

Cooperative Phragmites Control Programming in The Winyah Bay Focus Area, South Carolina

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Winyah Bay Focus Area

- Third largest east coast estuary
- 525,000 acres total
- 123,000 acres of forested wetlands
- 23,000 acres of tidal freshwater marshes
- 50,000 acres of wetland impoundments
- 20,000 acres still impounded



Image © 2006 MDA EarthSat
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Pointer 33°19'27.74" N 79°13'35.33" W elev 8 ft Streaming ||||| 100% Eye alt 18.13 mi



Image © 2006 DigitalGlobe

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Pointer 33°24'55.13" N 79°13'16.69" W elev 3 ft

Streaming ||||| 100%

Eye alt 20299 ft

Invasive Species Subcommittee

- **Clemson University**
- **The Nature Conservancy**
- **South Carolina D N R**
- **Winyah Bay Task Force**
- **US Fish and Wildlife Service**
- **USC – NERR**
- **Natural Resource Conservation Service**
- **Historic Ricefields Association**
- **Ducks Unlimited**

Why?

- Aquatic Invasives are a PROBLEM
- Prioritize Concerns
- Documentation of What Works
- Demonstrate to Landowners
- Cost-share Program for Private Landowners

Priorities

- Phragmites
- Water Hyacinth
- Alligatorweed
- Chinese Tallow
- Giant Reed
- Beach Vitex







