Welcome!

- Meeting Objectives
- Outcome Themes
- Year in Review
- Agenda Highlights

PINEMAP

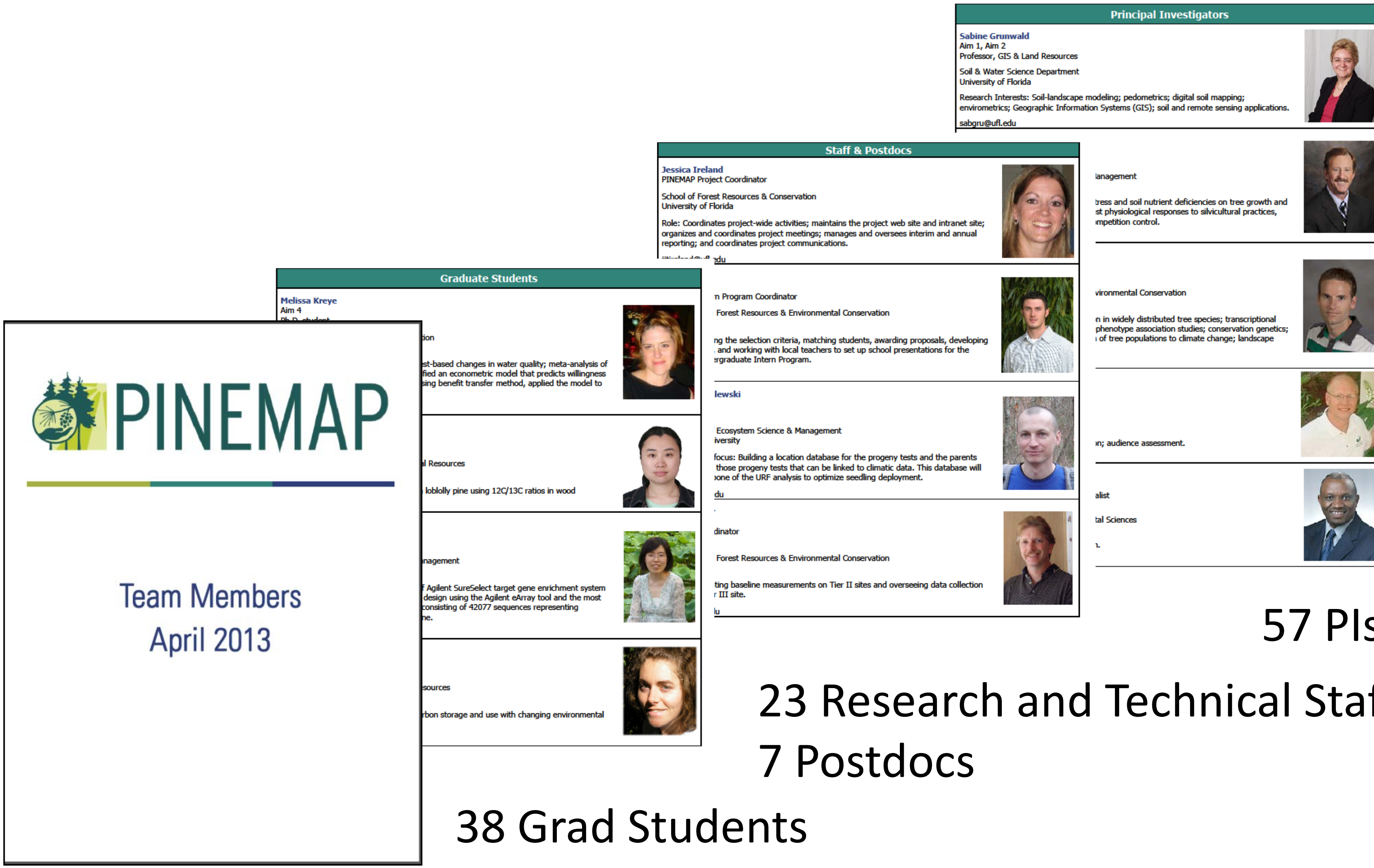
PINEMAP Annual Meeting
Athens, GA, April 24-26, 2013

USDA United States Department of Agriculture
National Institute of Food and Agriculture

Meeting Objectives

1. Share and reflect on emerging research results and methods.
2. Revisit broad project outcomes, recognize how each participant's work contributes, and identify gaps.
3. Continue to identify and create integrative mechanisms for achieving long-term project outcomes.

