ASSOCIATION OF NATURAL RESOURCES EXTENSION PROFESSIONALS 15th BIENNIAL CONFERENCE

May 12-15, 2026 | WILMINGTON, NORTH CAROLINA

# Confluence of Knowledge: Charting the Future of Natural Resource Extension

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## Conference Committee

Our sincerest gratitude to the dedicated volunteers for their invaluable time and effort in planning the ANREP 2026 conference. The conference committee includes representation from all four regions of ANREP and ANREP's executive committee.

- Robert Bardon, NC State (Chair)
- Renee Strnad, NC State (Co-Chair)
- Janice Sitzes, NC State (Conference Coordinator)
- David Herpy, NC State
- Biswanath Dari, NC A&T
- Sanjok Poudel, NC A&T
- Erika Young, NC Sea Grant
- Bindu Bhakta, Michigan State
- Calvin Norman, Penn State
- Maddy Goebel, Univ. of Idaho
- Leslie Boby, ANREP Board
- Dean Solomon, ANREP Executive

# Sustainability Efforts


We are proud to announce that the ANREP conference has earned the **"Sustainability Steward"** ranking from the NC State University Office of Sustainability. We are committed to walking the talk through several major initiatives:

Thanks to the incredible financial support and guidance of the NC Composting Council, we are implementing food and serviceware composting for approximately 95% of our meals!

- Compostable Serviceware: Through a partnership with World Centric, everything—from plates and napkins to cups, lids, straws, and utensils—is fully compostable.
- Local Impact: We are partnering with the Wilmington Compost Company to haul and process our organic waste, ensuring our footprint remains small all while supporting a local small business.
- Expert Advice: Representatives from the NC Composting Council will be on-site Wednesday morning to answer your questions and help you find similar resources in your home state.

However, success depends on our collective effort! We kindly ask you to:

1. Sort with Care: Please keep compost bins free of non-compostable landfill waste. When in doubt, throw it in the landfill trash to avoid contaminating the compost stream.
2. BYO Gear: While we provide compostable cups, we strongly encourage you to bring your own reusable coffee mugs and water bottles, especially for field excursions.
3. Join the Green Team! Want to help others sort their waste correctly? Volunteer for our Green Team during meal times!

Other ways we are working to host a more sustainable event:

- Location: Cape Fear Community College Union Station is a LEED certified building.
- Transportation: All our hotels and off-site evening events are a short walking distance from our conference venue (check in at the Registration desk if you need transportation for evening events).
- Conference Swag: Our conference give-aways feature recycled materials and give-back programs.

# Overall Program

| | | |
|---|---|---|
| **Tuesday, May 12** | | |
| 12:00 pm – 5:00 pm | Registration | 5th floor lobby |
| 12:45 pm – 4:00 pm | Pre-conference Tours | 5th floor lobby |
| 4:00 pm – 5:00 pm | Newcomer Orientation | Room U512 |
| 5:00 pm – 6:00 pm | Registration – Wilmington Railroad Museum | 505 Nutt St |
| 6:00 pm – 8:00 pm | Welcome Reception – Wilmington Railroad Museum | 505 Nutt St |
| **Wednesday, May 13** | | |
| 7:00 am – 6:00 pm | Registration | 5th floor lobby |
| 8:30 am – 9:45 am | Welcome & Opening Session – *Sponsored by NC State Extension* | Room U170 |
| 9:45 am – 10:00 am | Break | Room U508 |
| 10:00 am – 11:30 am | Concurrent Sessions 1 – Oral Presentations | |
| | • Forest & Urban Management – *Sponsored by Forestry Webinar Portal* | Room U402 |
| | • Environmental Education & Youth Engagement | Room U404 |
| | • Ecosystem Health, Climate, & Fire | Room U405 |
| | • Water Resources & Sustainable Ag & Horticulture | Room U406 |
| | • Community Development, Leadership, Land Use, & Other | Room U408 |
| 11:30 am – 12:00 pm | Concurrent Sessions 1 – Ignite Presentations | |
| | • Program Design & Delivery A | Room U402 |
| | • Program Design & Delivery B | Room U404 |
| | • Innovative Approaches – *Sponsored by Natural Resource Extension Education Foundation* | Room U405 |
| | • Partnership & Collaborations – *Sponsored by University of Wisconsin -Madison Division of Extension Nat. Res. Institute* | Room U406 |
| | • Program Evaluation & Impact, & Needs Assessment | Room U408 |
| 12:00 pm – 1:30 pm | Awards Luncheon – *Sponsored by NCSU College of Nat. Resources* | Room U508 |
| 1:30 pm – 3:00 pm | Concurrent Sessions 2 – Oral Presentations | |
| | • Forest & Urban Management | Room U402 |
| | • Environmental Education & Youth Engagement | Room U404 |
| | • Ecosystem Health, Climate, & Fire | Room U405 |
| | • Water Resources & Sustainable Ag & Horticulture | Room U406 |
| | • Community Development, Leadership, Land Use, & Other | Room U408 |
| 3:00 pm – 3:30 pm | Break | Room U508 |
| 3:30 pm – 4:00 pm | Concurrent Sessions 2 – Ignite Presentations | |
| | • Program Design & Delivery | Room U402 |
| | • Program Design & Delivery | Room U404 |
| | • Innovative Approaches | Room U405 |
| | • Partnership & Collaborations | Room U406 |
| | • Program Evaluation & Impact, & Needs Assessment | Room U408 |
| 4:00 pm – 6:00 pm | Poster Session and Reception – *Sponsored by NC Farm Bureau* | Room U508 |
| 7:15 pm – 9:00 pm | Special Outing: Ghost Tour (pre-registration required) | Market & Water Streets |

