point nuclear power plant boundaries are within miles of documented sightings or collections



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ECISMA has responded to sightings in Broward County



No dedicated management funding provided to date



Eradication is unlikely



Early Detection & Rapid Response Potential for Eradication: Unlikely



ECISMA Early Detection Rapid Response Initiatives:

Tupinambis merianae, Argentine black and white tegu lizards

Reproducing population established within 5 years of discovery (estimated)

Large, omnivorous South American lizards

ECISMA initiated EDRR, surveys, mapping and cooperative trapping effort, radio telemetry, diet analysis, _____

Established in eastern Everglades National Park

Biscayne National Park, Turkey Point nuclear power plant and Key Largo boundaries are within miles of documented sightings or collections

FWC, USGS, Zoo Miami and University of Florida now leading control effort

No dedicated management funding provided to date

Eradiation is unlikely

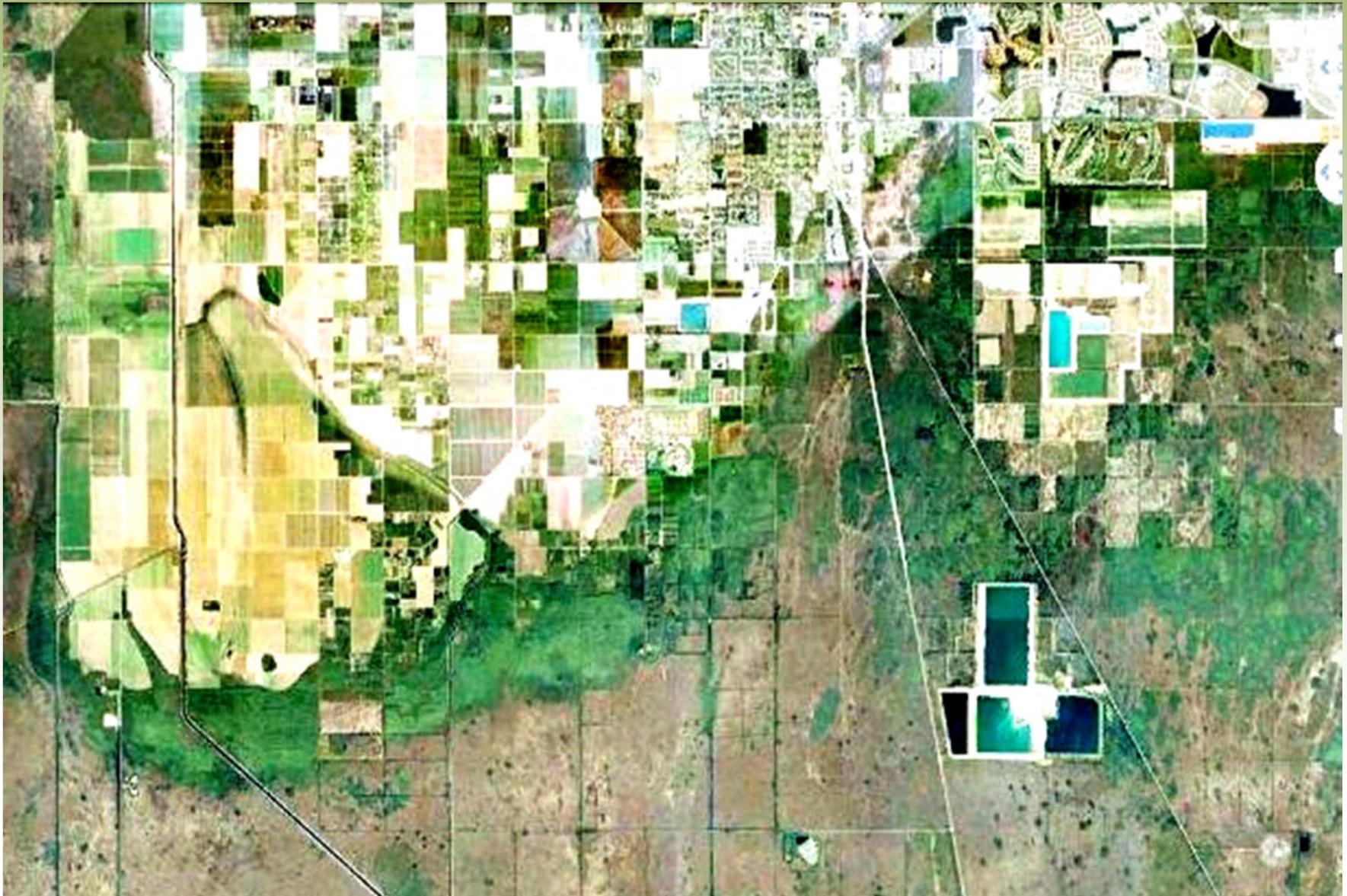
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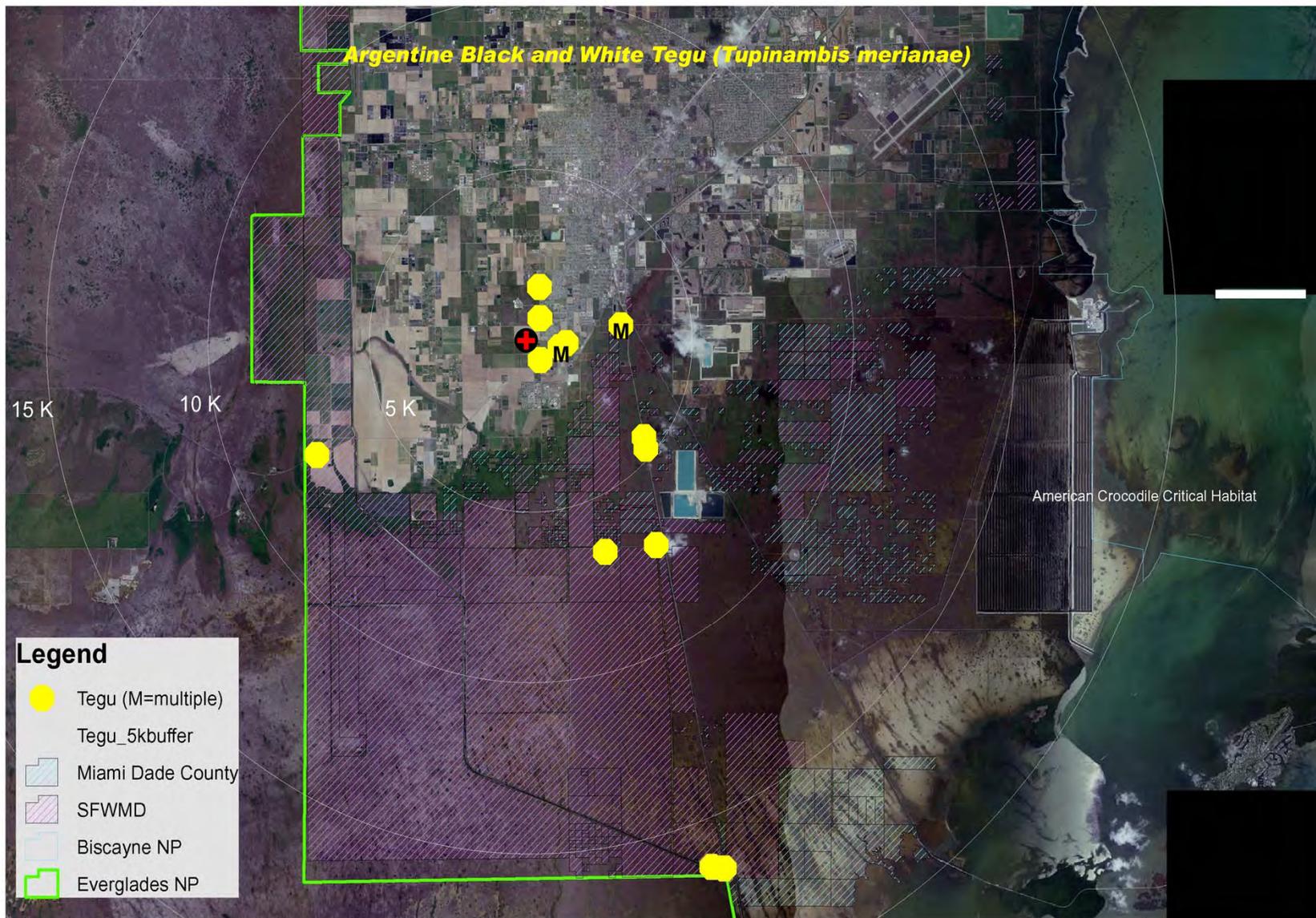
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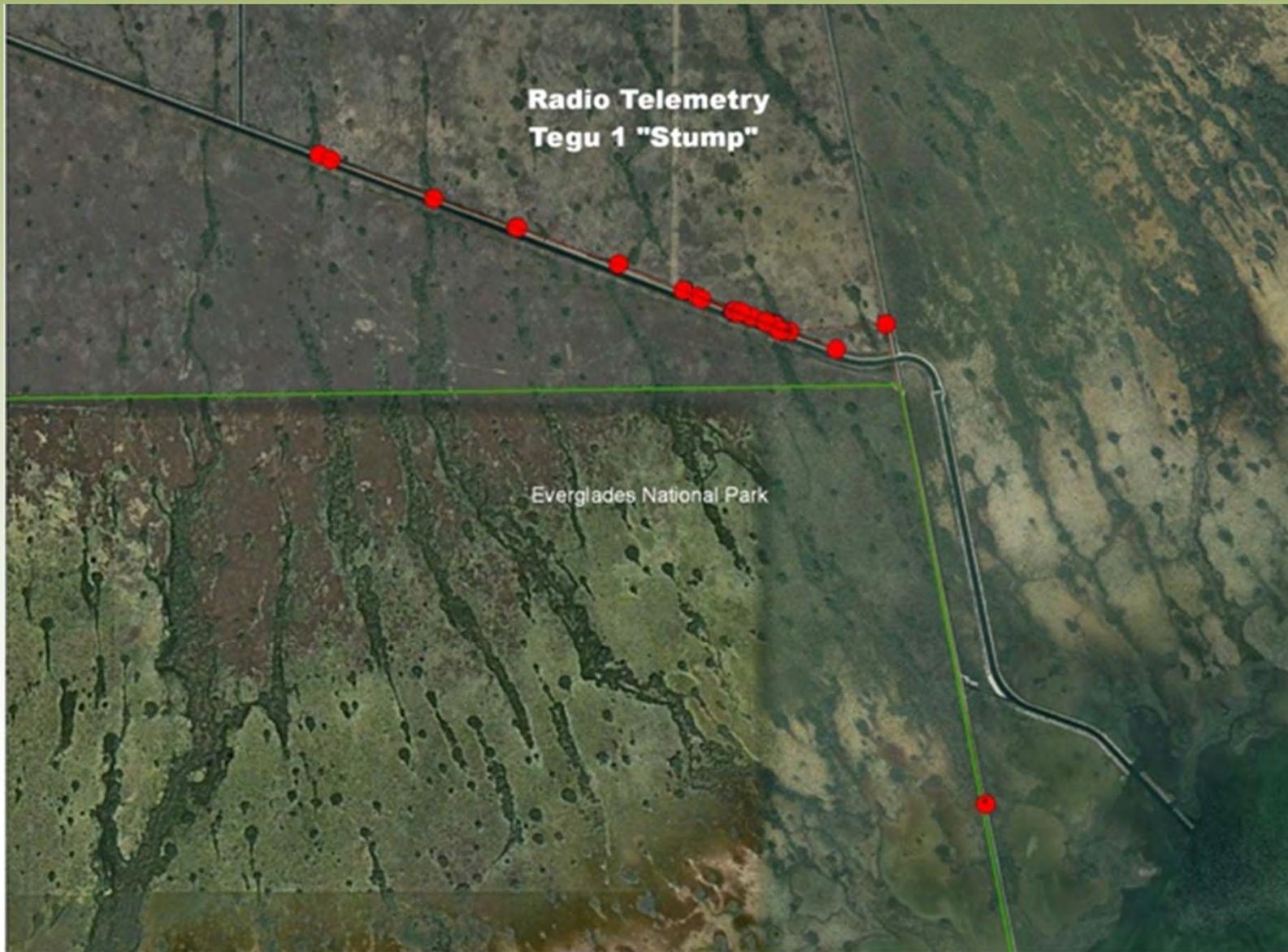
FWC, USGS, Zoo Miami and University of Florida now leading control effort