PINEMAP Project Team



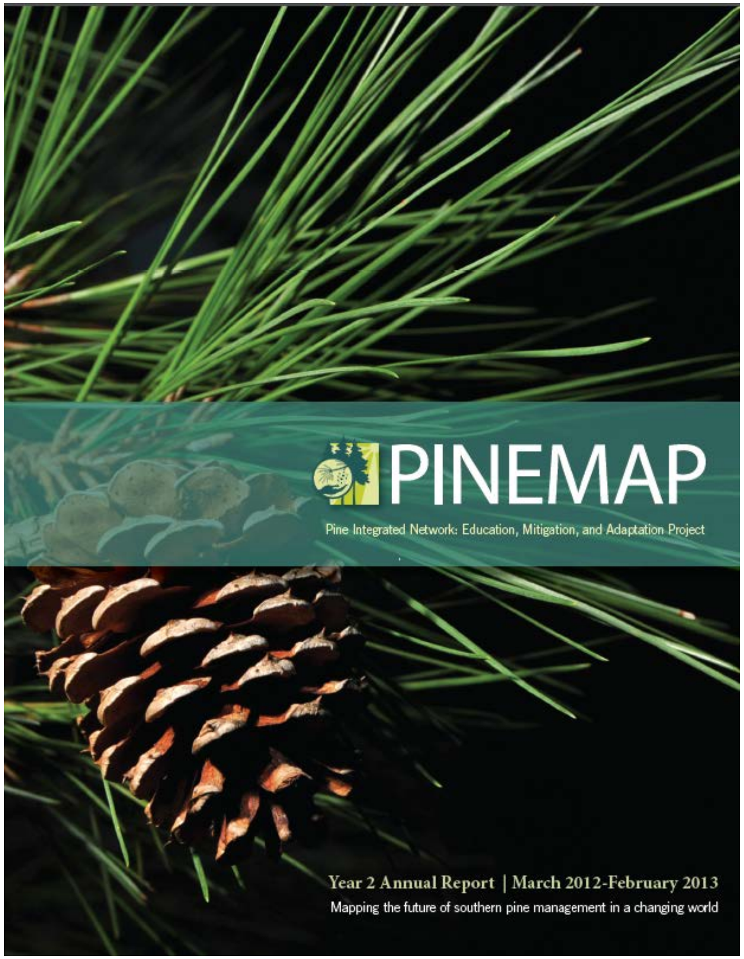
57 PIs

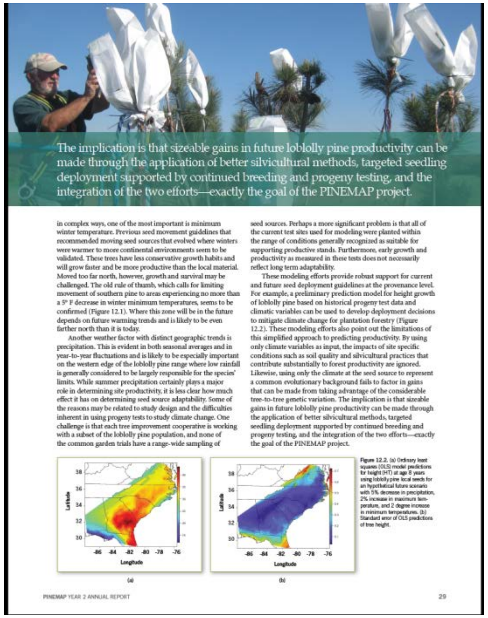
23 Research and Technical Staff

7 Postdocs

38 Grad Students

Annual Report – A sampling of PINEMAP's first rate science





Outcome Themes

Increased carbon (C) sequestration from silvicultural and genetic enhancement of productivity and efficiency of fertilizer use, and resilience to climate variability and disturbance.

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Engaged and literate public with the capacity to make informed, practical decisions related to climate, forest ecosystems, and forest management.

