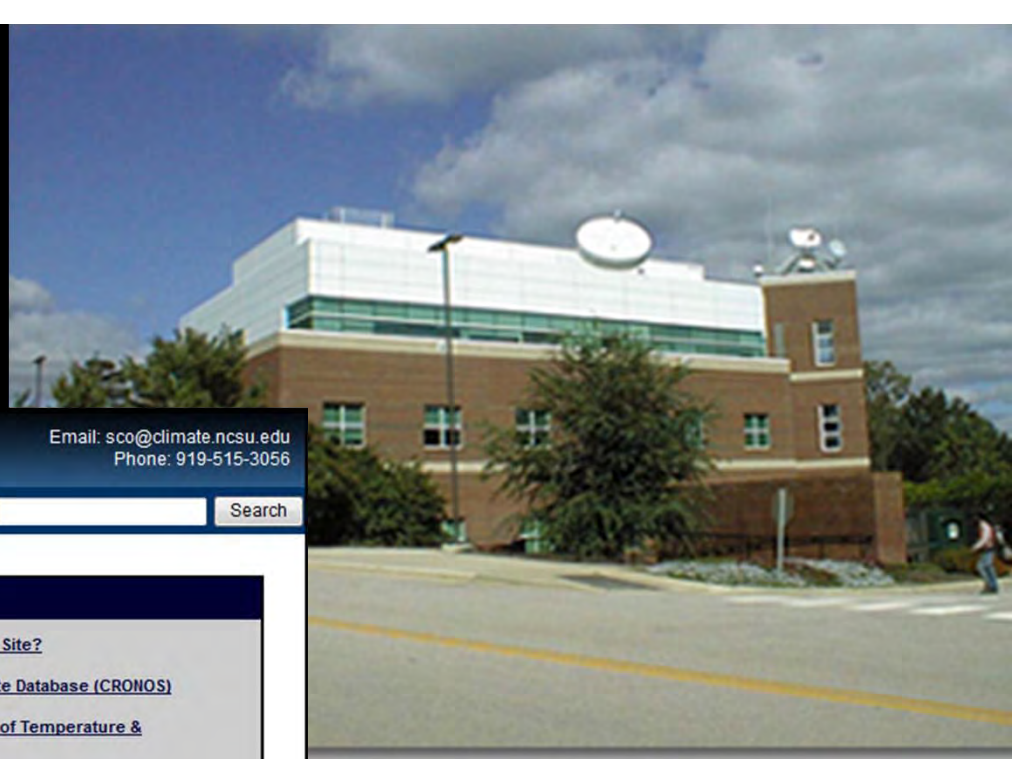




What is PINEMAP and how could it help you?

Heather Dinon Aldridge
State Climate Office of NC
Raleigh, NC
December 7, 2012

NCSU Centennial Campus Research Building III



State Climate Office of North Carolina

Email: sco@climate.ncsu.edu
Phone: 919-515-3056

Data and Products Aspects of NC Climate Educational Outreach About Our Office Search

SCO News

October 10, 2012
Oct 2012 #climate update published! Covers @sercc Climate Perspectives tool, and a seasonal outlook. Details at nc-climate.ncsu.edu/office/newslet...

September 13, 2012
Sept 2012 #climate update published! Covers climate education modules, hurricane tools, and CoCoRaHS. Details at nc-climate.ncsu.edu/office/newslet...

August 10, 2012
NC #climate update: 3rd warmest July on record for NC, summary of student projects, and updates on #econet. Details at nc-climate.ncsu.edu/office/newslet...



Featured Products



Hurricanes Database
Searchable database of all tropical cyclones in the Atlantic

SPC Storm Reports Map

Interactive database and map of tornado, hail, and high wind reports provided by NOAA's Storm Prediction Center



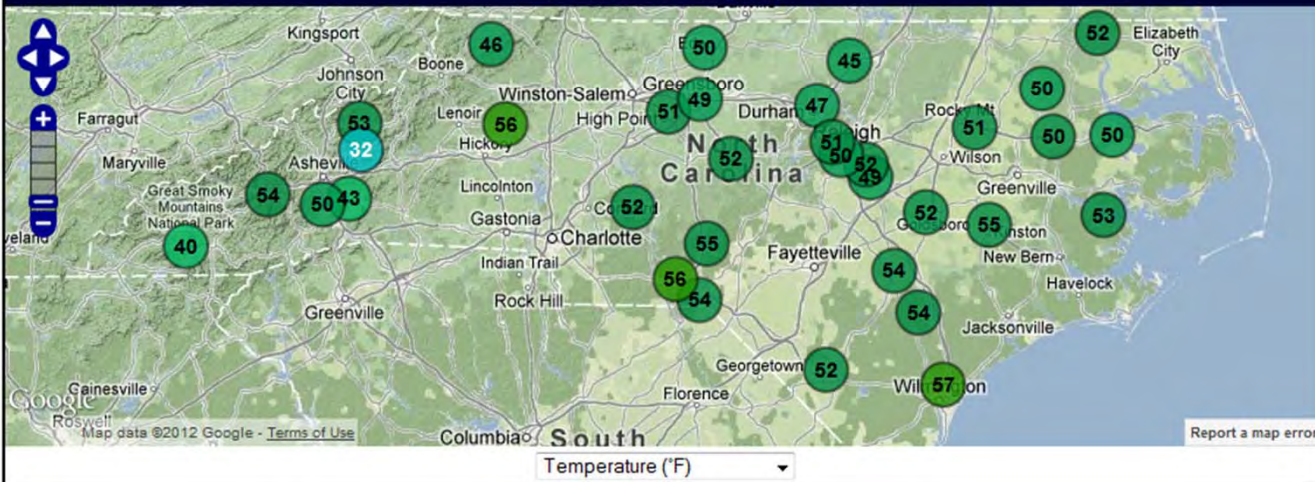
NWS Local Storm Reports Database
Database of Local Storm Reports (LSRs) issued by National Weather Service offices nationwide