No dedicated management funding
provided to date



Eradication is unlikely



Early Detection & Rapid Response Potential for Eradication: Unknown



ECISMA Early Detection Rapid Response Initiatives:

Python sebae, Northern African Python

Large constrictor, closely related to ***Python molurus***, Burmese Python

Reproducing population established within 5 years of discovery (estimated)

ECISMA initiated EDRR, surveys, mapping and cooperative trapping effort

Everglades National Park eastern boundary within miles of documented population

ECISMA led surveys continue

No dedicated management funding provided to date

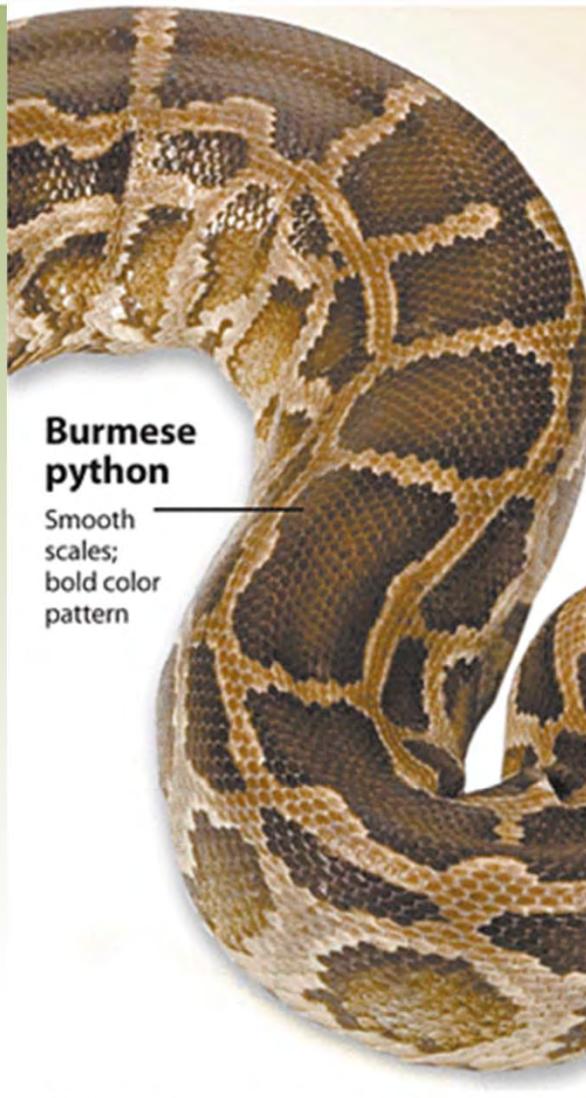
Eradiation is unlikely

Python sebae

Northern African Python



Large constrictor snake, closely related to *Python molurus*, Burmese Python



Giant snakes invade

Much of the world struggles with "introduced species" – destructive plants and animals from elsewhere – but South Florida's Everglades swamp has a notable invader, a giant predatory snake.

Burmese python
Smooth scales;
bold color pattern

Hatchling: 19-31 in. (48-79 cm)
Adult: 15-20 ft. (4.5-6 m)

Adult human

Largest adults: 23 ft. (7 m); live 15 to 20 years

Nonvenomous; kills by constricting coils when longer than 8 ft. (2.4 m)

Eggs



SOURCE: Florida Institute of Food and Agricultural Sciences, US Geological Survey, American Museum of Natural History, US Fish & Wildlife Services

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Reproduces quickly: Female python lays 30 to 100 eggs at a time.

Reproducing population established within 5 years of discovery (estimated)

Bird Road Basin African Python Observations
Exotic Species Database
Fish and Wildlife Conservation Commission
22-Dec-2009