Outcome Themes

- Increased carbon (C) sequestration from silvicultural and genetic enhancement of productivity and efficiency of fertilizer use, and resilience to climate variability and disturbance.
- Enhanced capacity for regional, interdisciplinary collaboration among climate and forest scientists and Extension and education professionals.
- Enhanced connections between corporate and noncorporate forest landowners and forestry and climate researchers and education and outreach professionals.
- Engaged and literate public with the capacity to make informed, practical decisions related to climate, forest ecosystems, and forest management.
- Public policy that supports sustainable management of planted pine under future climate scenarios.

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Increased carbon (C) sequestration from silvicultural and genetic enhancement of productivity and efficiency of fertilizer use, and resilience to climate variability and disturbance.

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Public policy that supports sustainable management of planted pine under future climate scenarios.

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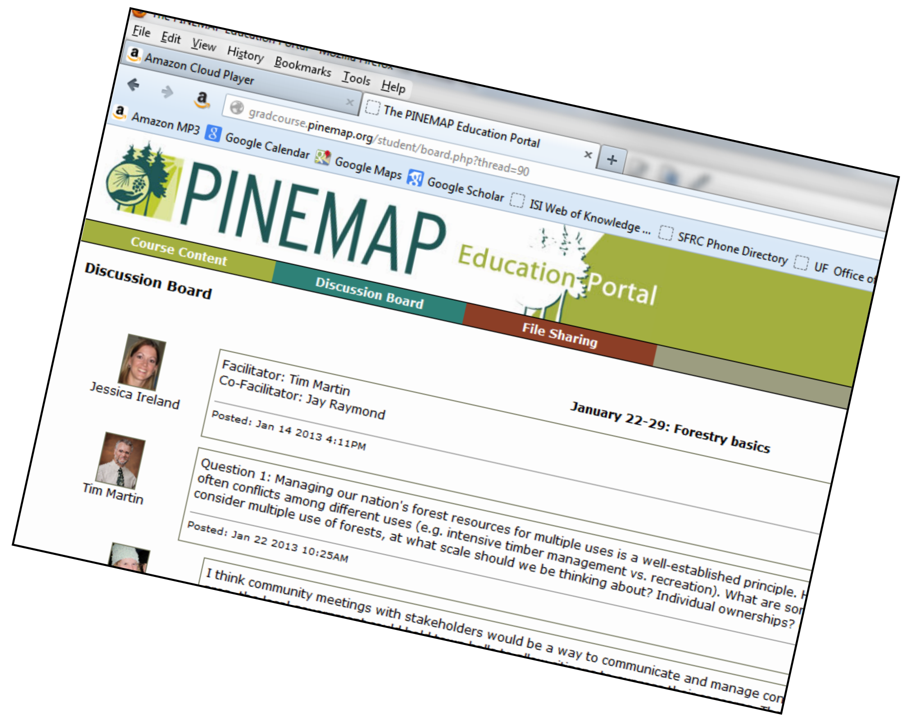
A more robust and resilient forest-based economy in the Southeast U.S.

