



Picayune Strand Restoration Project: Vegetation Management Update

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Big Cypress Basin Board Meeting

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Overview

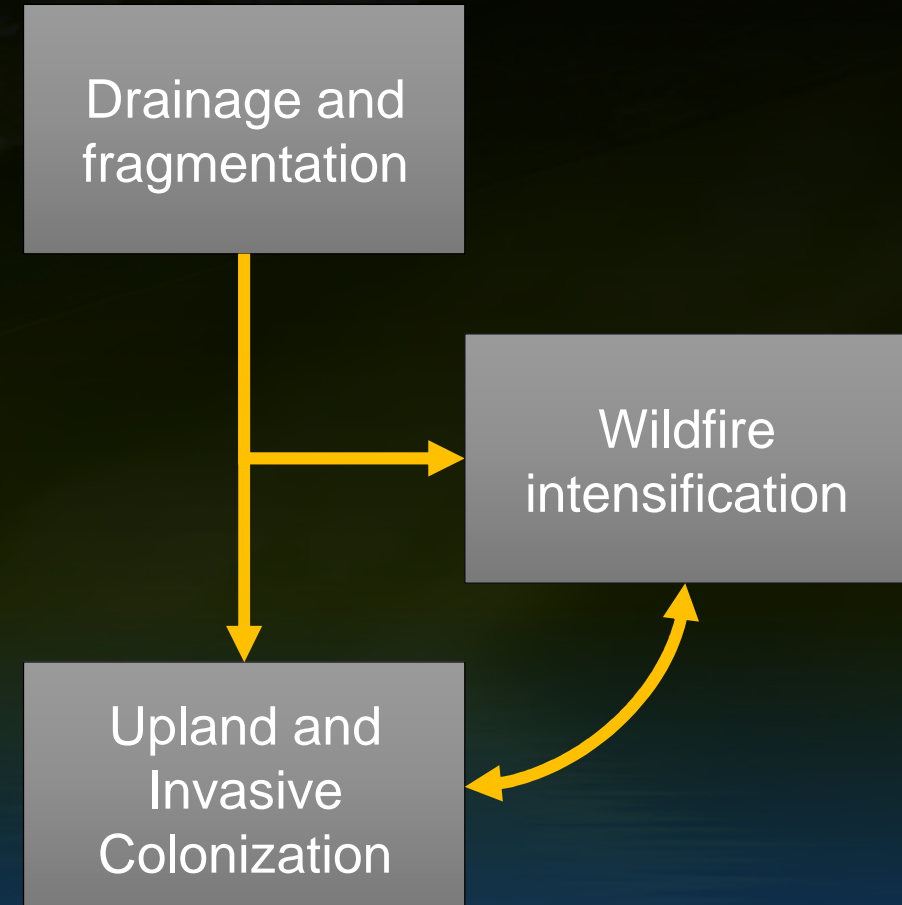
- Invasive and nuisance species at Picayune Strand Restoration Project
- Vegetation management plan strategy
- Progress to date
- Future plans



Restoring natural grade of Picayune Strand topography

Picayune Strand Plant Community Shifts

- Historically hydric pine flatwoods, marshes, and cypress swamps
- Regional drainage triggered cascading plant community effects



Priority Invasive and Nuisance Species

- Several dominant invasive species
 - Brazilian pepper
 - Cogon grass
- Native upland species also impact ecosystem processes and critical habitat
 - Sabal palm
- Numerous other priority invasive plant species throughout project area
 - Melaleuca, Old World climbing fern, earleaf acacia, torpedograss



