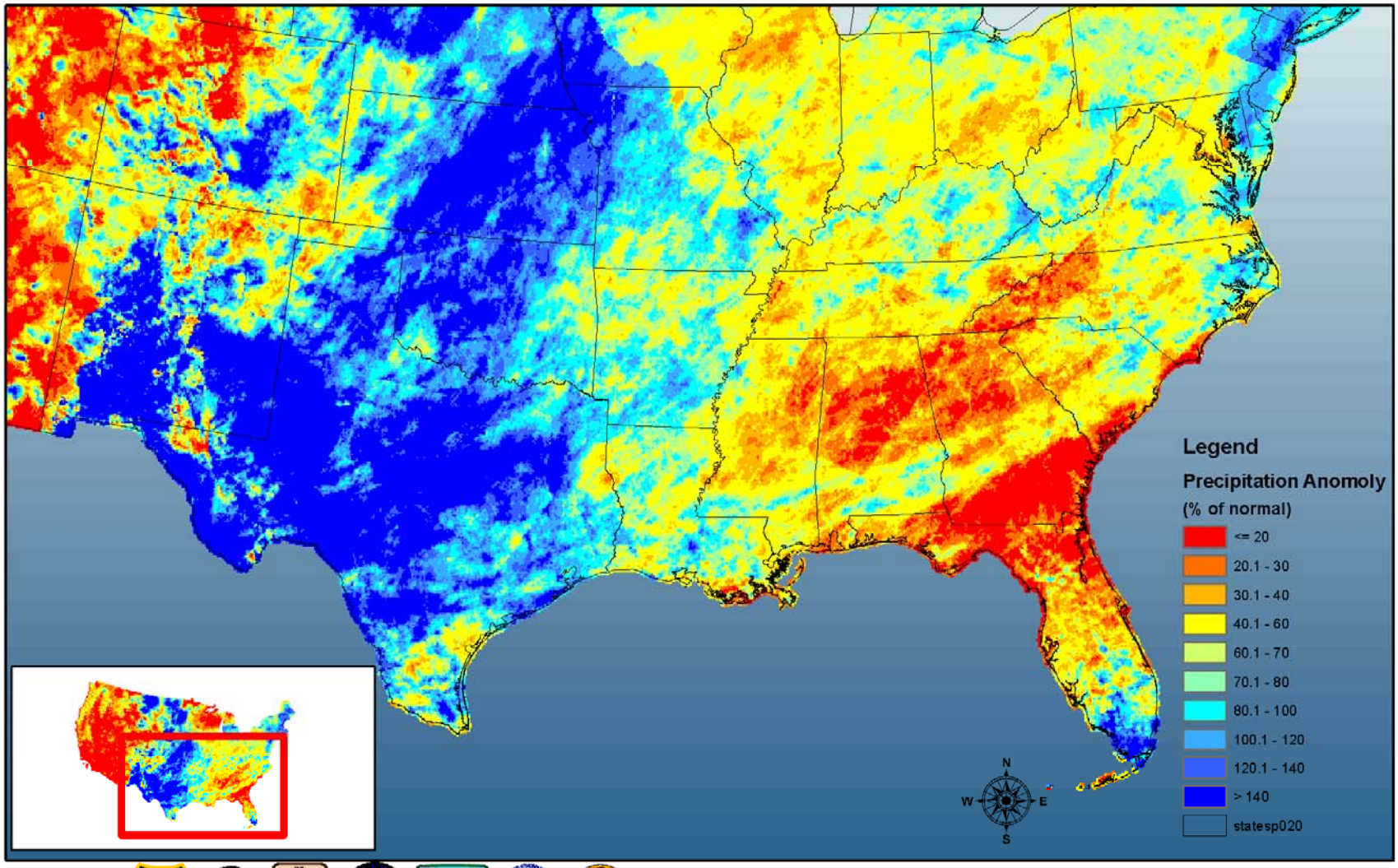
Southern Fire Season 2007

- 1998 Fire Season
- 2003 Shuttle Disaster and Response
  - Extended response
- 2005 Hurricanes Katrina, Rita and Wilma (among others)
- 2006 Texas and Oklahoma Fires
- 2007 Texas and Oklahoma Flooding
- 2007 S. Georgia and N. Florida

Drought

Precipitation deficit (27 May 2007)



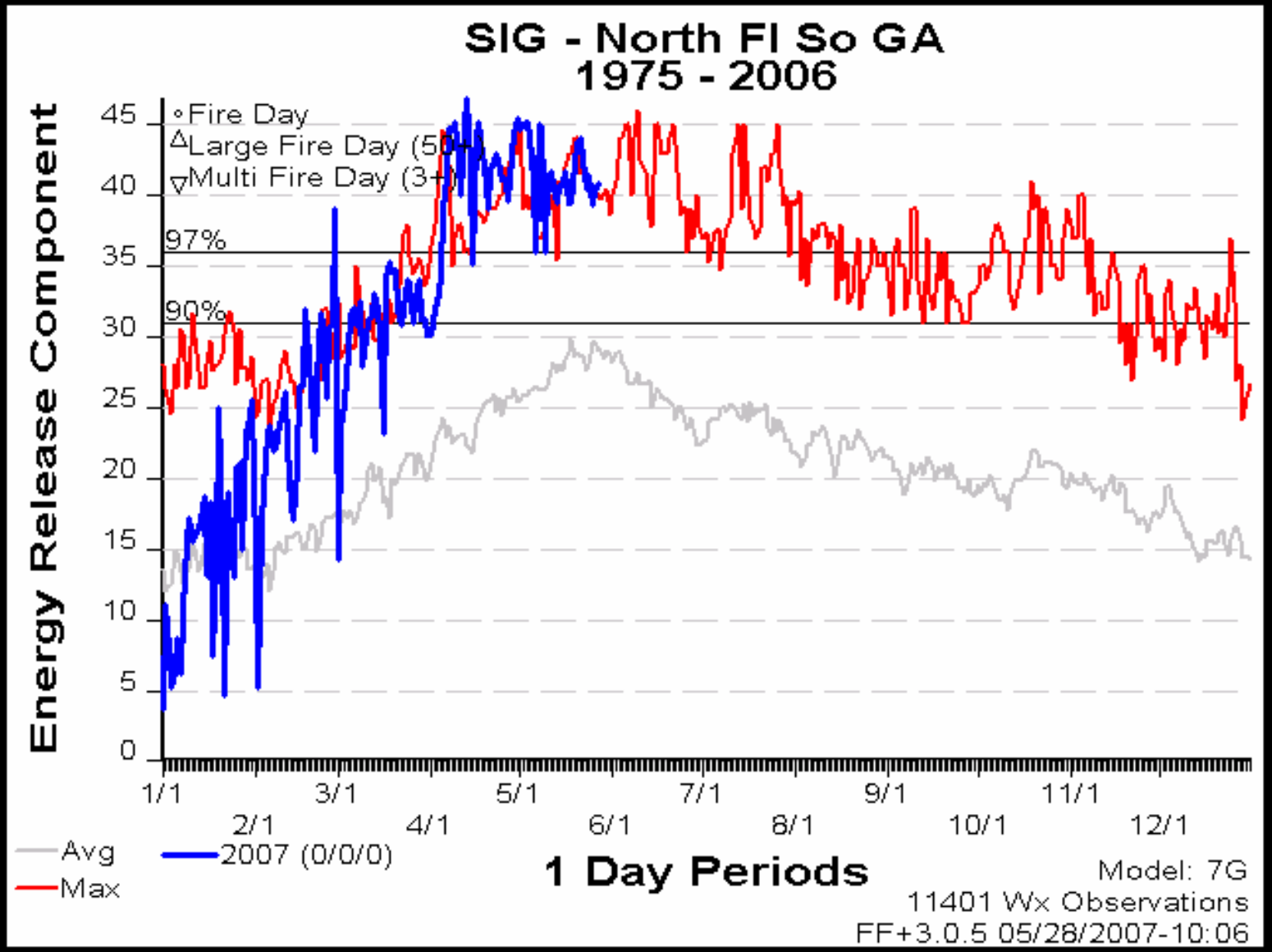
SOUTHERN GROUP OF STATE FORESTERS

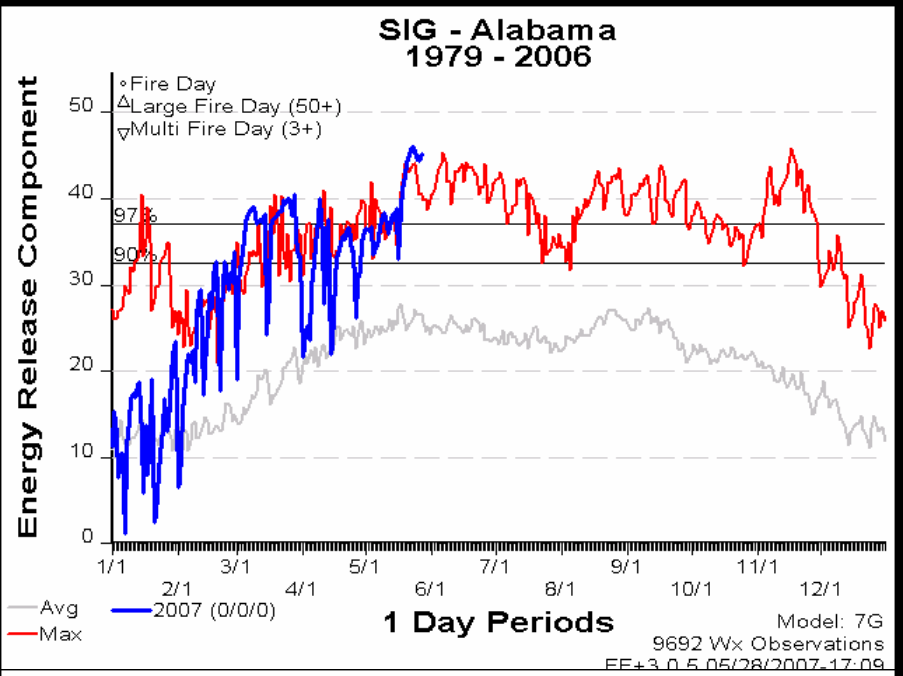
SACC Risk Assessment Team, 28 May 2007 0930

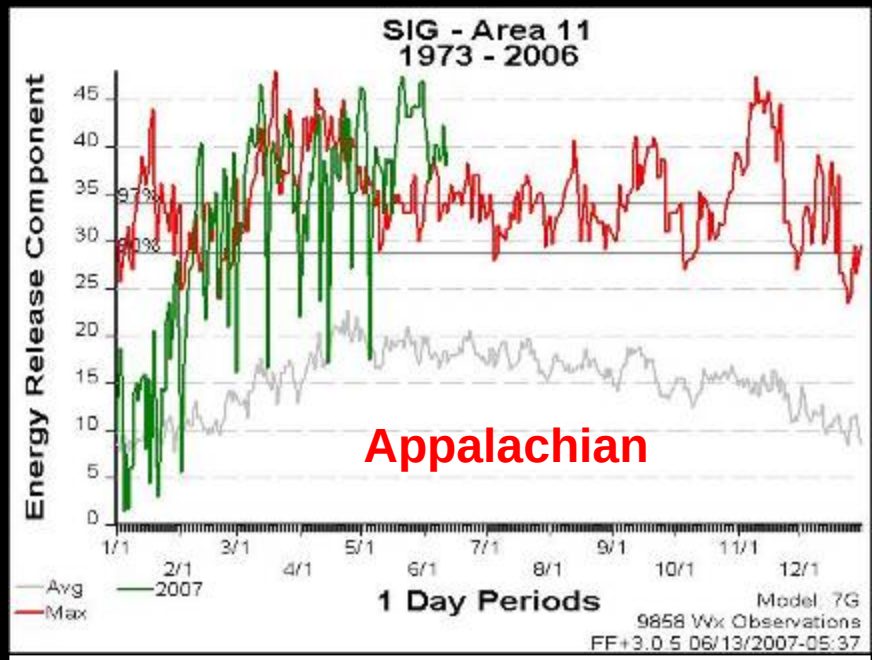
Precipitation expressed as a percentage of historical normal for the Southern Region. Current conditions are derived from the National Weather Service NAM Precipitation Analysis and long-term normals are derived from the PRISM long-term normals dataset.

