Louisiana State Report: Update on transport of MARAD vessels to LA, Salvinia, Bonnet Carre spillway

April 22, 2008

Louisiana Aquatic Invasive Species Council and Task Force

Actions taken since last AIS meeting

- In July, 2007, LAIS Council and Task Force received presentations on issues regarding the MARAD fleet of obsolete government vessels
- Subcommittee organized to develop recommendations for action
- LDWF used input from sub-committee and LDEQ, drafted & sent letter on Aug. 17 to MARAD outlining “interim plan”
- Intent was to allow LA facilities to participate in ship dismantling program without creating undue risks to LA ecosystems
- Would allow transport of ships from Beaumont fleet only, under specified conditions.

LA Interim Plan for MARAD vessels

- Intended to be used to limit potential for introducing AIS until more complete assessment of biota and issues could be developed & reviewed
- Only pertains to Beaumont (TX) fleet – **James River (VA) and Suisan Bay (CA) fleets not accepted at this time**
- 5-point plan
  - survey ship before transport to LA waters
  - If non-native species on hull, document information on species, including potential to impact LA ecosystems
  - if non-native species with potential to impact LA ecosystems, implement mitigation measures
  - clean all external surfaces of fouling growth
  - internal areas that may hold water and organisms, including ballast tanks & bilges must be treated to minimize transport of those organisms to LA waters

Results

- MARAD had solicited bids on 4 Beaumont fleet vessels on July 23
- LA sent letter to MARAD on Aug. 17
- LA contractor bid on vessels from Beaumont, TX fleet was not allowed by MARAD in bid opening of Aug 30
- LA contractor agreed to abide by LA “interim plan”, but MARAD said those conditions not acceptable since LA has imposed unacceptable conditions, but other bidders were eligible.
- LA contractor appealed MARAD decision
- Legal and administrative procedures still ongoing for results of Aug. 30 bid opening

Additional actions

- MARAD began development of plans to sample Beaumont fleet, beginning in Sept., 2007.
- Seasonal sampling for 1 year, with final report in about 18 months from beginning of project

New Bid Solicitation by MARAD

- On Nov. 19, MARAD solicited bids on 3 ships
- LA ship dismantler provided plan to meet criteria of Louisiana “interim plan”, including sampling and evaluation of fouling organisms

Further Actions

- LA ship dismantler located biologist and dive crews to assess benthic biota on a ship from the Beaumont fleet
- LDWF reviewed sampling protocols to ensure consistency with prior studies on MARAD fleet from James River, VA and Suisan Bay, CA
- Beaumont sampling occurred in December
- Draft report provided to LDWF in mid-February
- Draft report reviewed by DWF staff, based on comparison to criteria of LA “interim plan”
- Corrections and modifications to report through end of Feb.

