

Larson & McGowin, Inc.



*Forest Management & Invasive
Plants*

May 7, 2015

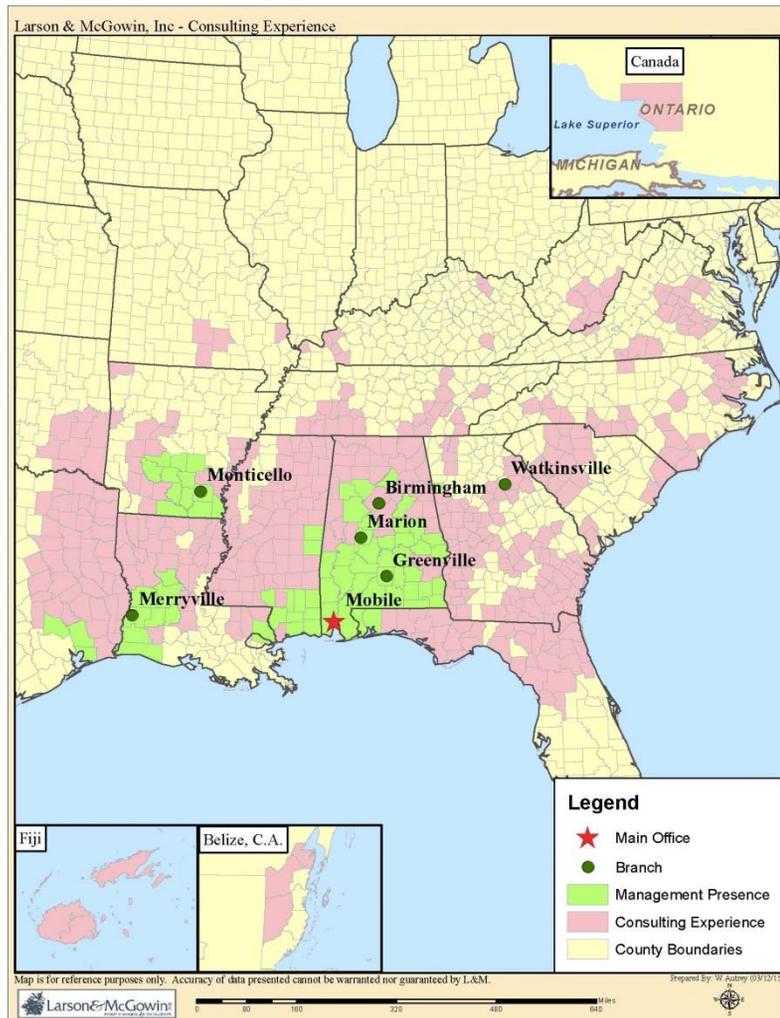
*Will Dixon, RF
Larson & McGowin, Inc.*

Overview



- *Introduction*
- *Why do we treat invasive plants?*
- *Challenges we face in invasive plant control*
- *How we are controlling invasive plants*
- *Conclusion*
- *Q & A*

Our History



- Founded in 1957
- Evolved from older firm, Pomeroy & McGowin, Inc.
- In Third Generation of Ownership
- Two Subsidiary Companies
- Headquarters: Mobile, AL
- Branches:
 - Watkinsville, GA
 - Birmingham, AL
 - Greenville, AL
 - Marion, AL
 - Monticello, AR
 - Merryville, LA

About Us



- *Manage approximately 650,000 acres across the south*
- *48 professionals dealing with various aspects of forestry*
 - Real Estate
 - L&M Properties
 - Forestry Software
 - Silvics Solutions
 - Forestry Consulting
 - Forest Management

Forest Management



Our Clients

- **Small Private Landowners**
 - Family Farms, Personal Investors

- **Large Private Landowners**
 - Family Offices, High Net Worth Individuals

- **Private Investment/Institutional**
 - TIMO's, University Endowments, Pension Funds

- **Public Investment/Forest Products/Government Agencies**
 - REIT's, Sawmills/Pulp and Paper, USFS, AFC

Forest Management



Forest Management Services

- Harvest Planning/Budgets
- Timber Sale Administration
- Reforestation Supervision
- Road, Bridge, Boundary-line Maintenance
- Hunting Lease/Wildlife
- **PEST MANAGMENT**
- Fire Protection
- Accounting/Record Keeping/ Reporting

Pest Management



- *Beavers*
- *Southern Pine Beetles*
- *Native Plants*
- *Non-Native Invasive Plants*

***Invasive Plants are
Pests!***

WHY?



