

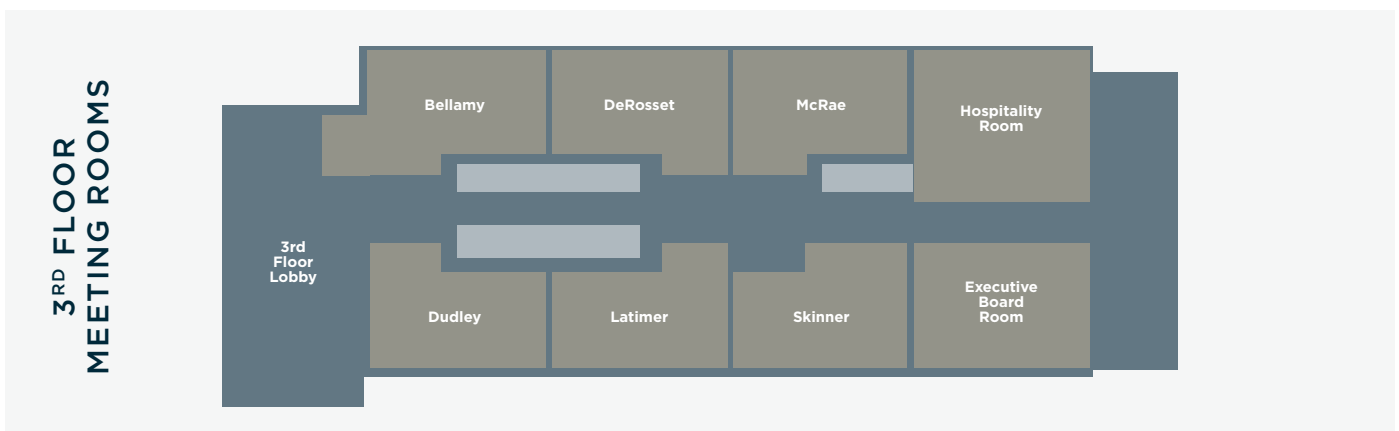
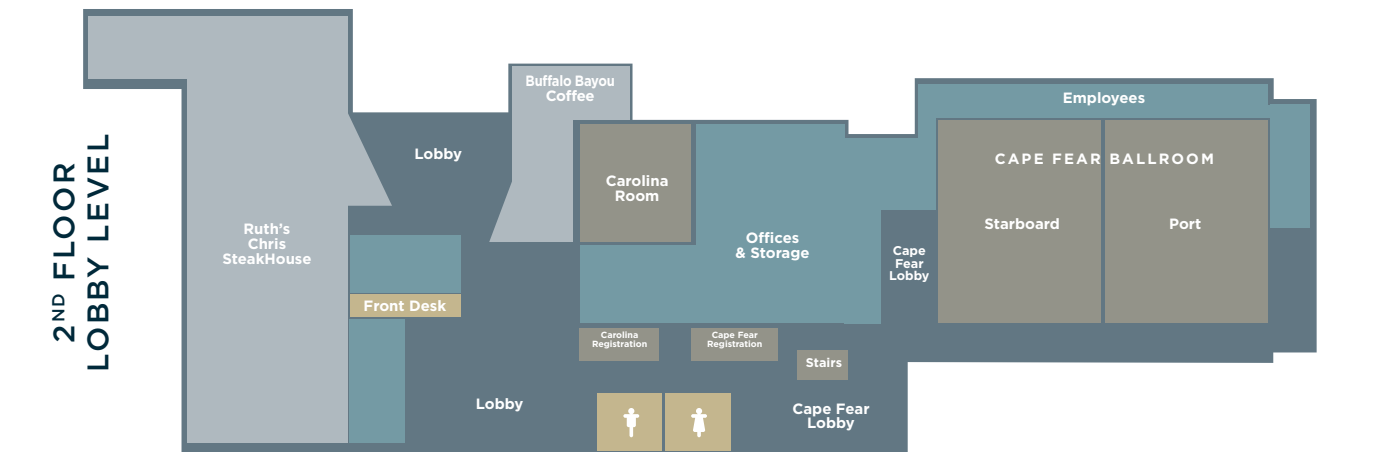
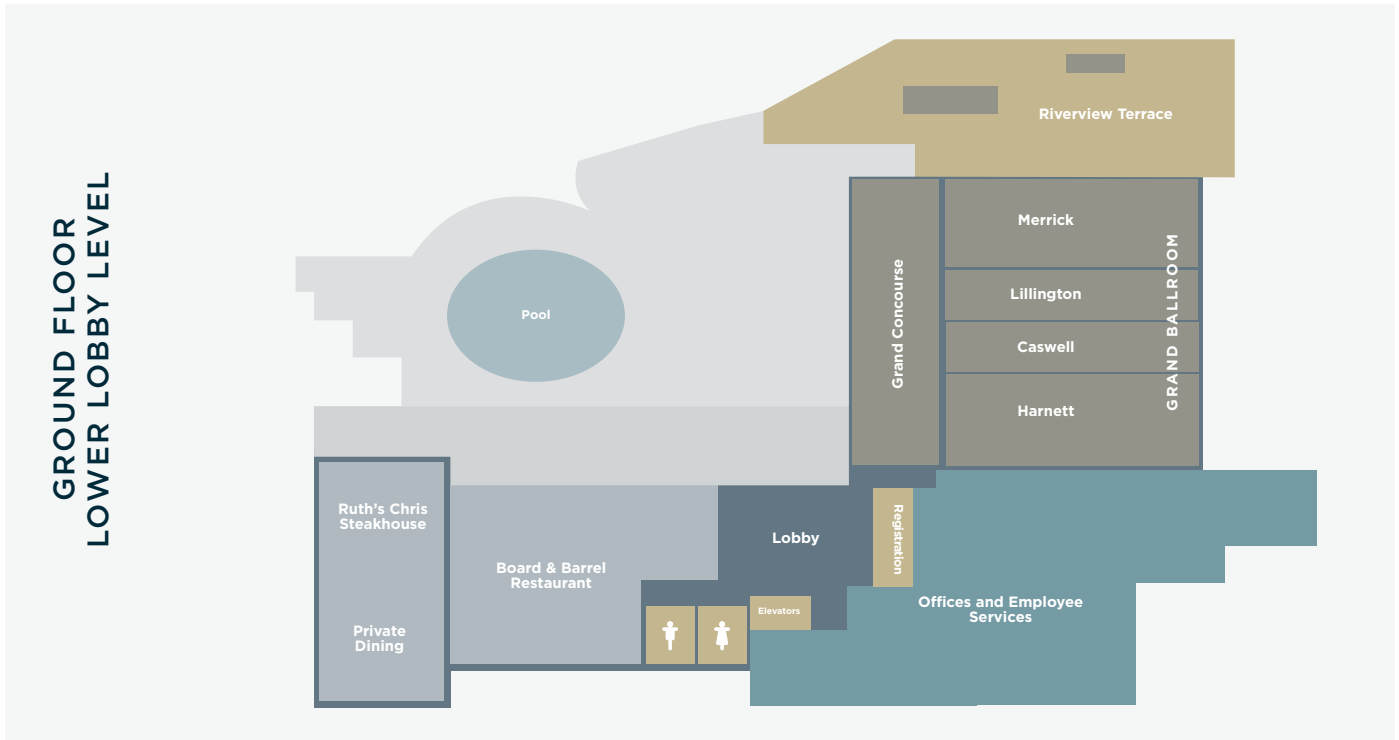