PINEMAP Graduate Course version 2.0

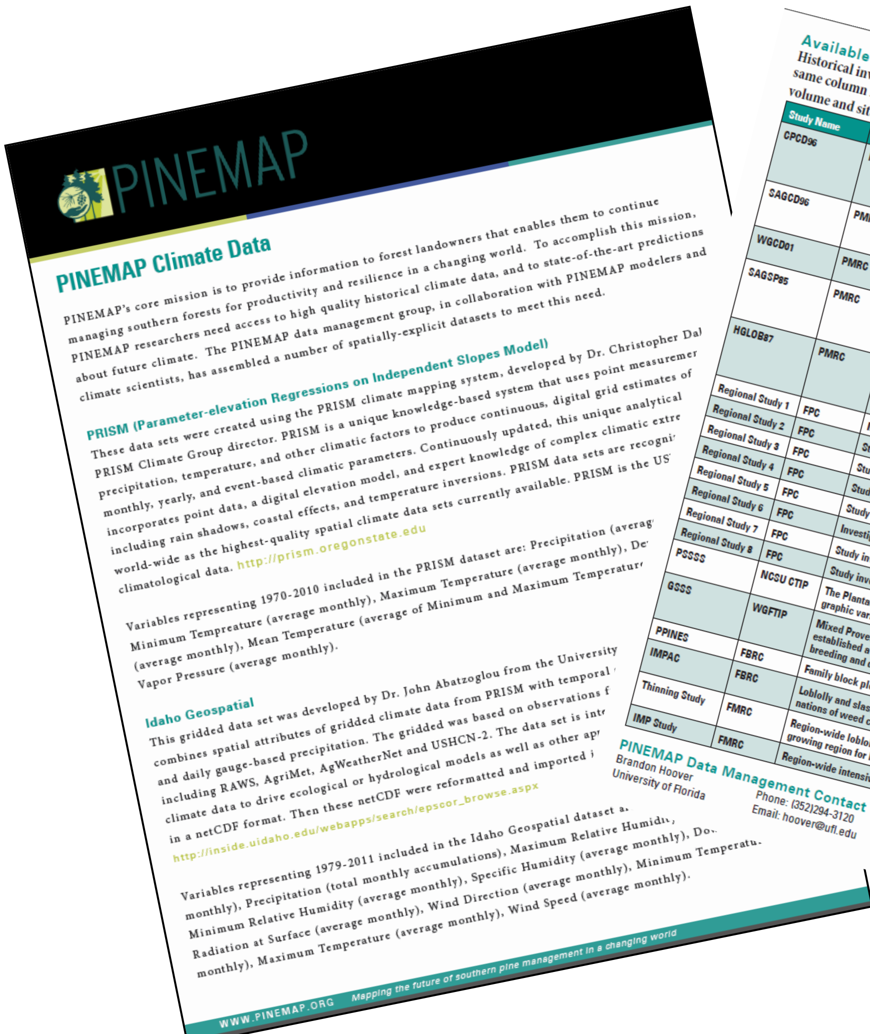
- Introduction to CC mitigation and adaptation issues; building capacity for integration
- Spring 2013 course revised based on feedback from 2012
- 19 students from 8 universities enrolled
- 41 graduate students enrolled over both years' offerings!



PINEMAP Undergraduate Fellowship Program

- Excellent opportunities for “two-way-benefits” between UG and Grad students
- Fellows participate in Fall online course and secondary school outreach
- 5 UG Fellows, 16 schools visited, 1,060 students reached
- 12 slots available for 2013

PINEMAP Datasets



PINEMAP

PINEMAP Climate Data

PINEMAP's core mission is to provide information to forest landowners that enables them to continue managing southern forests for productivity and resilience in a changing world. To accomplish this mission, PINEMAP researchers need access to high quality historical climate data, and to state-of-the-art predictions about future climate. The PINEMAP data management group, in collaboration with PINEMAP modelers and climate scientists, has assembled a number of spatially-explicit datasets to meet this need.

PRISM (Parameter-elevation Regressions on Independent Slopes Model)

These data sets were created using the PRISM climate mapping system, developed by Dr. Christopher Dal PRISM Climate Group director. PRISM is a unique knowledge-based system that uses point measuremer precipitation, temperature, and other climatic factors to produce continuous, digital grid estimates of monthly, yearly, and event-based climatic parameters. Continuously updated, this unique analytical incorporates point data, a digital elevation model, and expert knowledge of complex climatic extre including rain shadows, coastal effects, and temperature inversions. PRISM data sets are recogni world-wide as the highest-quality spatial climate data sets currently available. PRISM is the US climatological data. http://prism.oregonstate.edu