Results of Biological Sampling

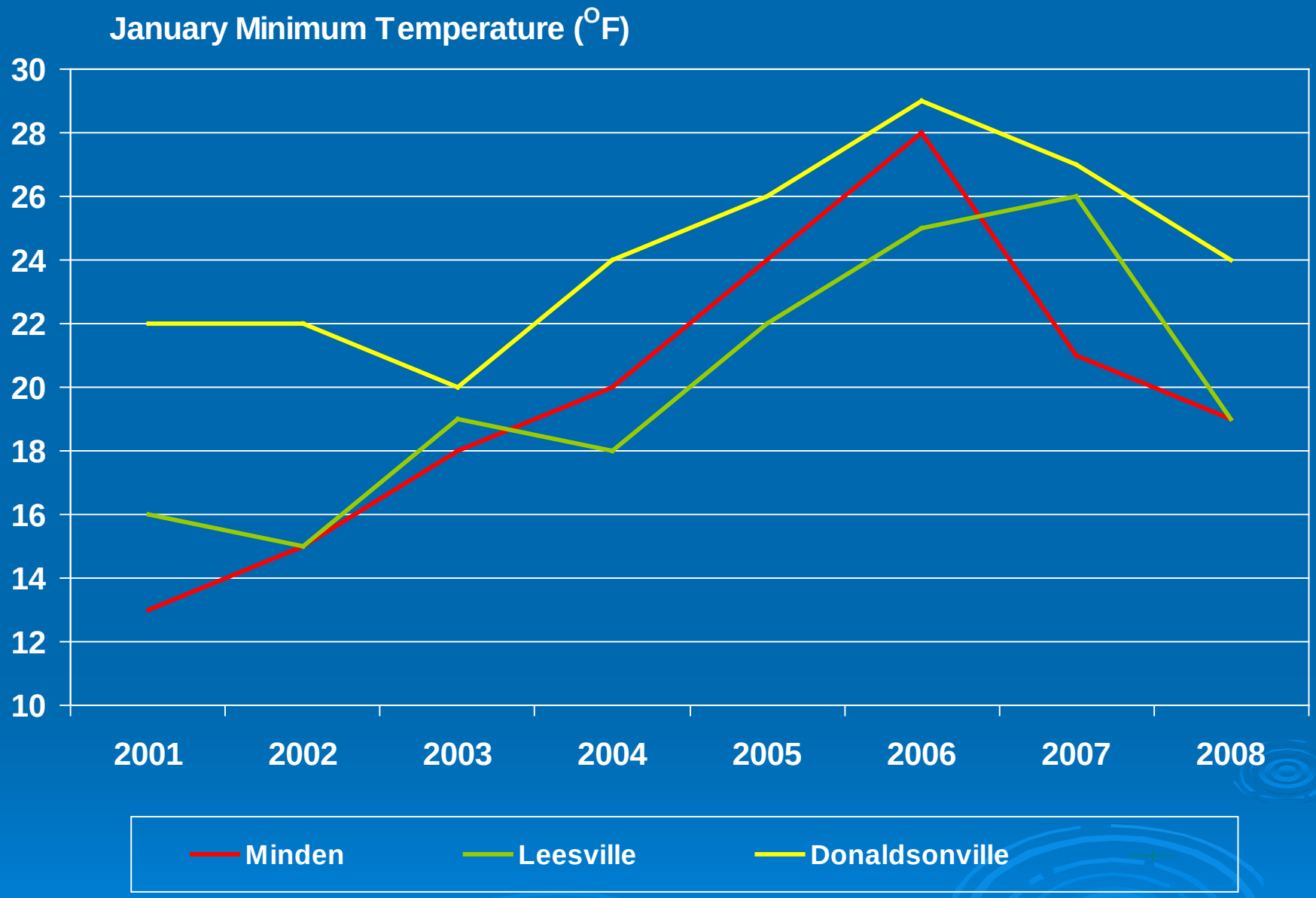
- Low numbers of species found in samples
- Platyhelminthes and Nemerta not ID'ed below major taxa
- Species accumulation curves indicate that more species would be found with additional sampling
  - this is consistent with findings from other fleet sites
- Most species found were either native to region, or have been established and recorded in LA for some time
- One species identified which could have been new to region - final identification provided to LDWF last week.

Louisiana is currently seeing an increase in aquatic plant problems WHY?

- No recent significantly cold winters
  - global warming?
- High turnover rate of sprayers
- Increased spread of giant and common salvinia
  - Salvinia species are more difficult to control

