

Ground Application Services

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South Florida Water Management District

Governing Board Meeting

July 9, 2020

Invasive and Nuisance Plant Species

➤ Invasive Exotic Species:

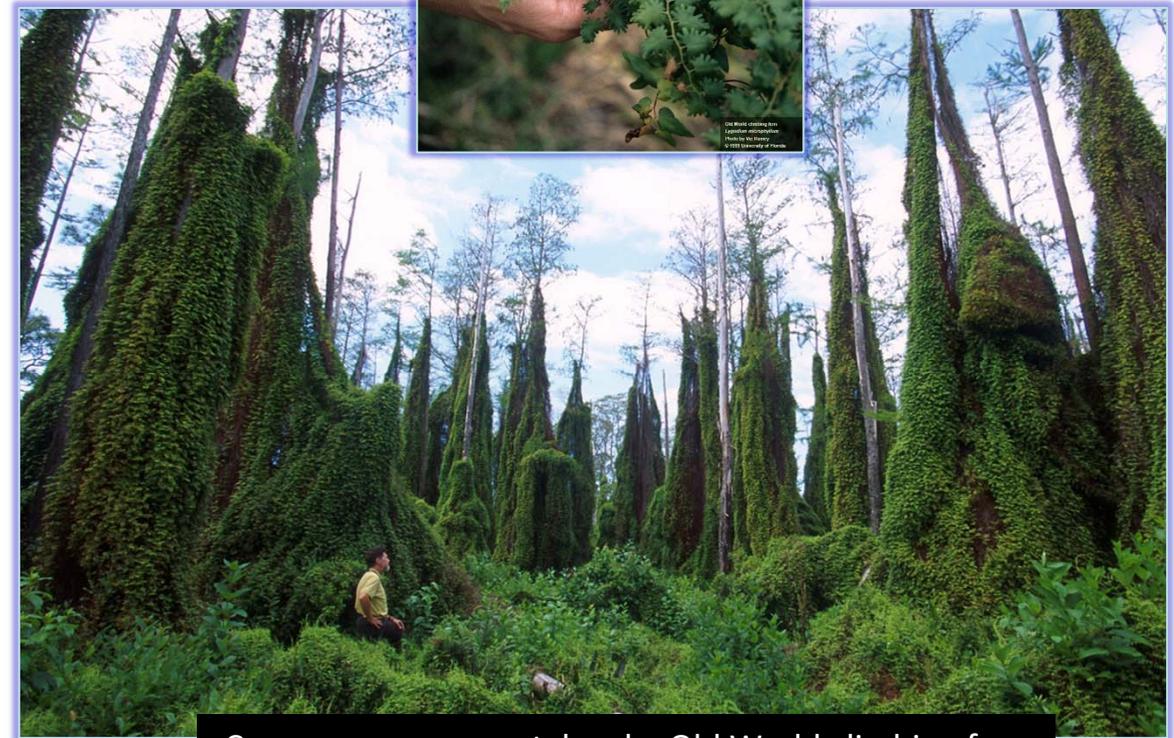
- Non-native
- Causes economic or environmental harm or harm to human health.

➤ Nuisance Vegetation:

- Typically native plant species
- Problematic in disturbed areas or interfere with infrastructure

➤ **1005** naturalized non-native plant species within SFWMD jurisdiction

- Manage over 76 priority invasive plants
- **18** are widely established on District Managed lands and waterways.



Cypress swamp overtaken by Old World climbing fern

Impacts of Invasive Plants



- Significant impacts to the District's mission
- Alteration of ecosystem structure/processes
 - Displacement of native flora and endangerment of threatened species
 - Alteration/loss of wildlife habitat
 - Impacts to operations/restoration infrastructure
 - Impacts to flood control mission and water conveyance

SFWMD Vegetation Management Program

➤ Purpose

- Protect progress on Everglades restoration efforts and natural resources
- Protect flood control system
- Improve Stormwater Treatment Area (STA) function through vegetation optimization