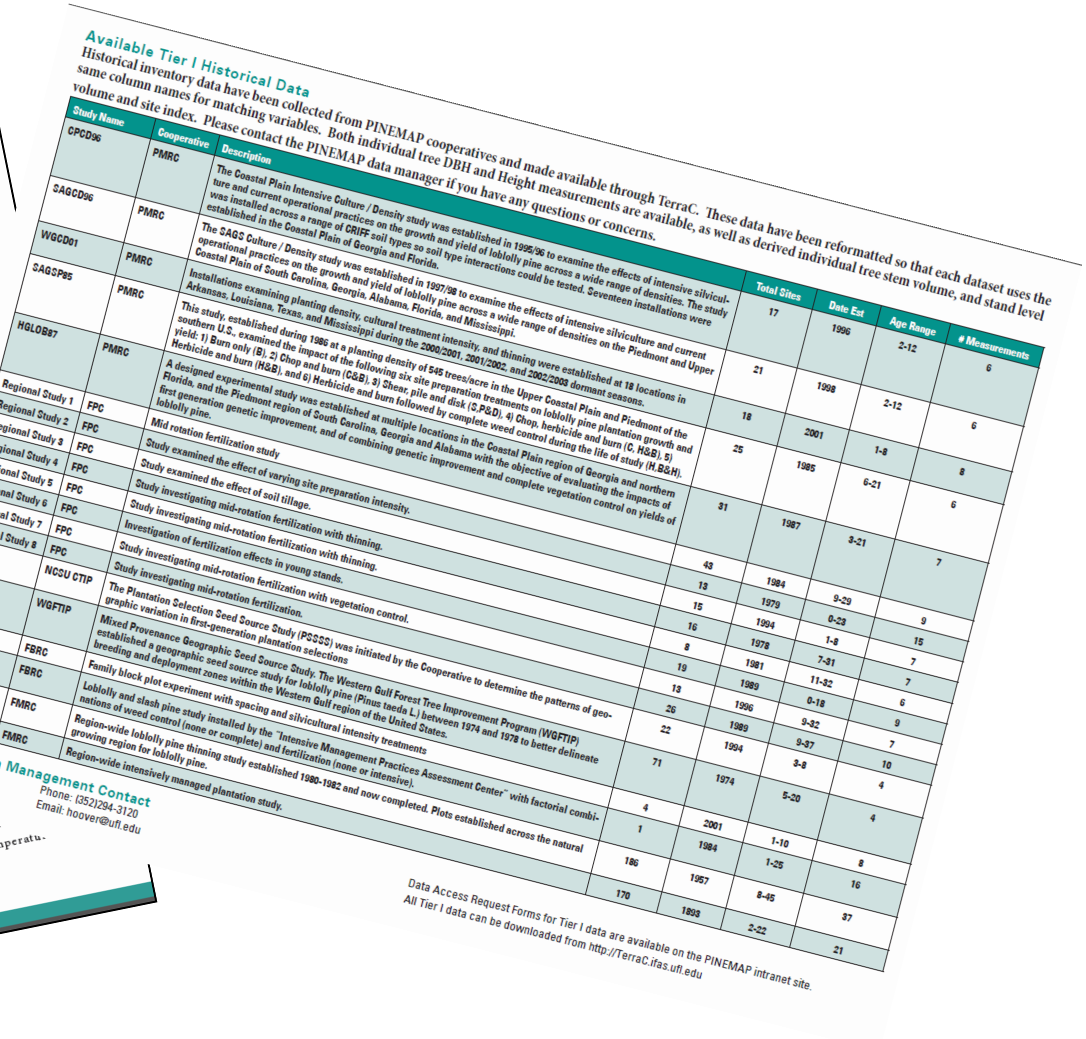
Variables representing 1970-2010 included in the PRISM dataset are: Precipitation (averag Minimum Tempreature (average monthly), Maximum Temperature (average monthly), De (average monthly), Mean Temperature (average of Minimum and Maximum Temperatur Vapor Pressure (average monthly).

Idaho Geospatial

This gridded data set was developed by Dr. John Abatzoglou from the University combines spatial attributes of gridded climate data from PRISM with temporal and daily gauge-based precipitation. The gridded was based on observations f including RAWS, AgriMet, AgWeatherNet and USHCN-2. The data set is inte climate data to drive ecological or hydrological models as well as other ap in a netCDF format. Then these netCDF were reformatted and imported i http://inside.uidaho.edu/webapps/search/epscor_browse.aspx

Variables representing 1979-2011 included in the Idaho Geospatial dataset a monthly), Precipitation (total monthly accumulations), Maximum Relative Humidi Minimum Relative Humidity (average monthly), Specific Humidity (average monthly), Do Radiation at Surface (average monthly), Wind Direction (average monthly), Minimum Temperatu monthly), Maximum Temperature (average monthly), Wind Speed (average monthly).