Dense cogon grass stands displace native understory species

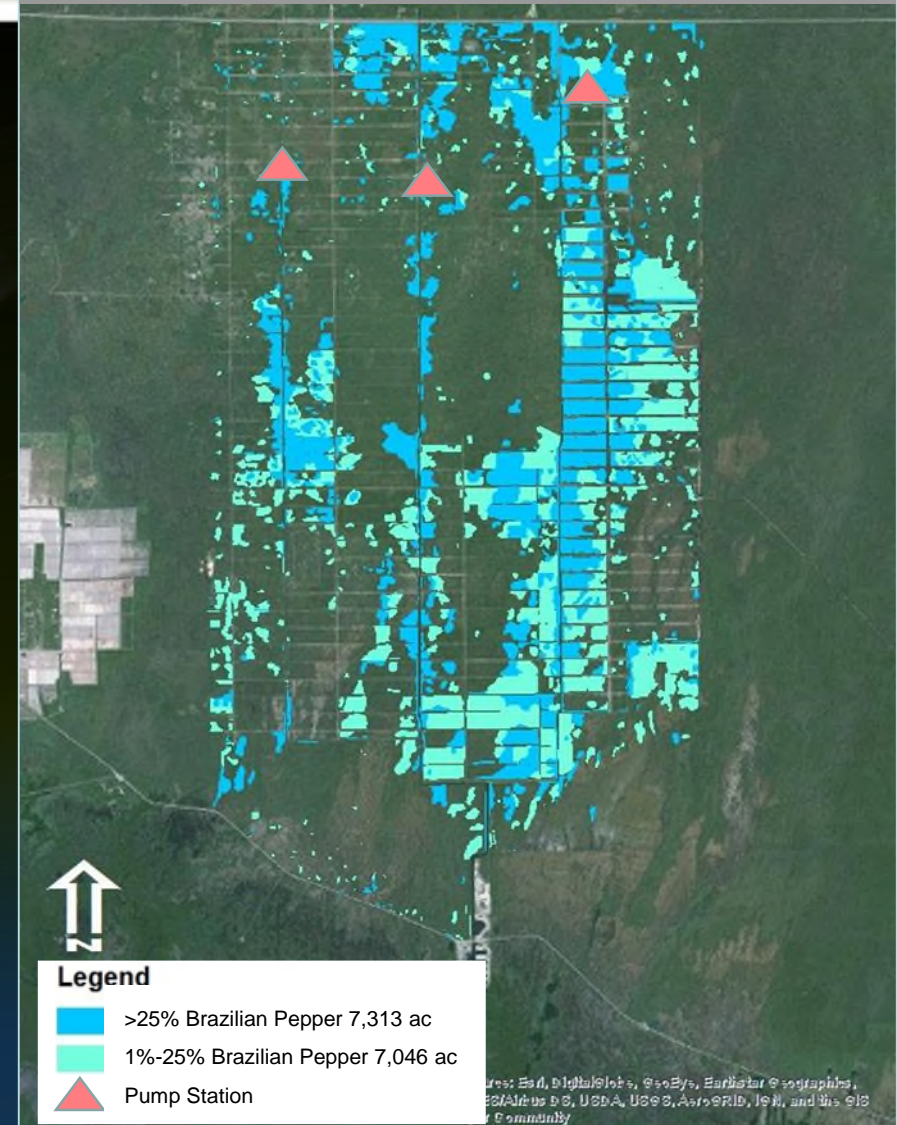
Brazilian Pepper

- The most dominant invasive
- Occupies ~14,000 acres
 - 25% of restoration footprint

Brazilian pepper thicket



Dense Brazilian Pepper Distribution
~14,000 acres



Sabal Palm Alters Fire Behavior, Plant Communities

- Sabal palm (native) dominates drained wetlands
- Occupies over 18% of restoration footprint
- Increases fire intensity
- Degrades critical panther habitat