- *Protect & Improve Investment*
- *Competition Control*
- *Wild Fire Prevention*
- *Ecosystem Protection*
- *Increase Biodiversity*
- *Aesthetics & Recreation*



WHY?

Protect & Improve Investment

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WHY?

- *Competition Control*

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UGA0016199

WHY?



www.forestry.alabama.gov

Wild Fire Prevention



WHY?

Ecosystem Protection

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WHY?



Increase Biodiversity

A photograph of a dirt road winding through a tall pine forest. The road is flanked by green grass and leads into the distance between rows of trees. The sky is visible through the canopy.

WHY?

Aesthetics & Recreation

Challenges



- *Awareness*
- *Regional & Site Specific Issues*
- **MONEY**

Challenges



Awareness

- *Problems Invasive Species Present*
- *Invasive Plant Identification*
- *Timely Treatment*
- *Control Options*

Challenges



Regional Specific Issues

- *Different SPECIES*
- *Different PROBLEMS*
- *Different REGIONS*

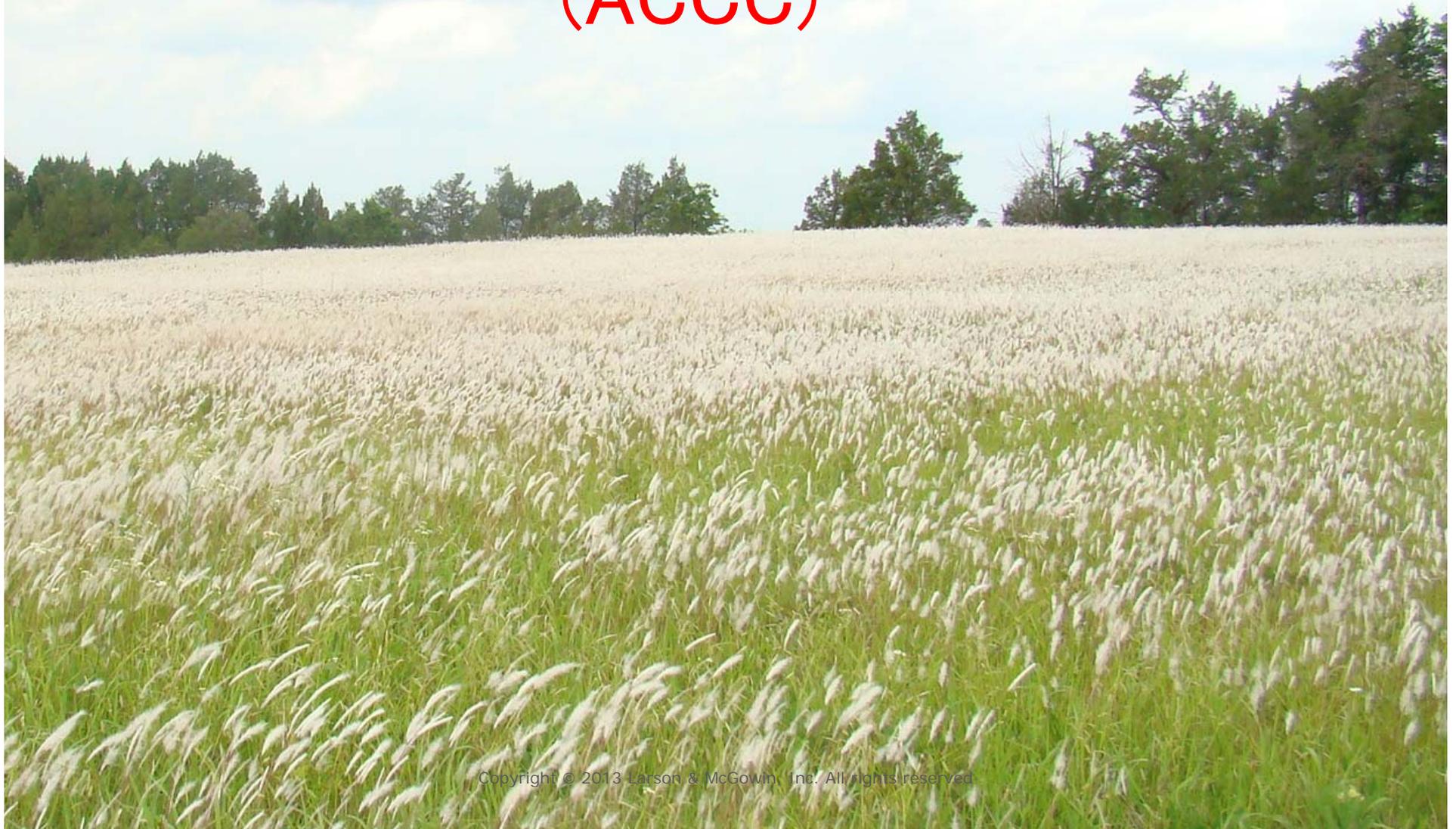
Challenges



Site Specific Issues

- *Non-Target Species*
- *Offsite Contamination*
- *Limited Treatment Options*

Alabama Cogongrass Control Center (ACCC)