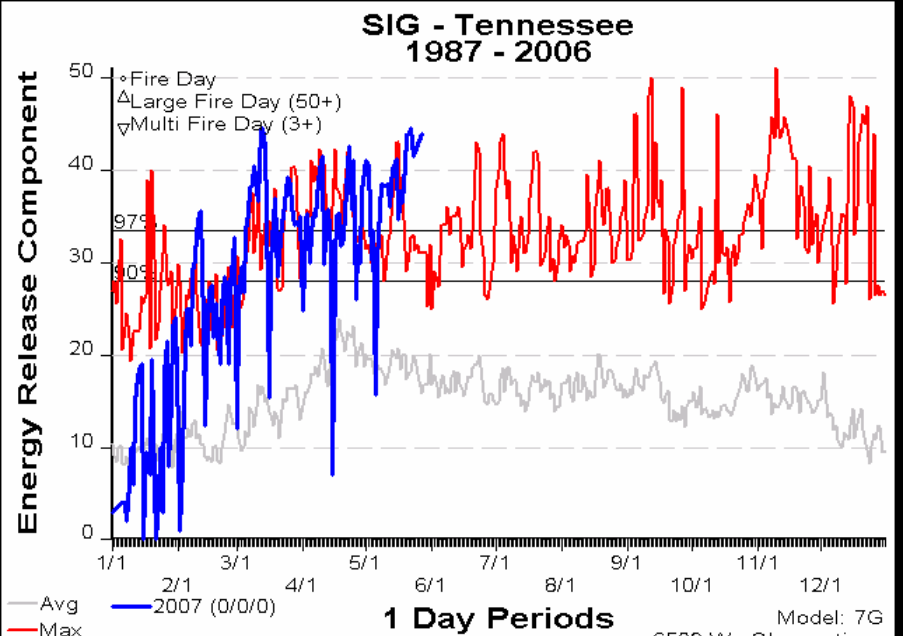
Fuels

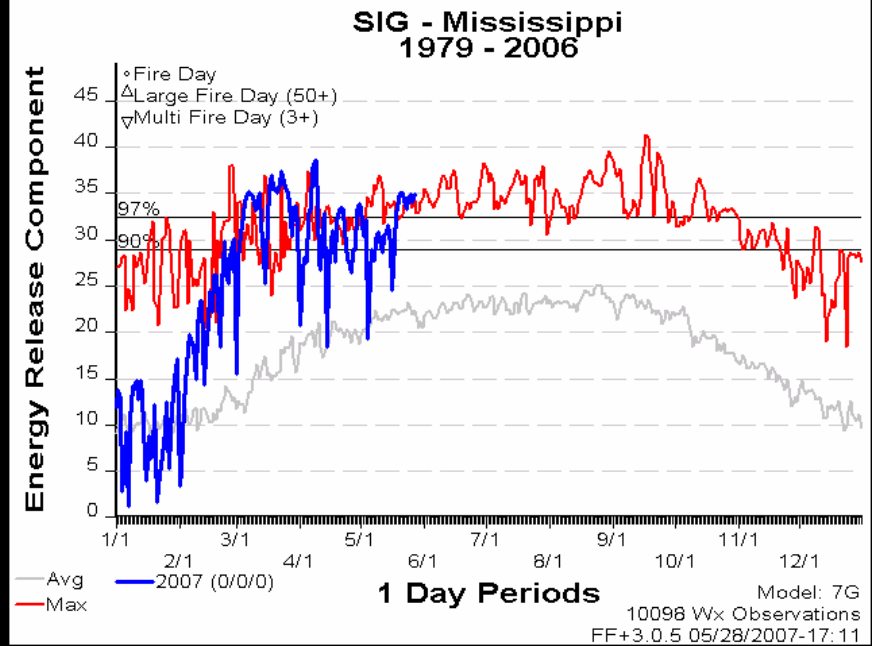
ERC - North FL & South GA



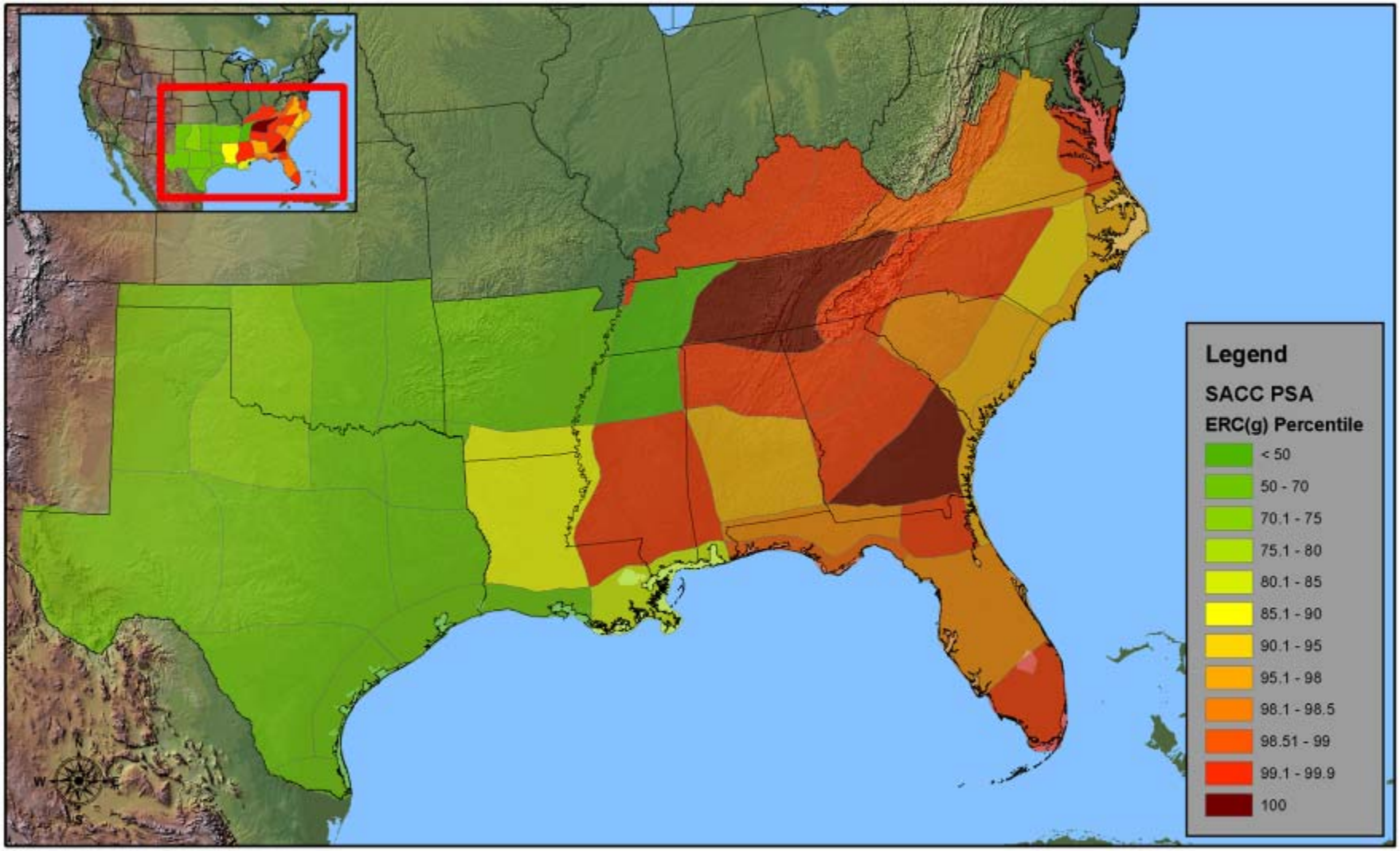

SIG - Alabama
1979 - 2006
Fire Day
Large Fire Day (50+)
Multi Fire Day (3+)
97%
90%
Energy Release Component
1/1
2/1
3/1
4/1
5/1
6/1
7/1
8/1
9/1
10/1
11/1
12/1
Avg
Max
2007 (0/0/0)
1 Day Periods
Model: 7G
9692 Wx Observations


SIG - Area 11
1973 - 2006
97%
90%
Energy Release Component
Appalachian
Avg
Max
2007
1 Day Periods
Model: 7G
9858 Wx Observations
FF+3.0.5 06/13/2007-05:37


SIG - Tennessee
1987 - 2006
Fire Day
Large Fire Day (50+)
Multi Fire Day (3+)
97%
90%
Energy Release Component
Avg
Max
2007 (0/0/0)
1 Day Periods
Model: 7G


SIG - Mississippi
1979 - 2006
Fire Day
Large Fire Day (50+)
Multi Fire Day (3+)
97%
90%
Energy Release Component
Avg
Max
2007 (0/0/0)
1 Day Periods
Model: 7G
10098 Wx Observations
FF+3.0.5 05/28/2007-17:11

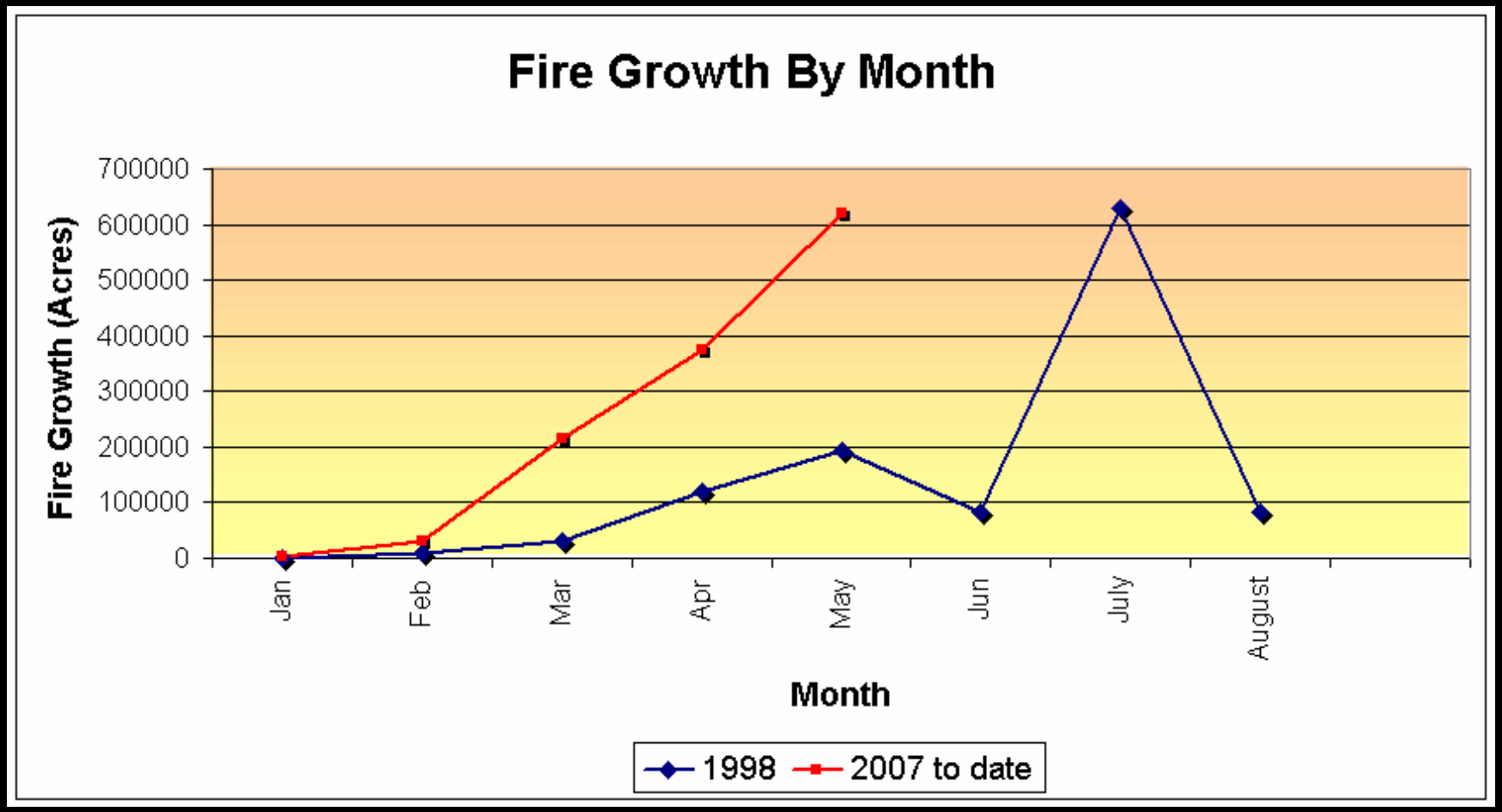
Energy Release Component (g) Percentiles (28 May 2007)