FORESTRY TOOLS OF TOMORROW

PIONEERING NEW FRONTIERS USING
AI & ADVANCING TECHNOLOGIES

Southern Group of State Foresters 2024 Annual Meeting





WELCOME TO NORTH CAROLINA



It is with great pleasure that N.C. Forest Service staff welcomes you to the Southern Group of State Foresters 2024 Annual Meeting.

As with most southern states, forestry is an important part of North Carolina's past, present and future. This state is the birthplace of forestry in America. North Carolina is also aptly referred to as the "Tar Heel State" because of our state's reputation and role as a key supplier of naval stores during colonial times.

A strong forest sector is a longstanding tradition in North Carolina. In fact, forestry is the largest manufacturing sector in the state, supporting about 139,700 full-time and part-time jobs, and contributing more than \$35 billion in industry output to our state's economy.

While we will have time to socialize and network over the next few days, we will spend most of our time discussing forestry-related issues that are challenging the region during these tough economic times. As populations grow and life around us advances, so must forestry and forest industry. AI and advancing technologies are certainly part of the equation. The work we do here will impact not only how we solve problems with fewer resources but how we do business in the years to come.

This year's meeting is being held in beautiful downtown Wilmington. The city is conveniently located near the Wilmington International Airport which makes for easier travel. The wonderful accommodations of the Hotel Ballast, the excellent restaurants and other amenities are certainly added bonuses.

The port city of Wilmington is situated in the southeastern part of North Carolina between the Atlantic Ocean and the Cape Fear River. It is also located a short distance from Wrightsville Beach, which offers activities such as surfing and sailing, making it one of the most popular tourist destinations in the coastal region. In addition to receiving high marks as one of the best areas in which to live, Wilmington is considered to be the "Hollywood of the East," with many television shows and more than 180 movies having been filmed in the area.

We hope this is an enjoyable and informative meeting in North Carolina. If there is anything we can do to make your visit more enjoyable, please don't hesitate to ask.

Greg Hicks
Assistant Commissioner
North Carolina Forest Service

SILENT AUCTION



The 2024 Southern Group of State Foresters Silent Auction proceeds will benefit the North Carolina Fallen Firefighters Foundation (NCFFF) Memorial Expansion.

About the NCFFF

The NCFFF is organized exclusively for charitable, religious, educational and scientific purposes, more specifically to lead the effort to remember North Carolina's fallen firefighters and their families.

The NCFFF compiles, maintains, and makes information available concerning our state's fallen firefighters. The NCFFF acts in the best interest of the firefighters of North Carolina and supplements the efforts of other North Carolina-based fire services and government agencies and the National Fallen Firefighters Foundation. The NCFFF endeavors to cultivate a fraternal spirit among the firefighters as they endure the loss of their fellow firefighters.

Our Mission

- Honor and remember North Carolina's fallen fire heroes.
- Provide resources to support their survivors in rebuilding their lives.
- Educate the fire service community and other agencies about the North Carolina Fallen Firefighters Foundation.

NCFFF Memorial Expansion

Each year, the NCFFF hosts a memorial service in Nash Square which is located in Raleigh, NC. The service is supported entirely by donations and is staffed by an all-volunteer group of highly dedicated men and women.

There are currently 350 honorees on the memorial, with an average of ten names being added each year. At this rate, we will run out of space in two years. In order to continue honoring those that have sacrificed their lives so that others may live, we must expand the memorial.

We are now in the planning phase for expanding the memorial, but we cannot begin construction until the funds are available for distribution to the vendors. Distribution includes payments for architectural renderings, construction permits, purchasing of materials and actual construction cost. The projected cost is between \$900,000 and \$1,000,000, with adjustments allowed for inflation. All support would be greatly appreciated to assist in honoring our fallen.