WWW.PINEMAP.ORG Mapping the future of southern pine management in a changing world



Available Tier I Historical Data

Historical inventory data have been collected from PINEMAP cooperatives and made available through TerraC. These data have been reformatted so that each dataset uses the same column names for matching variables. Both individual tree DBH and Height measurements are available, as well as derived individual tree stem volume, and stand level volume and site index. Please contact the PINEMAP data manager if you have any questions or concerns.

Study Name	Cooperative	Description	Total Sites	Date Est	Age Range	# Measurements
CPCD96	PMRC	The Coastal Plain Intensive Culture / Density study was established in 1995/96 to examine the effects of intensive silviculture and current operational practices on the growth and yield of loblolly pine across a wide range of densities. The study was installed across a range of CRIFF soil types so soil type interactions could be tested. Seventeen installations were established in the Coastal Plain of Georgia and Florida.	17	1996	2-12	6
SAGCD96	PMRC	The SAGS Culture / Density study was established in 1997/98 to examine the effects of intensive silviculture and current operational practices on the growth and yield of loblolly pine across a wide range of densities on the Piedmont and Upper Coastal Plain of South Carolina, Georgia, Alabama, Florida, and Mississippi.	21	1998	2-12	6
WGCD01	PMRC	Installations examining planting density, cultural treatment intensity, and thinning were established at 18 locations in Arkansas, Louisiana, Texas, and Mississippi during the 2000/2001, 2001/2002, and 2002/2003 dormant seasons.	18	2001	1-8	8
SAGSP85	PMRC	This study, established during 1986 at a planting density of 545 trees/acre in the Upper Coastal Plain and Piedmont of the southern U.S., examined the impact of the following six site preparation treatments on loblolly pine plantation growth and yield: 1) Burn only (B), 2) Chop and burn (C&B), 3) Shear, pile and disk (S,P&D), 4) Chop, herbicide and burn (C, H&B), 5) Herbicide and burn (H&B), and 6) Herbicide and burn followed by complete weed control during the life of study (H,B&H).	25	1985	6-21	6
HGLOB87	PMRC	A designed experimental study was established at multiple locations in the Coastal Plain region of Georgia and northern Florida, and the Piedmont region of South Carolina, Georgia and Alabama with the objective of evaluating the impacts of first generation genetic improvement, and of combining genetic improvement and complete vegetation control on yields of loblolly pine.	31	1987	3-21	7
Regional Study 1	FPC	Mid rotation fertilization study	43	1984	9-29	9
Regional Study 2	FPC	Study examined the effect of varying site preparation intensity.	13	1979	0-23	15
Regional Study 3	FPC	Study examined the effect of soil tillage.	15	1994	1-8	7
Regional Study 4	FPC	Study investigating mid-rotation fertilization with thinning.	16	1978	7-31	7
Regional Study 5	FPC	Study investigating mid-rotation fertilization with thinning.	8	1981	11-32	6
Regional Study 6	FPC	Investigation of fertilization effects in young stands.	19	1989	0-18	9
Regional Study 7	FPC	Study investigating mid-rotation fertilization with vegetation control.	13	1996	9-32	7
Regional Study 8	FPC	Study investigating mid-rotation fertilization.	26	1989	9-37	10
PSSSS	NCSU CTIP	The Plantation Selection Seed Source Study (PSSSS) was initiated by the Cooperative to determine the patterns of geographic variation in first-generation plantation selections	22	1994	3-8	4
GSSS	WGFTIP	Mixed Provenance Geographic Seed Source Study. The Western Gulf Forest Tree Improvement Program (WGFTIP) established a geographic seed source study for loblolly pine (Pinus taeda L.) between 1974 and 1978 to better delineate breeding and deployment zones within the Western Gulf region of the United States.	71	1974	5-20	4
PPINES	FBRC	Family block plot experiment with spacing and silvicultural intensity treatments	4	2001	1-10	8
IMPAC	FBRC	Loblolly and slash pine study installed by the "Intensive Management Practices Assessment Center" with factorial combinations of weed control (none or complete) and fertilization (none or intensive).	1	1984	1-25	16
Thinning Study	FMRC	Region-wide loblolly pine thinning study established 1980-1982 and now completed. Plots established across the natural growing region for loblolly pine.	186	1957	8-45	37
IMP Study	FMRC	Region-wide intensively managed plantation study.	170	1893	2-22	21