Aerial view of sabal palm encroachment



No Sabal palm treatments:
Note high burn scars

Sabal palm treated before burn

Responses to Hydrologic Restoration

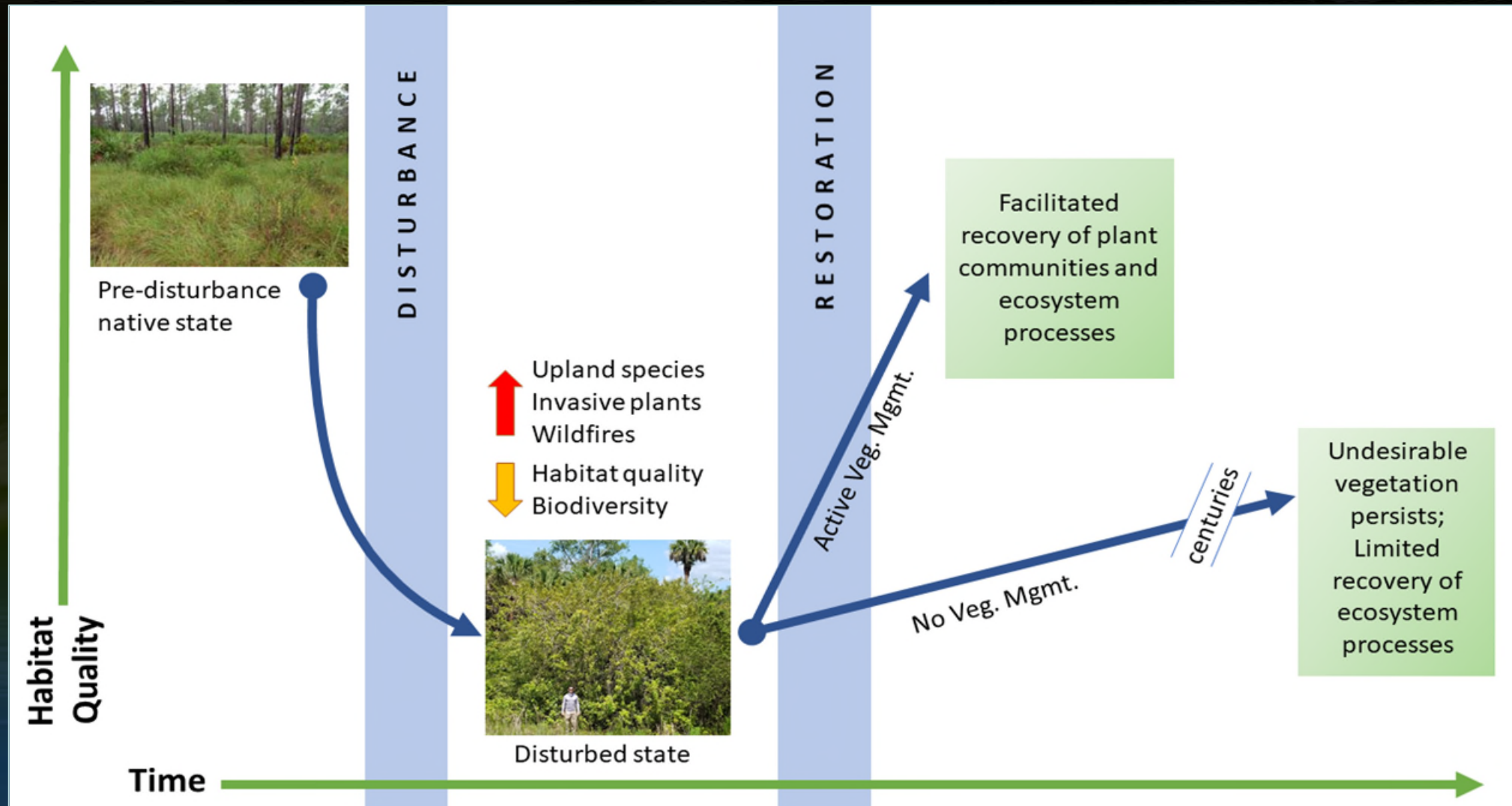
Upland Adapted Species

- Established populations decline, but at varied rates
- Minimal colonization of new species
- Sabal palm and Brazilian pepper expected to persist

Wetland Adapted Species

- Most established species will expand
- Includes invasive species
- New native and non-native colonizers
- Melaleuca, Old World climbing fern, some invasive grasses will expand

Restoration Requires Active Management



Vegetation Management Plan

➤ Construction Phase

- Initial control efforts in construction footprint by USACE

➤ Operations Phase Plan

- Implemented by SFWMD, 50% reimbursement from USACE

➤ Two Objectives

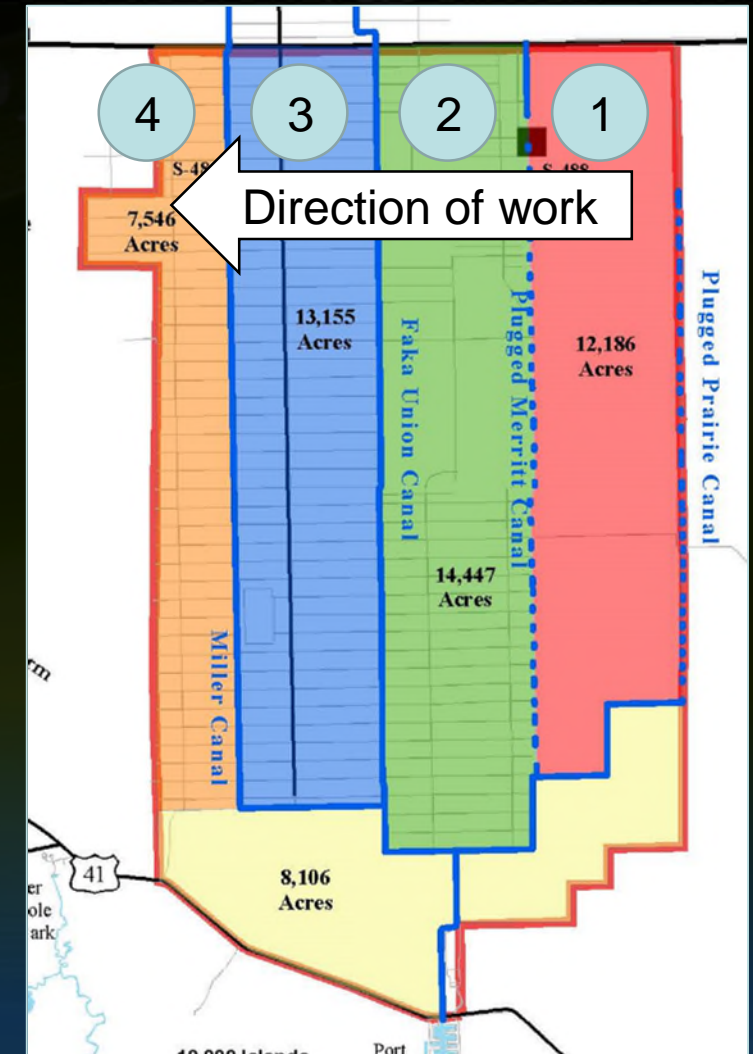
- Facilitate desired vegetation in construction footprint
- Remove invasive and nuisance species in forested areas (*Non-Construction footprint*)