MEETING AGENDA

- 1-5 p.m. Committees Convene for afternoon sessions
- 1-3:30 p.m. Committee Chairs present 10-minute work plan presentations to State Foresters (Only Chairs attend, Committees meet separately)

SGSF Committee Reports and Requests – Reports with Q / A

Updates on Committee work plan actions

- SGSF Urban and Community Forestry Committee (10) – Troy Clymer
- SGSF Water Resources Committee (10) – Holly Welch
- SGSF Forest Management Committee (10) – Dana Stone
- SGSF Forest Protection and Fire Committee (10) – Gail Bledsoe
- SGSF Communications Committee (10)- Elishia Ballentine
- SGSF GIS Committee (10)- Kris Robbins
- SGSF SUM Committee (10)- David Neumann
- SGSF Forest Health Committee (10)- Shane Harrington
- SGSF FIA Committee (10) – Byron Rominger

Water Resources Committee (*Latimer Room -- 3rd Floor*)

- 1-1:45 p.m. Welcome and introductions -- Carey Potter, Vice-Chair
- 1:45-2:15 p.m. Review winter meeting minutes and review action item updates -- Group
- 2:15-2:45 p.m. Pete Cauldwell -- USFS SRS update
- 2:45-3:30 p.m. Erik Shilling -- NCASI update

Forest Management Chiefs Committee (*Bellamy Room -- 3rd Floor*)

- 1-1:30 p.m. Introduction of the Forest Management Chiefs and Guests -- Round Robin
- 1:30-2:30 p.m. Susan Granbery and Lynn Lewis, USDA Forest Service -- Grants and policy review
- 2:30-3:30 p.m. Tim Foley, SGSF Policy Director -- SGSF policy updates

Southern Fire Chiefs Committee (*Carolina Ball Room / Port Room -- 2nd Floor Lobby Level*)

- 1-1:30p.m. Introductions/Logistics/Vice-chair Elections -- Gail Bledsoe
- 1:30-2 p.m. U.S. Forest Service WO Report --TBD (*virtual*)
- 2-3 p.m. U.S. Forest Service R8 Report -- Shardul Raval, et al.
- 3-3:30 p.m. Southern Fire Exchange Report -- Rae Crandall (*virtual*)

GIS Committee (*McRae Room -- 3rd Floor*)

- 1-1:30 p.m. Welcome and introductions
- 1-2:30 p.m. Nova Drone Mapping Software -- Daan Arscott, Nova Maps
- 2:30-3:40 p.m. Forest Tech Updates in GPS, GIS, Forest Measurement, Drones, and Forest Inventory -- Johnny Thompson, Landmark Spatial Solutions

MEETING AGENDA

SUM Committee (*Dudley Room -- 3rd Floor*)

- 1-1:30 p.m. NCFS Welcome & Utilization Program Overview -- Barry New, NCFS
- 1-2 p.m. USFS SRS -- TPO Update -- Jason Cooper
- 2-2:45 p.m. Wood Innovations & Community Wood Grant Update -- Marcus Taylor
- 2:45-3:30 p.m. Mass Timber Conference Update -- Collin Buntrock

FIA Committee (*DeRosset Room -- 3rd Floor*)

- 1-3:30 p.m. SGSF Strategic Plan and Implementation Plan review and recommendations -- David Dickinson, FIA Committee Incoming Chair
Committee discussion -- David Dickinson, FIA Committee Incoming Chair

3:30-4 p.m. Break (*Ground Floor -- Lower Level -- Harnett Room*)

4-5 p.m. State Foresters Business Session (Committees meet separately)
Minutes
Treasurer's Report
Executive Committee Report
Nominating Committee -- Goeller

State Foresters discussion session on miscellaneous topics

Water Resources Committee (*Latimer Room -- 3rd Floor*)

- 4-5 p.m. Group open discussion

Forest Management Chiefs Committee (*Bellamy Room -- 3rd Floor*)

- 4-4:30 p.m. Daniel McInnis, USDA Forest Service -- Keeping Forests Partnership Update
- 4:30-5 p.m. Group discussion

Southern Fire Chiefs Committee (*Carolina Ball Room / Port Room -- 2nd Floor Lobby Level*)

- 4-5 p.m. SouthWRAP Upgrade Report -- Curt Stripling (*virtual*)

GIS Committee (*McRae Room -- 3rd Floor*)

- 4-5 p.m. Tree Tracker Updates -- George Banzhaf, Tree Tracker CEO

SUM Committee (*Dudley Room -- 3rd Floor*)

- 4-5 p.m. FS Committee Funding Grant & Grant Work Plan Development -- Collin Buntrock & David Neumann

FIA Committee (*DeRosset Room -- 3rd Floor*)

- 4-5 p.m. Research Priorities for SGSF Strategic Plan

6-8 p.m. State Forester Dinner and Dinner on your own

8-10 p.m. Hospitality Room Open (*3rd Floor*)

MEETING AGENDA

WEDNESDAY, JUNE 5

6:45-7:45 a.m. Breakfast for all attendees (*Ground Floor -- Lower Level -- Caswell / Lillington Rooms*)

State Forester Business session continues (Committees meet separately)

8-8:30 a.m. **Fire Compact Meetings** -- Jim Prevette, Fire Director, SGSF

8:30-10 a.m. **EPA NAAQS change Panel Discussion** -- Gary Wood --
Moderator, Sean Taylor -- Georgia EPD, Greg DeAngelo -- Southeastern
States Air Resource Managers, Rick Gilliam -- EPA Region 4