Mechanical harvesting



Grass carp stocking

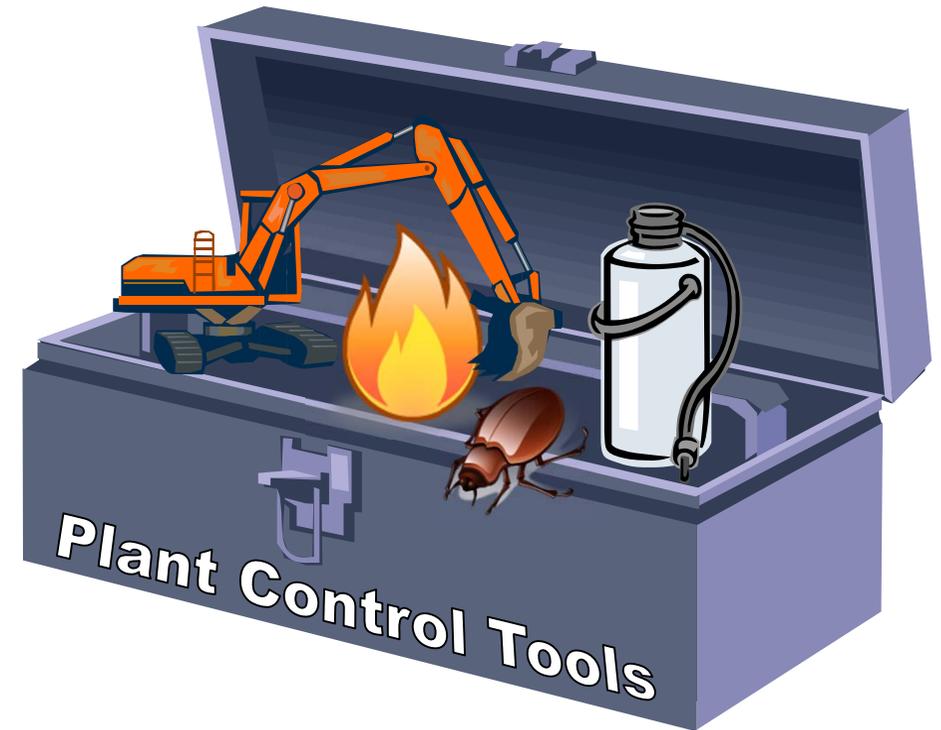


Levee Mowing

Vegetation Control Tools

➤ Five Control Tool Categories

- Prevention
- Biological
- Mechanical
- Chemical
- Cultural



Integrated Pest Management



Chemical



Cultural



Biological



Public Engagement



Mechanical



SFWMD Vegetation Management Strategy

- Maintenance Control
 - Maintain invasive and nuisance plants at lowest feasible level

- Ground Application Services
 - Certified applicators
 - Laborers
 - Equipment and supplies
 - Airboats, buggies, sprayers, herbicides etc.
 - Innovations
 - Align with District's herbicide reduction strategy