➤ Plan Components

- **Priority species**
- **Timetable and spatial approach**
- **Budget**

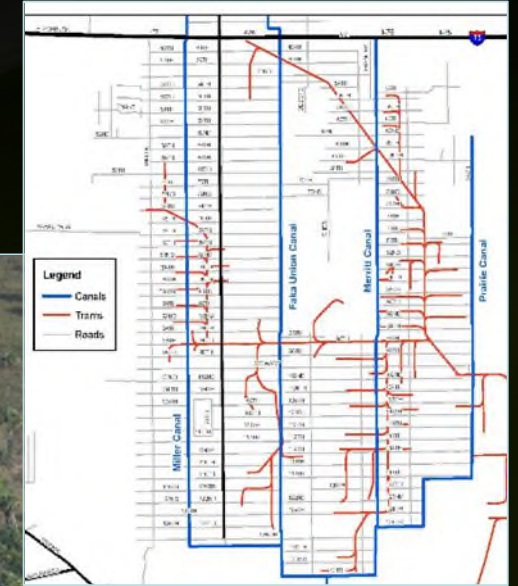
Vegetation Management Strategy

- Systematic approach, follow restoration
- Establish species priorities
 - Based on risk after hydrology is restored
- Integrated Pest Management Approach
 - Strategically combine prevention, herbicide, fire, biological and mechanical controls
- Maintenance Control
 - Emphasize follow up treatments -- “hold ground”



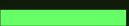
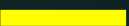

Construction Footprint

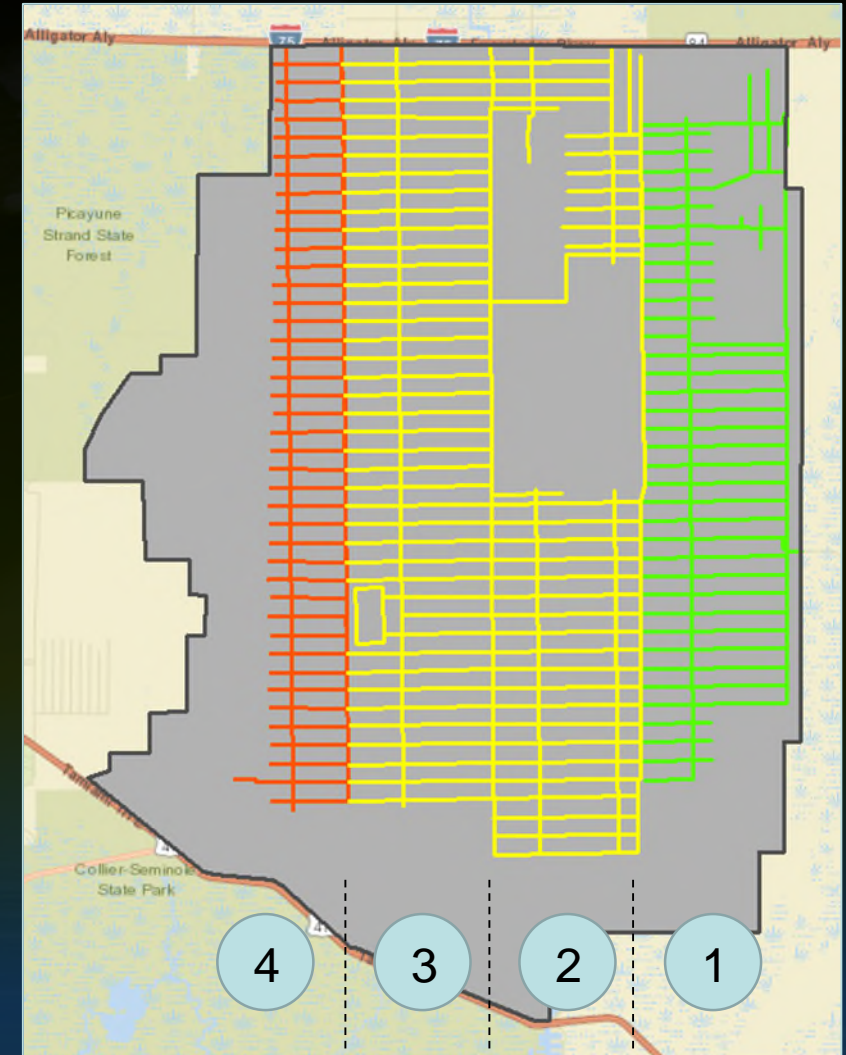
- Maintain 395 miles of removed roads and filled canals
 - Limit spread of priority invasive plants
 - Facilitate establishment of desired species
 - Initiate treatments within one year of phase completion