Water Resources Committee (*Latimer Room -- 3rd Floor*)

8-8:30 a.m. Weyerhaeuser Research -- Brent Hawkes

8:30-9:15 a.m. Drone Use for BMP monitoring -- Richard Christan Auburn University

9:15-10 a.m. Group Discussion

Forest Management Chiefs Committee (*Bellamy Room -- 3rd Floor*)

8-8:30 a.m. Dana Stone, Alabama Forestry Commission -- Discuss Alabama Landowner Survey from ACES

8-9 a.m. Group Discuss with the FMC committee members

9-10 a.m. Victor Harris, Cierra Publishing Company in NC: Minority Landowner Magazine --
Discuss Management Opportunities of Underserved Landowners

Southern Fire Chiefs Committee (*Carolina Ball Room / Port Room -- 2nd Floor Lobby Level*)

8-8:30 a.m. Fire Compacts Meeting

8-10 a.m. EPA NAAQS change panel discussion

GIS Committee (*McRae Room -- 3rd Floor*)

8-10 a.m. GIS Project Presentations (state by state and open discussion)

SUM Committee (*Dudley Room -- 3rd Floor*)

8-8:30 a.m. Policy Update -- Tim Foley, SGSF

8:30-9:15 a.m. TBD

9:15-10 a.m. Forest Products Locator & Economic Development Grant Update --
Leslie Boby, SREF

FIA Committee (*DeRosset Room -- 3rd Floor*)

8-9 a.m. SGSF Strategic Plan and Implementation Plan review and recommendations

9-10 a.m. SGSF Workforce Recruitment and Retention Survey -- Chelsea Ealum,
SGSF Communications Director

MEETING AGENDA

10-10:30 a.m. Break (Ground Floor -- Lower Level -- Harnett Room)

10:30 a.m. - Noon State Forester Liaisons meet with committees (All state foresters attend; Liaisons invite other State Foresters to join with committees)

Water Resources Committee (Latimer Room -- 3rd Floor)

10:30 a.m. - Noon Group Open discussion State Forester Liaisons meet with committees

- Work plan
- SRS research needs and state's needs
- Potential LSR projects and other grant projects

Forest Management Chiefs Committee (Bellamy Room -- 3rd Floor)

10:30 a.m. - Noon State Forester Liaison, Rick Oates will attend FMC committee

- Review current work plan - make any necessary edits
- Discuss the Strategic Plan
- Discuss the Implementation Plan
- Discuss SRS Research Ideas

Southern Fire Chiefs Committee (Carolina Ball Room / Port Room -- 2nd Floor Lobby Level)

10:30-11 a.m. IMT Training Courses Update -- Mark Goeller
11-11:30 a.m. Fire Weather Intelligence Portal -- Corey Davis
11:30 a.m. - Noon SGSF Workforce Recruitment & Retention Survey -- Chelsea Ealum

GIS Committee (McRae Room -- 3rd Floor)

10:30 a.m. - Noon GIS Business Meeting Part 1

- State Forester Liaisons meet with the GIS committee
- Work plan and action item discussion

SUM Committee (Dudley Room -- 3rd Floor)

10:30-11:00 a.m. State Forester Liaison -- Tim Lowrimore
11:00 a.m. - Noon European Union Deforestation Regulation (EUDR) Update --
Tripp Pryor or Michael Snow, AHEC

FIA Committee (DeRosset Room -- 3rd Floor)

10:30 a.m. - Noon State Forester Liaison meets with Committee -- Heather Slayton,
TN State Forester

Noon - 1:20 p.m. Awards Luncheon (Ground Floor -- Lower Level -- Caswell / Lillington Rooms)

Water Resources Committee (Latimer Room -- 3rd Floor)

1:30-2 p.m. New Tools and Technology for Water Resource Professionals
2-2:30 p.m. Landscape Scale Integration and Shared Stewardship -- Paul Gellerstedt
2:30-3 p.m. NLE and Tricolored Bat Guidance and Discussion

MEETING AGENDA

Forest Management Chiefs Committee (*Bellamy Room -- 3rd Floor*)

- 1:30-2:30 p.m. Chelsea Ealum, SGSF Communications Director -- SGSF Recruitment and Retention Survey
- 2:30-3 p.m. Group Discuss with the FMC committee members about recruitment and retention

Southern Fire Chiefs Committee (*Carolina Ball Room / Port Room -- 2nd Floor Lobby Level*)

- 1:30-2:45 p.m. NASF Technology Report -- Keith Smith/Chris Gerecke
- 2:45-3 p.m. Bin Items

GIS Committee (*McRae Room -- 3rd Floor*)

- 1:30-3 p.m. GIS Project Presentations (state by state and open discussion)

SUM Committee (*Dudley Room -- 3rd Floor*)

- 1:30-2:15 p.m. Export market opportunities overview -- Michelle Wang, North Carolina Department of Agriculture & Consumer Services
- 2:15-3 p.m. Carbon market update -- Katie Fernholtz, Dovetail Partners

FIA Committee (*DeRosset Room -- 3rd Floor*)

- 1:20-2:20 p.m. County Materials Working Group discussing and recommendations -- Josh Bradley and Eric Brixey
- 2:20-3:40 p.m. Break (Ground Floor – Lower Level – Harnett Room)