Quick Links

- [First Time at Our Site?](#)
- [Weather & Climate Database \(CRONOS\)](#)
- [Climate Normals of Temperature & Precipitation](#)
- [NC Weather Extremes](#)
- [Overview of NC Climate](#)
- [Climate Outlook](#)
- [Water Resources Database \(CRONOS H2O\)](#)
- [Ask a Meteorologist Database](#)
- [Data Request Form](#)

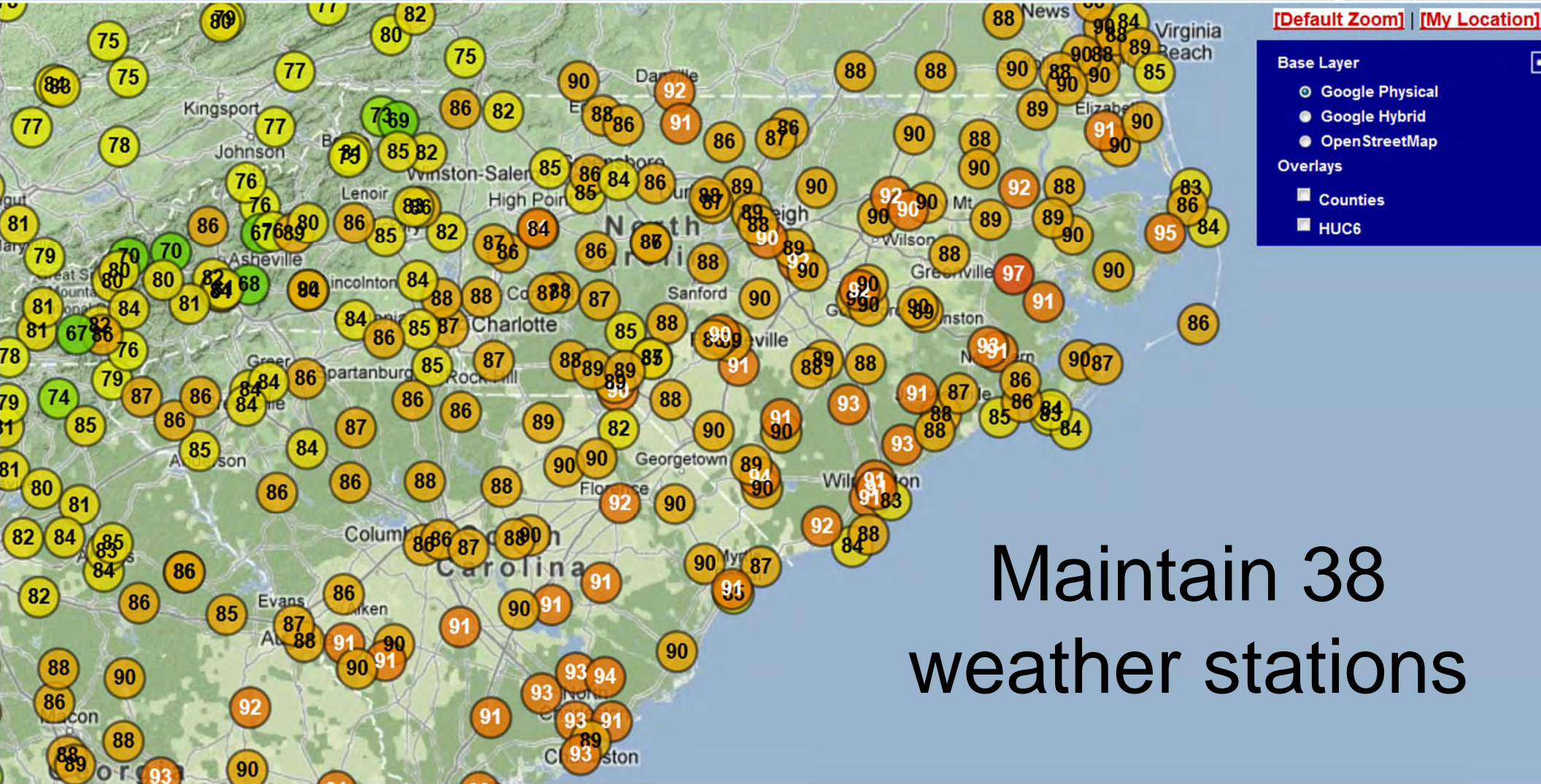
Recent Weather from ECONet

Click for more data on larger map



Archived Weather Station Data

Showing 654 of 671 stations in the CRONOS network with data on 4:00 PM EDT Aug. 14th, 2012



Maintain 38
weather stations

You can become a dot on the map!

- CoCoRaHS = Community Collaborative Rain, Hail & Snow Network
- Volunteer, grassroots precip network
- Sign-up:
www.cocorahs.org