SACC Risk Assessment Team, 29 May 2007 1400

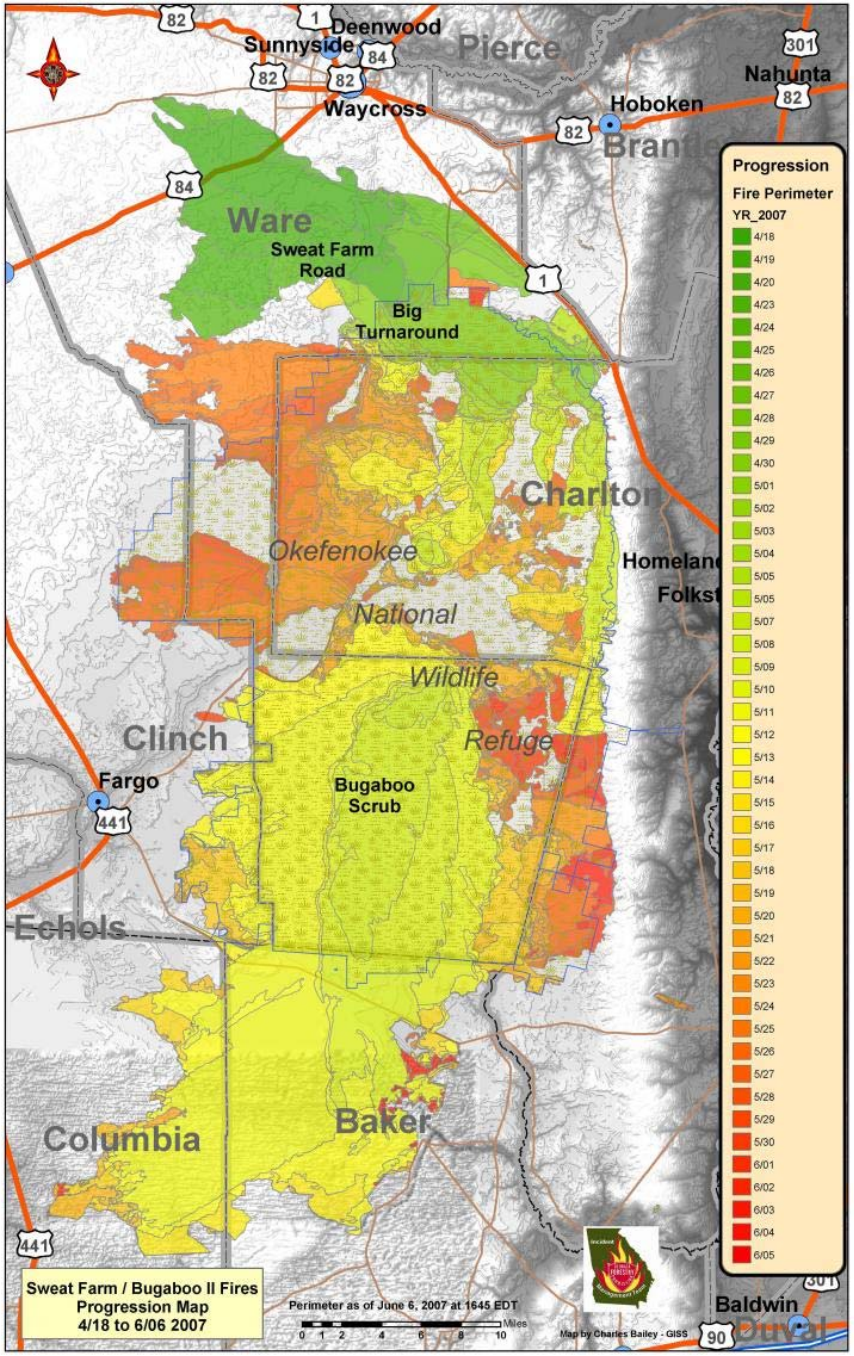
Energy Release Components for fuel model G, expressed as a percentile of their historical value. High values indicate areas where current ERC values are meeting or exceeding historical values for that area.

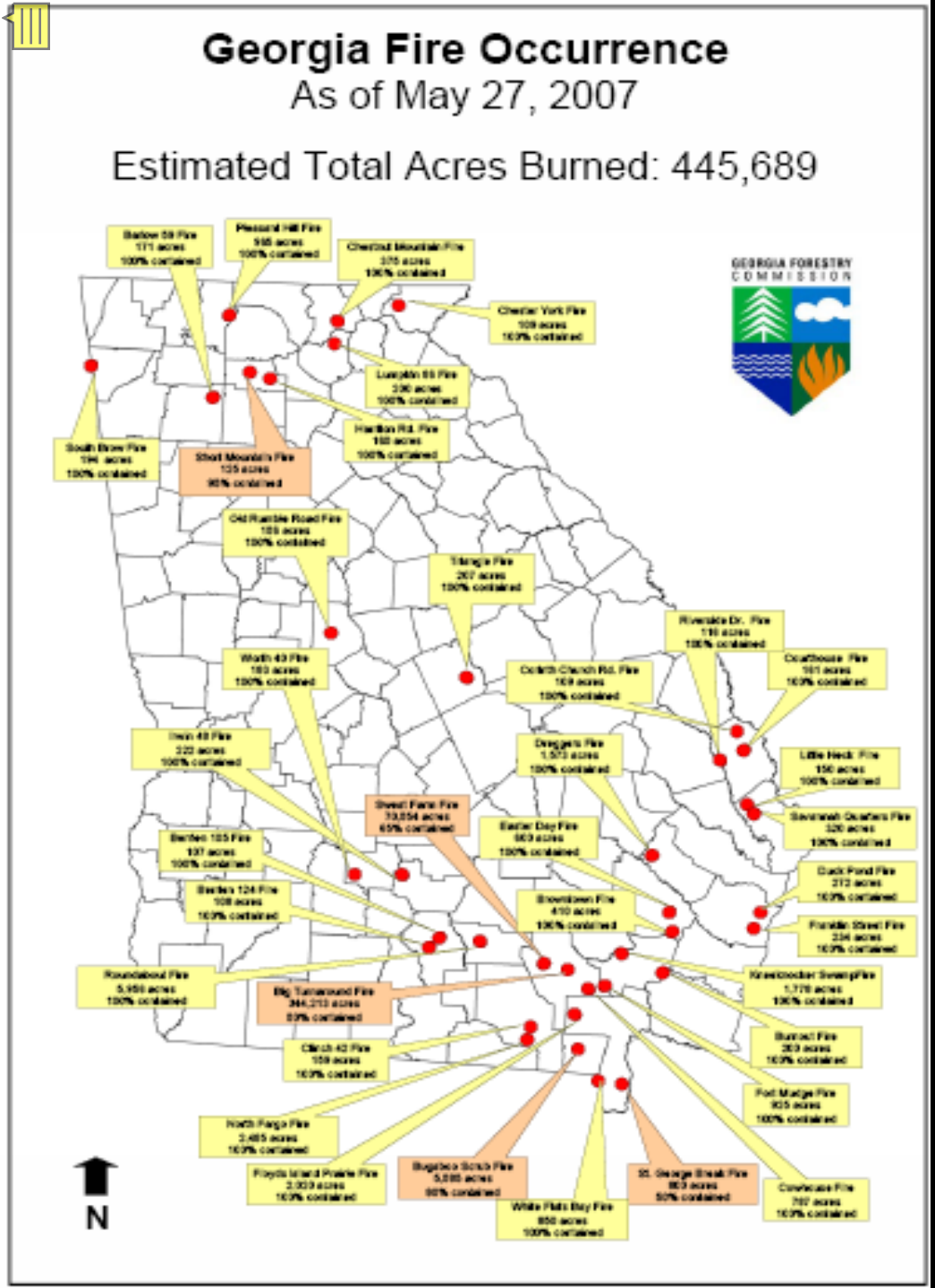
Fire Data


Fire Growth By Month
Fire Growth (Acres)
700000
600000
500000
400000
300000
200000
100000
0
Jan
Feb
Mar
Apr
May
Jun
July
August
Month
1998
2007 to date