- 1:30-2 p.m. **NASF President’s Report and discussion** -- Scott Phillips, President NASF
- 2-2:30 p.m. **Regional State Forester Association Reports** -- NMSFA, CWSF / WFLC
- 2:30 – 3 p.m. **Southeastern Partnership for Forests and Water** -- Kathy Hawes, Coordinator
- 3-3:30 p.m. Break (*Ground Floor -- Lower Level -- Harnett Room*)

Water Resources Committee (*Latimer Room -- 3rd Floor*)

- 3:30-4 p.m. National Wetland Inventory Update -- Meghan Lang
- 4-5 p.m. Open discussion

Forest Management Chiefs Committee (*Bellamy Room -- 3rd Floor*)

- 3:30-4:30 p.m. Michael Rhodes, North Carolina Forest Service District 8 -- Discuss management of North Carolina forests
- 4:30-5 p.m. Group discussion

MEETING AGENDA

Southern Fire Chiefs Committee (*Carolina Ball Room / Port Room -- 2nd Floor Lobby Level*)

3:30-3:50 p.m. NASF/NWCG Report -- Greg Smith (*virtual*)

3:50-4:15 p.m. Northeast Fire Supervisors Report -- Ben Snyder
Western Fire Managers Report -- Vaughn Jones (*virtual*)

4:15-5 p.m. NWCG Committee Reports

- Risk Management Committee -- Darryl Jones
- Incident & Position Standards Committee -- Michael Froelich
- Incident Business Committee -- Susan Gill (*virtual*)

GIS Committee (*McRae Room -- 3rd Floor*)

3:30-4 p.m. GIS Project Presentations (state by state and open discussion)

4-5 p.m. ArcGIS Experience Builder Demo and Updates -- esri Solution Engineers

SUM Committee (*Dudley Room -- 3rd Floor*)

3:30-5 p.m. State reports -- (5 to 10 minutes each -- each state informally brief the group on utilization, markets and services related issues of concern)

FIA Committee (*DeRosset Room -- 3rd Floor*)

3:40-5 p.m. Cost Component Working Group discussion and recommendations -- Don Roach, John Pemberton, Josh Bradley, Chris Brown and Byron Rominger

3:30-4:30 p.m. **SGSF Recruitment/Retention Survey** – Chelsea Ealum,
SGSF Communications Director

4:30-5:00 p.m. **Inclusion Council Report** – Alicia Cramer, US Endowment for Forestry
and Communities and Terry Baker -- SAF

6-8 p.m. **Dinner** -- *Off-site*

8:30-10:30 p.m. Hospitality Room Open (*3rd Floor*)

THURSDAY, JUNE 6

6:45-7:45 a.m. Breakfast for all attendees (*Ground Floor -- Lower Level -- Caswell / Lillington Rooms*)

8:00 a.m. - Noon State Forester Session
(Committees meet separately)

MEETING AGENDA

Water Resources Committee (*Latimer Room -- 3rd Floor*)

- 8-8:45 a.m. SGSF Forester Recruitment/Retention Survey (with SUM Committee) -- Chelsea Ealum, SGSF
- 8:45-9 a.m. GIS Update
- 9-10:30 a.m. WRC Business Session

Forest Management Chiefs Committee (*Bellamy Room -- 3rd Floor*)

- 8-8:30 a.m. Pam Snyder, Kentucky Division of Forestry -- White Oak Initiative
- 8:30-9 a.m. Bonnie Stine, Florida Forest Service -- Longleaf Pine Initiative
- 9-10 a.m. Leslie McCormick, Executive Director -- North Carolina Tree Farm Discussion
- 10-10:45 a.m. Break and Check Out of Hotel

Southern Fire Chiefs Committee (*Carolina Ball Room / Port Room -- 2nd Floor Lobby Level*)

- 8-9 a.m. Prescribed Burn Associations -- Jesse Wimberley/Jenn Fawcett
- 9-9:30 a.m. SERPPAS Report -- Jenn Fawcett
- 9:30-9:45 a.m. Southern Regional Extension Forestry Report -- Leslie Boby
- 9:45-10 a.m. Southern Research Station Report -- Joe O'Brien (*virtual*)
- 10-10:30 a.m. CMAT Presentation -- Jonathan Bruno/Hannah Thompson-Welch

GIS Committee (*McRae Room -- 3rd Floor*)

- 8-9 a.m. National (NASF) and State Project Updates -- Chris Gerecke, Timmons Group
- 9-10 a.m. BMP Implementation USLE Survey Demo and Design -- AJ Lang & Moriah VanVoorhis, NCFS
- 10-10:30 a.m. GIS Business Meeting Part 2
 - Committee Liaisons Reports
 - New Officers and Liaisons
 - Discuss Winter meeting location

SUM Committee (*Dudley Room -- 3rd Floor*)

- 8-8:45 a.m. SGSF Forester Recruitment/Retention Survey -- Chelsea Ealum, SGSF
- 8:45-10:15 a.m. Brainstorm regional / multi-state projects
- 10:15-10:45 a.m. Break (Ground Floor – Lower Level – Harnett Room)

FIA Committee (*DeRosset Room -- 3rd Floor*)

- 8-9 a.m. SGSF Communications Committee Liaison meets with Committee -- Shannon Coker, Communications Committee
- 9-10 a.m. Tree Grade Working Group discussion and recommendations -- Pam Snyder and John Pemberton

8-8:30 a.m. **SGSF Policy Priorities Overview** -- Tim Foley, Policy Director, SGSF