Salvinia minima

Salvinia molesta



Data from Louisiana Office of State Climatology

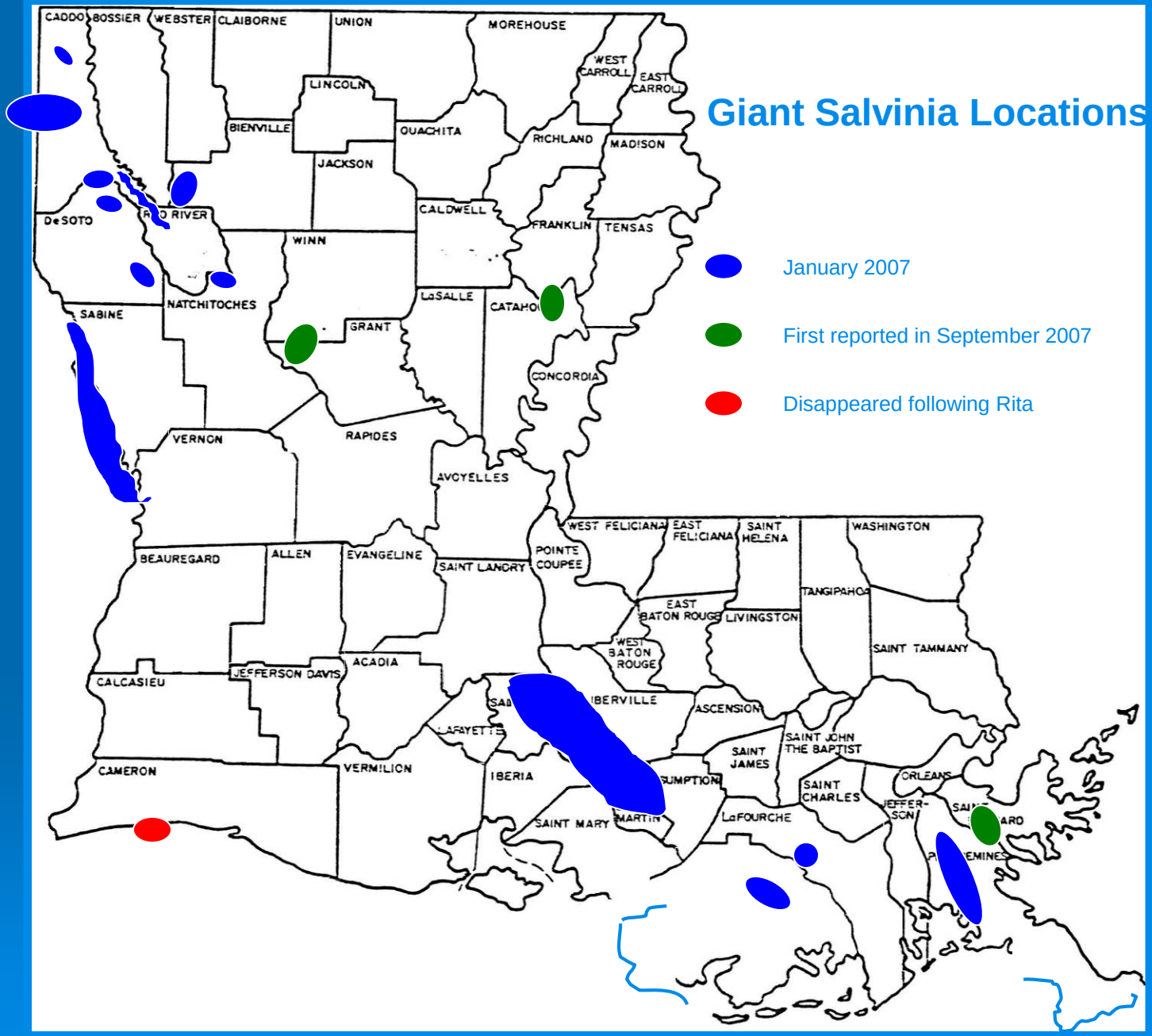
Giant Salvinia

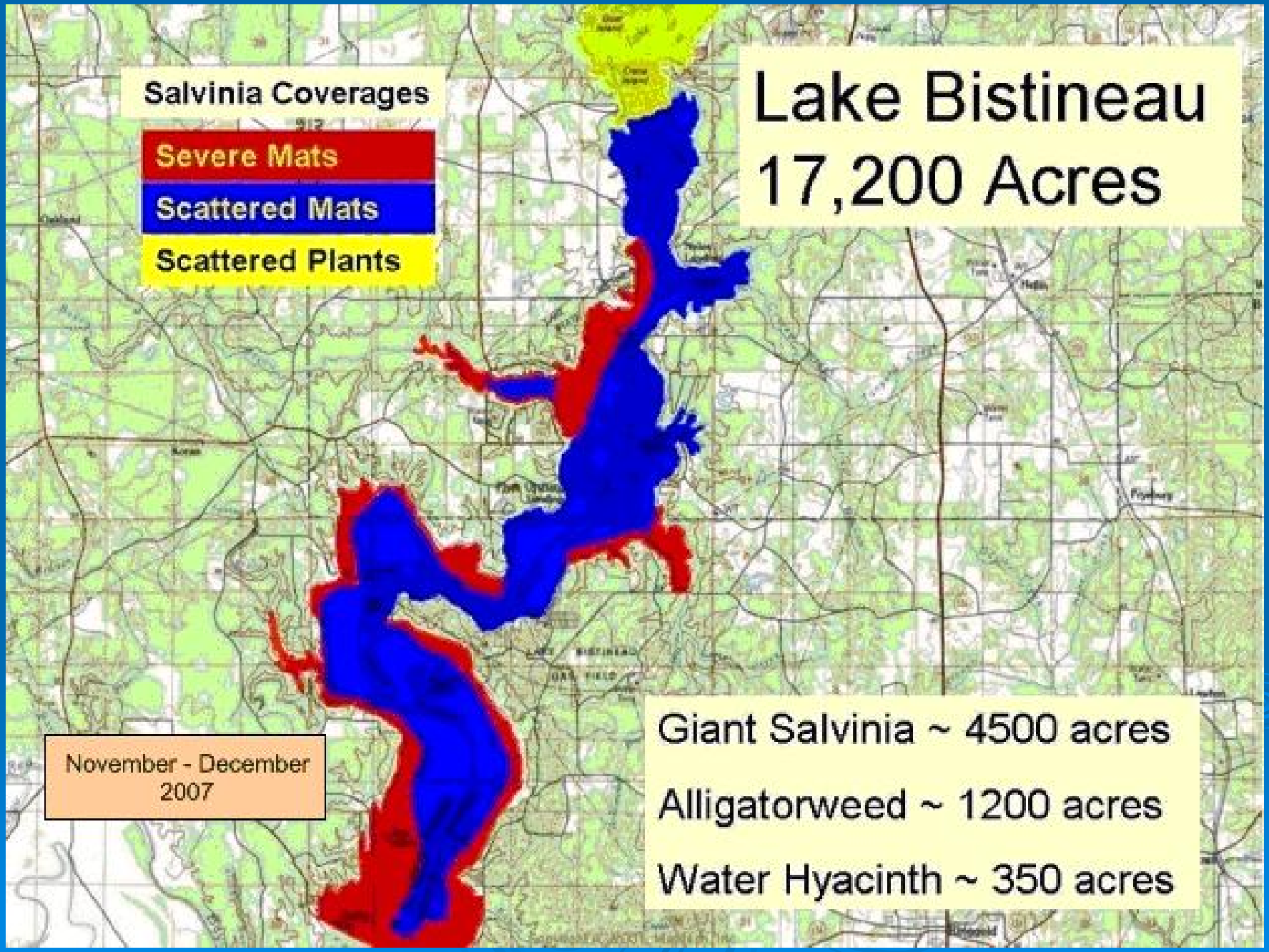
Lake Bistineau

Giant Salvinia

- Aquatic fern native to Brazil
- Listed a Federal Noxious Weed
- First found in Louisiana in 1998
- Under ideal growing conditions, it can double in 3-5 days
- Can grow vertically, as well as horizontally
- Hairs on leaf impact herbicide effectiveness

Giant Salvinia Locations




Salvinia Coverages
Severe Mats
Scattered Mats
Scattered Plants
Lake Bistineau
17,200 Acres
November - December
2007
Giant Salvinia ~ 4500 acres
Alligatorweed ~ 1200 acres
Water Hyacinth ~ 350 acres

Lake Bistineau

Lake Bistineau – State Park

2008 - Additional $3.5 Million in Conservation Funds to the Aquatic Plant Control Program

- **Purchase new equipment**
  - **mudboats, airboats and pumps**
- **Increase the use of contract sprayers**
- **Increase the purchase of herbicides**
- **Hire 10 additional sprayers – (8 temporary)**
- **Hire 2 employees to monitor contractors, conduct type mapping and assist district personnel with aquatic plant problems**

Integrated Control Methods

- **Herbicides**
- **Biological**
- **Drawdown**
- **Containment booms**
- **Mechanical removal**

Herbicide Application

- **More crews**
- **20 acres/day max under ideal conditions**
- **Surge**
  - 1st week of April
  - 2 weeks later
- **Contract**