ACCC Recap



Program Overview

- *Funded through grants (2010-13)*
- *Provided free herbicide treatment services to private, nonindustrial landowners*
- *Created jobs*
- *Promoted education and awareness*
- *Provided foundation for long-term management*

ACCC Recap

- *Captured and managed large amounts of data*
 - Scout data:
 - 32 fields (GPS attributes, stand data, water proximity, prescription)
 - Treatment data:
 - 50 fields (GPS, spray data, weather conditions)
 - Inspection data:
 - 23 fields (crew, treatment observed, PPE, equipment condition)

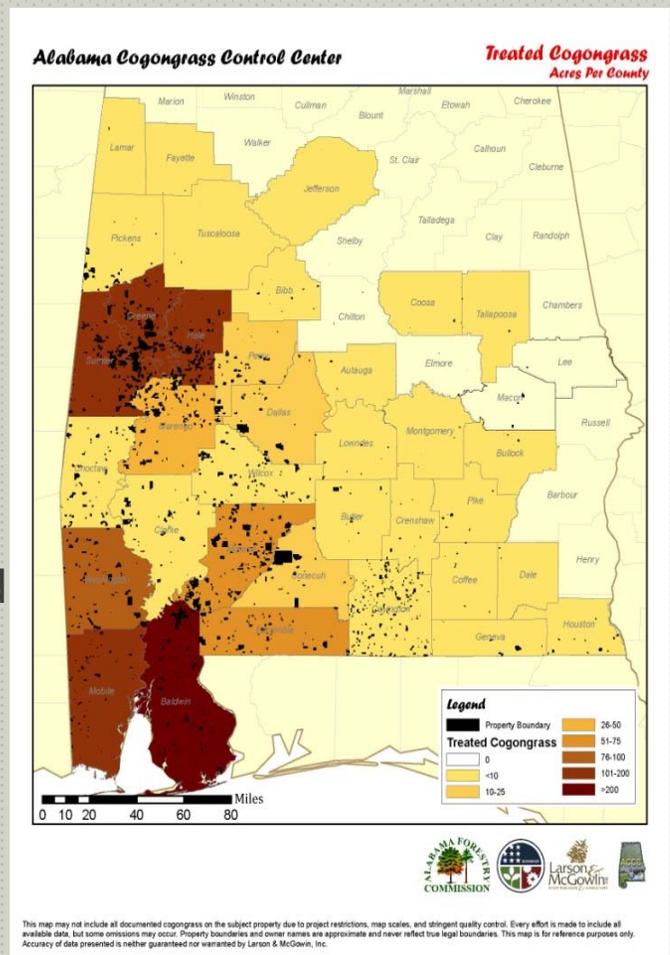


ACCC Recap



Program Results

- Scouted
 - 1,145 properties
 - 26,831 patches over 37 counties
 - 2,176 cogongrass acres
 - 400,000+ acres covered
- Treatments
 - 7 companies, 49 crews
 - Overall: 16,145 patches (1,311 ac) treated
- Education
 - Positive Press coverage
 - 65 presentations, 5 newspaper interviews & 5 published articles



The How



Large Scale Treatment

- *Allocate Capital*
- *Scout and map infestations*
- *Choose the appropriate treatment*
- *Execute treatment*
- *Constant monitoring*
- *Document EVERYTHING!*

Capital



How much money should I set aside?