8:30-9:15 a.m. **Keeping Forests Update** – Daniel McInnis

MEETING AGENDA

- 9:15-9:40 a.m. **CMAT Team Presentation** -- Jonathan Bruno, Coalitions and Collaboratives
- 9:40-10:05 a.m. **Washington Office Forest Service Report** -- James Fortner, Chief of Staff, Cooperative Forestry, USFS
- 10:05-10:30 a.m. **State and Private Forestry Region 8 Updates** -- Kay Reed, Director of Cooperative Forestry, USFS Region 8
- 10:30-10:45 a.m. Break (*Ground Floor -- Lower Level -- Harnett Room*)

Water Resources Committee (*Latimer Room -- 3rd Floor*)
 10:45 a.m. - Noon Group open discussion

Forest Management Chiefs Committee (*Bellamy Room -- 3rd Floor*)
 10:45 a.m. - Noon Group Discussion -- Finalize rotation of leadership in the committee: Chair, Vice Chair, Past Chair and Secretary. Discuss our committee on maintain contact with US Virgin Islands and Puerto Rico representatives. Discuss next committee leadership and winter meeting.

Southern Fire Chiefs Committee (*Carolina Ball Room / Port Room -- 2nd Floor Lobby Level*)
 10:45-11:30 a.m. Eastern Innovation Landscape Network -- Brett Williams (*virtual*)
 11:30-11:45 a.m. Cohesive Strategy -- Gary Wood
 11:45 a.m. - Noon Bin Items / Closeout -- Gail Bledsoe

GIS Committee (*McRae Room -- 3rd Floor*)
 11 a.m. - Noon GIS Business Meeting Part 2 continued

SUM Committee (*Dudley Room -- 3rd Floor*)
 10:45 a.m. - Noon Nominations for Vice Chair & Secretary
 Winter 2025 SUM Meeting
 2025 Workplan & Priorities
 Summary and Action Items

FIA Committee (*DeRosset Room -- 3rd Floor*)
 10:15-11:30 a.m. Results from FIA data collection employee surveys and discussion
 11:30 a.m. - Noon Action items, meeting closeout, final thoughts and passing the Chair

- 10:45-11:10 a.m. **Southern Research Station Updates** -- Toral Patel-Weynand, Director, Southern Research Station, USFS
- 11:10-11:45 a.m. **Southern Forest Outlook** -- Daniel McInnis, John Coulston, USFS
- 11:45 a.m. - Noon **SGSF Chair Report** -- Russell Bozeman, Chair SGSF and Mississippi State Forester
- Noon ADJOURNMENT of meeting

SPOUSE / GUEST AGENDA

MONDAY, JUNE 3

- 2-5 p.m. SGSF Executive Committee meeting (*Carolina Room -- 2nd Floor -- Lobby Level*)
- 1-6 p.m. Registration Opens (*Ground Floor -- Lower Level*)
- 6-8 p.m. Opening Reception (*Ground Floor -- Lower Level -- Harnett Room*)
- 8-10 p.m. Hospitality Room Open (*3rd Floor*)

TUESDAY, JUNE 4

- 6:45-7:45 a.m. Breakfast for all attendees (*Ground Floor -- Lower Level -- Caswell / Lillington Rooms*)
- 9:15 a.m. Load SUVs for Airlie Gardens
- 12:30 p.m. Lunch at Sweet and Savory
Shopping at Lumina Station
- 3:30 p.m. Load SUVs for a drive by the Beach
- 5:00 p.m. Return to Hotel
- 8-10 p.m. Hospitality Room Open (*3rd Floor*)

WEDNESDAY, JUNE 5

- 6:45-7:45 a.m. Breakfast for all attendees (*Ground Floor -- Lower Level -- Caswell / Lillington Rooms*)
- 9:45 am Shopping at Cotton Exchange -- nearby Wilmington area
Walking/Sight Seeing -- Riverwalk
- 12:00 p.m. Lunch at Elijah's
- 2:30 p.m. Carolina River Boat Sight-Seeing Cruise
1-hour history tour -- Local legends and stories
- 4 p.m. Back to Hotel
- 6-8 p.m. Dinner -- *Off-site*
- 8:30-10:30 p.m. Hospitality Room Open (*3rd Floor*)

SGSF Annual Meeting, 2024

Wilmington, NC | June 3-6

Forestry Tools of Tomorrow:
Pioneering new frontiers using AI & advancing technologies

Meeting Speakers & Presentations



Dr. Songlin Fei
Institute for Digital Forestry
Purdue University

Dr. Songlin Fei is a **professor and the Dean's Chair of Remote Sensing, and serves as the director of the Institute for Digital Forestry at Purdue University**. Fei's research includes forest ecology, invasion ecology and digital forestry. His research has significantly advanced the ecology and management of invasive species, the understanding of forest responses to climate change, and the modernization of forestry into the digital age. His work has been published in over 140 peer-reviewed research articles, including those in Science, Science Advance, Nature Communications and PNAS. Fei currently serves as the PI for over \$25 million of research funding.

- **Abstract:** "Forests provide critical resources such as timber, fiber, and clean water and air, on which we are heavily dependent. Although digital technology continues to transform our daily lives, our forests are still managed using traditional technologies that are often labor intensive. Here, I discuss how Purdue's Institute for Digital Forestry is taking advantage of recent key developments in sensing technology and computational advancements to move this traditional field into the digital age. I highlight examples about how to merge cross-disciplinary knowledge to revolutionize the forestry sector, which has tremendous economic and ecological impacts. In particular, I showcase the use of different sensing technology from proximal, near-proximal, aerial and satellite-based sensing platforms and various AI models for automated measurement, monitoring and management of forest ecosystems."