Construction Footprint: Progress to Date

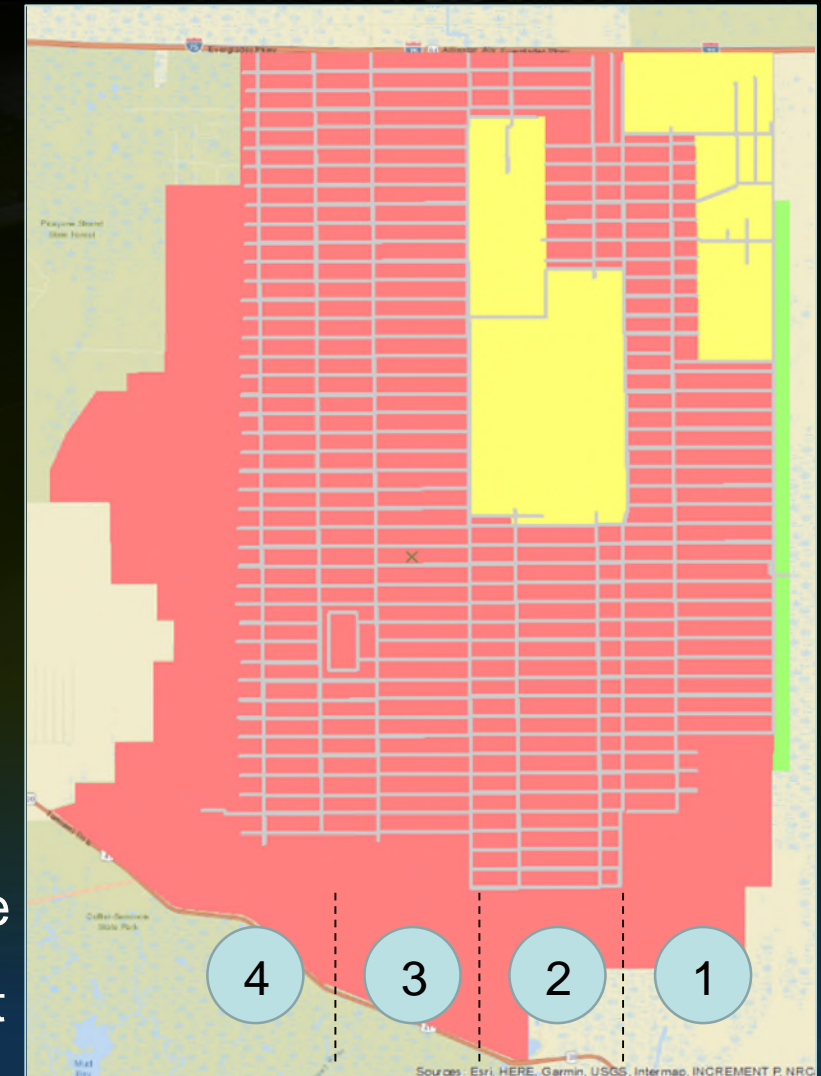
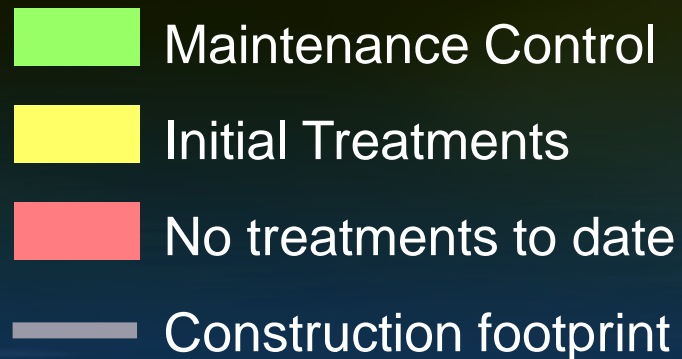
- Invasive plants at maintenance level control in Phase 1
- Initial and follow up treatments completed in Phases 2 and 3
- No treatments to date in Phase 4

-  Maintenance Control
-  Initial Treatments
-  No treatments to date



Non-Construction Footprint: Progress to Date

- Initial treatments in northern portions of Phases 1 and 2 (8,866 acres)
- Maintenance control limited to small segment of Prairie Canal
- No treatments to date in remainder of non-construction footprint