PINEMAP Data Management Contact
Brandon Hoover
University of Florida
Phone: (352)294-3120
Email: hoover@ufl.edu

Data Access Request Forms for Tier I data are available on the PINEMAP intranet site.
All Tier I data can be downloaded from http://TerraC.ifas.ufl.edu

Agenda Highlights - Today

PINEMAP

2013 Annual Meeting

April 24-26, 2013 | UGA Hotel and Conference Center at the Georgia Center, Athens, GA

Meeting Objectives:

1. Share and reflect on emerging research results and methods.
2. Revisit broad project outcomes, recognize how each participant's work contributes, and identify gaps.
3. Continue to identify and create integrative mechanisms for achieving long-term project outcomes.

WEDNESDAY, APRIL 24, 2013

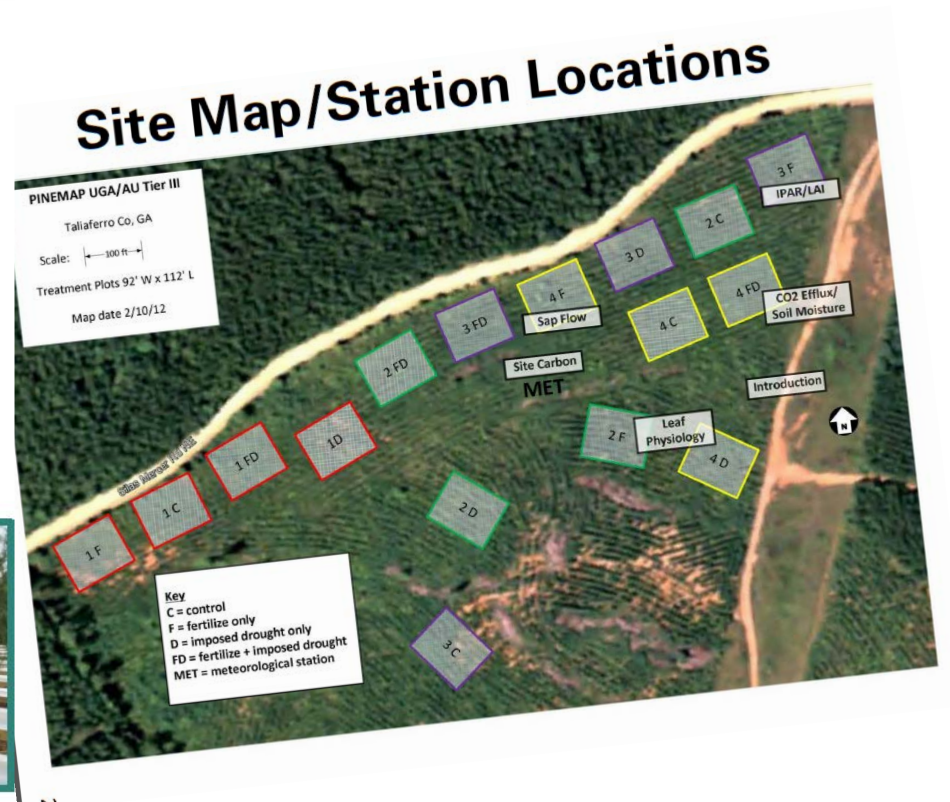
7-8 a.m.	Registration (outside of Dogwood Hall) Continental breakfast (Pecan Tree Galleria)
8-8:30 a.m.	**Welcome** (Dogwood Hall*) Tim Martin
8:30-8:45 a.m.	**NIFA update** Eric Norland, National Program Leader, Forest Resources Management USDA National Institute of Food and Agriculture
8:45-10:15 a.m.	**Science presentations session #1** – Aim 1: Preliminary results from Tier III studies, Rod Will – Aim 3: Strengths and weaknesses of universal response function approaches for support of deployment decisions, Tom Byram – Aim 2: Regional carbon sequestration and climate change: It's all about water, Steve McNulty – Aim 4: Incorporating LCA elements into regional modeling, Bob Abt and Puneet Dwivedi
10:15-10:30 a.m.	Break (Pecan Tree Galleria)
10:30-11:15 a.m.	**Science presentations session #2** – Aim 5: Student learning with two different ways of teaching about climate and carbon, Stephanie Hall and Martha Monroe – Aim 6: Climate change perceptions of southern foresters: Preliminary survey results, William Hubbard, Leslie Boby, and Hilary Cole
11:15 a.m.-12 p.m.	**Translating science for different stakeholders** Wendy-Lin Bartels
12-1 p.m.	Buffet lunch (Room K/L)
1-1:45 p.m.	**Preparing future professionals: Graduate education panel**
1:45-2:45 p.m.	**DSS: Connecting your research to decisions** Ryan Boyles and Heather Dinon Aldridge
2:45-3 p.m.	Break (Pecan Tree Galleria)
3-5 p.m.	**Aim breakout sessions** Aim 1: Dogwood Hall Aim 2: Room E Aim 3: Room A Aim 4: Room B Aim 5: Room C Aim 6: Room D
5-6 p.m.	Graduate student social (Dawg House Bar & Grill)
6:15 p.m.	Carpool departs UGA Hotel and Conference Center
6:30-8:30 p.m.	Dinner at Flinchum's Phoenix