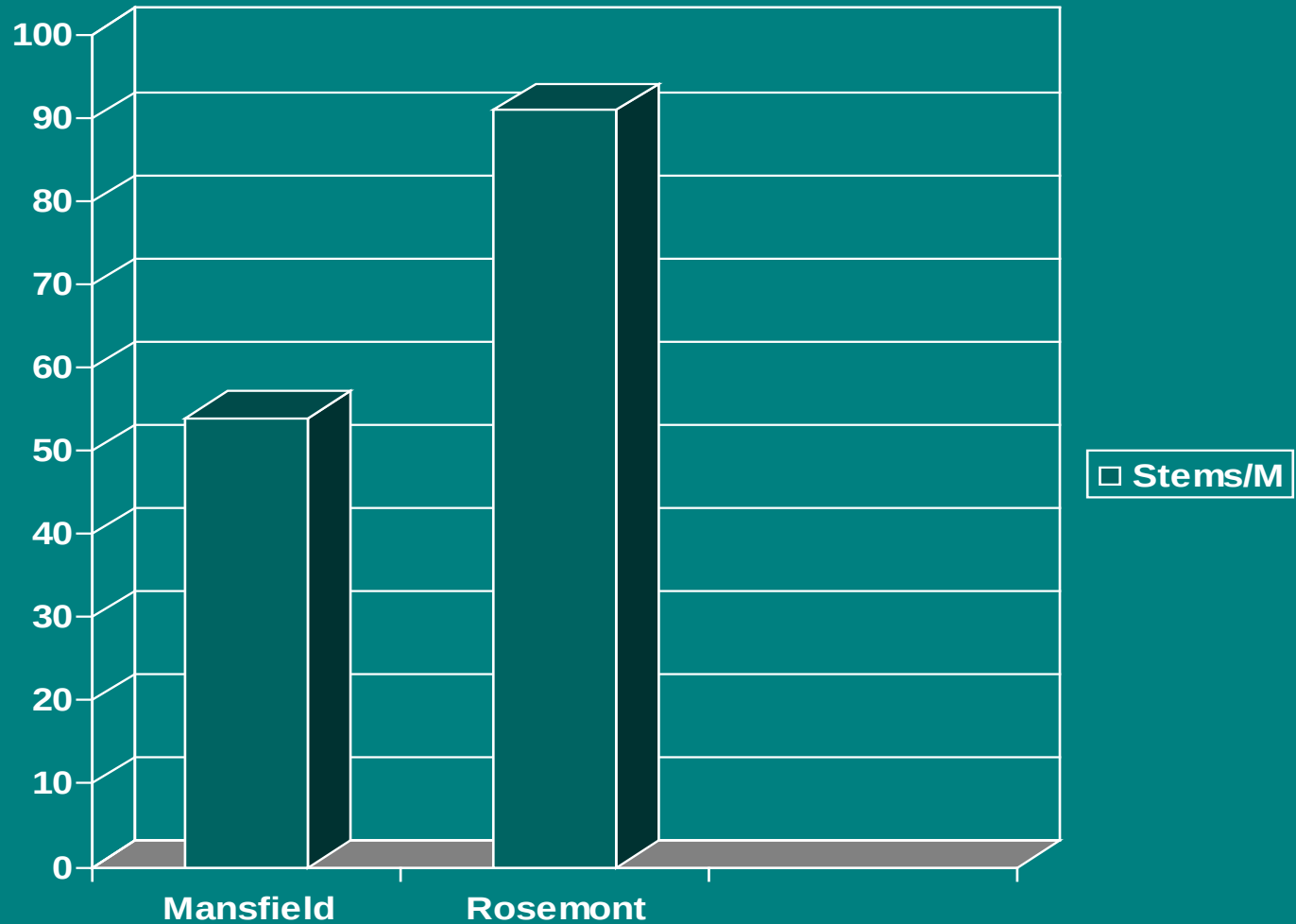
Phragmites Control Demonstrations

- **Mansfield and Rosemont Plantations**
- **Glyphosate and Imazapyr**
- **Aerial and Backpack**

Phragmites Control Cooperators

- Mansfield and Rosemont Plantations
- Summit Helicopters Inc.
- The Nature Conservancy
- SC DNR
- BASF
- Clemson University