Map Type

Map Location

Date

Colors

Precipitation

North Carolina

Cities / Counties

11/14/2012

Standard

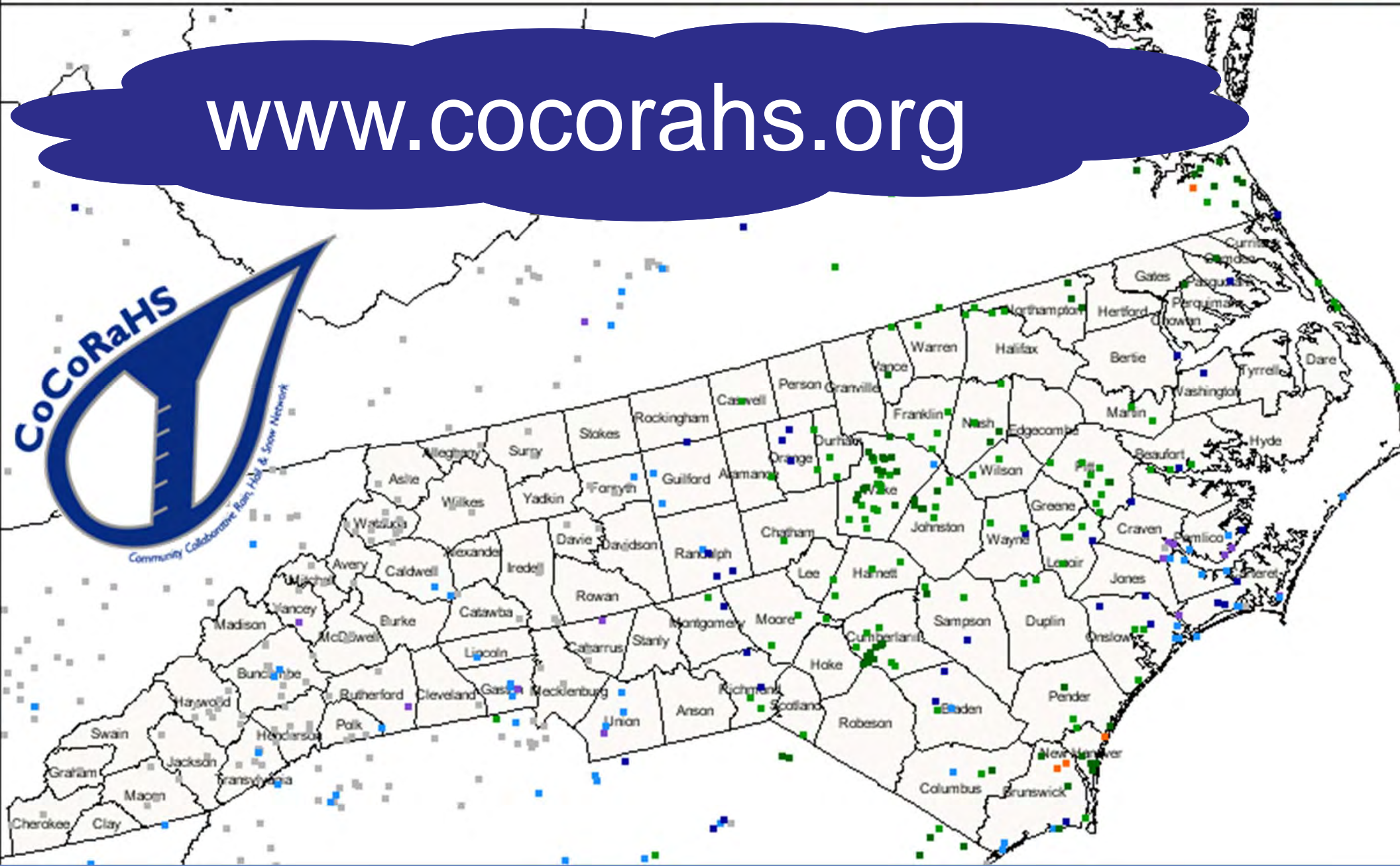
Get Map

Daily Precipitation (inches x.xx), for the 24 hour period ending ~7:00 am

North Carolina 11/14/2012

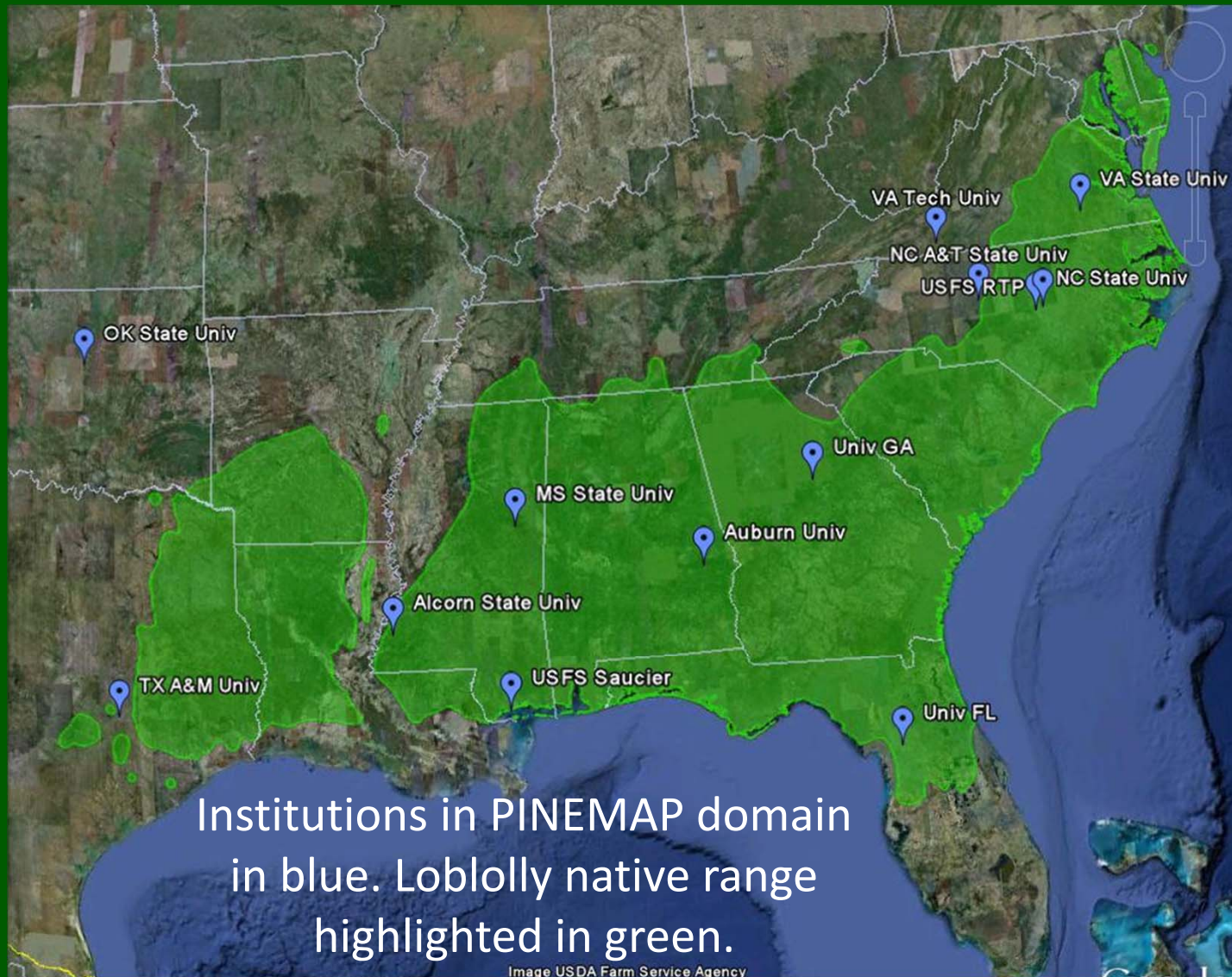
0.0 Trace 0.01 - 0.04 0.05 - 0.08 0.09 - 0.20 0.21 - 0.49 0.50 - 0.74 0.75 - 0.82