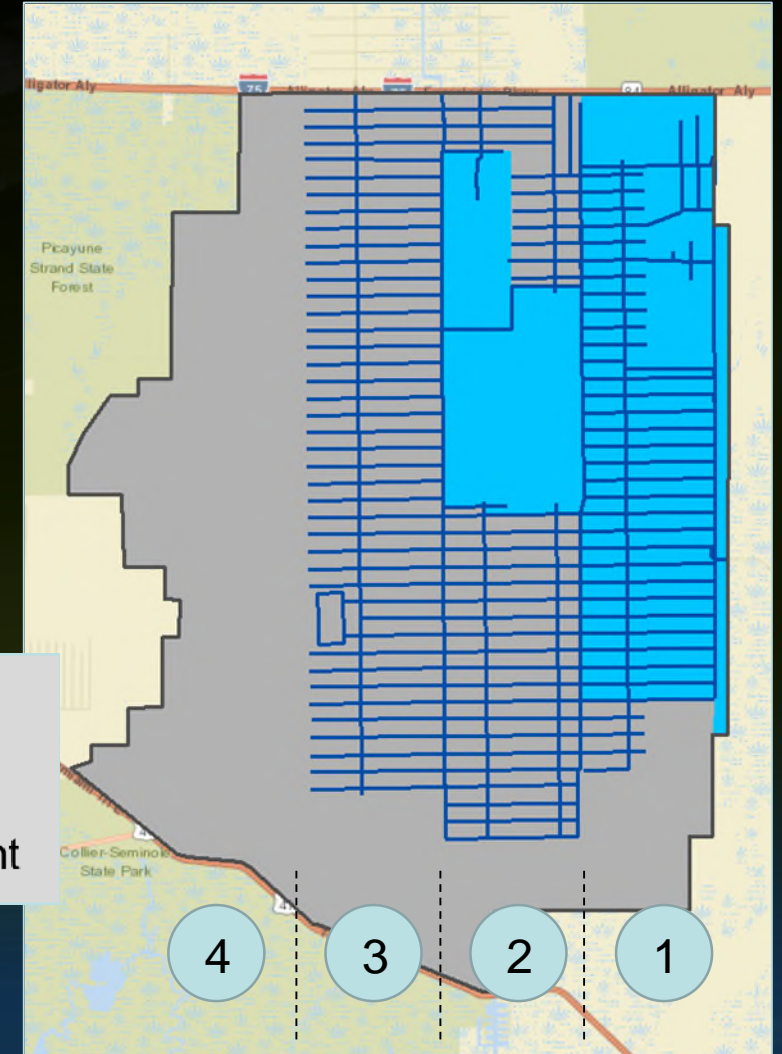
FY21 Planned Treatments

- Budget: \$3.8 million
- Construction Footprint
 - Follow up treatments in Phases 1-3
- Non-Construction Footprint
 - Follow up and initial treatments in Phases 1 and 2