Dr. Alicia Peduzzi
Warnell School of Forestry
and Natural Resources
University of Georgia

Dr. Alicia Peduzzi received her Ph.D. in Forestry from Virginia Polytechnic Institute and State University in 2011. Her research focus is on the application of remote sensing science to vegetation assessment and management of natural resources, with particular emphasis on the development of methodologies for precision forestry. She started as an **assistant professor in precision forestry at UGA's Warnell School of Forestry and Natural Resources** in August 2020. Before UGA, she worked for the USDA Forest Service, the Woodwell Climate Research Center, and the World Bank. Over the years, Dr. Peduzzi has worked with pine plantations in the Southeast U.S. as well as with temperate and tropical natural forests, and her remote sensing expertise includes the utilization of LiDAR, radar, and optical data derived from satellites, airborne, and unmanned aerial vehicles. Her research has been concentrated on the generation of predictive models of vegetation biophysical parameters to evaluate and monitor tree growth and productivity and, more importantly, to inform decision-making processes.

- **Abstract:** *The use of high-resolution remote sensing data for forest management.*



Dr. Mauricio Acuna
Natural Resources Institute
Finland (Luke)

Dr. Mauricio Acuna was appointed to a five-year term as **Research Professor in Automation and AI in Forest Operations with the Natural Resources Institute Finland (Luke) Production Systems unit** in June 2024. Acuna holds a PhD in Forest Engineering from Oregon State University, a MSc in Operations Management from the University of Chile, and a Bachelor in Forest Engineering from the University Austral of Chile. Before this appointment, Prof. Acuna worked as a Senior Research Fellow in Forest Operations at the University of the Sunshine Coast (UniSC) and the University of Tasmania in Australia. He is also an Adjunct Professor in Forest Operations at UniSC. In these previous roles, he conducted applied research and developed tools for the Australian forest industry in areas that included sensor technologies and artificial intelligence in forest operations, mathematical programming and optimization techniques for forest management and operations, wood and biomass harvesting and transport logistics, operations research and decision support systems, and harvesting machine evaluation.

- **Abstract:** *His research focuses on advancing new smart digital solutions to enable the next technological leap in forest operations. The aim is to develop cost-effective methods that support the sustainable use of forests, the availability of high-quality raw materials, ecosystem services and biodiversity.*



Dr. Scott Goodrick
Center for Forest Health
and Disturbance
Southern Research Station,
USDA Forest Service

Dr. Goodrick has been a **Research Meteorologist with the U.S. Forest Service, Southern Research Station since 2002 and currently serves as Director of the Station's Center for Forest Health and Disturbance**. His general area of research spans fire-atmosphere interactions and smoke management, focusing on how prescribed fire ignition patterns influence plume dynamics and smoke dispersion. Past research has covered fire-climate dynamics, fire weather, and wind-related forest disturbance. He has authored over 100 peer-reviewed publications and conference papers. Before joining the Forest Service, Scott spent 4 years as the fire weather meteorologist for the Florida Forest Service where he helped develop the weather and smoke components of their fire management information system. Scott received his M.S. and Ph.D. in Atmospheric Science from the University of Alabama in Huntsville.

- **Abstract:** *Potential for AI Applications for Wildland Fire Management. "Wildfires pose an ever-increasing threat to communities, ecosystems, and economies worldwide. As the frequency and intensity of these events continue to rise in response to climate change and other factors, innovative solutions are urgently needed to enhance our ability to predict, monitor, and respond to wildfires effectively. Artificial Intelligence (AI) has emerged as a powerful tool with a range of potential applications in wildland fire management. Here I will provide an overview of some current and future applications of AI in addressing the challenges of wildland fire management, such as fire behavior prediction, fuel mapping, fire detection and monitoring, and incident response planning. While the potential of AI in wildland fire management is vast, it is not without challenges and limitations, including data quality, computational resources, ethical considerations, and the need for collaboration and regulatory frameworks. In this talk, I aim to provide a balanced overview of the benefits and potential challenges of AI applications for wildland fire management that will inform attendees about the transformative potential of AI in this critical domain."*



Steve Poleskey
Gaia AI

Steve Poleskey is the **Chief of Staff and Head of Business Development and Gaia AI**. Gaia AI is a Boston based tech company that applies cutting-edge AI and robotics to increase the quantity, quality and efficiency of forest data capture and analysis. Prior to Gaia AI, Steve was VP of Business Operation at Hopin, INC; had various management roles at Google, INC, and served as a submarine officer in the US Navy. He holds a degree in Mechanical Engineering from Penn State and an MBA from NYU.

- **Abstract:** *Foresters and Forest Managers rely on data for informed decision making and planning. However, the techniques commonly used in our industry today rely on approaches that have not evolved for many decades. Efforts to integrate emerging technologies into everyday forestry operations have met mixed results over the last 20 years. However, macroscopic changes driven by climate change are creating a new sense of urgency to monitor and take action on increasingly dynamic forest ecosystems. Rapid advancement in sensor technology and computing capabilities, including artificial intelligence, make it an exciting time to reassess the role and opportunities of accelerated technology adoption to aid and enhance the efforts of foresters across the US South and around the world.*



Dr. Louise Loudermilk
Southern Research Station
USDA Forest Service

Dr. Loudermilk has been a **Research Ecologist with the U.S. Forest Service, Southern Research Station** since 2012 and currently serves as the **Fire Team Leader of the Athens Prescribed Fire Science Laboratory**. Her work focuses on advancing science to support prescribed fire management and fire effects monitoring using advancing technology. She uses terrestrial (TLS) and aerial laser scanning (or LiDAR) to measure fuels and ecosystems in 3D, particularly for supporting monitoring needs. An integral part of her work is building streamlined approaches to incorporating LiDAR and fuels data into 3D fire behavior models and ecosystem process models. The goal is to bridge the gap between everyday applications of prescribed fire and other fuel treatment and land management decisions and long-term ecosystem response. Louise received his M.S. and Ph.D. in Forestry and Ecology from the University of Florida.

