FFWCC Upland Exotic Plant Management Program

Jackie Smith - Upland Regional Biologist
The Fish and Wildlife Conservation Commission is designated by the Florida Legislature as the lead agency for...

“the purpose of controlling nonnative, upland, invasive plant species on public lands.”

Section 369.252, Florida Statutes
How it started!

- Melaleuca quinquenervia!
- Legislature set aside $1,000,000.00 for control of Melaleuca.
- Working with SFWMD we started an assault on exotics.
Together FWC and SFWMD worked throughout south Florida to control Melaleuca...but there were more species lurking out in the WILD!!!
Brazilian pepper

Lygodium microphyllum
Inventory and map the distribution of upland weeds on public conservation lands

HAD TO START PRIORITIZING

Development of the upland invasive plant working groups to set regional priorities
Increase public awareness through a comprehensive education and outreach program.
Upland Invasive Plant Management Program

Physical

Mechanical

Chemical

Biological
THE UPLANDS FUNDING PROGRAM...
HOW IT WORKS
Their Basic Ideas:

- Site Managers are in charge of day-to-day Project Management
- Funding for the heavy lifting, first few treatments
- Funding priorities changed with funding availability
- Herbicide Bank to help with maintenance
- $1,000,000 for Melaleuca Management
Upland Invasive Plant Management Strategies

Regional Working Groups

IPMS PROJECT FUNDING CRITERIA

- Cost-share/matching funds available
- Target species with high invasiveness
- Current control technologies available
- Benefit listed species (plant & animal)
- Site maintenance by management entity
Working Group Input

Species of local concern

Regional knowledge

Rank the projects for funding

Work with the local CISMAss

Work with adjacent private land owners
Upland Invasive Plant
The Same

Herbicide Bank

- Maintenance of previous Uplands projects
- Any *Lygodium* spp. or cogon control
- $300,000±/year
- FY 14/15 $250,000.00
- 35,000 acres as of today
- Rook handles this part 😊
“There is nothing permanent, except change”

Heraclitus

This is especially true in nature and government

* More competitive quote = more funded projects

* Accountability

* The age of the maintenance state
(what does that mean??)
We started with changes to the Proposals

Additional Information Required
1. Unit Treatment History Table (contractor specs)
2. Invasive Plant Management Plan (where we are)
3. Powerpoint format

Lygodium Strike Team Vanished
1. Now the EDRR Strike Team (with Lygodium, cogon, natal, air potato)

More Notated Compliance
1. Biologist Hired for Compliance
2. Evaluation and Monitoring Forms

More Mapping
1. Shapefiles of the final treatment area(s) required (LMIS)
New in 2014/2015

• TIERS - Terrestrial Invasive Exotic Reporting System
• Small, Large, EDRR & Special Projects
• New Request for Proposals for New Contractor List
Terrestrial Invasive Exotic Reporting System (TIERS)

- Project proposal and SOW

- Submit, rank, random picks, SOW creation, invite, post pre-quote meeting notes “addendum”, invoice, upload evaluations/shapefiles and reports
### Unit Treatment History

Only list the treatment history of the unit(s) to be treated in this proposal.

<table>
<thead>
<tr>
<th>Year</th>
<th>Acres</th>
<th>Unit</th>
<th>Agency</th>
<th>Species</th>
<th>Treatment Type</th>
<th>Amount</th>
<th>Edit</th>
<th>Delete</th>
<th>Add</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>45.60</td>
<td>1</td>
<td>IPM</td>
<td>LY, BP, CG</td>
<td>Maintenance</td>
<td>$6,000.00</td>
<td>Edit</td>
<td>Delete</td>
<td>Add</td>
</tr>
<tr>
<td>2011</td>
<td>43.00</td>
<td>1</td>
<td>IPM</td>
<td>LY, BP, CG</td>
<td>Maintenance</td>
<td>$7,254.46</td>
<td>Edit</td>
<td>Delete</td>
<td>Add</td>
</tr>
<tr>
<td>2012</td>
<td>25.00</td>
<td>1</td>
<td>IPM</td>
<td>LY, BP, CG</td>
<td>Maintenance</td>
<td>$7,930.00</td>
<td>Edit</td>
<td>Delete</td>
<td>Add</td>
</tr>
</tbody>
</table>

#### Unit Description (Required)

Delineate into specific treatment units to accommodate efficient bidding if there are significantly different areas (For example: within a 1,000 acre unit there is a 25 acre stand of dense Melaleuca) or the size of the project may exceed funding caps.

COVER CLASS | RANGE(%): 1 | 0-5%  | 2 | 5-25%  | 3 | 25-50%  | 4 | 50-75%  | 5 | 75-95%  | 6 | 95-100%

<table>
<thead>
<tr>
<th>Treatment Unit(s)</th>
<th>Acreage</th>
<th>Total acres infested, cover class estimate, etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Add**

**Total Treatment Acres: 35.00**

### Upload Documents (Required) - Include maps of each treatment area

Allowed file extensions are .pdf, .jpeg

**Document Type**: Treatment area map

**Document Description**: [Browse] [Upload]
Annual (2014/15) Invasive Plant Management Status Map

- **Annual (2014/15) Invasive Plant Management Status Map**
  - annual snap shot of your area as it relates to invasive plant management.