FY21 Planned Treatments

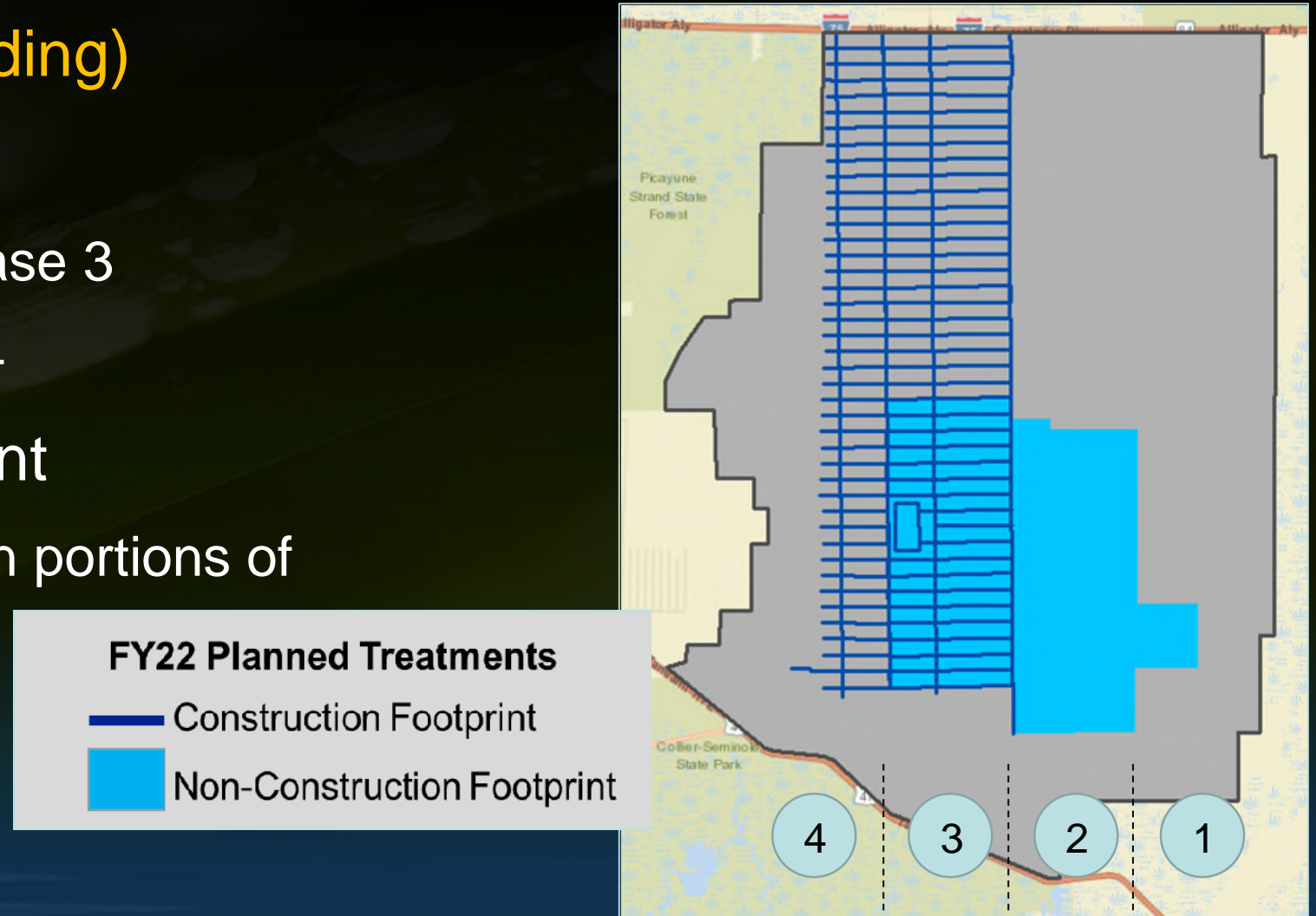
— Construction Footprint

■ Non-Construction Footprint



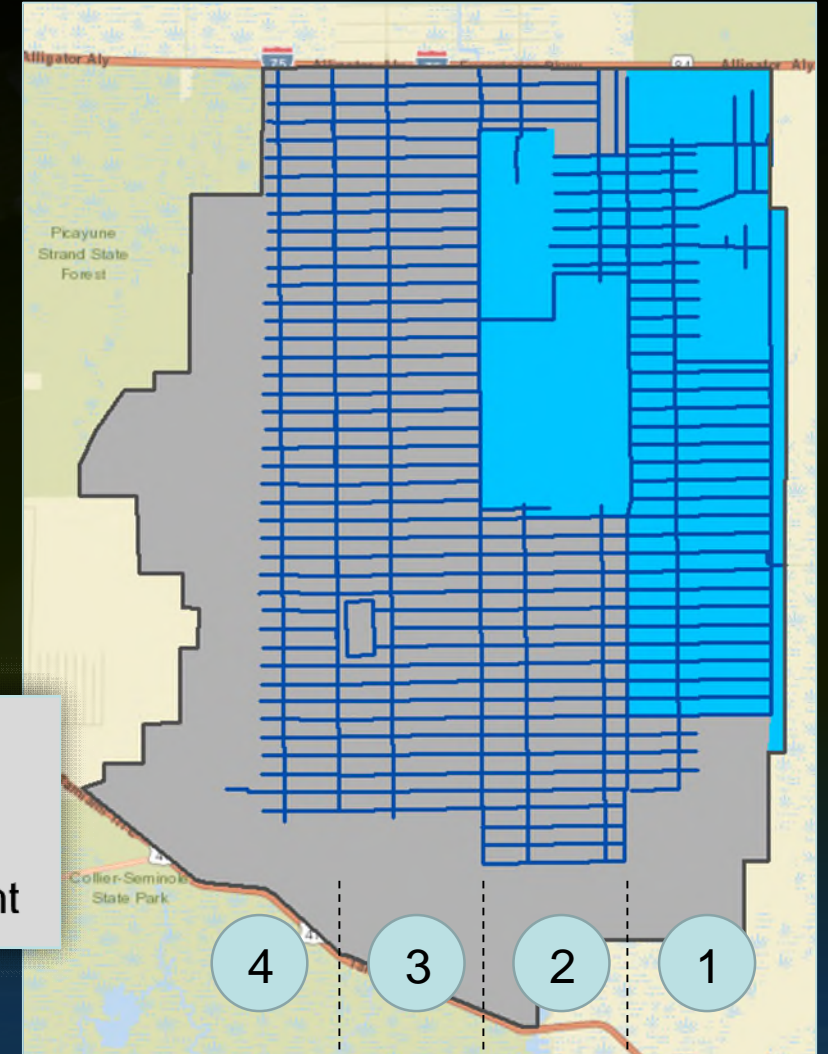
FY22 Planned Treatments

- Budget: \$3.4 million (pending)
- Construction Footprint
 - Follow up treatments in Phase 3
 - Initial treatments in Phase 4
- Non-Construction Footprint
 - Initial treatments in southern portions of Phases 2 and 3