Sweat Farm Road / Big Turnaround and Bugaboo Fires

Over 600,000 acres and still burning / reburning

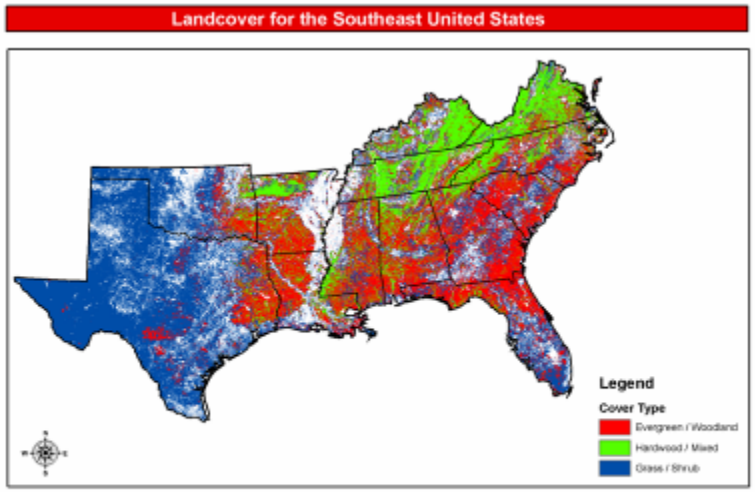




GA Large Fires

SOUTHERN AREA 2007 YTD REPORTED (209) "LARGE", >=65 AC+ FIRES

Data Thru Jun 12, 2007



Map Date: Dec 05, 2006
Map Directory Location: D:\DATA\ARCGIS\SACC\ARC_PROJECTS

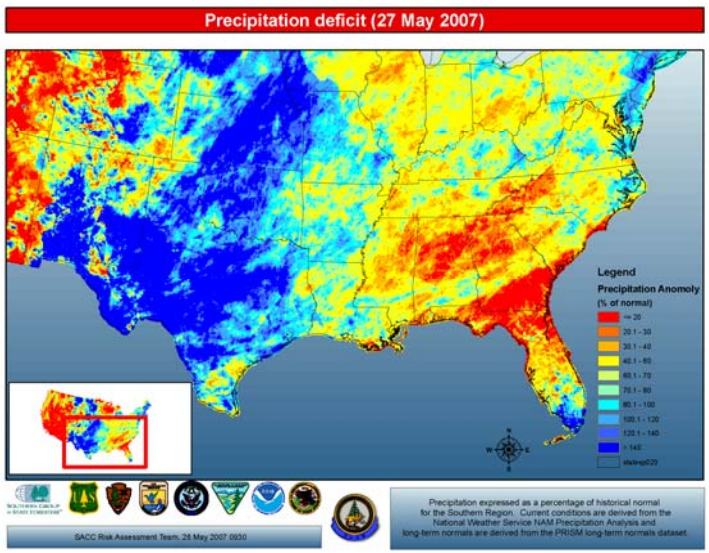
Resources Committed to S. Fires

Infrastructure

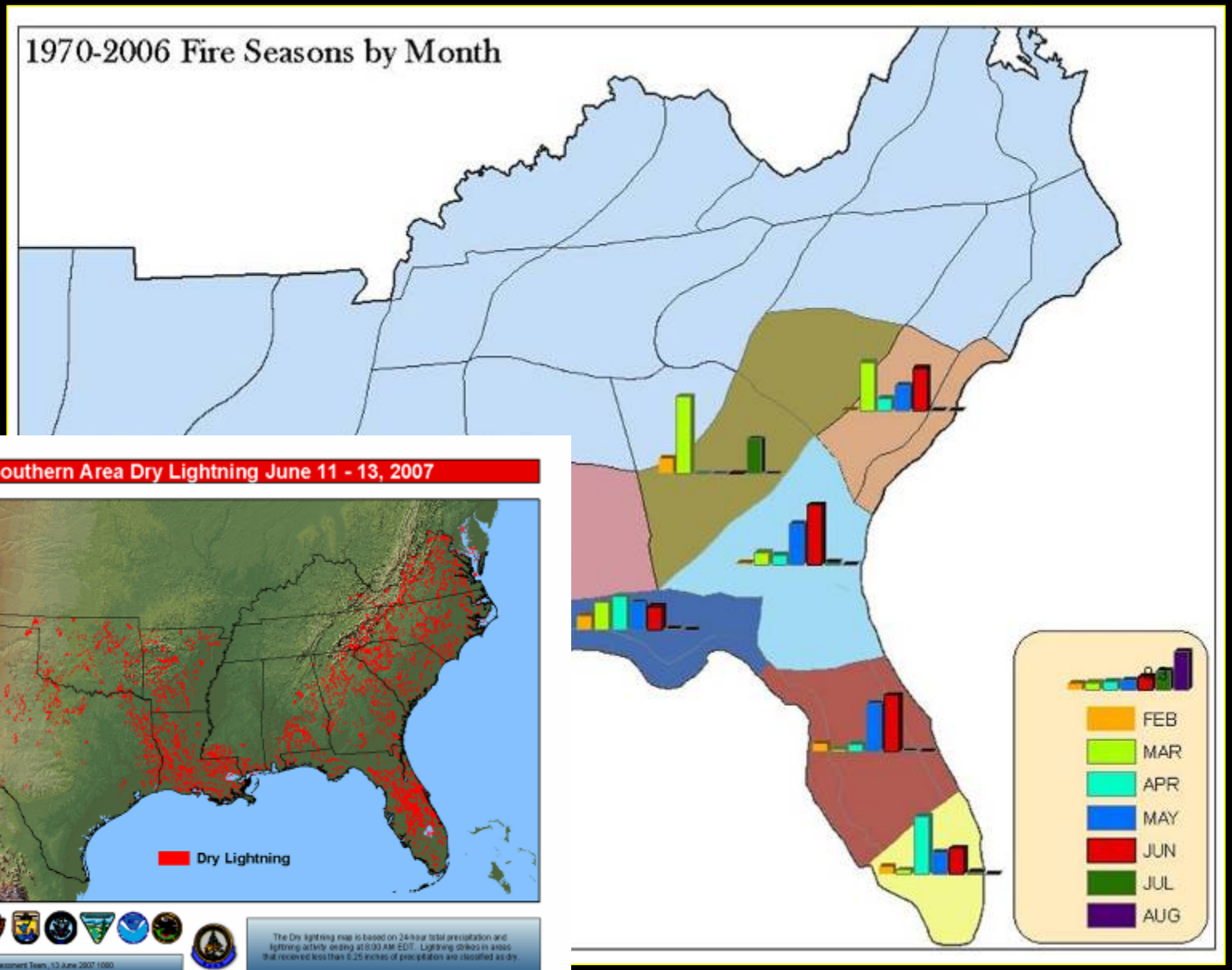
CHALLENGES

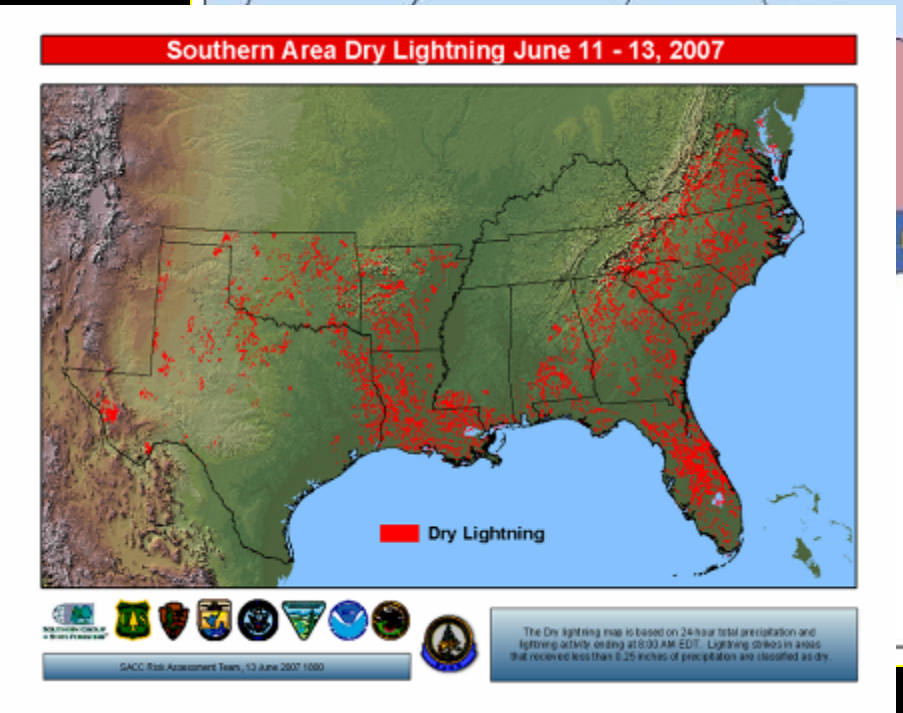
- Extreme drought relief only with tropical storm
- Year-round fire season & # fires region-wide
- Majority land is privately owned & fragmented

- Competition for resources with other regions
- Personnel fatigue
- Early mountain fire season

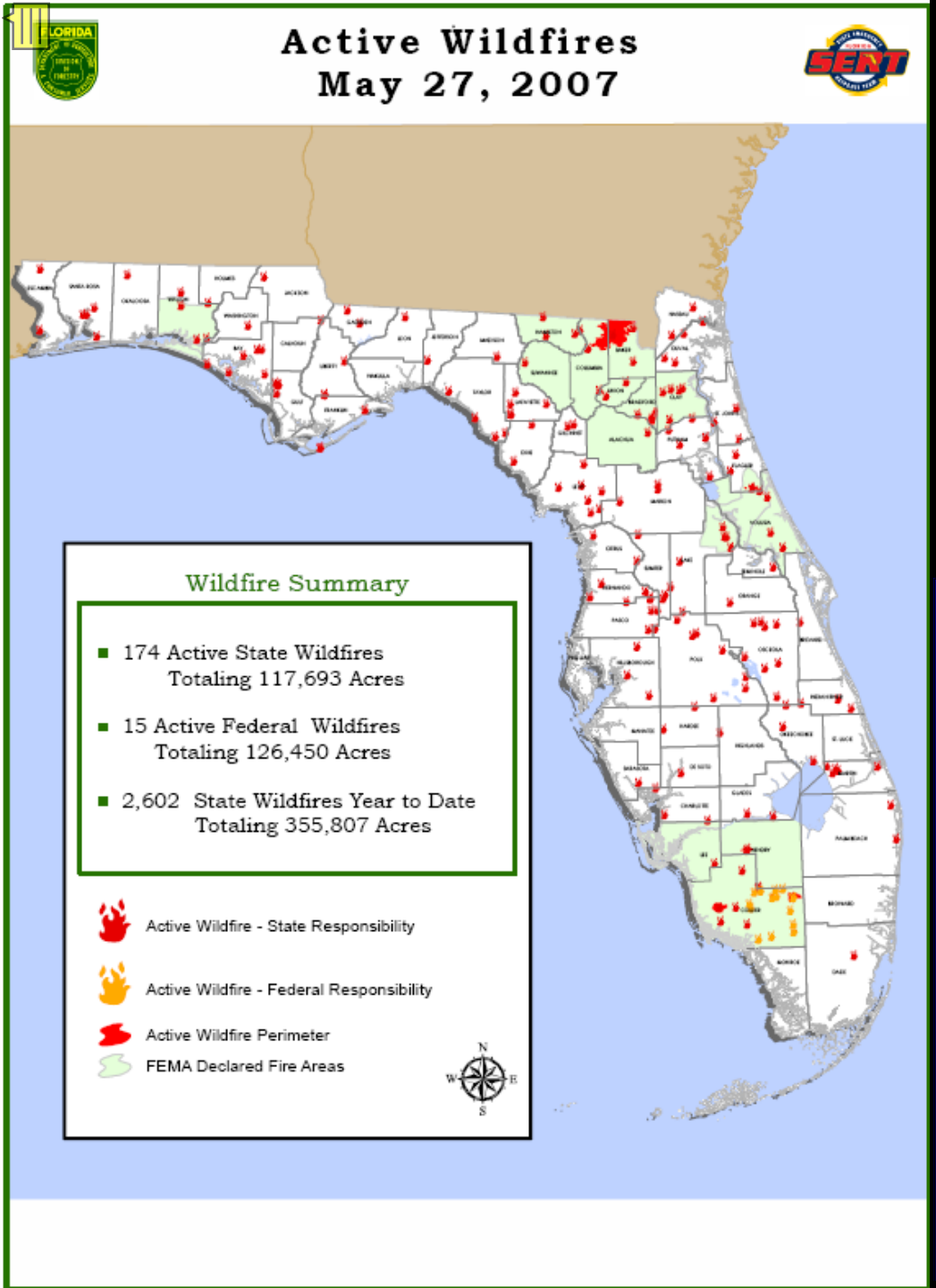

Precipitation deficit (27 May 2007)
Legend
Precipitation Anomoly
(% of normal)
<= 20
20.1 - 30
30.1 - 40
40.1 - 60
60.1 - 70
70.1 - 80
80.1 - 100
100.1 - 120
120.1 - 140
> 140
Precipitation expressed as a percentage of historical normal for the Southern Region. Current conditions are derived from the National Weather Service NAM Precipitation Analysis and long-term normals are derived from the PRISM long-term normals dataset.
SACC Risk Assessment Team, 28 May 2007 0930

Acres Burned as a Percent of the Total





Active Wildfires
May 27, 2007



Wildfire Summary

- 174 Active State Wildfires Totaling 117,693 Acres
- 15 Active Federal Wildfires Totaling 126,450 Acres
- 2,602 State Wildfires Year to Date Totaling 355,807 Acres

