Louisiana’s Aquatic Plant Control Program

Alex Perret

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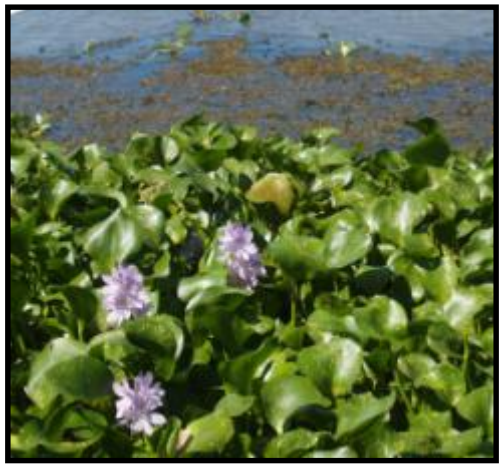
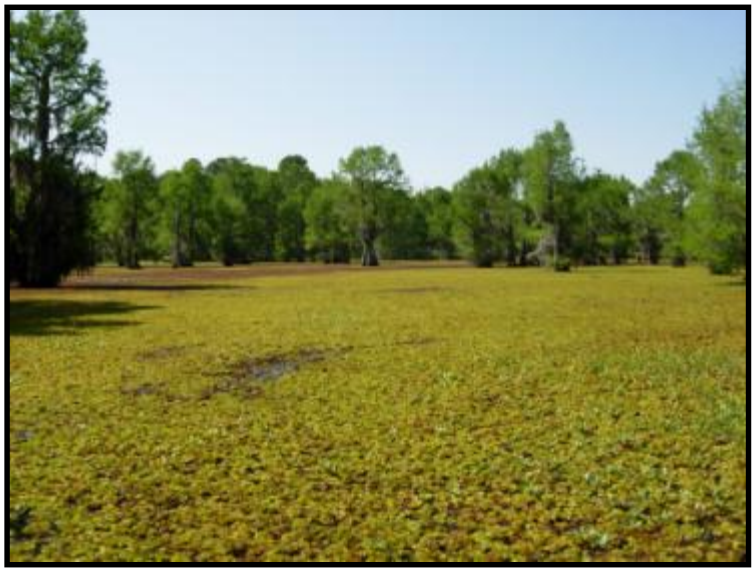
LDWF

Invasive Plants in Louisiana

Floating

- Water Hyacinth
- Common Salvinia
- Giant Salvinia





Invasive Plants in Louisiana

Emergent

- Alligator Weed
- American Lotus

Submerged

- Hydrilla

Invasive Aquatic Plants in Louisiana

Plant	1st Year	Acres of Infestation				
		2008	2009	2010	2011	2012
Water Hyacinth	1884	128,595	134,413	86,530	80,750	90,197
Hydrilla	1975	118,017	98,352	75,810	66,925	47,481
Common Salvinia	1980	208,450	188,815	102,082	49,735	30,247
Giant Salvinia	1998	6,560	13,691	2,706	25,076	32,237

Aquatic Plant Control Budgets

- FY 06/07 - $ 2,698,000.00
- FY 07/08 - $ 6,531,000.00
- FY 08/09 - $ 8,331,000.00
- FY 09/10 - $ 8,060,000.00
- FY 10/11 - $ 7,900,000.00
- FY 11/12 - $ 7,400,000.00

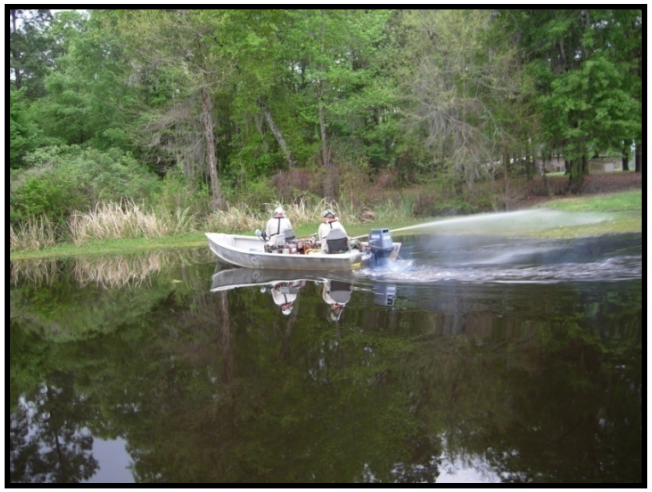
Acreage of Aquatic Plants Treated by LDWF