- **Abstract:** *Measuring and modeling wildland fuels and fire behavior have come to a crossroads where technology and innovation can drastically advance the field of wildland fire science. Fuels can now be sampled and represented in three-dimensions (3D) through simple Lidar-based field sampling techniques. This study illustrates the innovative work of using push-button terrestrial laser scanning (TLS) for monitoring of ecosystems and fuels, and the National interagency collaboration to guide this effort, particularly the Eastern Innovation Landscape Network (EILN). From this effort, TLS can be used to quickly measure prescribed fire or fuel treatment effectiveness (% reduction in canopy, ladder, surface fuels), predict surface consumption, and estimate precise tree data with little bias and high consistency across systems. An automated online approach has been developed to streamline the processing, metadata and data management, and outputs. Furthermore, TLS can now be automatically coupled (co-registered) with aerial laser scanning to create complete landscape coverage of 3D canopy, ladder, and surface fuels. Our ongoing co-production effort within the EILN brings these 3D data to the forefront of both fuels monitoring and 3D fire behavior models, such as QUIC-Fire. These innovative techniques are on their way to support the efforts for increasing the pace and scale of prescribed burning through effective and efficient training, consistent and quality fuels data and measurements, and realistic, near operational fire behavior models that couple fire, fuels, and atmosphere dynamics in 3D*



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The NCFA seeks to serve its membership through four major programs – Advocacy, Training for Forestry Professionals, Education, and Communications.





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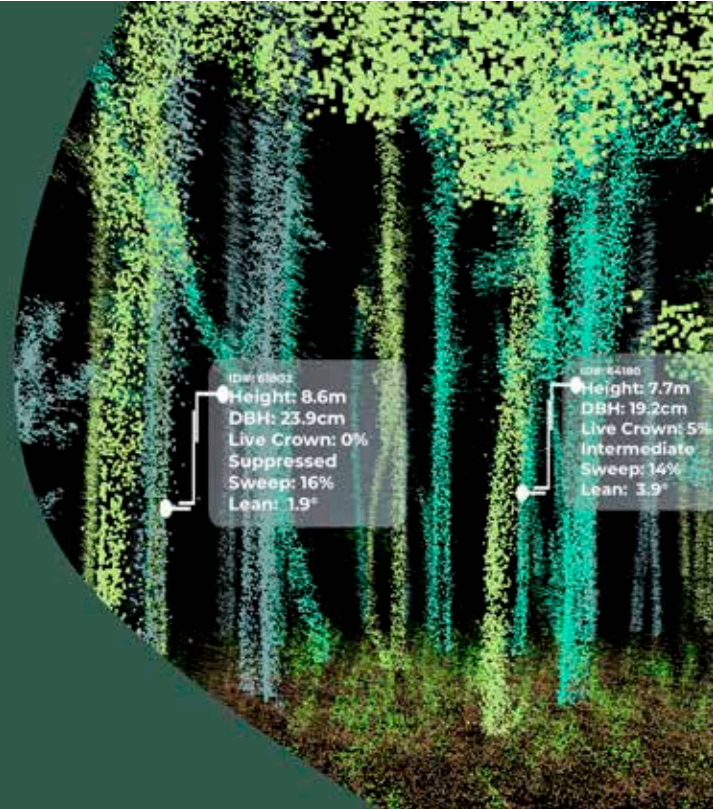
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THINGS TO DO IN WILMINGTON

- Explore the city’s expansive 230-plus-block National Register Historic District
- Stroll along the scenic Riverwalk
- The Battleship NORTH CAROLINA
- The Civil War-era Fort Fisher State Historic Site and the award-winning North Carolina Aquarium at Fort Fisher in Kure Beach
- The vintage seaside Carolina Beach Boardwalk
- Three nearby island beaches

FAMOUS & NOTEWORTHY NOSHES

PinPoint Restaurant: (farm-and-sea-to-table cuisine) a local eatery featured on The Cooking Channel’s “Best Thing I Ever Ate” and named one of the “South’s Best Restaurants” by Southern Living.

Casey’s Buffet: voted “The Best All-You-Can-Eat Buffet in North Carolina” by the readers of Reader’s Digest, Devour in award-winning Southern barbecue, fried chicken, catfish and savory sides, adventurous diners can try pigs’ feet, fat back and more.

Flaming Amy’s: signature burrito with chipotle peppers, green chiles, jalapenos, named one of Thrillist.com’s “33 Best Burritos in America.”

Benny’s Big Time Pizzeria: owned by Chef Vivan Howard, who also stars on the TV Series documentary “Somewhere South.” Enjoy Neapolitan-style woodfired pizza.

Swing by Indochine: an acclaimed Thai and Vietnamese restaurant in Wilmington.

Wilmington’s first fine-dining vegan eatery, **The Green House**, features a menu focused on fresh vegetables and clean proteins. Indulge in the executive chef’s signature dish, delicate roasted vegetables served with grits, saffron beurre blanc, chimichurri and beans.

Swing by Wilmington’s restaurants featured on the Food Network television series hit show; “Diners, Drive-Ins and Dives” hosted by Guy Fieri.



Scan for Meeting Agendas