Active Wildfire - State Responsibility

Active Wildfire - Federal Responsibility

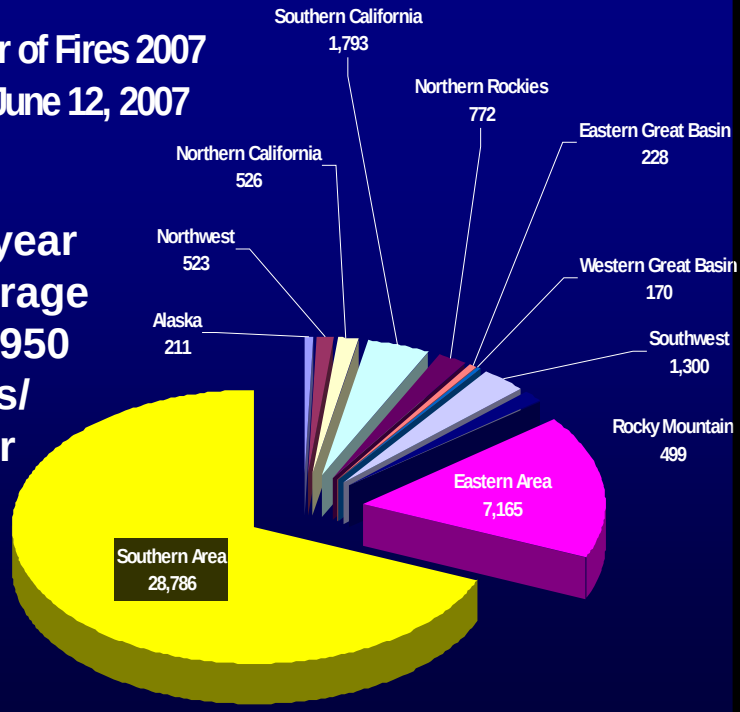
Active Wildfire Perimeter

FEMA Declared Fire Areas

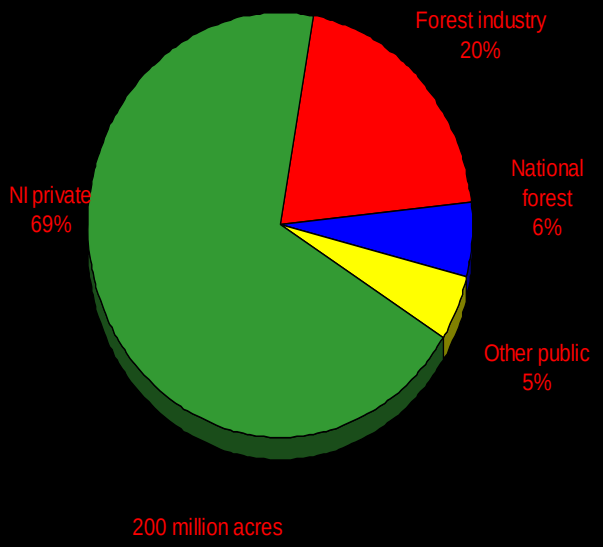
N W E S

Number of Fires 2007 as of June 12, 2007

10-year average 34,950 fires/ year



Forest Area and Ownership - South



Source: SFRA, 2002

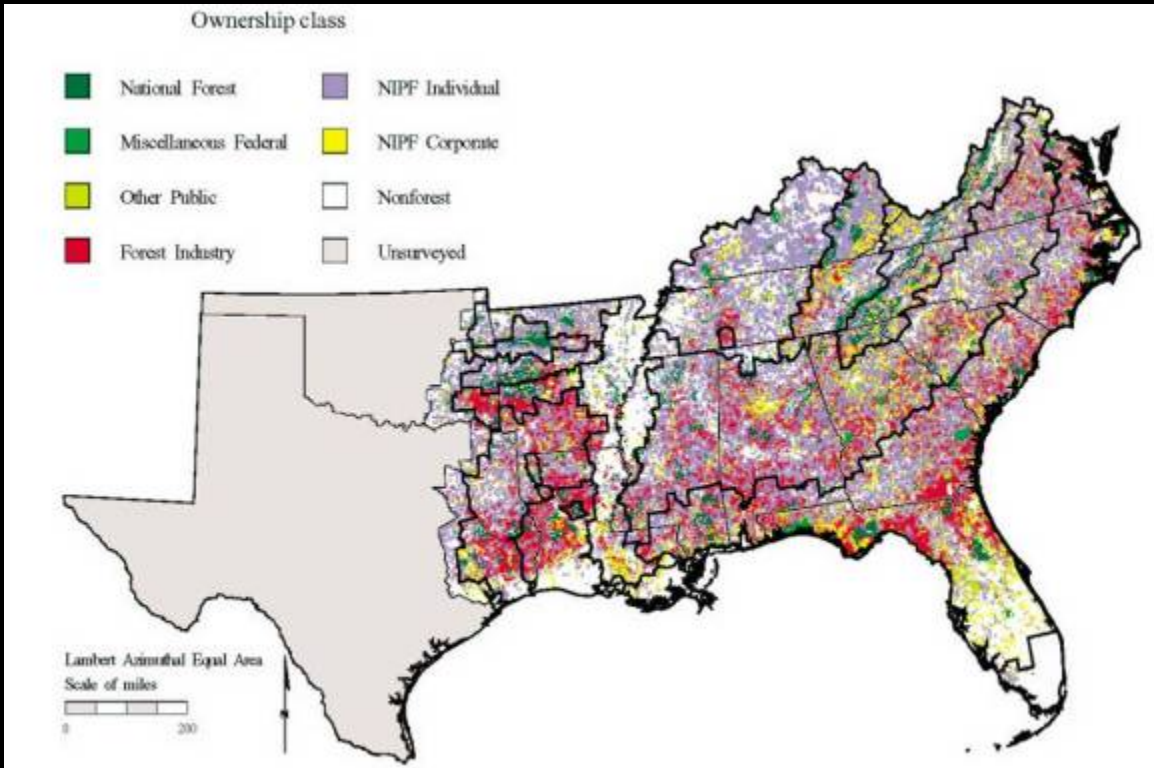
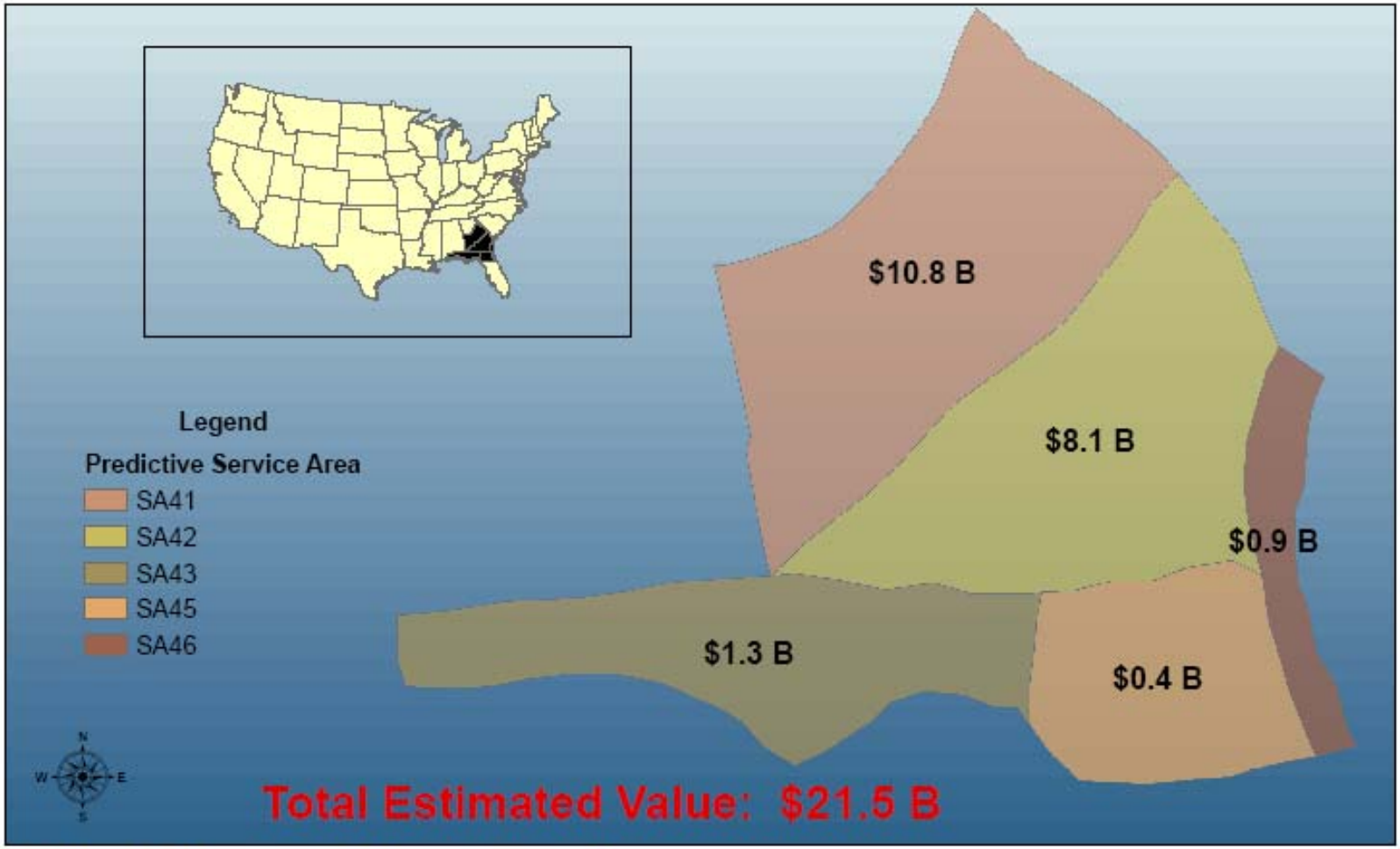


Figure 35—Distribution of timberland by province, and ownership class, Southern United States, 1999

Values at Risk

Total Estimated Timber Value (Billions): Forest Inventory Analysis



L. Allen Smith, TFS, GISS 5/23/2007 0930 EDT

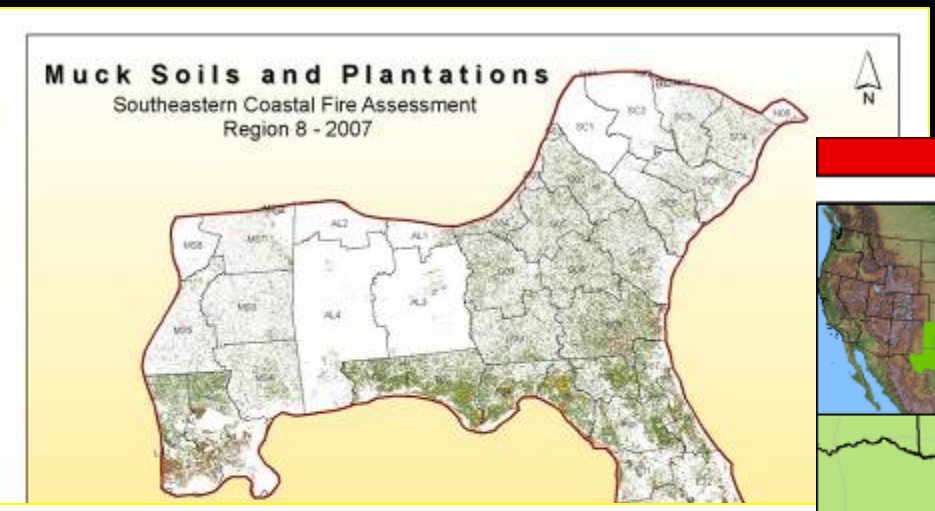
Timber Volume and Value data provided by Georgia Forestry Commission Forest Inventory Analysis (FIA).

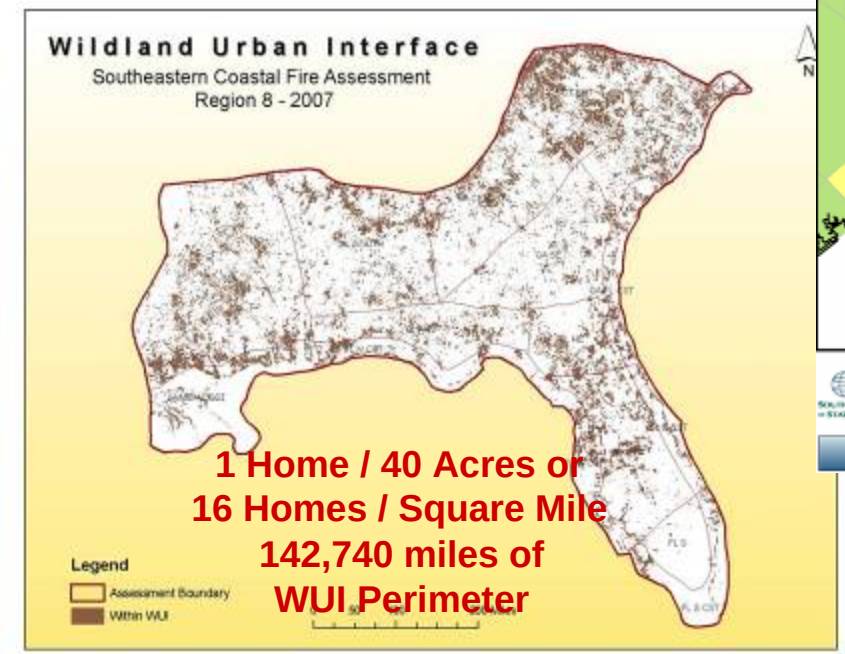
SUCCESSES

- SWRA and LANDFIRE
- Decision Support Team
- GOAL Organization
- CWPPs
- Hazard Mitigation

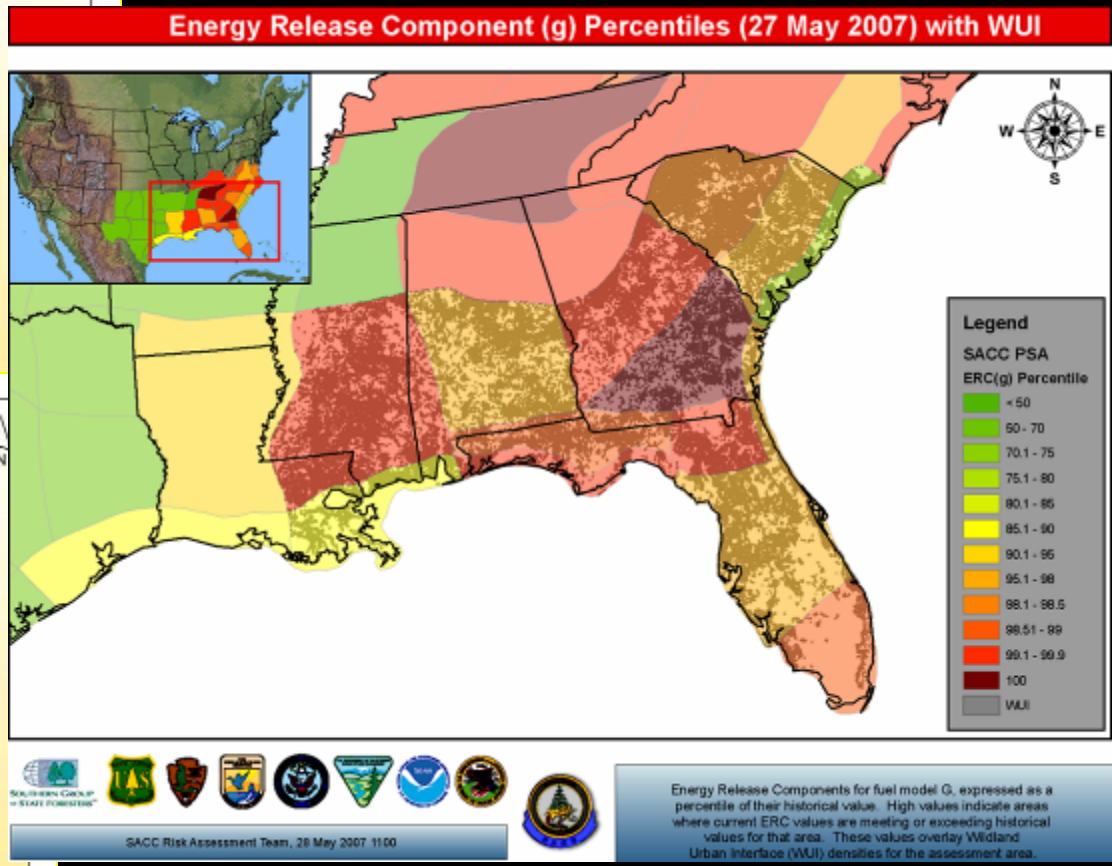
- Joint Arson Task Force
- Effective IA
- NIMO