Top: Initial melaleuca treatment



Left: melaleuca present, but under maintenance control

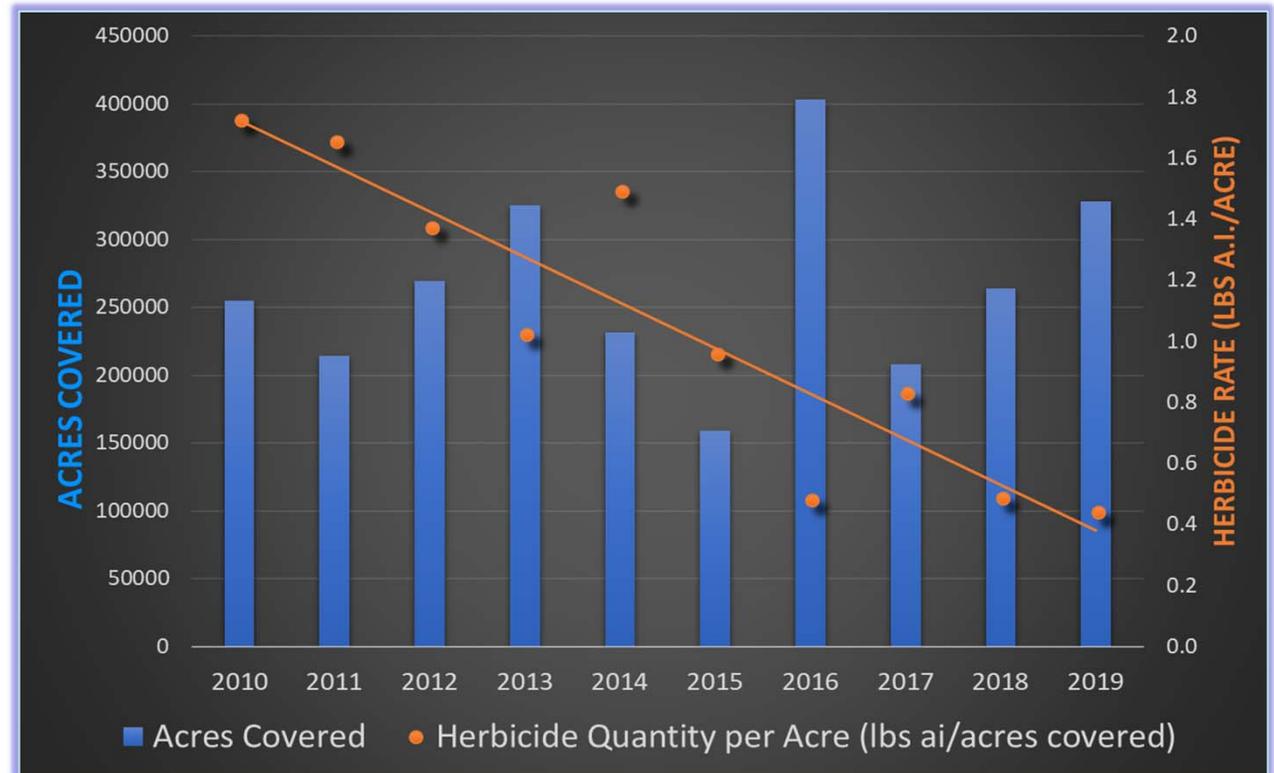
Herbicide Reduction Strategy

➤ Purpose

- Achieve goals and mandates of District vegetation management program while addressing public concerns

➤ Goals

- Continue progress toward maintenance control through enhanced program oversight and maximizing Integrated Pest Management (IPM)
- During the next five years, reduce herbicide use by an **additional 20%** while maintaining acceptable level of control



Efficient Herbicides and Application Techniques

Sponge applicator



Spray pattern & soil treatment



Left:
Reduced hack
methodology with
new chemistries



Above: Traditional
girdle treatment



Planting in the STAs



Backpack application (Cypress Creek)



Ground crew treating melaleuca (WCA1)

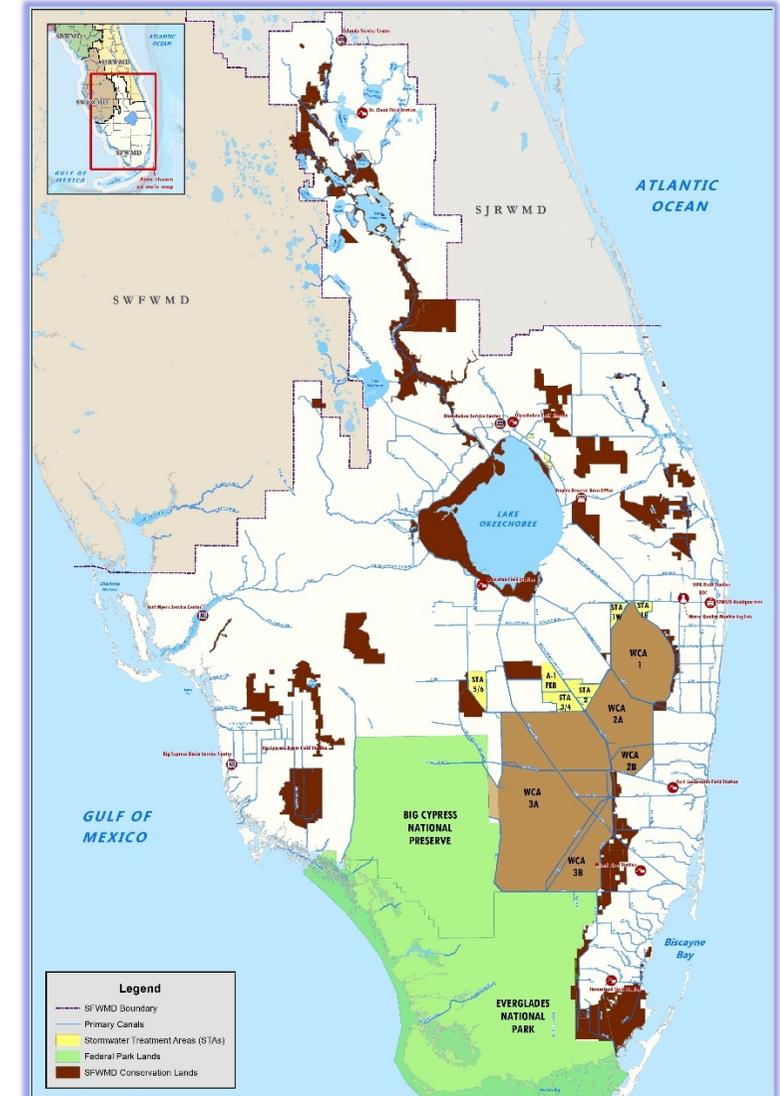


Spraying from airboat (STA 1W)