Mean Stems/Square Meter



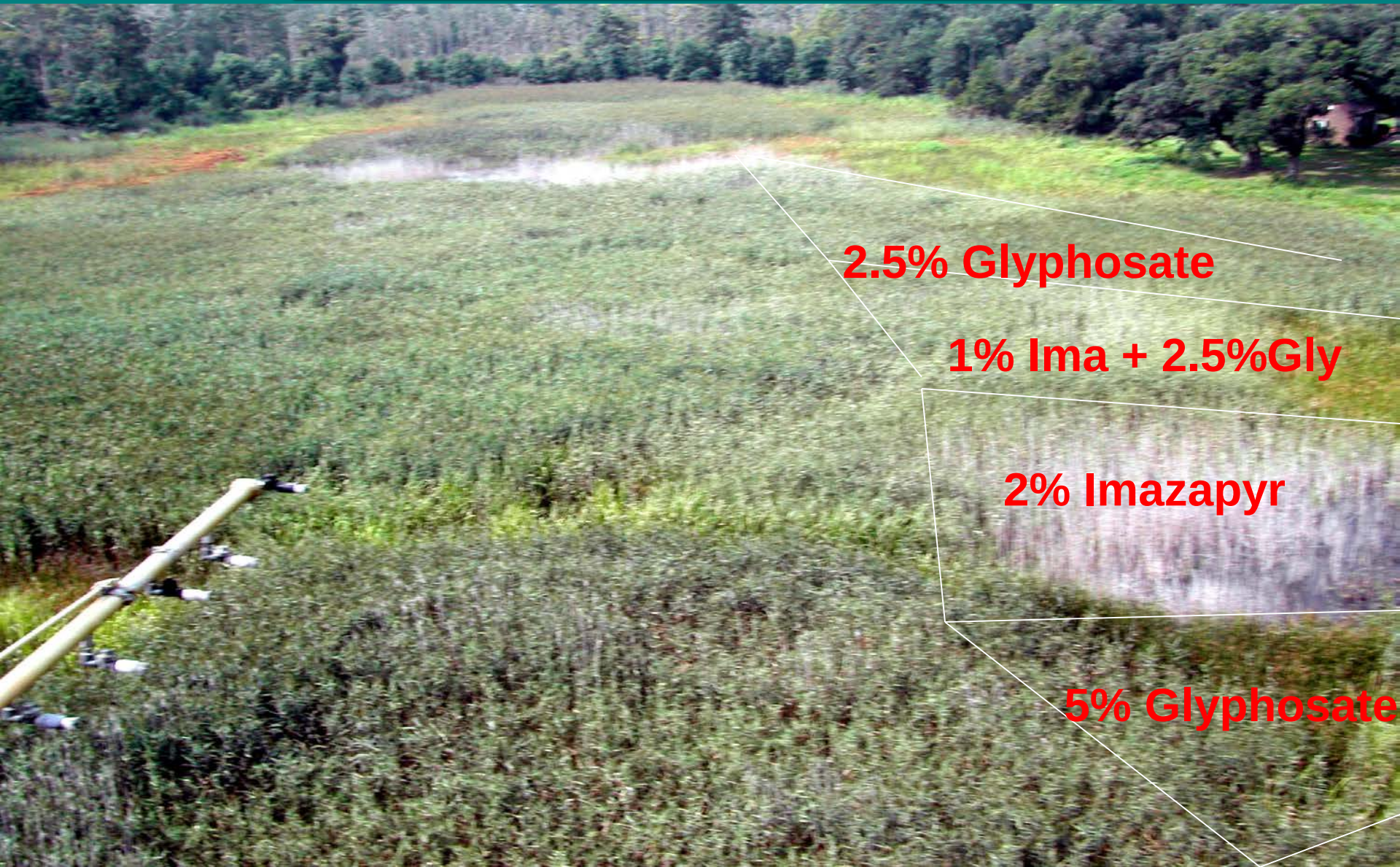
Phragmites – Backpack Application

Control Demonstration

Mansfield

- 5% v/v Glyphosate
- 2% v/v Imazapyr
- 1% Imazapyr + 2.5% Glyphosate
- 2.5% v/v Glyphosate

Mansfield Backpack



2.5% Glyphosate

1% Ima + 2.5%Gly

2% Imazapyr

5% Glyphosate

Phragmites Aerial Application **Demonstration**

- **Five – 7 Acre Plots**
- **32 oz Summit 910 Surfactant**
- **15 Gallons per Acre**

Sampling Regimen

- June 21, 2005
- Mid-point/Plot - adjacent 50 foot offset
- 150 feet into Plot – First Sample
- Dead and Alive Stems/Square Meter
- Six Samples per Plot

Mansfield Aerial Demonstration

- October 21, 2004
- 7 Acre Plots
- 48 oz Imazapyr + 32 oz Glyphosate
- 64 oz Imazapyr