Southern Wildfire Risk Assessment





1 Home / 40 Acres or
16 Homes / Square Mile
142,740 miles of
WUI Perimeter

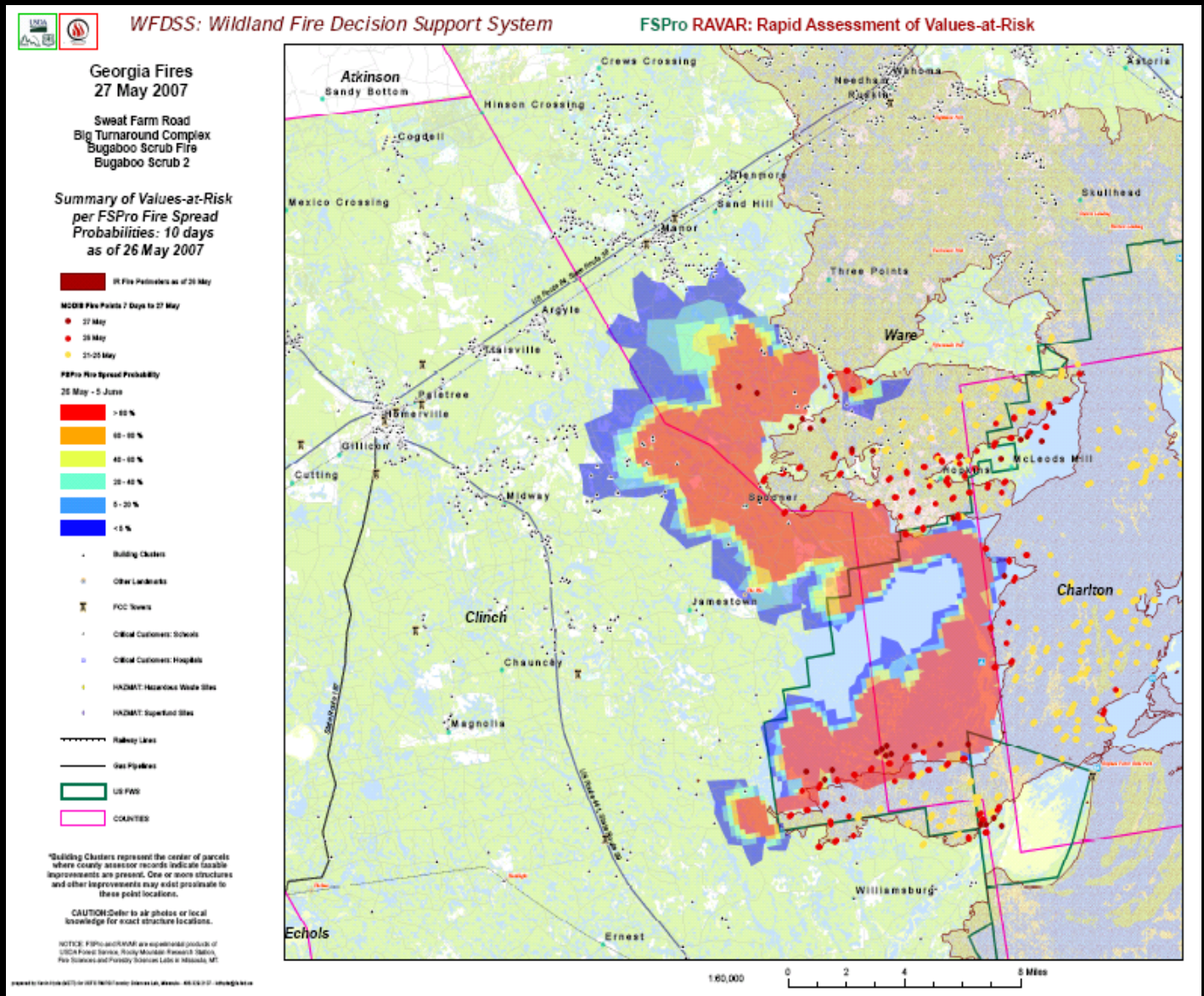


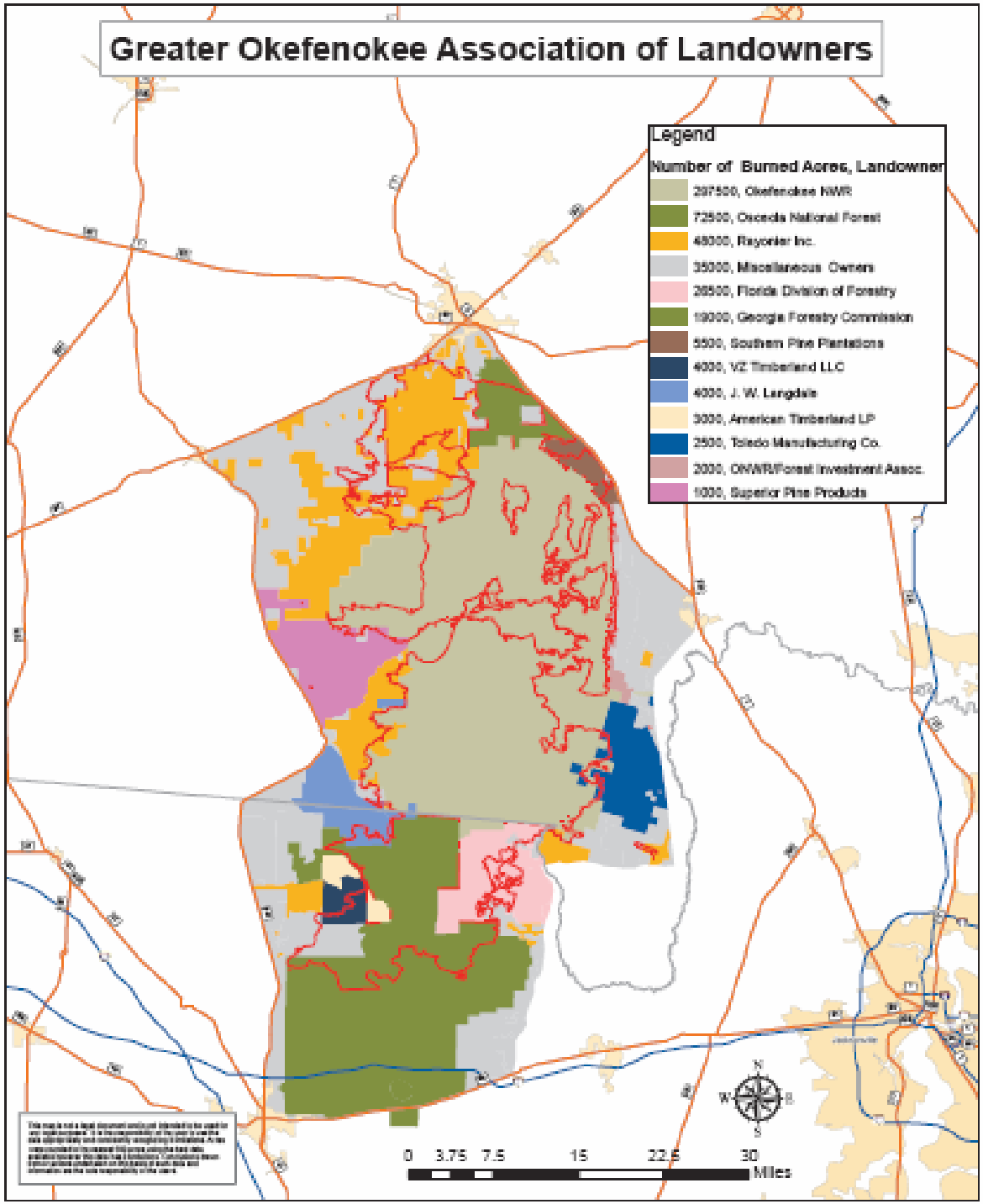
Big Turnaround Fire Perimeter and SFRAS Data: May 29, 2007

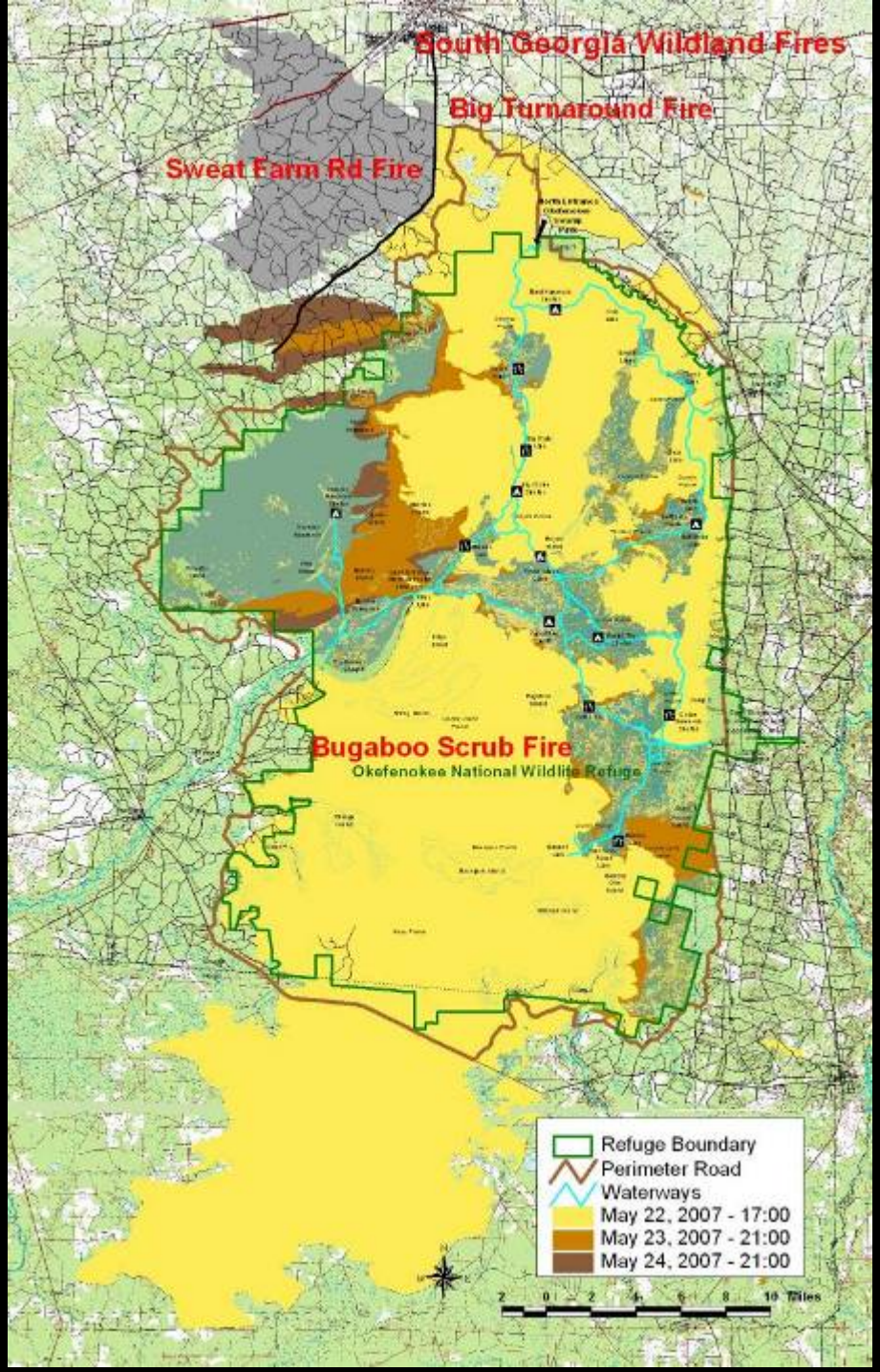
Southern Area Coordination Center - Rapid Assessment Team
30 May 2007 0800 EDT

Map combines Big Turnaround Fire perimeter from May 29, 2007 with data from the Southern Fire Risk Assessment System. Layers incorporated here include Plantations, Muck Soils and Wildland Urban Interface.

RAVAR


WFDSS: Wildland Fire Decision Support System
FSPro RAVAR: Rapid Assessment of Values-at-Risk
Georgia Fires
27 May 2007
Sweat Farm Road
Big Turnaround Complex
Bugaboo Scrub Fire
Bugaboo Scrub 2
Summary of Values-at-Risk per FSPro Fire Spread Probabilities: 10 days as of 26 May 2007
IR Fire Perimeters as of 26 May
MODIS Fire Points 7 Days to 27 May
27 May
26 May
25-25 May
FSPro Fire Spread Probability
26 May - 5 June
> 80 %
60 - 80 %
40 - 60 %
20 - 40 %
5 - 20 %
< 5 %
Building Clusters
Other Landmarks
FCC Towers
Critical Customers: Schools
Critical Customers: Hospitals
HAZMAT: Hazardous Waste Sites
HAZMAT: Superfund Sites
Railway Lines
Gas Pipelines
US FWS
COUNTIES
*Building Clusters represent the center of parcels where county assessor records indicate taxable improvements are present. One or more structures and other improvements may exist proximate to these point locations.
CAUTION:Defer to air photos or local knowledge for exact structure locations.
NOTICE: FSPro and RAVAR are experimental products of USDA Forest Service, Rocky Mountain Research Station, Fire Sciences and Forestry Sciences Labs in Missoula, MT.
Atkinson
Sandy Bottom
Crews Crossing
Hinson Crossing
Cogdell
Mexico Crossing
Glenmore
Sand Hill
Manor
Skullhead
Three Points
Argyle
Waresville
Ware
Palestree
Homerville
Gillicon
Cutting
Midway
Spooner
McLeods Mill
Jamestown
Charlton
Clinch
Chauncey
Magnolia
Williamsburg
Echols
Ernest
1:60,000
0
2
4
8 Miles