Ground Application Services

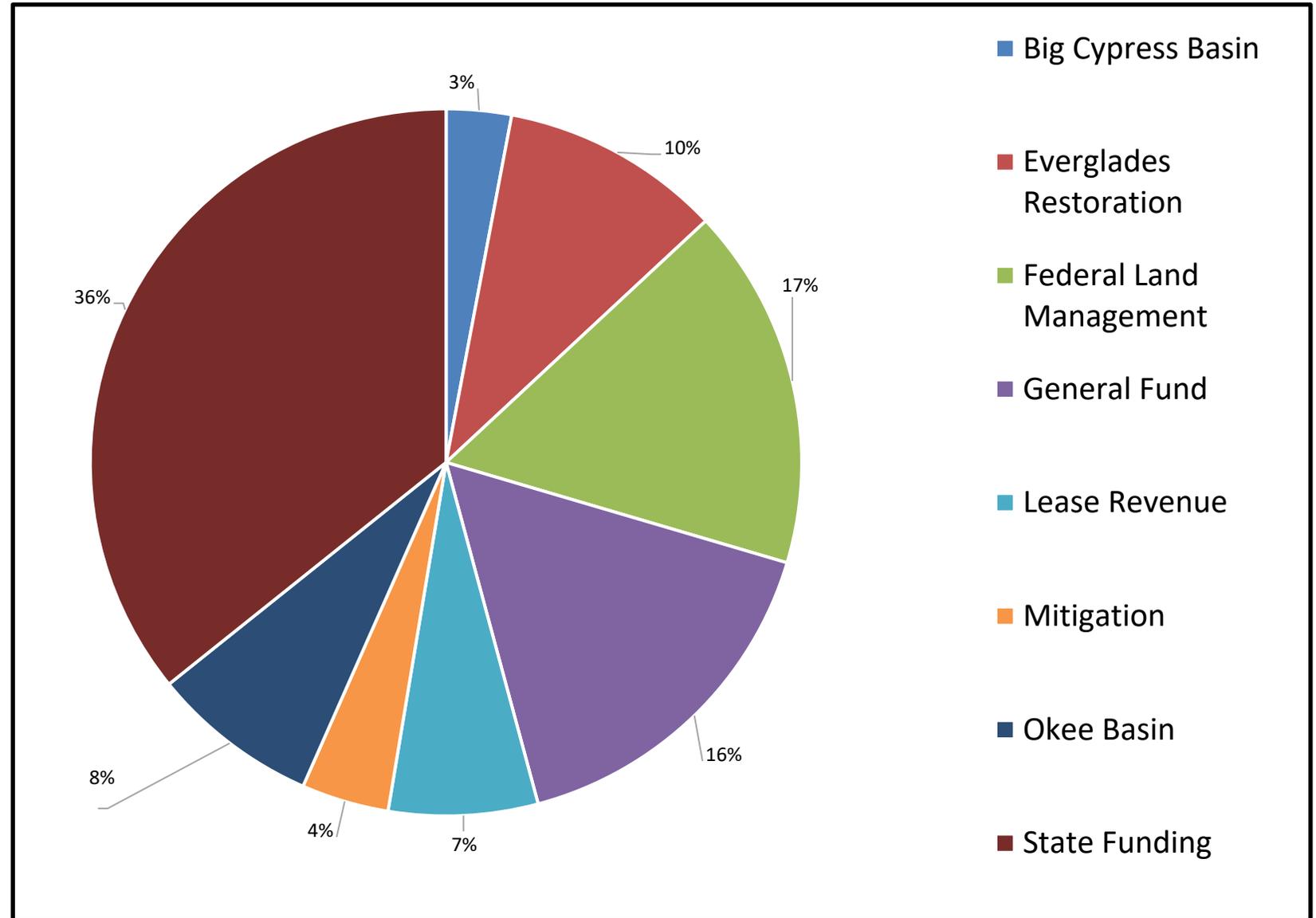
➤ Utilized throughout the District

- Field station/C&SF projects (rights-of-way, canals, and levees to meet USACE standards of conveyance capacity)
 - Canals ~2,200 miles
 - Levees/Berms ~2,100 miles
 - Cooperative management of lakes, ~500,000 acres
- Stormwater treatment areas (planting and invasive plant management to meet water quality goals)
 - ~76,900 acres
- Conservation lands, project lands, restoration projects (removal of invasive plants for ecological benefits)
 - ~1,191,200 Acres