- *How severe is/are the infestation(s)?*
- *What is/are the appropriate treatment(s)?*

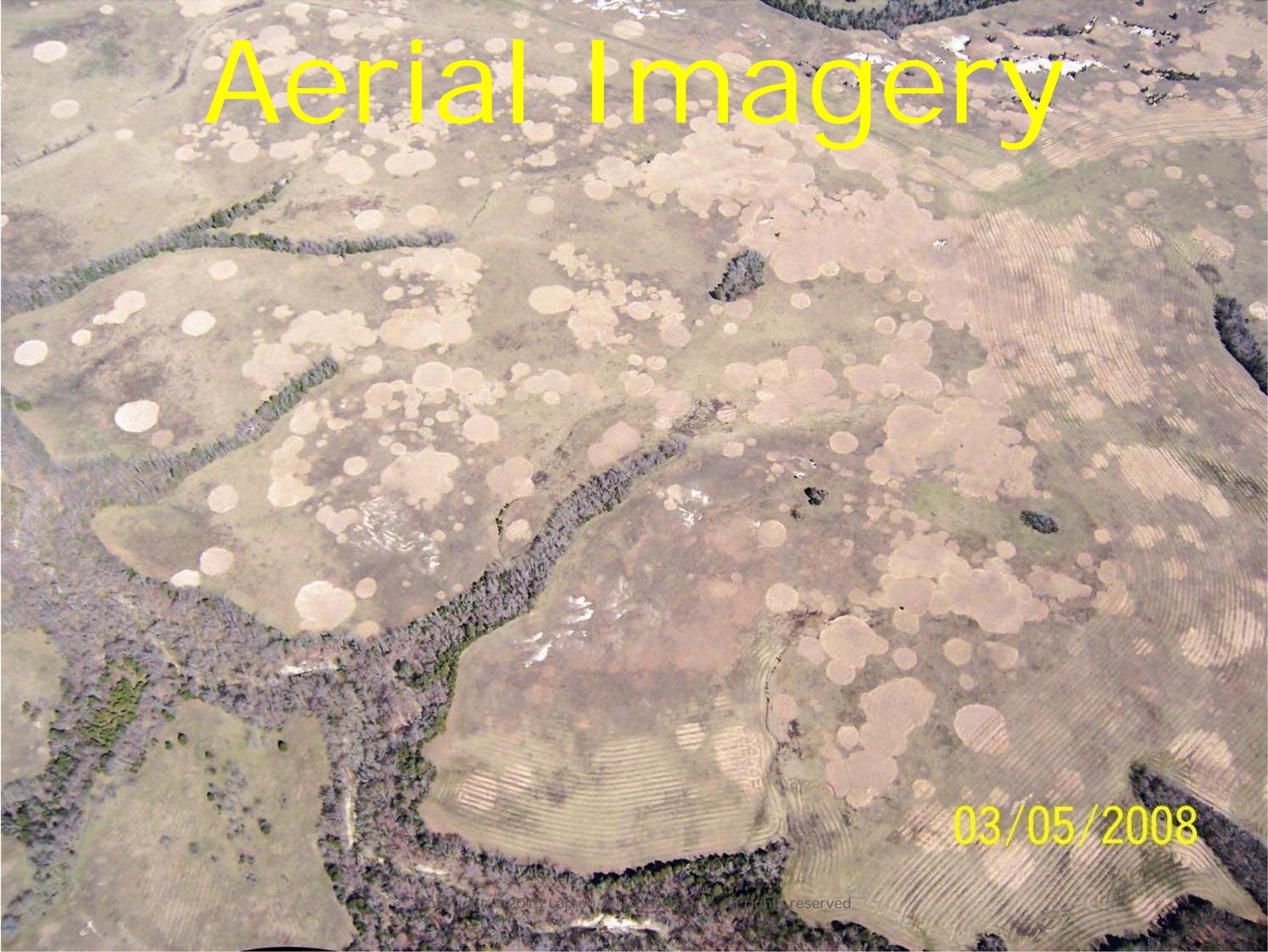
Scouting



How do we scout for infestations?

- *Become proficient at invasive species identification*
- *Allocate time to patrol property*
 - Utilize roads and trails
 - Walk transects
 - Closely inspect areas that have been disturbed
- *Utilize modern technology*