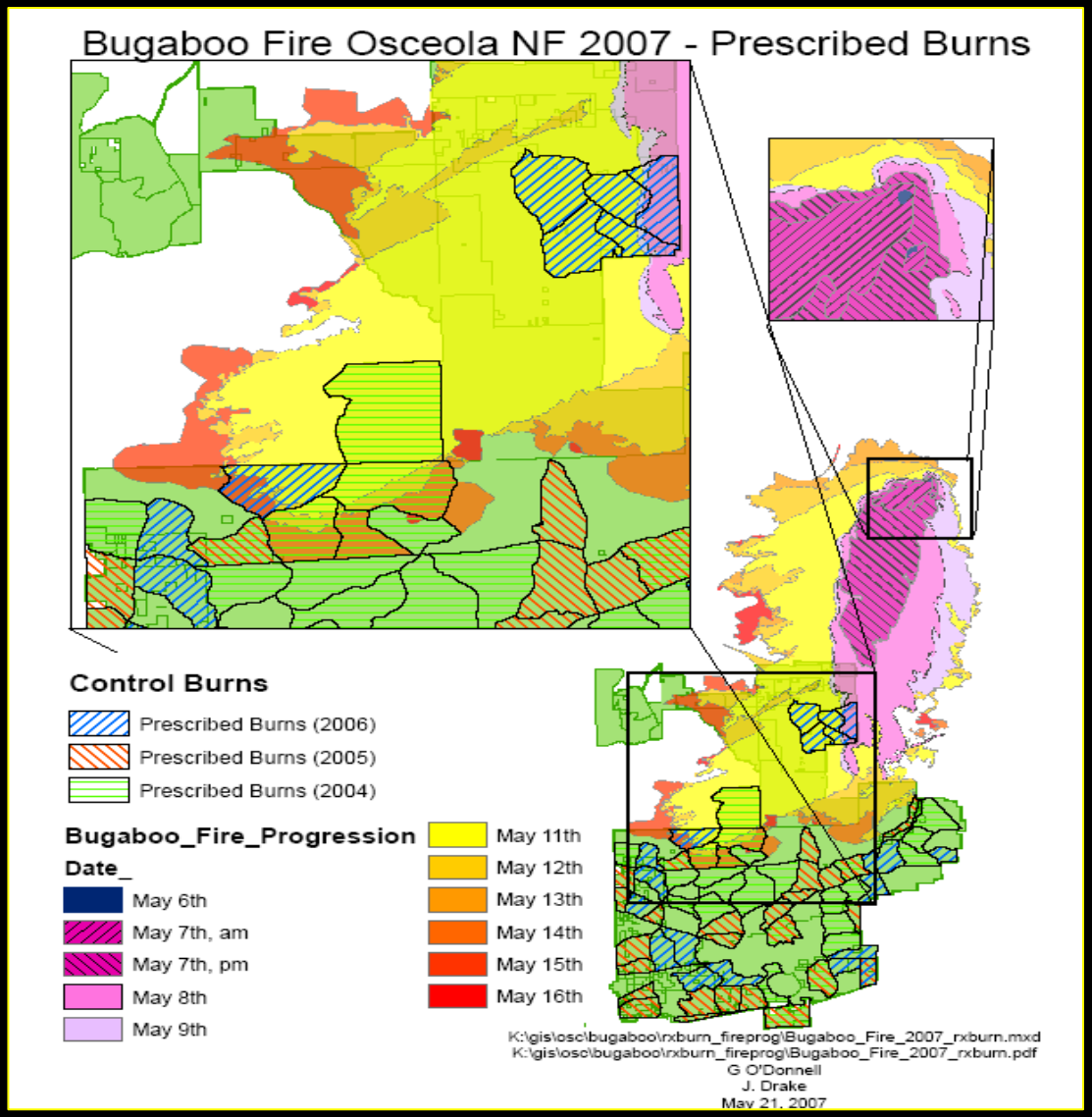

Greater Okefenokee Association of Landowners
Legend
Number of Burned Acres, Landowner
297500, Okefenokee NWR
72500, Osceola National Forest
48000, Rayonier Inc.
35000, Miscellaneous Owners
26500, Florida Division of Forestry
19000, Georgia Forestry Commission
5500, Southern Pine Plantations
4000, VZ Timberland LLC
4000, J. W. Langdale
3000, American Timberland LP
2500, Toledo Manufacturing Co.
2000, ONWR/Forest Investment Assoc.
1000, Superior Pine Products
N
W
E
S
0 3.75 7.5 15 22.5 30
Miles


South Georgia Wildland Fires
Big Turnaround Fire
Sweat Farm Rd Fire
Bugaboo Scrub Fire
Okefenokee National Wildlife Refuge
Refuge Boundary
Perimeter Road
Waterways
May 22, 2007 - 17:00
May 23, 2007 - 21:00
May 24, 2007 - 21:00
2 0 2 4 6 8 10 Miles

Community Planning

- CWPP = 431 completed in the South
- Town of Taylor CWPP
- Hazard Mitigation Saved Town
- FIREWISE Successful in Prevention

Fuels Treatments



Recent Prescription Burn

Untreated Unit

OPPORTUNITIES

- Emergency Assistance Issues
- Efficient Sharing of Resources
- Fire Behavior and Fuels Treatment
- Enhanced Training Methods

Emergency Assistance Issues on private and state lands

- Fire Declaration Requests on Complex Fires often misunderstood
  - Opportunity for “imminent threat” fire declaration similar to how Hurricane Rita was handled before coming on shore allowing for prepositioning etc. (fully explain benefits)

(10-year Strategy IP – Goal #1)

Emergency Assistance Issues on private and state lands

- Federal Management Assistance Grant Program
  - Opportunity to define what the “trigger point” is or what the process should be.
    - Based on Energy Release Component (ERC) ???
    - Based on acreage of private lands impacted ???
    - What variables should be considered ???

(10-year Strategy IP – Goal #1)

Emergency Assistance Issues on private and state lands

- Restoration
  - Farm Bill
  - Emergency language in supplemental

(10-year Strategy IP – Goal #3 A and B)

Efficient Sharing of Resources

- Efficient Sharing and Leveraging of Resources
  - Opportunity for better educating NMAC on Southern needs during times of high fire danger
  - Opportunity for better understanding of state needs for aircraft and federal needs for heavy tractors.
  - Fully staffing NICC year-round (S. Fire Season)

(10-year Strategy IP – Goal #1, Task 1 and 2)

Efficient Sharing of Resources

- Detection Resources
  - Opportunity for easier access to infrared technology and/or remote sensing tools for use in detections.

Fuels Treatment/Fire Behavior

- Longstanding Fuels Treatments Across South are very effective
  - Opportunity to burn more and continue consistent burning regiment 3-5 year average in coastal plain vegetation

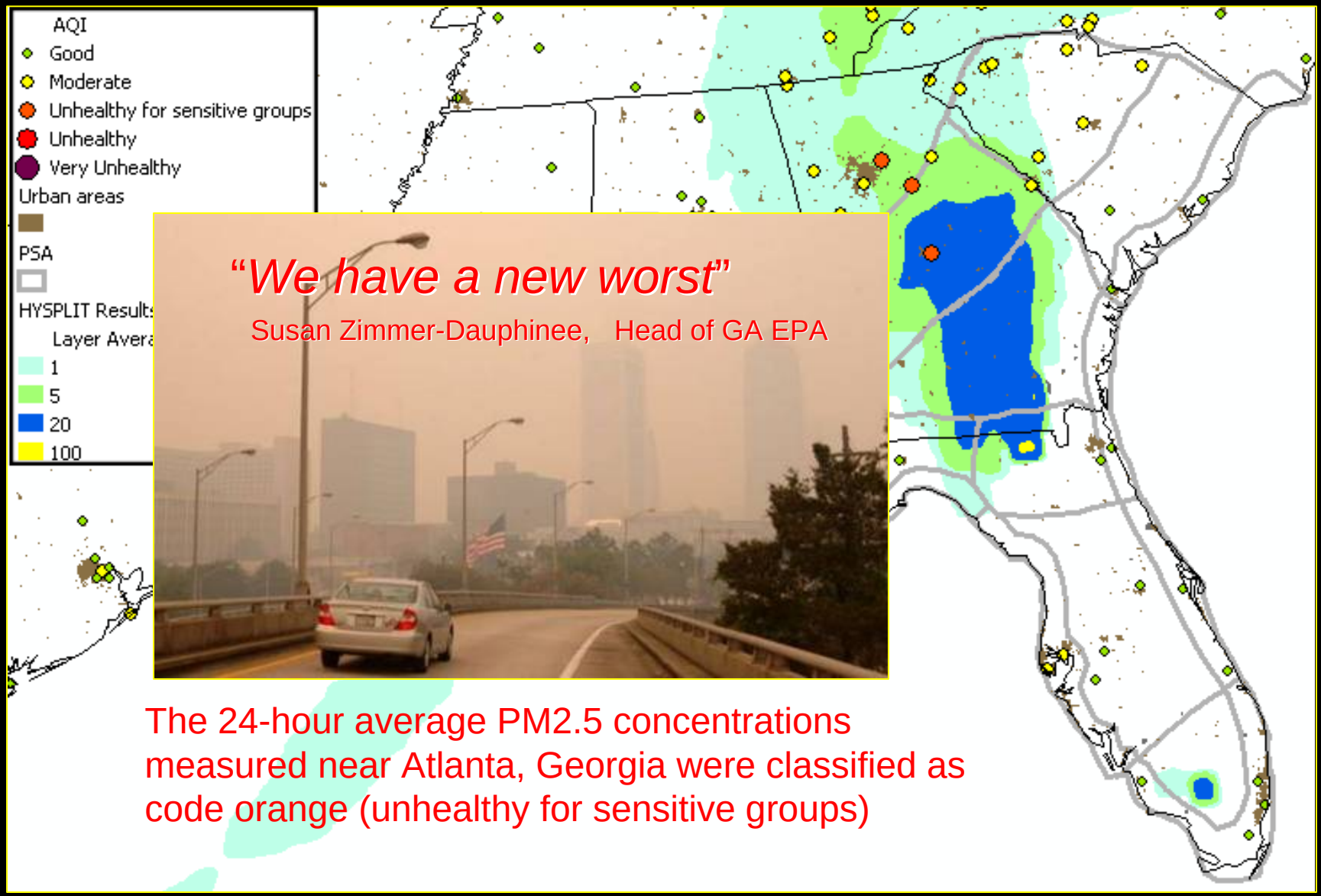
(10-year Strategy IP – Goal #2 and 3)

Fuels Treatment/Fire Behavior

- Prescribed Fire – Opportunity to educate EPA

(10-year Strategy IP – Goal #3)

Air Quality Index (AQI) and HYSPLIT results for 0500 on May 16, 2007

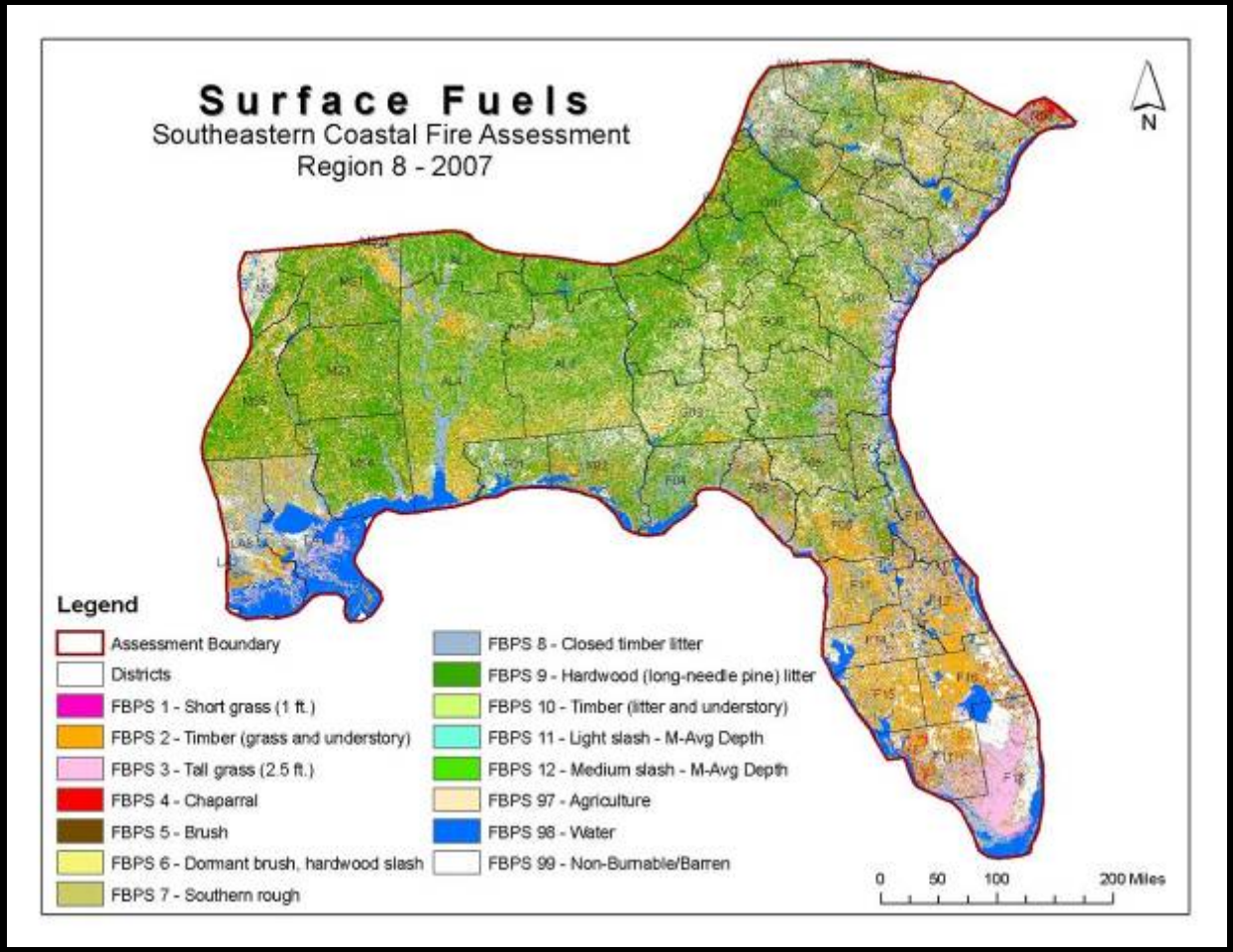


The 24-hour average PM2.5 concentrations measured near Atlanta, Georgia were classified as code orange (unhealthy for sensitive groups)

Fuels Treatment/Fire Behavior

- Fuels Layer used for N. FL and South GA – western chaparral
  - Opportunity to better characterize and apply models to southern fuels for fire behavior in varying levels of drought and/or fuel loading. (DSG ran simulations and gathered info, but longer research to better model)
  - Opportunity for a fire behavior service center in the South during high fire danger.