Sources of Funding

FY21 Vegetation Management Budget



Ground Application Services

- 79% Labor and equipment
 - Sweeping
 - Monitoring
 - Scouting
- 10% STA Planting expenses
 - Labor and equipment
- 11% Chemical expenses
 - Herbicides
 - Adjuvants

Large airboat crews in Pennsuco wetlands



Request for Proposal - Innovative Technology

➤ Contract oversight

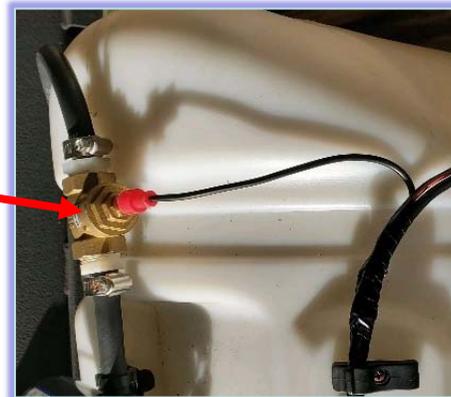
- Regular inspection by District staff
 - Inspection reports (Survey 123)
 - Review and verify initiation form
- QA/QC representative
- Review invoices, spray records, and tracks
 - Use of Herbicide
- PO Evaluation form



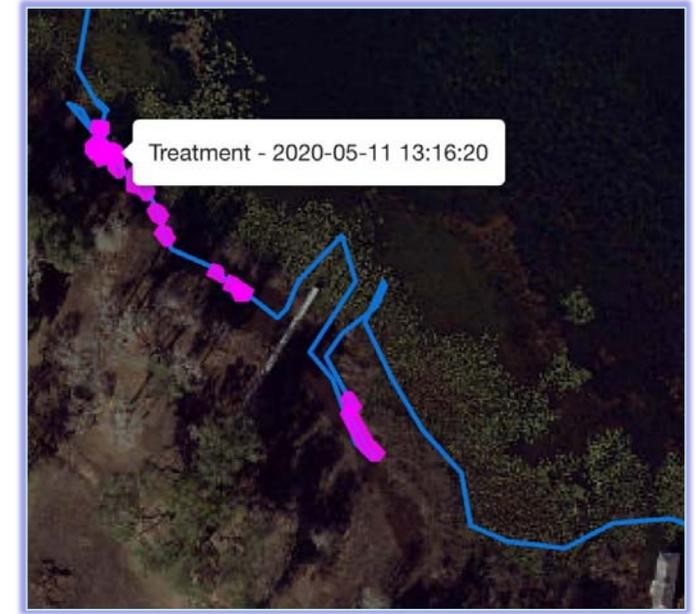
Smart devices



District staff inspecting contractor at work



GPS tracking device mounted on airboat with spray on/ spray off switch



Airboat Track showing spray location

Request for Proposal - Respondents

1. Walker Environmental, LLC (dba Walker Exotic Tree Eradication)
2. EarthBalance Corporation
3. Mettauer Environmental, Inc.
4. Applied Aquatic Management, Inc.
5. Aquatic Vegetation Control, Inc.
6. A+ Environmental Restoration, LLC
7. NaturChem, Inc.
8. Environmental Quality, Inc.
9. Ground Level, Inc.
10. Cardno, Inc.
11. Sandhill Native Growers, Inc.
12. Native Creations, Inc.
13. Florida Best Inc.
14. YT Land Services, Inc.
15. Lake and Wetland Management, Inc.

Large airboat crews in Pennsuco wetlands



Vegetation strips in STAs 15

Resolution

A Resolution of the Governing Board of the South Florida Water Management District to authorize the official ranking of firms and entering into 3-year work order contracts, with two 1-year renewal options with twelve (12) firms: Walker Environmental LLC, dba Walker Exotic Tree Eradication, EarthBalance Corporation, Mettauer Environmental, Inc., Applied Aquatic Management, Inc., Aquatic Vegetation Control, Inc., A+ Environmental Restoration, LLC, NaturChem, Inc., Environmental Quality, Inc., Ground Level, Inc., Cardno, Inc., Sandhill Native Growers, Inc., Native Creations, Inc., subject to successful negotiations to provide Ground Application Services in an amount not-to-exceed \$90,000,000 for all twelve (12) work order contracts, for which Ad Valorem and dedicated funds are subject to Governing Board approval of future years budgets; the District will proceed in ranked order until agreements have been successfully negotiated; providing an effective date.

Questions?