Aerial Imagery

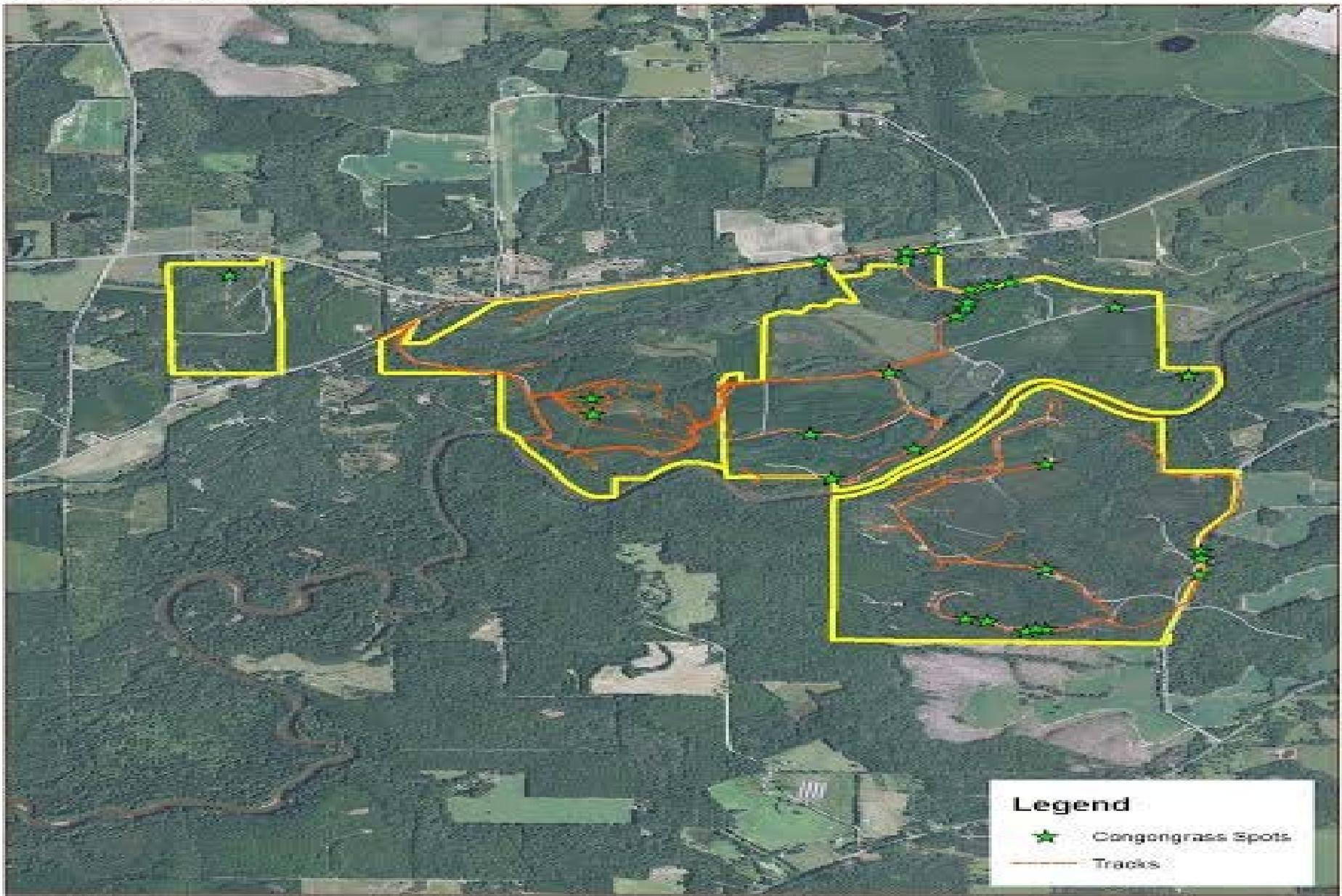


03/05/2008



Drones

**Cogongrass Tracking
Geneva County, Alabama**



Legend

- ★ Cogongrass Spots
- Tracks



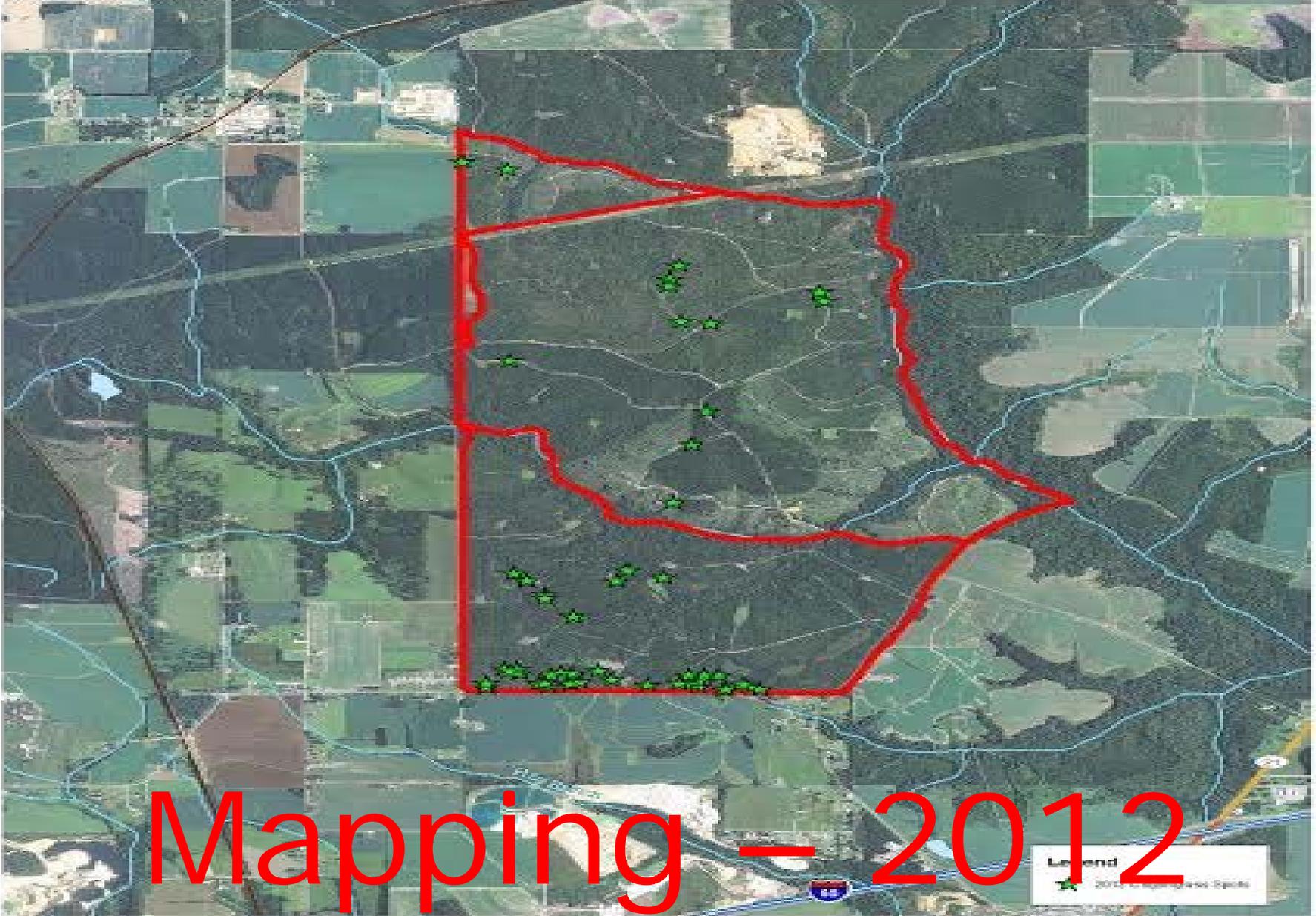
Map is for reference purposes only. Accuracy for the data presented cannot be guaranteed or warranted by L. A. S.

Mapping

- *Essential to effective control*
- *Take GPS Coordinates of infestation*
- *Flag and GPS perimeter of infestation*
- *Collect infestations data*
- *Upload field information to master database*