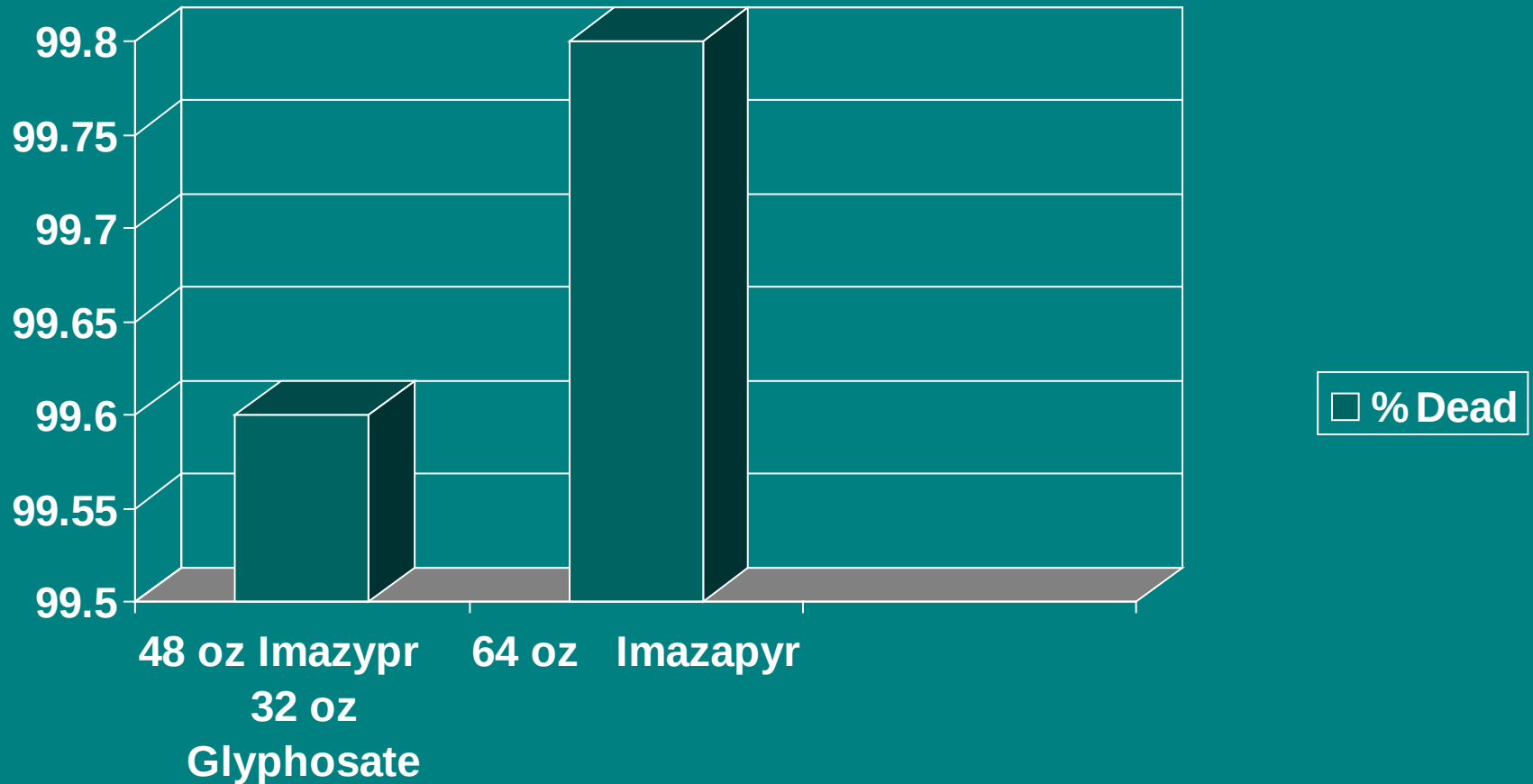


48 oz imazapyr
32 oz Glyphosate

This aerial photograph shows a large, flat landscape, likely a wetland or agricultural field, partially submerged in water. The water is a murky, light brown color, contrasting with the green vegetation that remains above the surface. In the foreground, there is a dense line of green trees and shrubs. The background shows a hazy horizon with more land and a small body of water on the left. Three red lines are drawn across the image to delineate different areas. The first line, on the left, points to a section labeled with chemical application rates. The second line, in the center, points to another section. The third line, on the right, points to a third section. The text is written in a bold, red, sans-serif font.