www.cocorahs.org



What is PINEMAP??

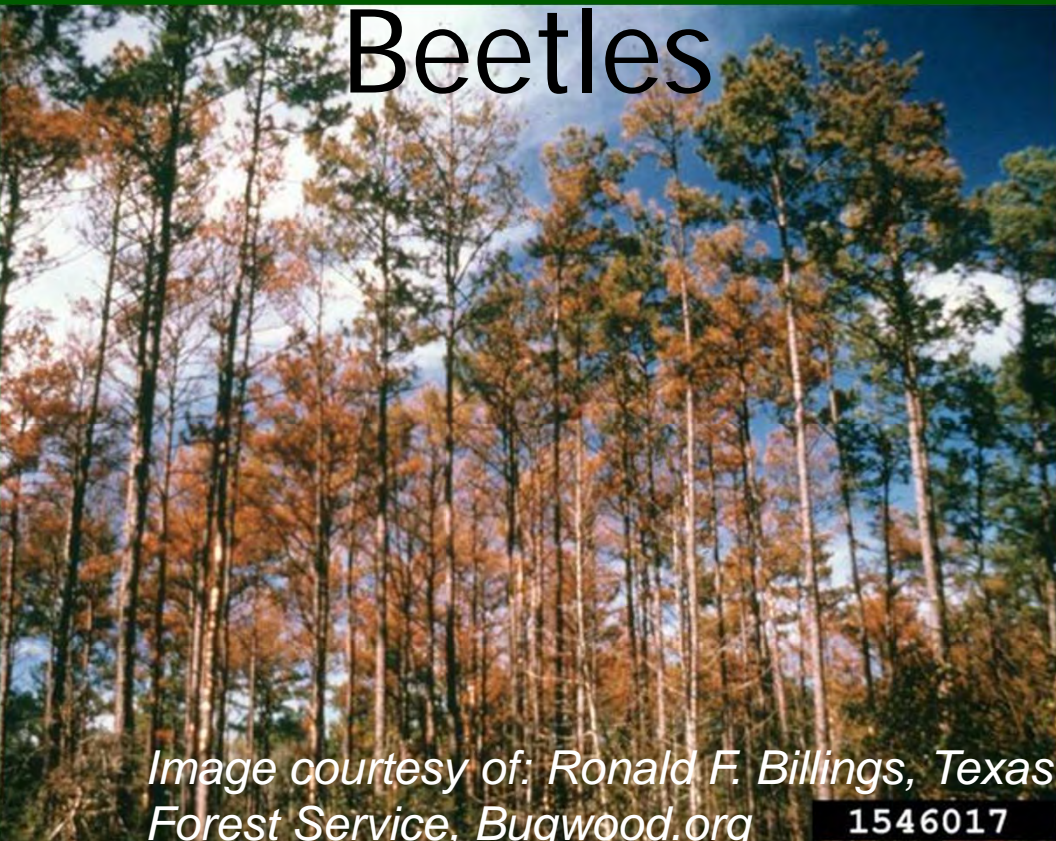
- Pine Integrated Network: Education, Mitigation, and Adaptation Project



Why Climate and Southern Forests?

- Forest system is sensitive to climate:
 - Drought*, cold temps, damage from winter wx, flooding, extreme temp shifts, tropical storms