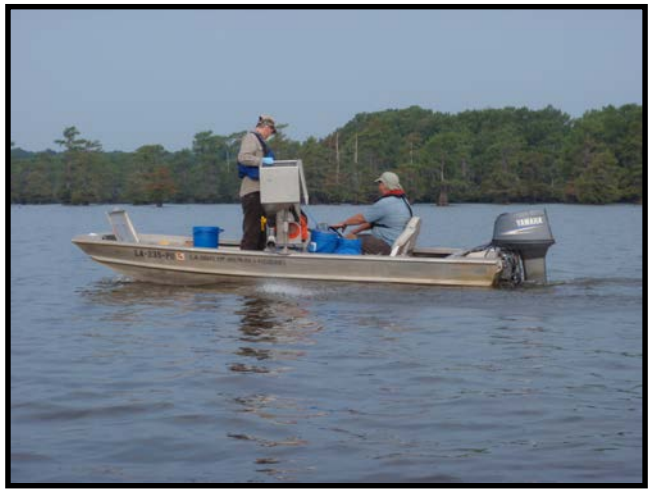
- FY 05/06 - 26,009 acres
- FY 06/07 - 30,179 acres
- FY 07/08 - 58,514 acres
- FY 08/09 - 68,433 acres
- FY 09/10 - 75,051 acres
- FY 10/11- 57,218 acres
- FY 11/12- 75,414 acres

Acres Sprayed by Species

- 10-11 LDWF Spray Efforts

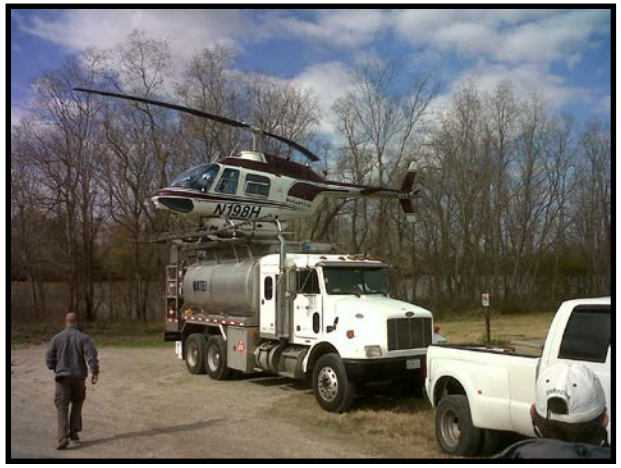
Plant	Acres Sprayed	% of Total	Herbicide Cost
Hydrilla	3,076	**5**	**$921,000**
C. Salvinia	3,314	**6**	**$133,500**
G. Salvinia	12,451	**22**	**$510,000**
W. Hyacinth	18,778	**33**	**$187,000**





Multiple Approach Management

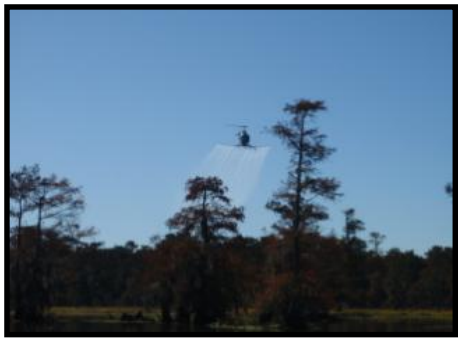
- Chemical
  - Herbicide Applications
- Mechanical
  - Drawdowns
  - Restrictive Booms
- Biological
  - Species-specific Control