*All sessions are in Dogwood Hall unless otherwise noted.

Pine Integrated Network: Education, Mitigation, and Adaptation Project
http://www.pinemap.org
Mapping the future of southern pine management in a changing world

- Science presentations
- Translating science for stakeholders
- Graduate education panel
- DSS session
- Aim breakouts
- Group dinner at Whitehall Forest

Field Tour Thursday



Agenda Highlights - Thursday

THURSDAY, APRIL 25, 2013	
6:30-7:15 a.m.	Continental breakfast (Pecan Tree Galleria)
7:15-7:30 a.m.	Meet in conference center lobby; load buses for field tour
7:30 a.m.	Buses depart conference center for field tour
7:30 am.-12:30 p.m.	**Field tour** Tier III site, Taliaferro County, GA (boxed lunch provided)
12:30-1 p.m.	Break **snacks available continuously from 1-5 p.m. in Pecan Tree Galleria*
1-2 p.m.	**Introduction to integration platforms** Wendy-Lin Bartels
2-4 p.m.	**Integration breakout sessions** PINEMAP scenario development: Dogwood Hall Leader: Bob Teskey Seed deployment tool: Room J Leader: Tom Byram Communicating science to diverse stakeholders : Room F/G Leader: Nick Fuhrman, Associate Professor, Department of Agricultural Leadership, Education, & Communication, University of Georgia
4-5 p.m.	**Poster session** (Pecan Tree Galleria)
6 p.m.	Dinner on your own: meet in conference center lobby; walk to dinner

- Field tour
- Integration breakout sessions
  - Scenario development
  - Seed deployment tool development
  - Science communication workshop
- Poster session
- Dinner on your own

Agenda Highlights - Friday

FRIDAY, APRIL 26, 2013

7-8 a.m.	Continental breakfast (Pecan Tree Galleria)
7:15 a.m.	Aim Leaders and Management Team gather for breakfast meeting in Dogwood Hall
8-9 a.m.	**Building PINEMAP's integration culture** Tim Martin
9-9:30 a.m.	Break/complete meeting evaluation (Pecan Tree Galleria)
9:30-11:30 a.m.	**Aim breakout sessions** Aim 1: Dogwood Hall Aim 2: Room L Aim 3: Room J Aim 4: Room A Aim 5: Room Y Aim 6: Room Z
11:30 a.m.-12:30 p.m.	**Closing session**, lunch (Magnolia Ballroom) Tim Martin

*All sessions are in Dogwood Hall unless otherwise noted.

- Reflection on field tour and integration discussion
- Aim breakouts
- Closing session and lunch