Biological Control

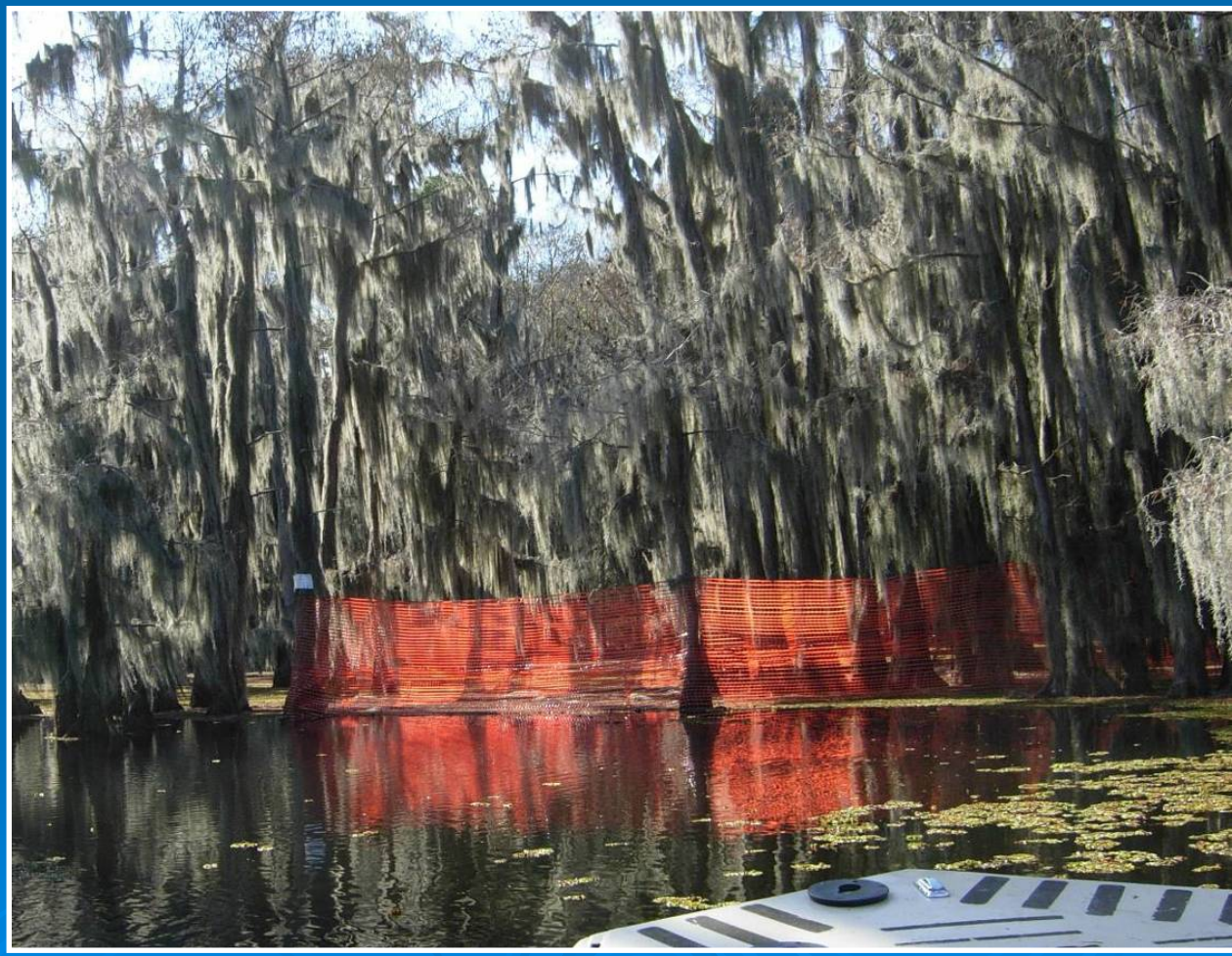
Salvinia weevil

Cyrtobagous salviniae

- **Worldwide success in tropical and subtropical climates, but results vary in temperate climates**
- **Does not control giant salvinia in an understory or when salvinia is multi-layered**

Lake Bistineau – Enclosure

- **Keep salvinia stationary**
  - Serves as nursery area
  - Fencing allows for exchange
- **Floating enclosures**
  - Fluctuate with water level



Drawdown

- Head cutting problem below the dam accelerated by a drawdown
- DOTD quick fix to allow for a midsummer drawdown
- Strand on banks to desiccate
- Bring out of trees into main channel