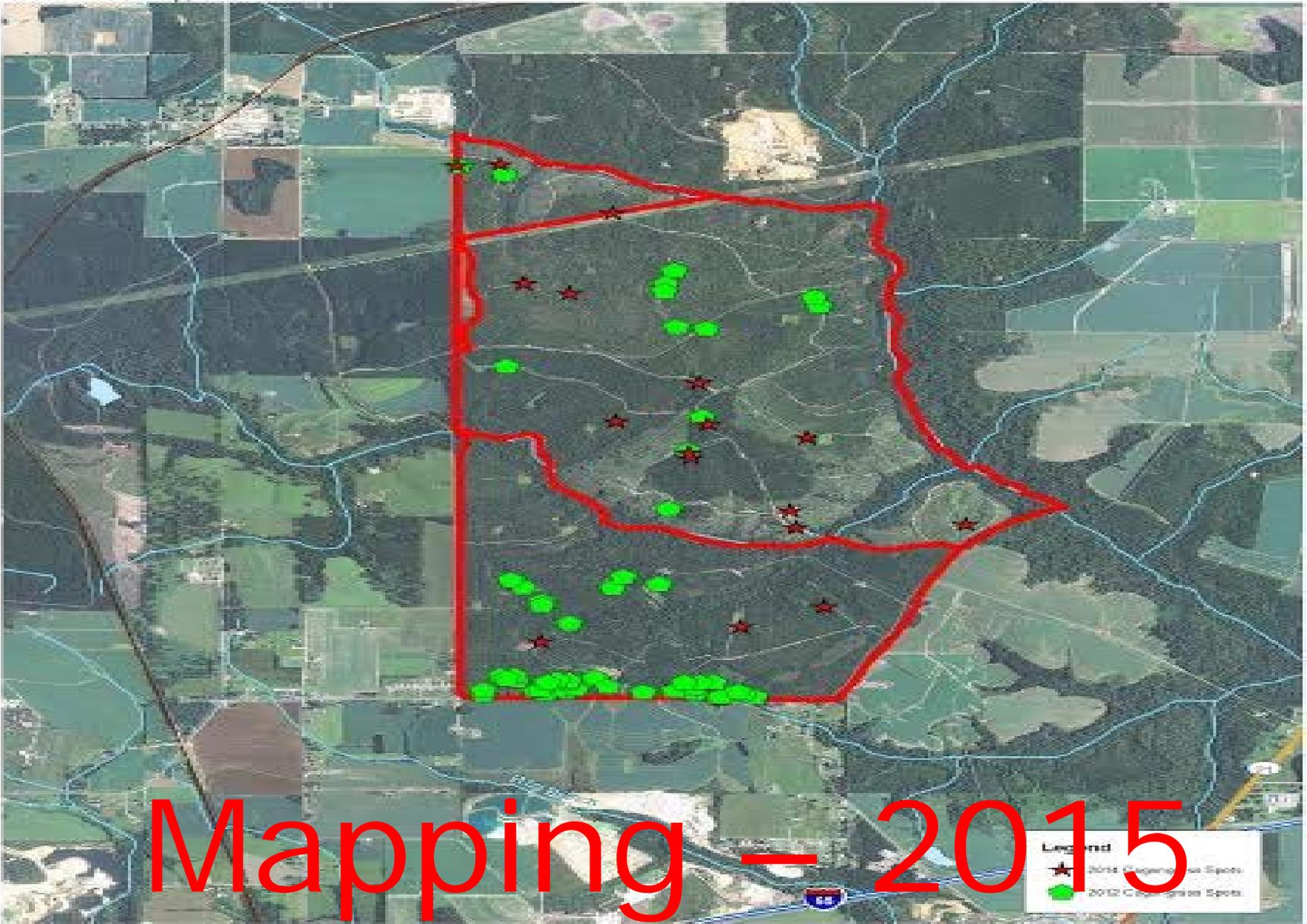
Cogongrass Areas - 2012
Escambia County, Alabama



Mapping - 2012



Cogongrass Areas - 2015
Escambia County, Alabama



Mapping - 2015

Legend

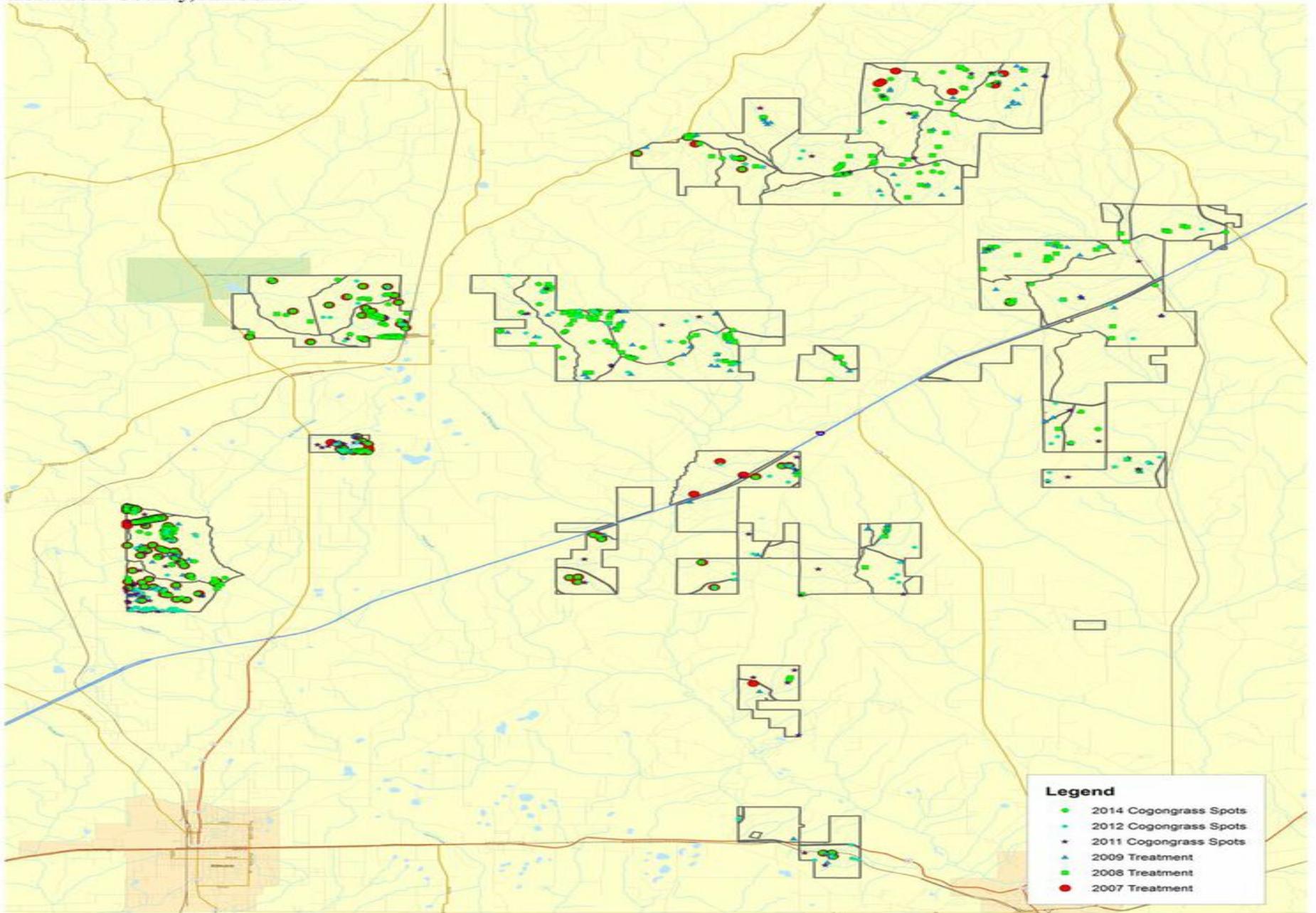
- ★ 2015 Cogongrass Spots
- 2012 Cogongrass Spots