  * In Rotation = Maintenance condition where the unit has been treated to a condition of maintenance; 2-3 year rotations (like burn rotations).
  * Not in Rotation = Initial condition or no longer in maintenance condition.
  * Exotic Free = There are no invasive plants in the unit.

This map represents what the current exotic treatment needs are for your area. Your whole site may be small and in the same in rotation; if this is the case state the rotation intervals for your area.
In FFS Rotation Not Due
Treated 1-2 years ago

Not In FFS Rotation
NGGE ROMA - control activities through Collier County Soil & Water Conservation District

PSRP - control activities through ACOE & SFWMD

Satellite - management activities not possible yet; access or prescribed fire issues remain

Key for Treatments
- In Rotation Not Due
- Treated FY12-13
- To be Treated FY13-14
- In Rotation Due
- Not in Rotation
- Not in Rotation - NGGE ROMA
- Not in Rotation - PSRP
- Not in Rotation - Satellite
- Private Inholding

Hog’s Breath Treatment Area

FLORIDA FOREST SERVICE
Agriculture & Consumer Services

0 1 2 3 4 5 6 8 km
0 1 2 4 6 8 mi
FWC UPLANDS
EDRR STRIKE TEAM

• PCL
• 40 acres or less
  • Easy access
• CISMA approved EDRR species, LY, natal grass, air potato or Cogon Grass
  • (skunk vine)
• FNAI assistance and lists
Areas will be bid on a per acre cost (not to exceed ceiling) POs

Weekly Progress Report (WPR)

New partial payment forms

All crew members will have to carry a Garmin GPS

7 new Contractors—total 23
RBs and Upland Projects

- Working group
- 6-32 Projects
- Review, set-up, conduct pre-quotes
- * New pre quote meeting Check List
  - Assistance in treatment plans
- Suggest changes to projects, addendum
- Check in with site manager and contractor
  - Compliance
    - LMRs
    - CISMAs
The Pre-quote Meeting

Make sure the sites have been ground truthed/access (best and the worst)

Make sure contractors have an opportunity to get into the site to review on their own
Apalachicola River WEA

Legend
Habitat Type

- Cypress, Pine, Open Water, Etc.
- Bottomland Forest
- Floodplain Swamp
- Treatment Zones

Notes:
Apalachicola River WEA
Invasive Plant Management
Cutoff Island
Project PH - 137

Map Prepared By:
Matthew Hortman
FWC, 8/5/2014

<table>
<thead>
<tr>
<th>FID</th>
<th>Shape</th>
<th>CLASS</th>
<th>Acres</th>
<th>Zone_Numbe</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Polygon</td>
<td>Floodplain Swamp</td>
<td>437.4</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>Polygon</td>
<td>Bottomland Forest</td>
<td>1123</td>
<td>1</td>
</tr>
<tr>
<td>0</td>
<td>Polygon</td>
<td>Floodplain Swamp</td>
<td>870.6</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>Polygon</td>
<td>Bottomland Forest</td>
<td>1323</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>Polygon</td>
<td>Floodplain Swamp</td>
<td>1155.3</td>
<td>3</td>
</tr>
<tr>
<td>13</td>
<td>Polygon</td>
<td>Bottomland Forest</td>
<td>1417.9</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Polygon</td>
<td>Floodplain Swamp</td>
<td>1294.5</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>Polygon</td>
<td>Bottomland Forest</td>
<td>526.2</td>
<td>4</td>
</tr>
</tbody>
</table>
Delineate where you want the contractor to begin based on management objectives.
Oh my, I might be here a while--
--I sure hope nobody does a compliance check.
Compliance

In the last 2 years compliance checks have increased by 200% due to:

1. Hiring a biologist to only work on compliance.

2. Contracting with FL Natural Areas Inventory to assist with compliance.

3. Emphasizing compliance with regional biologists.

4. Developed a form to insure consistency
<table>
<thead>
<tr>
<th>Plant Distribution</th>
<th>Pattern or arrangement of the plants within the infested acreage</th>
<th>P</th>
<th>SP</th>
<th>SDP</th>
<th>D</th>
<th>DM</th>
<th>LS</th>
<th>Single plant or clump</th>
<th>Scattered plants or clumps</th>
<th>Scattered dense patches</th>
<th>Dominant cover</th>
<th>Dense monoculture</th>
<th>Lineally scattered</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A truck</td>
<td>A two car garage</td>
<td>A basketball court</td>
<td>Roughly 4 tennis courts</td>
<td>½ of a football field (no end zones)</td>
<td>Football field (no end zones)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimates of coverage</th>
<th></th>
<th>0.005</th>
<th>0.01</th>
<th>0.1</th>
<th>0.25</th>
<th>0.50</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A truck</td>
<td>A two car garage</td>
<td>A basketball court</td>
<td>Roughly 4 tennis courts</td>
<td>½ of a football field (no end zones)</td>
<td>Football field (no end zones)</td>
<td>comments</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cover Class</th>
<th>A visual estimate of the percentage of the gross acre(s) infested that is actually covered by plants</th>
<th>&lt;5%</th>
<th>5 -25%</th>
<th>26-50%</th>
<th>51-75%</th>
<th>&gt;75%</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Area Inspected</th>
<th>Estimated acres or percent of treatment area inspected. Note: if combined with previous site manager inspections, add the areas together.</th>
<th>Acres and or Percent of treatment area surveyed</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Present of Inspection treated</th>
<th>Target Treated: Percent of target invasive species that was treated, in other words, “Did they spray what they were supposed to spray or did they miss a lot of it?”</th>
<th>&lt;25%</th>
<th>&lt;50%</th>
<th>&lt;75%</th>
<th>76-85%</th>
<th>86-95%</th>
<th>95-100%</th>
<th>unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&lt;25%</td>
<td>&lt;50%</td>
<td>&lt;75%</td>
<td>76-85%</td>
<td>86-95%</td>
<td>95-100%</td>
<td>unknown</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control on Inspection area</th>
<th>Target Killed: Percent of target invasive species killed by treatment, in other words, “Did the treatment work?”</th>
<th>&lt;25%</th>
<th>&lt;50%</th>
<th>&lt;75%</th>
<th>76-85%</th>
<th>86-95%</th>
<th>95-100%</th>
<th>unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>&lt;25%</td>
<td>&lt;50%</td>
<td>&lt;75%</td>
<td>76-85%</td>
<td>86-95%</td>
<td>95-100%</td>
<td>unknown</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Notes/Comments</th>
<th>Treatment Comments: Any information about control treatment, such as environmental conditions, areas requiring more time to review or comments that reflect treatment effort.</th>
<th>MND</th>
<th>NPP</th>
<th>May not die, may need to re-check</th>
<th>Not properly poodled</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Re-treatment needed</th>
<th>Does the site need a follow-up treatment or can it be skipped/rotated</th>
<th>1) needs following year treatment</th>
<th>2) skip one year</th>
<th>3) skip two years</th>
<th>3) skip three years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1) needs following year treatment</td>
<td>2) skip one year</td>
<td>3) skip two years</td>
<td>3) skip three years</td>
</tr>
</tbody>
</table>
Where are we Headed

Priority shift from all maintenance to initial and first 5 years after initial and/or units on a rotation schedule of maintenance

New priorities

More TIERs development

Government agencies competitive bidding

Thinking outside the box (to boldly go where we’re needed)
Upland Priorities

PRIORITY 1- Maintenance of FLEPPC 2015 Category I ferns, vines, and grasses (excluding torpedo, Para, Napier): $200,000 cap. To qualify for Priority 1 status, the proposal must be for maintenance control of a project area that has been continually treated for up to five consecutive years, but is not yet in a maintenance rotation.

PRIORITY 2- Initial control of FLEPPC 2015 Category I invasive plant species: $200,000 cap. Category II species may be considered on a case-by-case basis.
Priorities continued

PRIORITY 3- Maintenance of areas (including low density torpedo, Para, Napier) that were treated consecutively for multiple years and are currently in a treatment rotation (like a 2-3 year burn rotation), and are in need of treatment in the coming fiscal year: $200,000 cap.
Priorities continued

PRIORITY 4- Maintenance of areas where Category I species have not been treated consecutively for five years and are not currently in a planned maintenance rotation: $100,000 cap.

PRIORITY 5- Maintenance of areas that have been treated for more than five consecutive years and are not in rotation, or areas that have low invasive densities and could be placed in rotation: $50,000 cap. Priority 5 proposals may not be funded if it is determined that the infestation level is too low for cost-effective contracted work and treatment could be safely delayed for a year or two.
Zombies hidden behind a wall of Kudzu: yet another reason to kill the weeds.
Upland Invasive Plant Management
18-Year Program Results
(1997-2015)

- 2,337 projects on 610+ PCL
- 724,000 acres initial control
- 1,925,000 acres maintenance control
- $132 million expended
- $50+ million matching funds
Linda King 850-617-9425
Ruark “Rook” Cleary 850-617-9427
Jackie Smith (south projects) 772-597-5462
Rick Clark (north projects) 850-617-9424
Tony Cintron(compliance) 407-269-4298
Dennis Giardina (southwest) 239-229-5403
John Kunzer (west central) Botanist 352-726-8622
Derek Fussell (Panhandle) 850-510-1224
Michael Sowinski (central) 863-534-7074
Dan Dorosheff (northeast) 386-754-6255