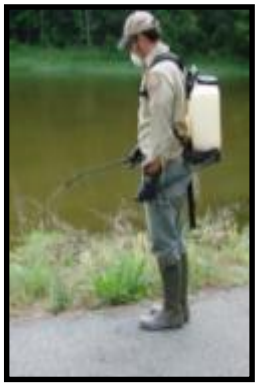


Chemical Control

Contract Applications

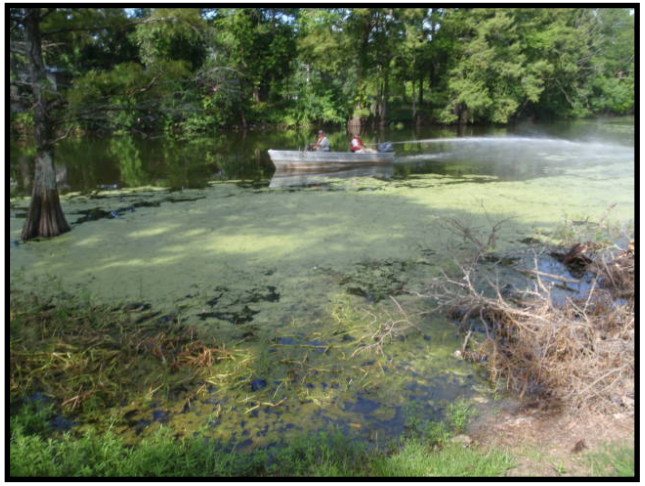
- Air Boat
- Aerial
  - Helicopter





LDWF Spray Crews

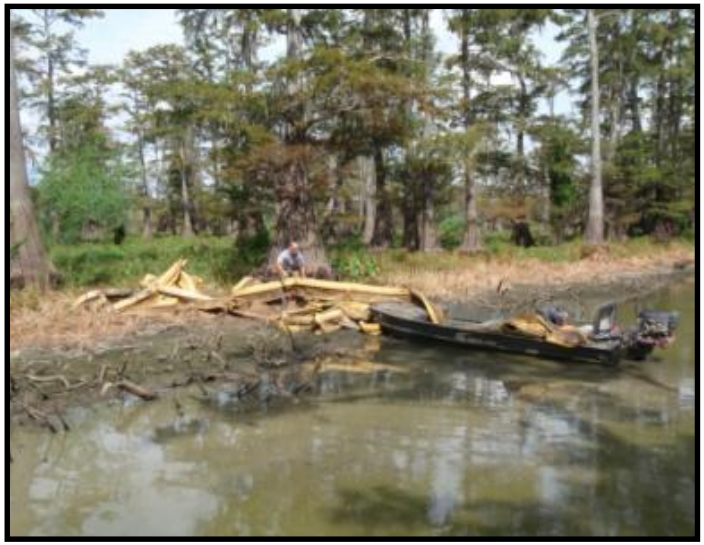
- Maintenance / Small Areas
  - Spray boats
  - Trailer mounted tanks
  - Backpack sprayers



Mechanical Control

Containment Boom

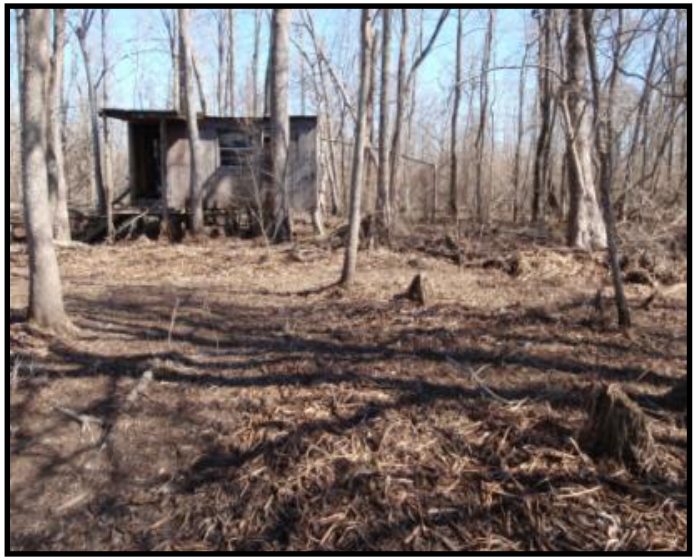
- Limits plant movement
- Containment for herbicide application



Mechanical Control

Drawdown

- Targets shoreline plants
- Affects entire waterbody
- Can remove large quantities at low cost



Biological Control

Triploid Grass Carp

- Submersed plants

Common and Giant Salvinia Weevils

Alligator Weed Flea Beetles

Water Hyacinth Planthopper

Giant Salvinia in Louisiana

- Lake Bistineau
- Clear-Smithport Lake
- Caddo Lake
- Red River Pools 1,2,3,4,5
- Cross Lake
- Black Bayou Reservoir
- Cypress Lake
- Black Bayou Lake
- Kepler Lake
- Lake Claiborne
- Grand Bayou Reservoir
- Wallace Lake
- Upper & Lower Caney Lakes
- Tributaries to Red River
- Caney Creek Lake
- Sibley Lake
- Saline Lake
- Toledo Bend
- Lacassine Bayou
- Grand Lake and assoc. canals
- Lake Bienvenue
- Black Lake
- Nantachie Lake
- Indian Creek
- Hardwater Lake
- Cotile Lake
- Turkey Creek Lake
- Sabine River
- Calcasieu River
- Mermentau River
- Bayou and Lake Des Allemands
- Barataria Basin
- Lower Atchafalaya Basin
- Terrebonne Basin
- Pearl River System
- Mississippi River
- Pontchartrain Basin
- White Lake and assoc. canals
- Bayou Teche
- Palmetto State Park
- Vermillion River
- Verret/ Grassy / Palourde Complex