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**Cogongrass Areas
Escambia County, Alabama**



- Legend**
- 2014 Cogongrass Spots
 - 2012 Cogongrass Spots
 - ★ 2011 Cogongrass Spots
 - ▲ 2009 Treatment
 - 2008 Treatment
 - 2007 Treatment



0 0.5 1 2 3 4 Miles
Map is for reference purposes only. Accuracy for the data presented cannot be guaranteed or warranted by L & M.

Treatment Options



Which treatment to use?

- *Identify target species*
- *Identify non-target species, critical areas, and site specific limitations*
- *Know your available treatment options*
 - Biological, Mechanical, and Chemical
- *If available, consult data collected and prior experience*

Chemical Treatment



- *By far, our most commonly used treatment*
- *Basal bark, cut stump, soil and/or foliar applied herbicide treatments*
- *Match the application method to the infestation size*
- *Choose appropriate herbicide for target and non-target species, treatment, and application method*

Foliar Applications



- *Our most commonly used application method is foliar*
- *Three common foliar application methods*
 - Hand applied (backpack sprayer)
 - Vehicle applied (skidder or UTV)
 - Aerial applied (helicopter)

Executing the Prescribed Treatment



Hand Applied

Executing the Prescribed Treatment



UTV

Executing the Prescribed Treatment

Skidder applied

Executing the Prescribed Treatment

Skidder applied

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UGA2307255

Executing the Prescribed Treatment



Aerial applied

Constant Monitoring



- *It is imperative to continue to monitor infestations during and after treatment*
- *Evaluate the effectiveness of the:*
 - Application
 - Watch for skips
 - Treat any missed areas
 - Prescription
 - Adequate control
 - Duration of control
- *Be vigilant of re-sprouting*
 - Rarely a one and done treatment

Constant Monitoring



Evaluating Effectiveness



Constant Monitoring

Monitoring for Re-Sprouting

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Stop The Spread



- *Establish protocols to prevent further spreading of the invasive species*
 - Minimize disturbance in and around infestations
 - Treat infestations prior to scheduled forestry activities
 - Clean equipment prior to moving on or off a tract with known infestations
 - Do not bring potentially contaminated materials onto property

EXTREME
**STOP THE
SPREAD!**

REPORT COGONGRASS
clemson.edu/invasives





W. Faircloth, USDA ARS

Take Home Message



- *In Conclusion:*
 - Awareness is key
 - Continuous scouting and monitoring
 - Keep good records
 - Have management strategies and plans in place
 - Its all about the BOTTOM LINE

Treatment?



What Happened Here?





Questions?

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