Below the Dam

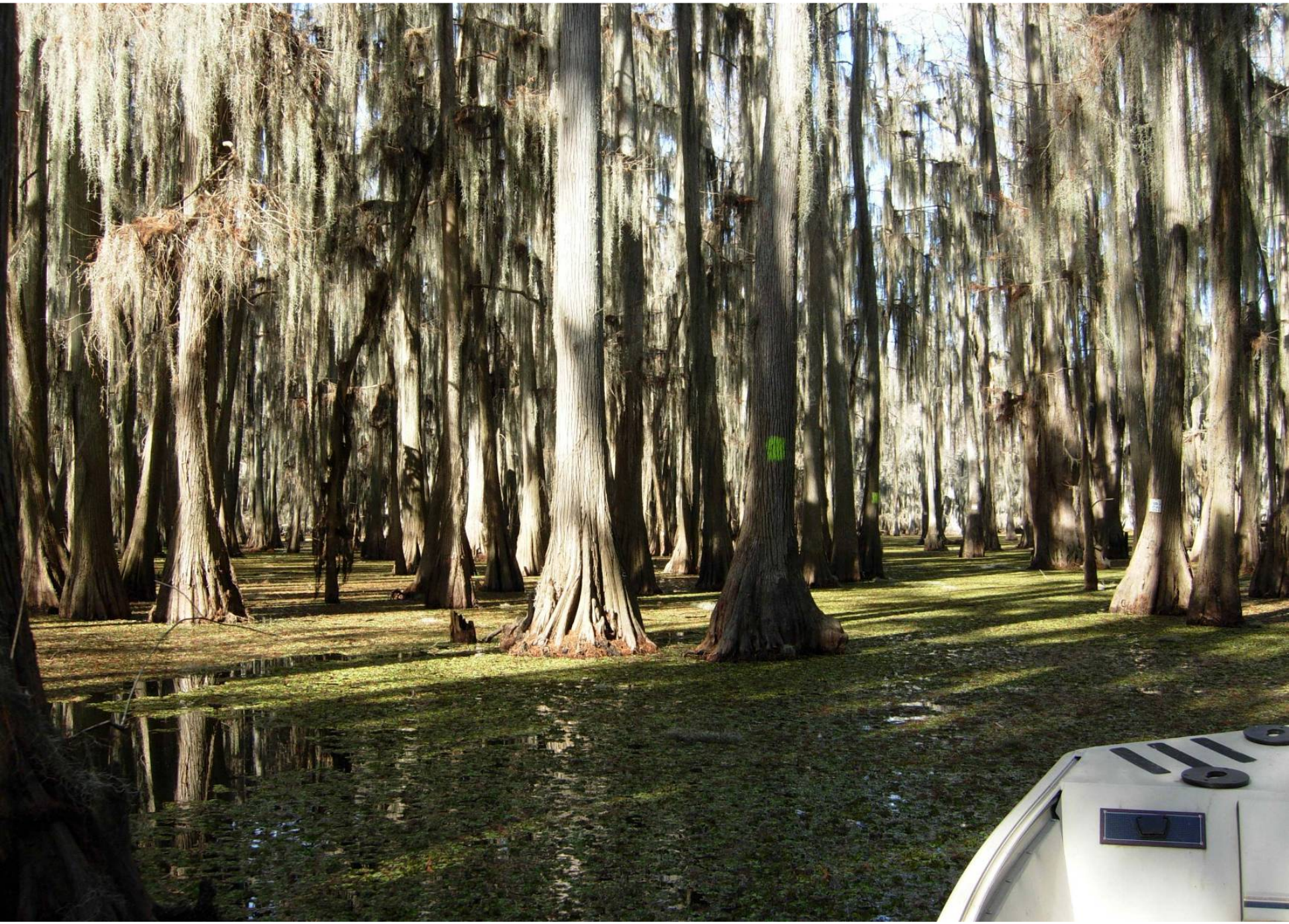
Mechanical

- **Remove plants from open areas**
  - Access
  - Reduce plant matter build up on the water control structure during a drawdown
- **Compost or landfill**

Containment Booms

Challenges

- **Dense stands of cypress trees**
  - Limits access for herbicide application
  - Serves as refugia
- **Multilayered**
  - Treating only top layer
- **Floating plants move with the wind**
- **Limited drawdown capabilities**
- **Weevils and winters**
- **Launches**
  - Sources of new infestation
- **Budget**



Lake Bistineau – 163 Bridge

Sprayed area mixed in

Lake Bistineau - Launches

Possible Methods to Reduce the Spread of Salvinia and other Exotic Plants from One Waterbody to Another

Create state law to prohibit transport of giant salvinia on boat trailers

- **Require boat wash stations at boat ramps**
- **Do not allow trailered boats into waterbodies not having salvinia**
- **Adopt rules governing the exotic plants allowed in Louisiana commerce (black list)**
- **Increase public awareness**

R.S. 56:328.C

The department shall have the authority to promulgate rules under the Administrative Procedure Act to prevent the introduction of invasive, noxious aquatic plants and to control, eradicate, and prevent the spread or dissemination within the state of all invasive, noxious aquatic plants that pose a threat to the wildlife or fisheries resources of the state.

Additional Plans for State-wide Control of Giant Salvinia

- **Continue working with LSU AgCenter and the Corps on various control measures**
- **Submit budget request to increase the number of aquatic plant control personnel and funding to the program**
- **Attempt eradication of new infestations**
  - More aggressive rapid response

Miss. R. plume 4/22/08 - NASA