64 oz Imazapyr

Mean Percent Dead – Mansfield

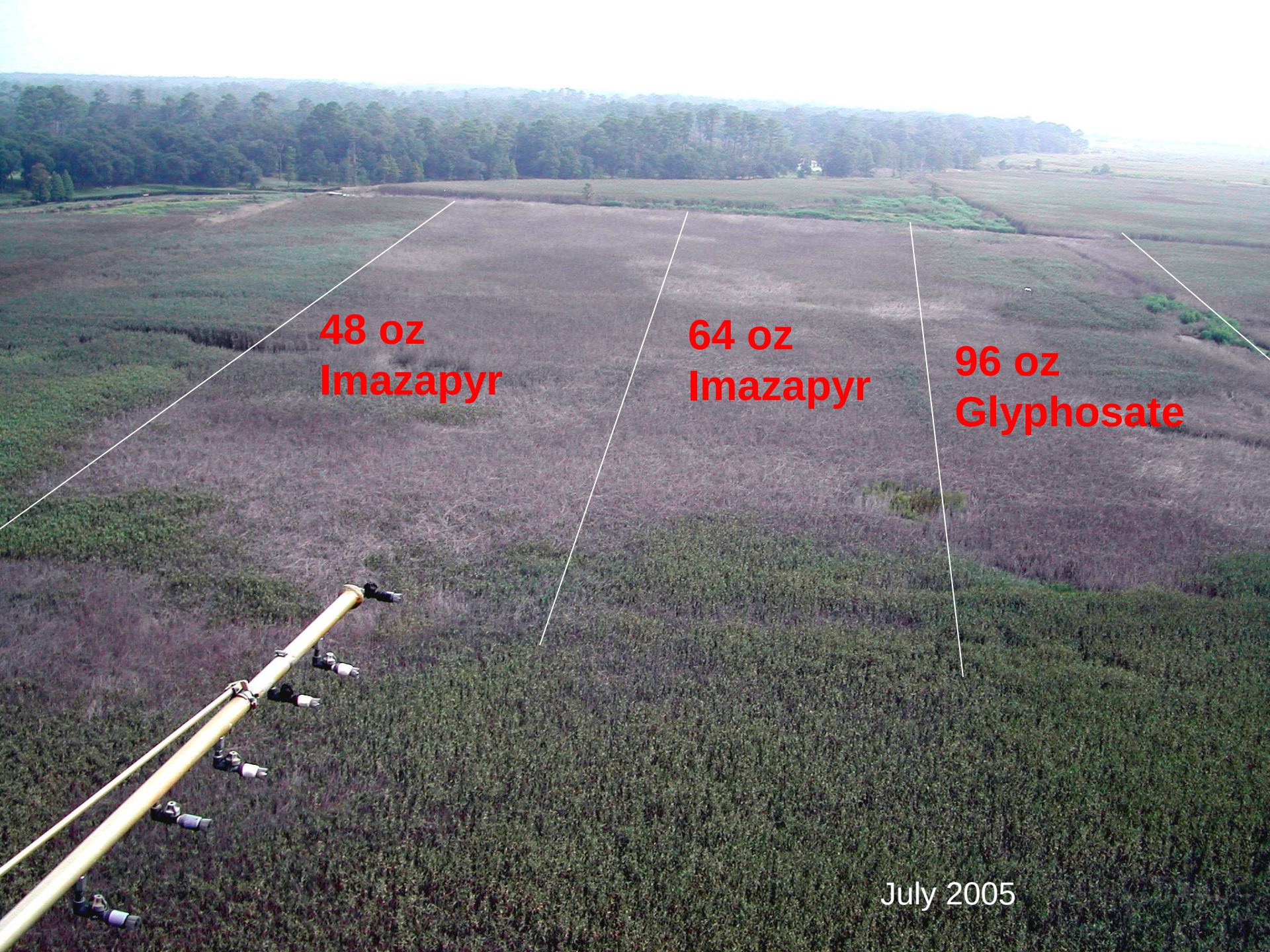


Rosemont Plantation

- October 21, 2004
- 7 Acre Plots
- 96 oz Glyphosate
- 48 oz Imazapyr
- 64 oz Imazapyr