FY23 Planned Treatments

- Budget: \$3.6 million (pending)
- Construction Footprint
 - Follow up treatments in all phases
- Non-Construction Footprint
 - Follow up and initial treatments in Phases 1 and 2



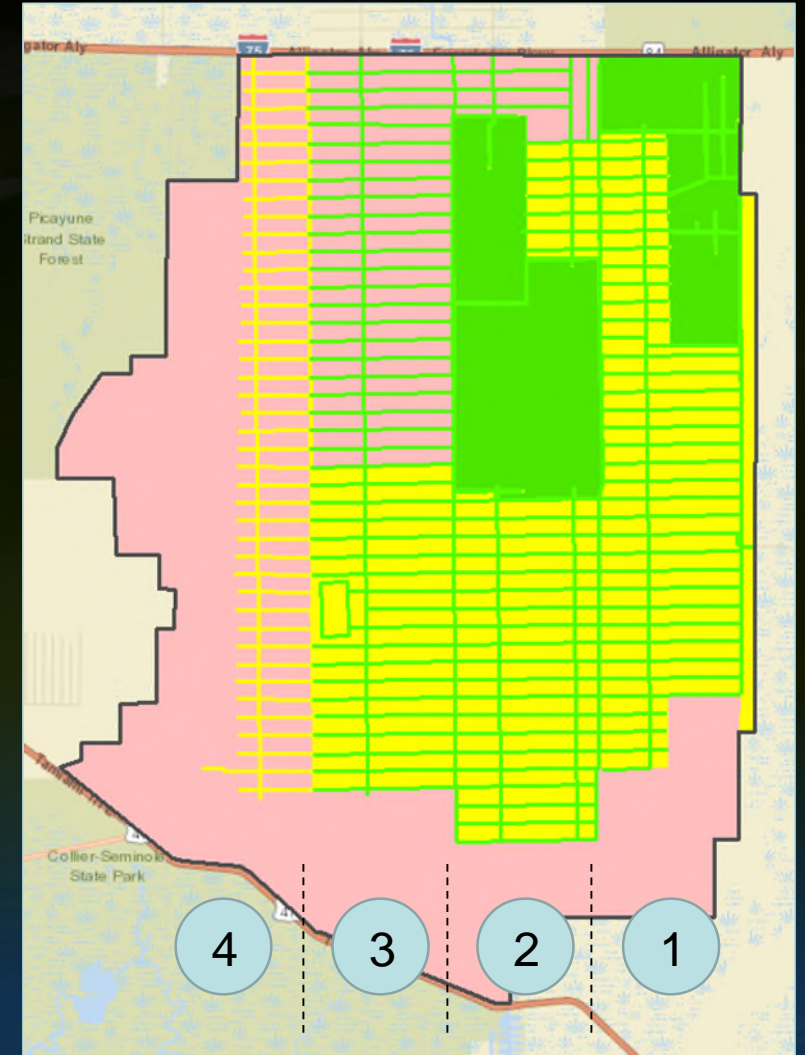
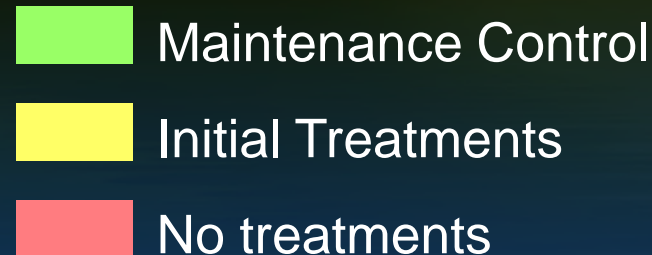
Summary of FY21-23 Treatment Goals

➤ Construction Footprint Target

- Maintenance 81%
- Initial Treatments 19%

➤ Non-Construction Footprint Target

- Maintenance 14%
- Initial Treatments 49%
- Untreated 37%



Challenges

- Funding and staffing
- Fire program
 - Coordination/integration with Florida Forest Service
- Contractor base
 - Experienced contractor availability
 - Training, guiding new contractors
- Sabal palm control
 - Will be integrated into plan following intensive Brazilian pepper removal



Sabal palm encroachment into freshwater marsh

Key Points

- Vegetation management is required to meet restoration and permit targets.
- High risk species are the first priority.
- Control efforts will be sequenced with hydrologic restoration phases.
- Consistent, long-term funding and staffing are necessary to achieve objectives.



Vegetation recovery in construction footprint

Questions