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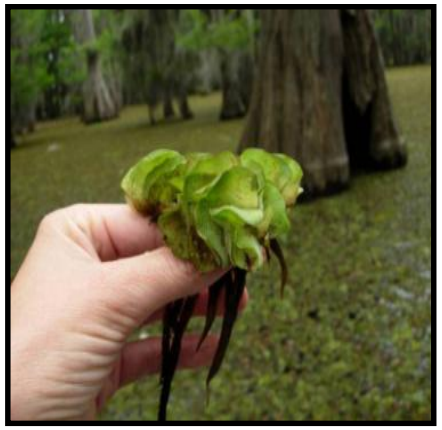
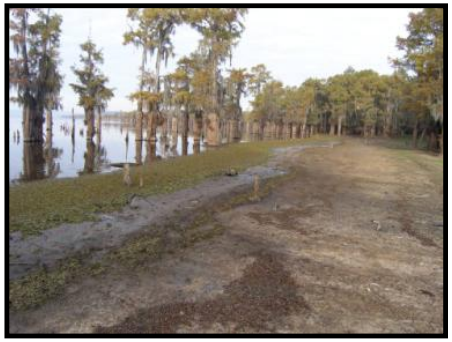
Giant Salvinia

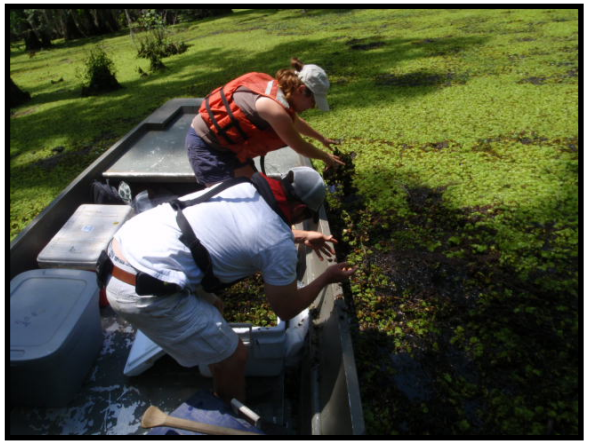
- Introduced to Toledo Bend in 1998
- Since 2006 has spread throughout the state
- Can double biomass every 5-7 days
- Surface hairs make chemical control difficult



Giant Salvinia Control

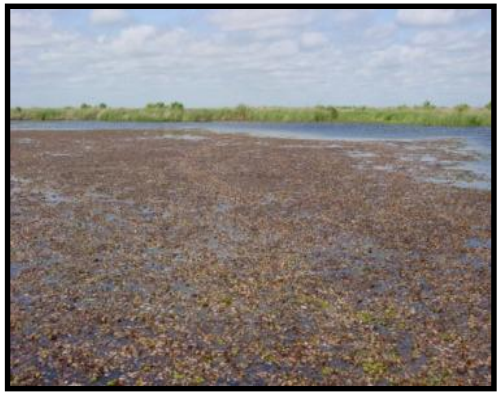


- Foliar applications
  - Glyphosate/diquat mix
- Whole waterbody treatment
  - Fluridone, penoxsulam
    - Expensive and risky
- Water level fluctuation
  - Cheap and effective
- Giant salvinia weevil stocking
  - Possible long-term solution



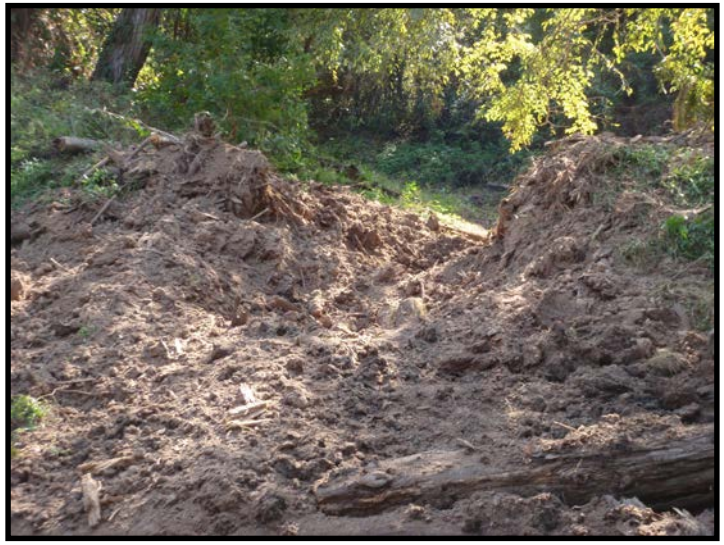
Giant Salvinia Control

- Giant salvinia weevil stocking
  - South LA
    - LSU AgCenter ponds
  - North LA
    - USACE Greenhouse facility
- Possible long-term control
  - More weevils
  - More stocking effort



Giant Salvinia Control
Other Tools

- Beaver Dam Removal
  - Removes backwater ponding areas
    - Harbor giant salvinia
  - More effective with water on the dam
  - Kill salvinia with liquid fluridone first



Questions?

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