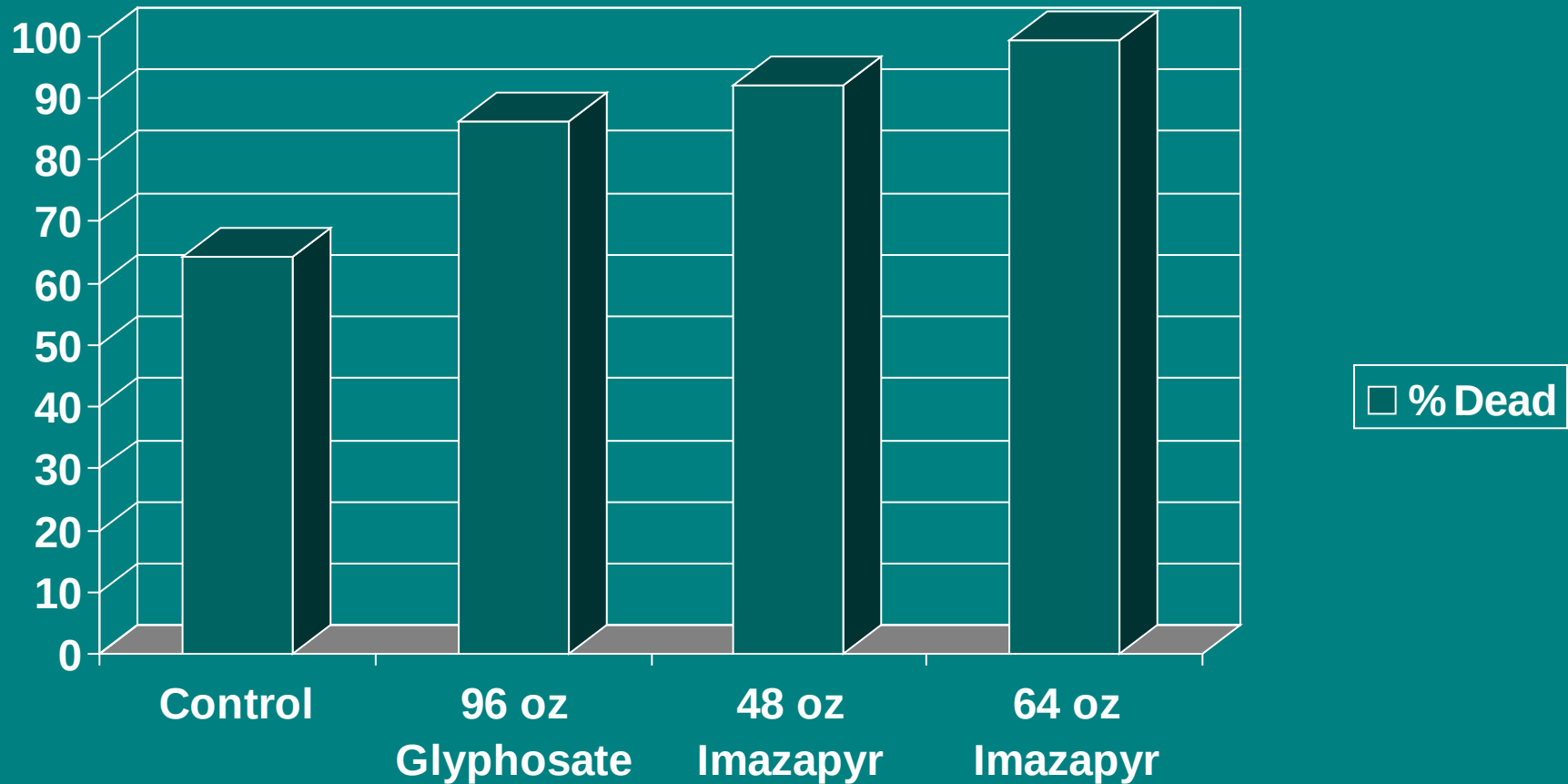
48 oz
Imazapyr

64 oz
Imazapyr

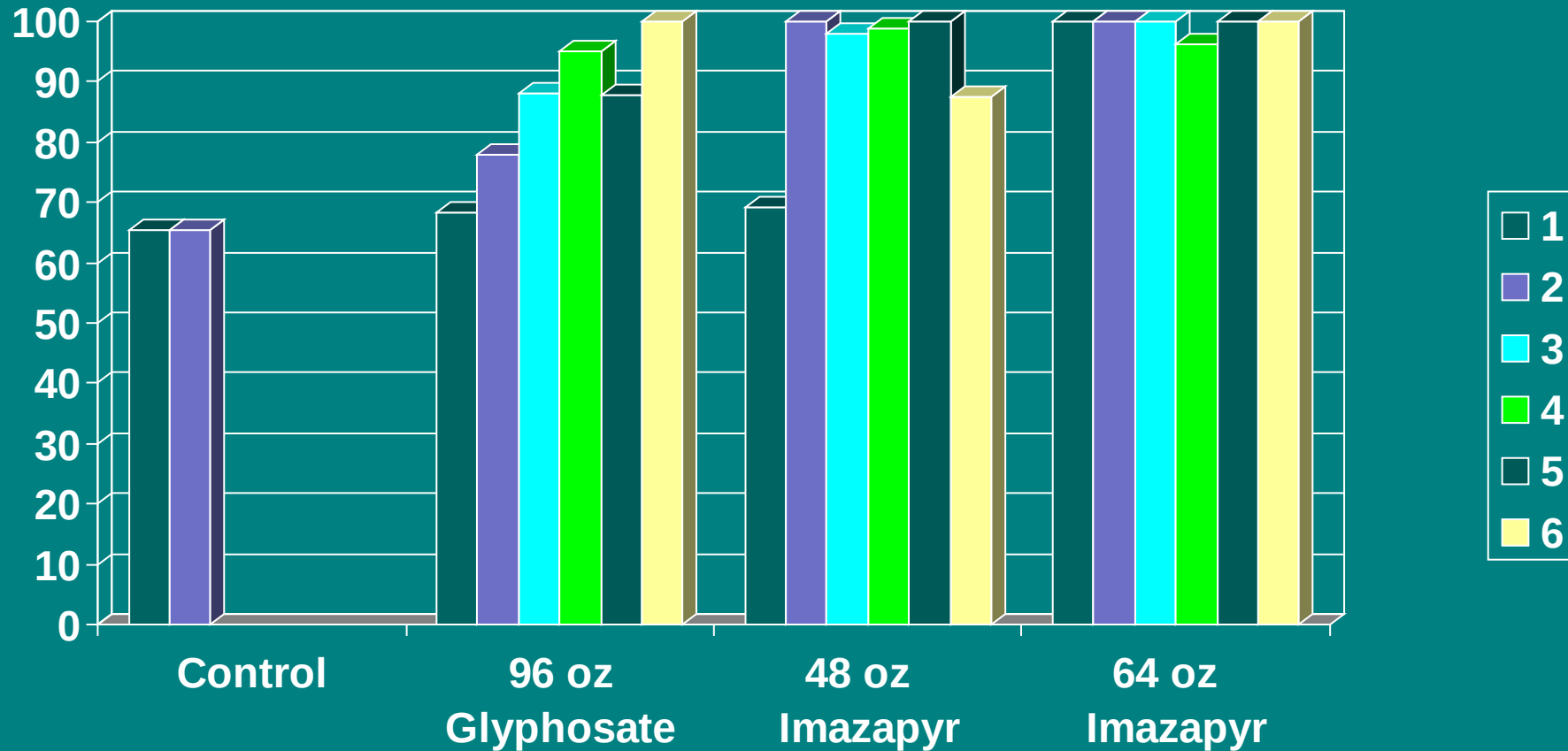
96 oz
Glyphosate

July 2005

Mean Percent Dead Phragmites - Rosemont



Percent Dead Phragmites - Rosemont





July 2006

2006 Rosemont Plantation Sampling



2006 Rosemont Shoots



Cost-share Program – Phragmites

- Ranking – Acres, Additional Acres, Easement, Proximity to Protected Area
- SC DNR Application Recommendations
- Licensed Applicators with GPS Recording
- Imazapyr or Glyphosate
- \$100 per acre – Imazapyr
- \$40 per acre – Glyphosate
- \$10,000 Max
- Follow-up Treatments
- Cost-share Payments after Application

Cost-share Technical Committee

- The Nature Conservancy
- SC DNR
- USDA – NRCS
- Ducks Unlimited
- Clemson University

Cost-share Funds

- **\$30K - National Fish and Wildlife Foundation**
- **\$50K - SC DNR**
- **\$30.5K - USDA NRCS WIP**
- **\$10K - Historic Ricefields Association**
- **\$10K - The Nature Conservancy**
- **\$130.5K - Total**