Beetles

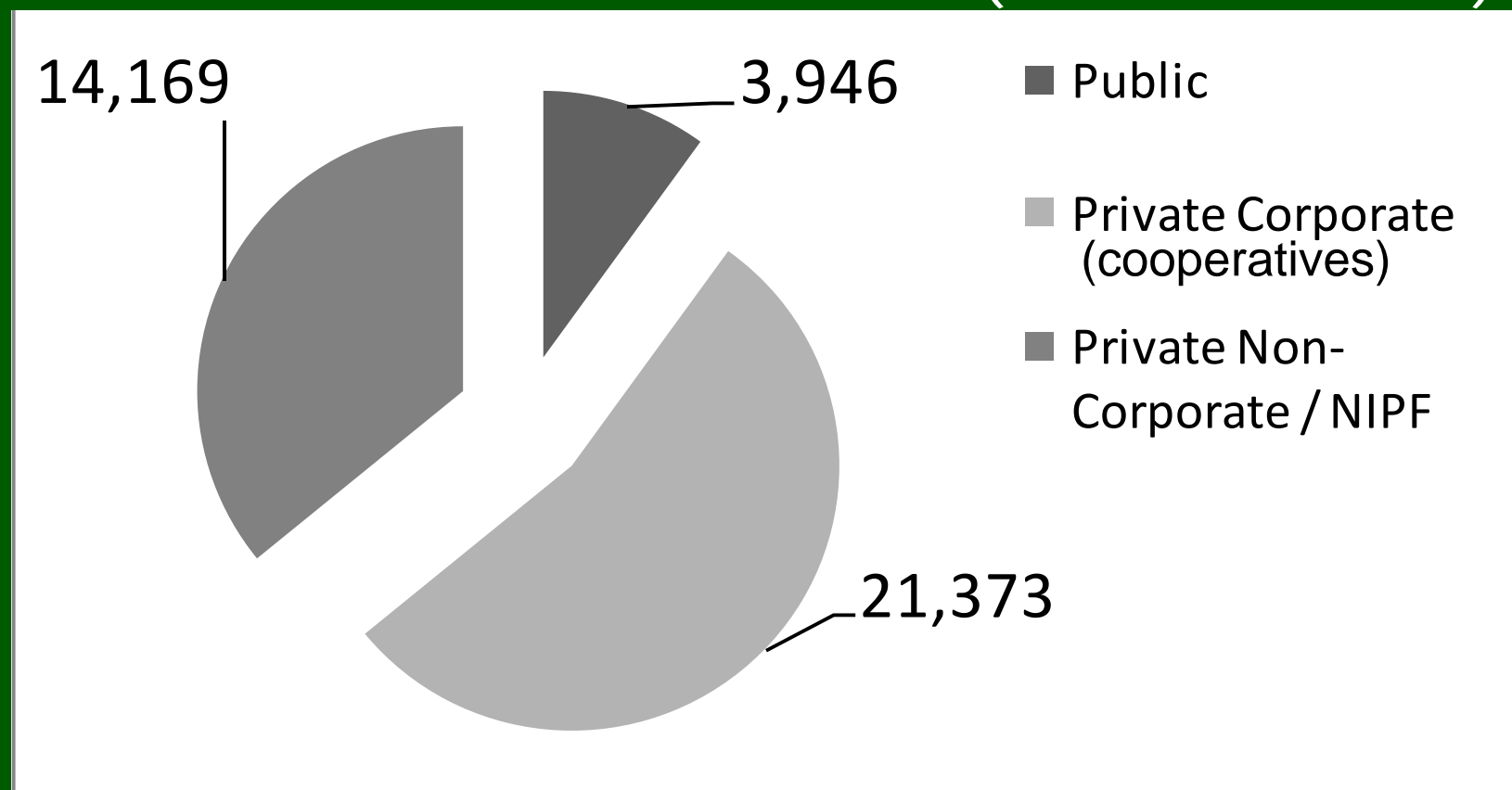


Wildfires



PINEMAP Audience:

Planted Pine in the Southern US (thousands acres)



- Cooperatives: scientists and land managers
- 10% of NIPF owners manage 70% of acres

Project Goals

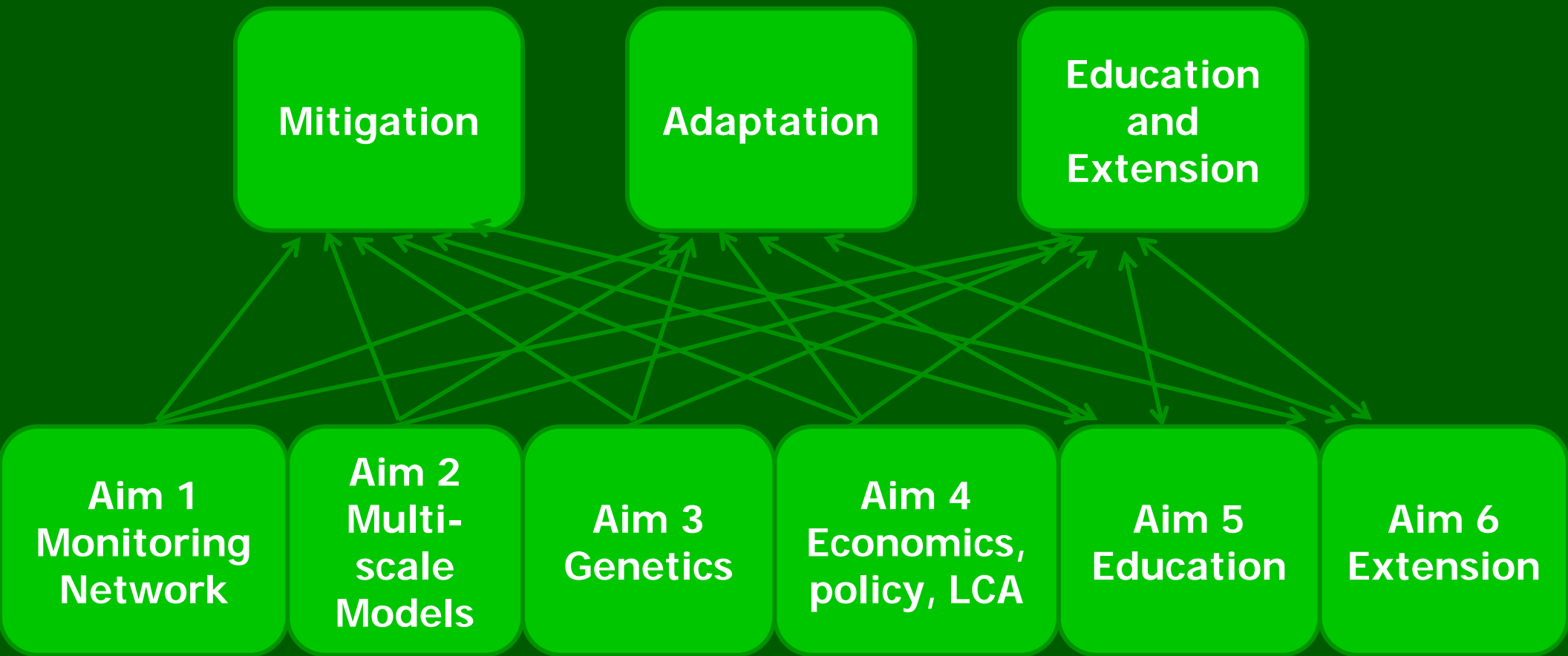
To create, synthesize, & disseminate knowledge that enables southern forest landowners:

- to harness pine forest productivity to mitigate atmospheric CO₂
- to more efficiently utilize fertilizer inputs (e.g. N)
- to adapt forest mgmt increase resilience & reduce risk due to climate and other factors

Also, climate literacy!



Disciplinary Aims Contribute to Broader Integrated Project Goals





PINEMAP research related to climate change: two examples

Pine Integrated Network: Education, Mitigation, and Adaptation project (PINEMAP) is a Coordinated Agriculture Project funded by the USDA National Institute of Food and Agriculture

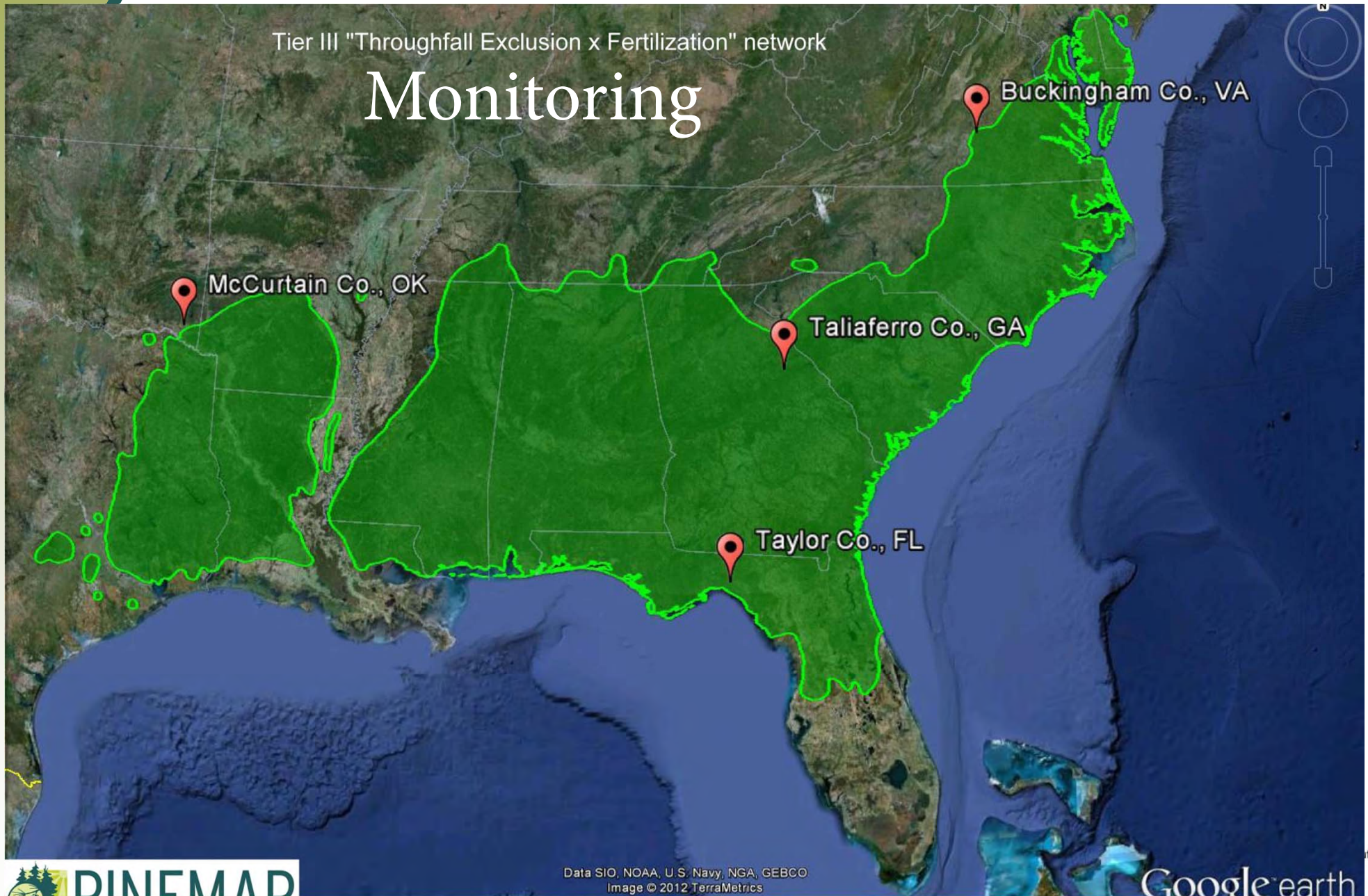


United States
Department of
Agriculture

National Institute
of Food and
Agriculture



PINEMAP research related to climate change: Topic #1





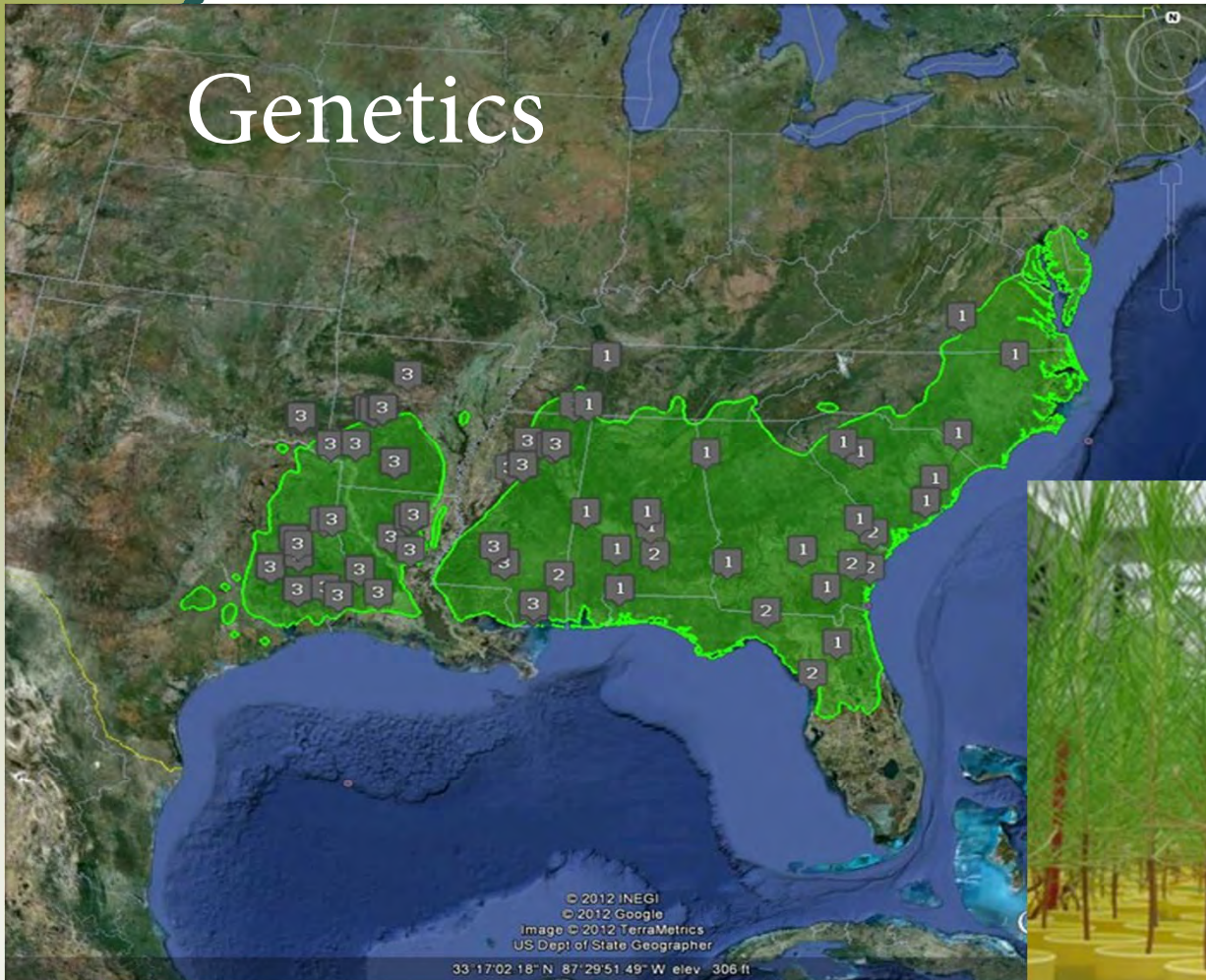
Sights of Tier III sites...





PINEMAP research related to climate change: Topic #2

Genetics



Pine Integrated Network: Education, Mitigation, and Adaptation project (PINEMAP) is a Coordinated Agriculture Project funded by the USDA National Institute of Food and Agriculture



United States Department of Agriculture
National Institute of Food and Agriculture

Meet Aim 6: Extension



land-grant →
end-users





PINEMAP Decision Support System

- Synthesizes PINEMAP research for forest landowners (industry, agency, Extension, etc.)
- Providing management guidance for a changing climate and for year-to-year & interannual climate variability
- Options for novice and advanced users
- Also includes:
 - PINEMAP information
 - Tools (online models, related material, etc.)
 - Tips (how to use and interpret DSS information)