ECISMA initiated EDRR, surveys, mapping and cooperative trapping effort



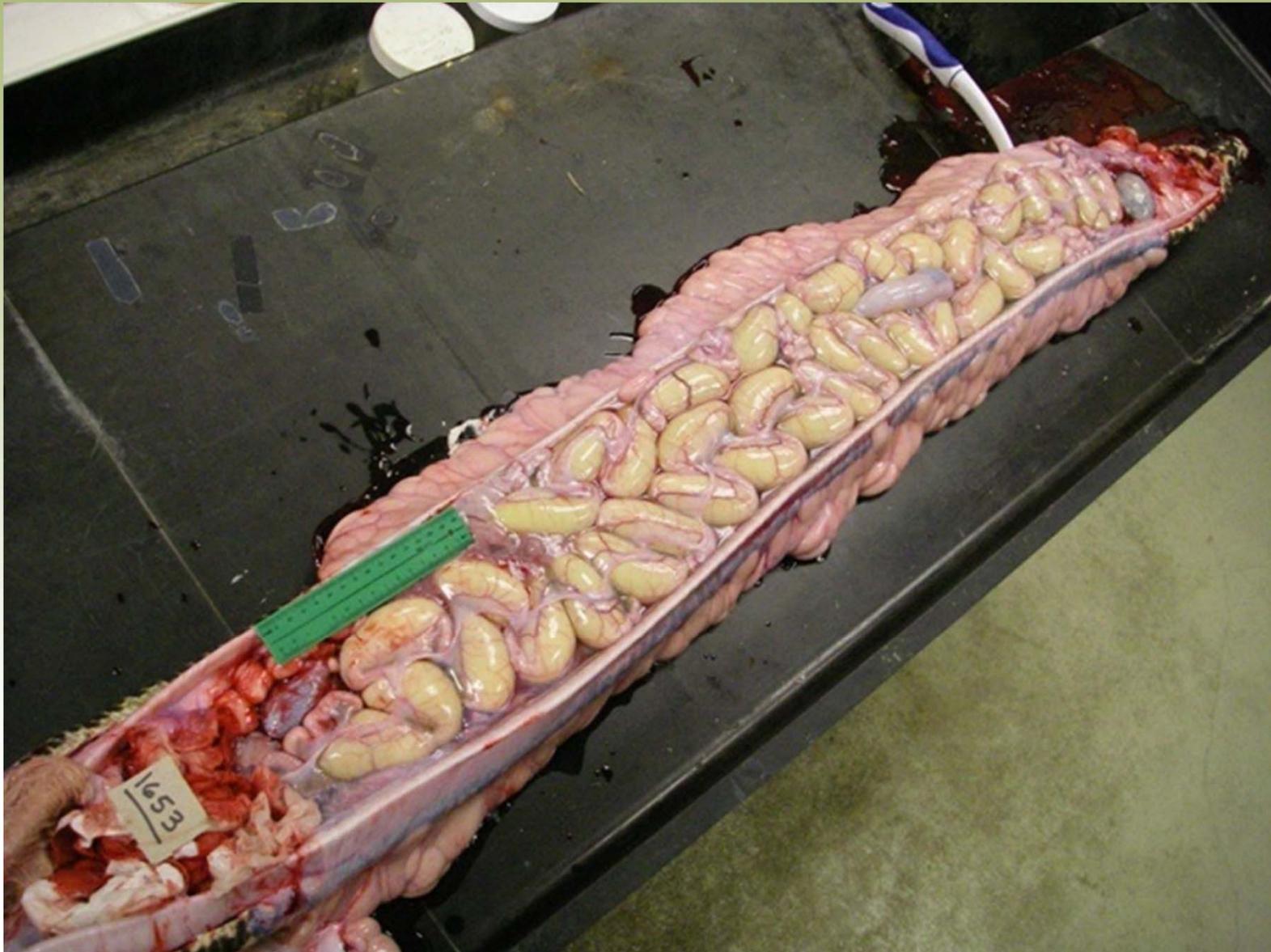
ECISMA led surveys continue



No dedicated management funding
provided to date



Eradication is unlikely



Early Detection & Rapid Response Potential for Eradication: None



ECISMA Early Detection Rapid Response Initiatives:

Invasive Fresh Water Fishes

Assist Florida Fish and Wildlife Conservation Commission monitor invasive fresh water fish species presence/absence

Host an annual Non-Native Fish Round Up to enlist fresh water fish anglers to fish for exotic fresh water fish compete for cash and prizes

ECISMA data collected at Non-Native Fish Round Up's have extended known ranges of non-native fish species

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Recommendations

Promote federal prevention initiatives

Establish Everglades Early Detection/Rapid Response (EDRR) Coordinator and dedicated EDRR funding

Coordinate development of cross-cut budget

Promote continued improvements to coordination

Promote National Screening

It is most cost effective to prevent invasive, exotic species

There are assessment tools that have been developed in other countries that could be adapted for the United States

Enhance EDRR Capabilities

It's the second most cost effective and certain way to prevent the spread of introduced invasive species

A dedicated federal EDRR position for animals (all taxa) to complement (lead) on-going efforts

Dedicated interagency funding to implement EDRR

Develop a Cross-Cut Budget

Without knowing collectively how much and where we're spending, it's hard to define what's needed to sustain success

A coordinated cross-cut budget for south Florida
invasive exotics

Enhance Coordination

To build on the successes of the interagency, invasive species coordination pioneered by:

Everglades Cooperative Invasive Species Management Area (ECISMA)

&

Florida Exotic Pest Plant Council (FLEPPC)

Formally develop a framework for regional comprehensive invasive species management

Frontload compliance for EDRR

Improve resource sharing capabilities

Questions