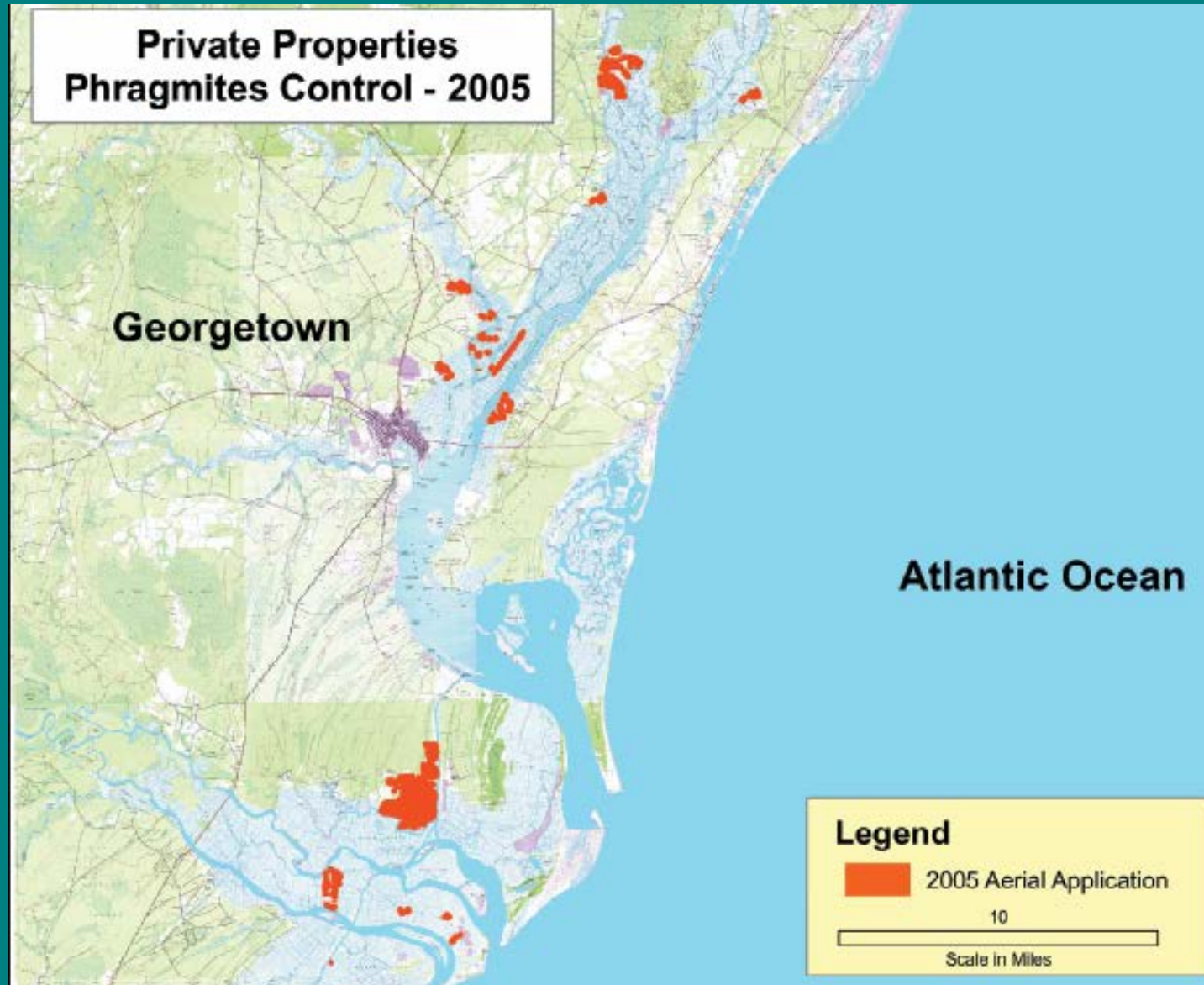
Project Obligations

- \$97.9K Obligated
- 18 Tracts
- 988 Acres



Private Landowners 2005

- 834 Acres



Clearcast – Phragmites - Edges

- Phragmites on treed edges – Post Habitat
- 32 Oz. Clearcast + .5% MSO in 15 Gallons
- 64 Oz. Clearcast + .5% MSO in 15 Gallons
- 10 August 2006
- 11 DAT

Clearcast – Phragmites - Edges



Clearcast – Phragmites

- 64 Oz. Clearcast + 1% MSO – 10 Gallons
- 22 June 2006
- Adjacent to Tree Canopy
- Summit Helicopter
- 44 DAT Rating
- Excellent Control
- Faster Efficacy than Habitat

Clearcast - Phragmites



Future Work

- **Continue Phragmites Cost-share**
- **Annual Sampling – Phragmites**
- **Burn Plots – Fall &/or Summer**

For More Information



www.dnr.sc.gov/water/envaff/aquatic/phragmites.html



www.dnr.sc.gov/water/envaff/aquatic/winyahphragmitesshare.html