(10-year Strategy IP – Goal #2)


Surface Fuels
Southeastern Coastal Fire Assessment
Region 8 - 2007
N
Legend
Assessment Boundary
Districts
FBPS 1 - Short grass (1 ft.)
FBPS 2 - Timber (grass and understory)
FBPS 3 - Tall grass (2.5 ft.)
FBPS 4 - Chaparral
FBPS 5 - Brush
FBPS 6 - Dormant brush, hardwood slash
FBPS 7 - Southern rough
FBPS 8 - Closed timber litter
FBPS 9 - Hardwood (long-needle pine) litter
FBPS 10 - Timber (litter and understory)
FBPS 11 - Light slash - M-Avg Depth
FBPS 12 - Medium slash - M-Avg Depth
FBPS 97 - Agriculture
FBPS 98 - Water
FBPS 99 - Non-Burnable/Barren
0
50
100
200 Miles

Training

- Recognize CIMC trained Teams at a higher level (= 520)
- Encourage training of Type III local orgs

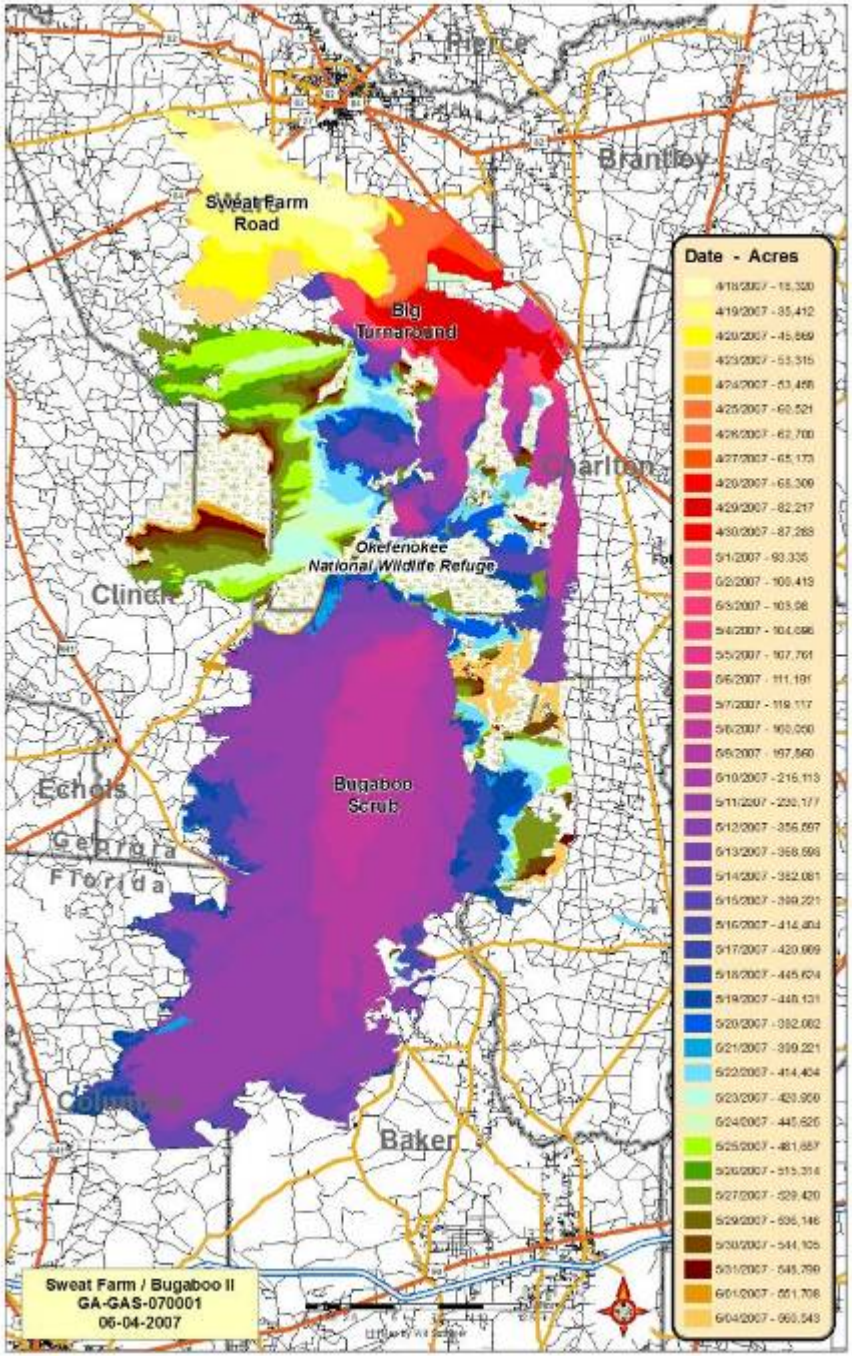
(10-year Strategy IP – Goal #1 Imp Task 1 and 3)

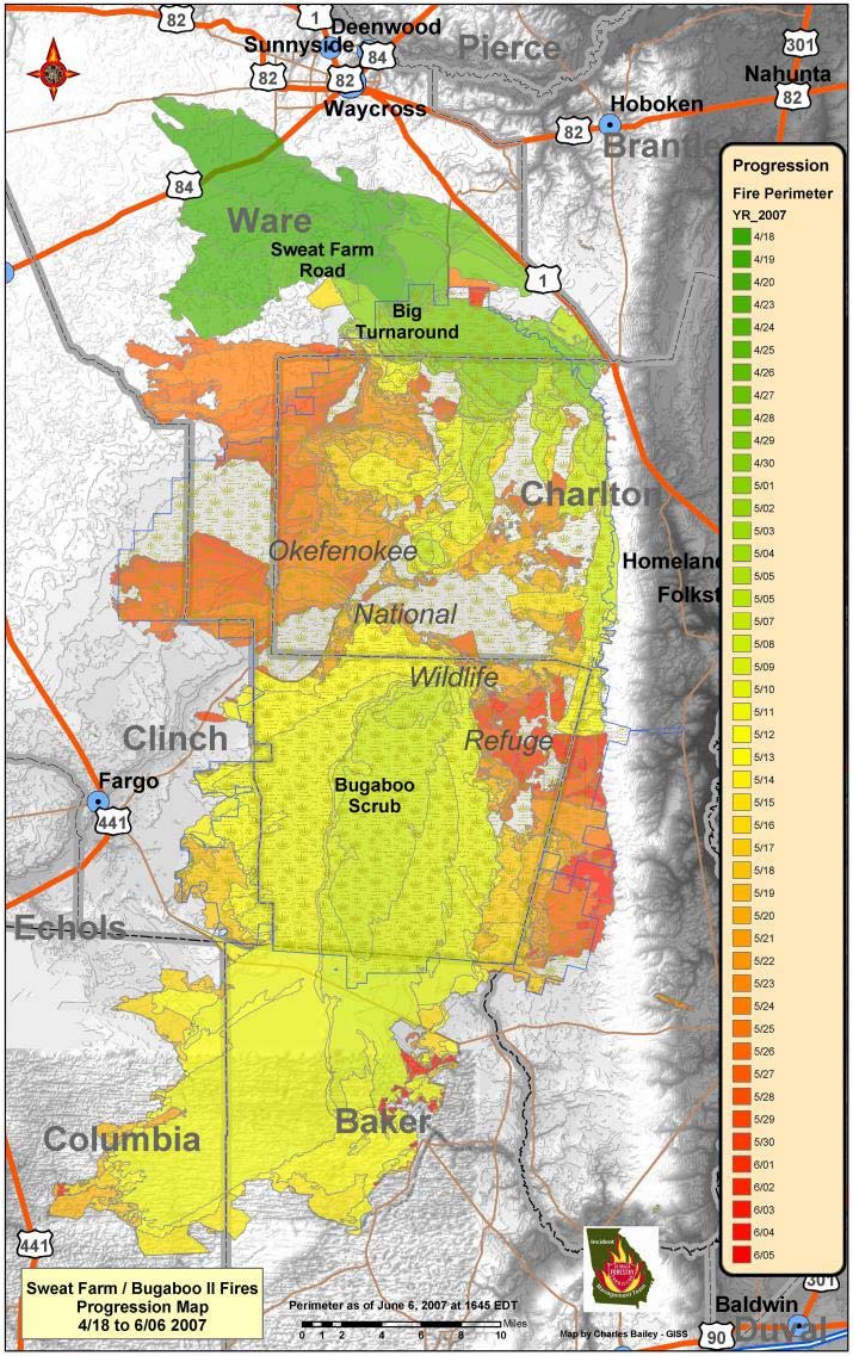
Training

- Effective Use of NIMO
  - Opportunity for working closer with IMT and NIMO to develop IMTs during incident.
    - NIMO in GA and FL in joint operations/mentoring
  - Use of NIMO in training situations outside of incident
    - AL currently moving forward with forming Type III organizations with NIMO assistance

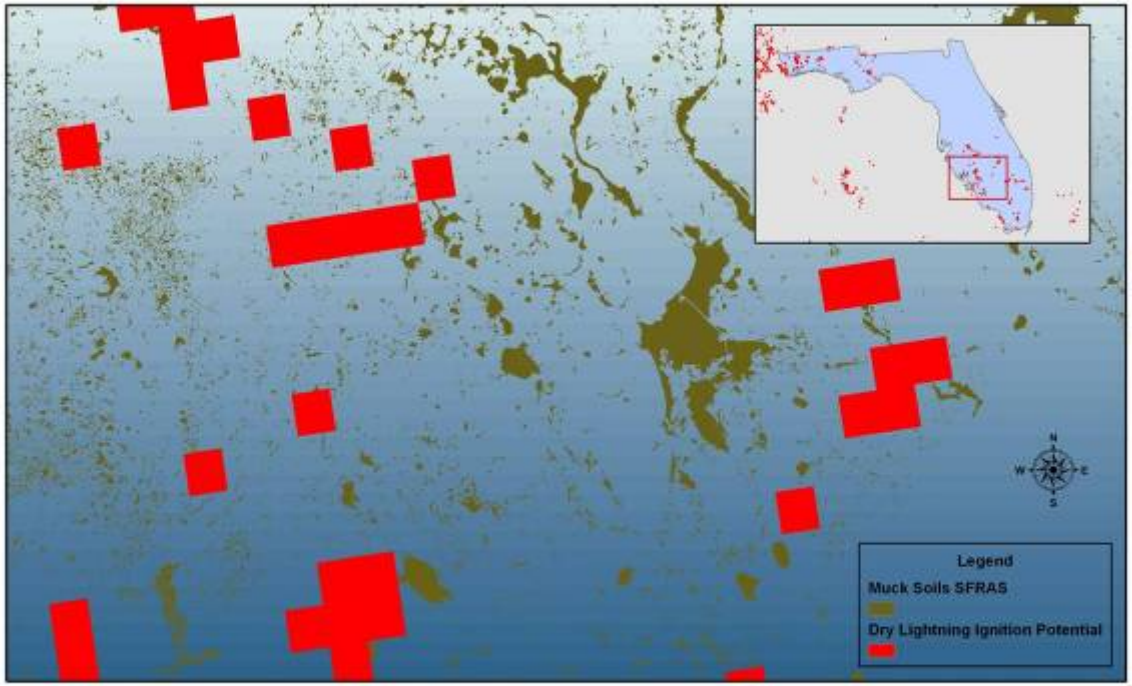
(10-year Strategy IP – Goal #1)

QUESTIONS


Pierce
Brantley
Sweat Farm Road
Big Turnaround
Charlton
Okefenokee National Wildlife Refuge
Clinch
Echols
Georgia
Florida
Bugaboo Scrub
Baker
Date - Acres
Sweat Farm / Bugaboo II
GA-GAS-070001
06-04-2007


Deenwood
Sunnyside
Pierce
Waycross
Hoboken
Nahunta
Brantley
Ware
Sweat Farm Road
Big Turnaround
Charlton
Okefenokee National Wildlife Refuge
Homeland
Folkst
Clinch
Fargo
Bugaboo Scrub
Echols
Columbia
Baker
Baldwin
Duval
Progression
Fire Perimeter
YR_2007
Sweat Farm / Bugaboo II Fires
Progression Map
4/18 to 6/06 2007
Perimeter as of June 6, 2007 at 1645 EDT
Map by Charles Bailey - GISS

Dry Lightning Potential and Muck Soils



L. Allen Smith, TFS, GISS, 5/24/2007, 1315EDT

Map combines SFRAS Muck Soils data and Dry Lightning Ignition Potential. Dry Lightning Potential is a product of ALMs lightning data raster and National Weather Service precipitation raster.

Joint Arson Investigation Team

- 10 agencies and 3 bloodhounds
- 20 investigators
- 61 cases opened on 120 fires
- 90% deemed arson
- 10 arrests by late May

Mentoring/Training on Fire Assignment

Ties to 10-year Strategy IP

- Implementing Collaborative Approach – Two way street
- Goal 1 – Imp Outcome – Loss of life are eliminated and firefighter injuries and damage to communities and the environment from wildfires are reduced.
- Goal 1, Imp Task 1 – Consider state and local protection needs and resources
- Goal 1, Imp Task 2 – interagency aviation strategy.
- Goal 1, Imp Task 3 – “Changing Role” rural strategy
- Goal 1, Imp Task 5 – Type III Orgs
- Goal 2, Imp Task 2 – Fuels MOU
- Goal 2, Imp Task 3 – Fuel models and methods
- Goal 2, Imp Task 4,5 – Hazard Reduction achievements by treatment type
- Goal 3 – Restoration and Post-Fire Recovery – Opty for task addressing assistance to private landonwers.
- Goal 3, Imp Task 1 – Barriers to treatments and PB