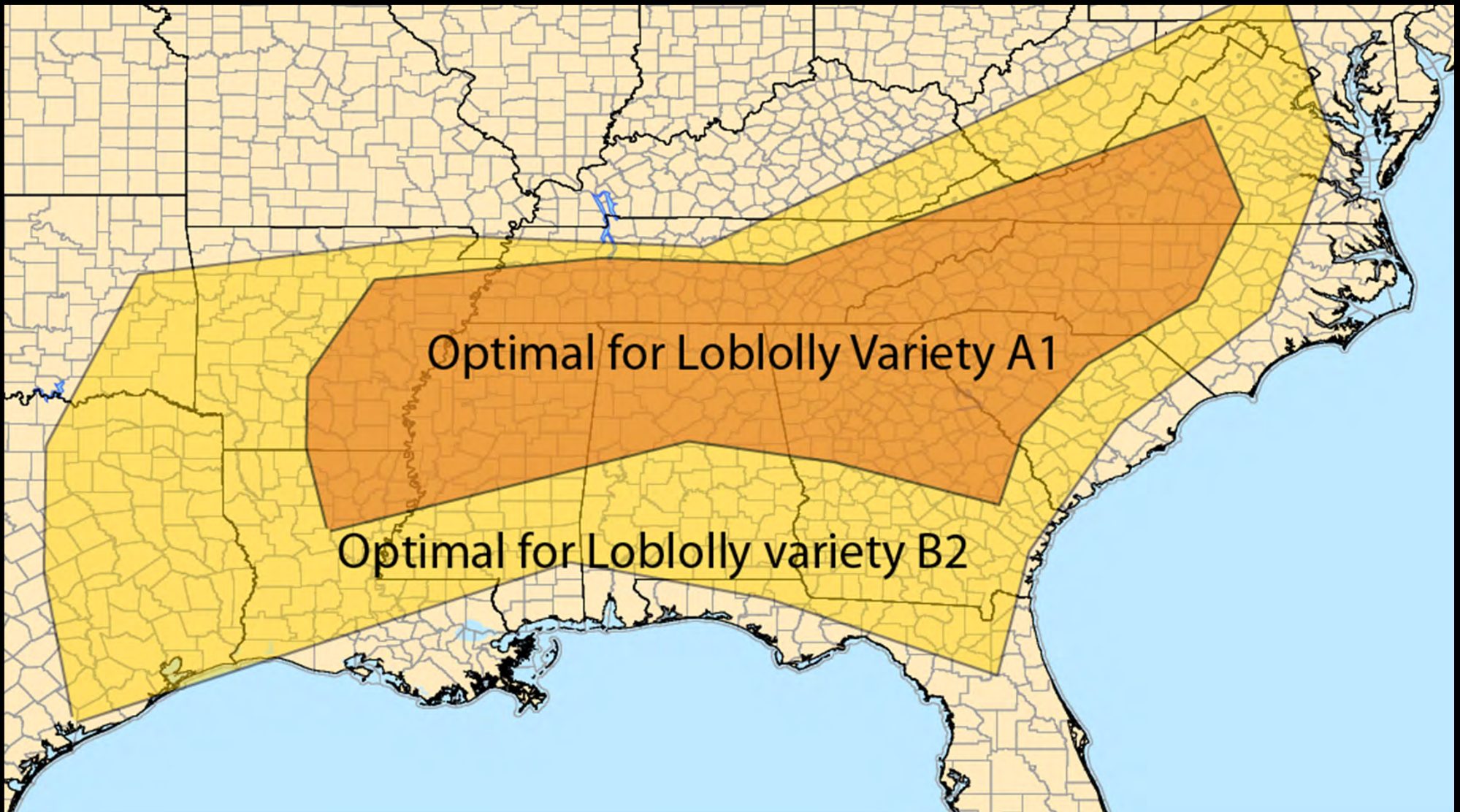


DSS will give guidance on...

- how to achieve forest health and resiliency
- how to maximize carbon sequestration
- how to efficiently utilize nitrogen and other fertilizer inputs

PINEMAP researchers are working hard to address these three topics while considering genetic, economic, climatic, and silvicultural factors.

Tools will take these risks into consideration: Climate, Soils, Disease, Pest, Fire, Genetics, Management, Market





Novice user – follow process

Basic User Start:

- About the Stand
- What You want to Do

About the Stand

- Location
- Soil / Weather
- Limitations
- New / Existing
- If Existing - parameters

Establish New Stand

- Species selection
- Density
- Site Prep
- Soil Fertility
- Rotational Plan
- Output:
 - Production
 - Risk assessment
 - Ecosystem Service rates
 - Carbon sequestration
 - Other

What Do You Want To Do?

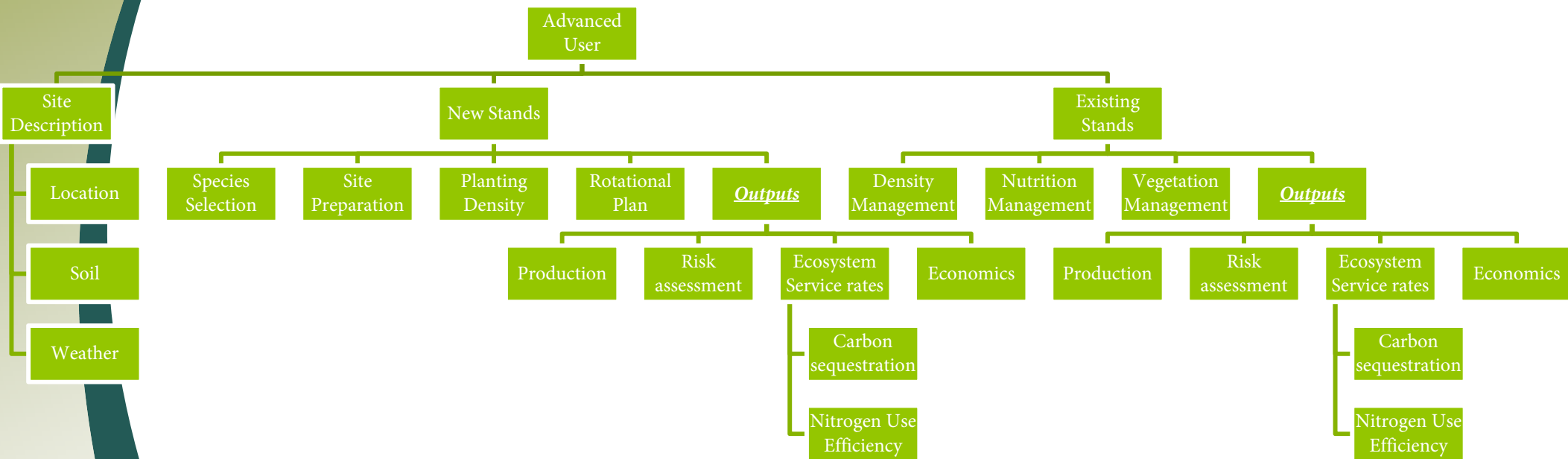
- Establish New stands
- Improve Existing Stand

Improve Existing stands

- Density management
- Nutrition Management
- Competition Control
- Outputs
 - Production
 - Risk assessment
 - Ecosystem Service rates
 - Carbon sequestration
 - Other
 - Economics



Advanced User – can skip around



Questions??

(with help from Eric Taylor,
Bill Hubbard, Mark Megalos)

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<http://pinemap.org>

<http://nc-climate.ncsu.edu>



*Photographer: J Seiler
jseiler@vt.edu*