| | | |
|---|---|---|
| **Thursday, May 14** | | |
| 7:00 am – 5:00 pm | Registration | 5th floor lobby |
| 8:00 am – 9:00 am | Business Meeting Breakfast | Room U508 |
| 9:00 am – 10:15 am | Plenary Session – Extension's Role in Disaster Preparedness, Response, Recovery, and Mitigation – *Sponsored by NCX* | Room U508 |
| 10:15 am – 10:30 am | Break | Room U508 |
| 10:30 am – 11:45 am | Organized Sessions | |
| | • Envisioning the Future of Extension Forestry Climate Change Programming | Room U402 |
| | • Communicating for Change: Media Tools to Drive Engagement in Natural Resource Issues | Room U404 |
| | • Let's Map it Out: Strategic Stakeholder Identification and Engagement Planning | Room U405 |
| | • Training Conservation Professionals to Recognize and Address Natural Resource Concerns on Ag Lands | Room U406 |
| | • Strengthening Agricultural Disaster Response: Building Resilience & Preparedness Through Psychological First Aid | Room U408 |
| 11:45 am – 12:15 pm | Box lunch pickup and load buses | Room U508 |
| 12:30 pm – 5:00 pm | Field Experiences | |
| 6:00 pm – 8:00 pm | Picnic Dinner – Warehouse on Water | 15 S Water St |
| **Friday, May 15** | | |
| 8:00 am – 8:45 am | Regional Meetings | |
| | • Northeast region | Room U402 |
| | • North Central region | Room U404 |
| | • Southern region | Room U508 |
| | • Western region | Room U406 |
| 8:45 am – 9:30 am | Initiatives/Committee Meetings | |
| | • National Extension Energy Initiative | Room U402 |
| | • National Extension Native Plant Initiative | Room U404 |
| | • National Extension Wildland Fire Initiative | Room U405 |
| | • Potential National Extension Water Initiative Discussion | Room U406 |
| | • ANREP Standing Committees | Room U508 |
| 9:00 am – 9:30 am | Break | Room U508 |
| 9:30 am – 11:00 am | Concurrent Sessions 3 – Oral Presentations | |
| | • Forest & Urban Management | Room U402 |
| | • Environmental Education & Youth Engagement | Room U404 |
| | • Ecosystem Health, Climate, & Fire | Room U405 |
| | • Water Resources & Sustainable Ag & Horticulture | Room U406 |
| | • Community Development, Leadership, Land Use, & Other | Room U408 |
| 11:00 am – 11:30 am | Concurrent Sessions 3 – Ignite Presentations | |
| | • Program Design & Delivery | Room U402 |
| | • Program Design & Delivery | Room U404 |
| | • Innovative Approaches | Room U405 |
| | • Partnership & Collaborations | Room U406 |
| | • Program Evaluation & Impact, & Needs Assessment | Room U408 |
| 11:30 am – 12:30 pm | Closing/Lunch | Room U508 |

# Plenary Sessions

## Welcome and Opening Plenary

Following introductory remarks from David Monks, Vice Provost for Outreach and Engagement and Director, NC State Extension, and Dr. M. Ray McKinnie, Associate Dean & Cooperative Extension Administrator for NC A&T, we will embark on a two-part exploration of our coastal host location, focusing on the critical, intertwined relationship between people and natural resources.

Join us as we chart the future of Natural Resource Extension by understanding the vital intersection of landscape and community knowledge.

***A Sense of Place: The Landscape Perspective***
Dr. Marcelo Ardón will provide a landscape-level view of the challenges and innovative approaches facing this dynamic environment. This presentation will ground us in the unique natural resource issues of the coastal North Carolina setting, providing a real-world context for the innovative programming and exchange of ideas that will follow throughout the conference.

Dr. Marcelo Ardón is a Professor in the Department of Forestry and Environmental Resources at North Carolina State University, specializing in aquatic ecosystem ecology and biogeochemistry of wetlands and streams. His research focuses on elucidating the mechanisms by which these ecosystems respond to human-accelerated environmental change. He seeks to understand how their structure and function are affected by land-use and climate change, and if management tools can restore them.

***A Sense of Community: The People Perspective***
Dr. Whitney Knollenberg will shift the focus to the human element, providing local examples of where people and natural resources are inextricably linked. This segment will highlight the community, social, and economic dynamics interwoven with the region's natural resources.

Dr. Whitney Knollenberg is an Associate Professor and Department Extension Leader in North Carolina State University's Department of Parks, Recreation and Tourism Management. Specializing in tourism leadership, her work explores its vital role in achieving sustainable tourism development through effective policy, planning, and strategic partnerships. She frequently collaborates with coastal North Carolina communities—where tourism is a key economic driver—to advance their climate resiliency initiatives.

# Panel

## Extension's Role in Disaster Preparedness, Response, Recovery, and Mitigation

The need for robust community disaster response is more critical than ever, and Extension programs are increasingly called upon to serve as essential hubs for preparedness, management, and recovery.

This dynamic, moderated plenary panel will bring together leading experts and professionals to explore the critical role of Extension in the disaster lifecycle. Panelists will share their extensive experience and offer valuable insights into:

- **Building Resilient Communities:** Strategies for establishing collaborative, long-term partnerships that enhance community preparedness *before* a disaster strikes.
- **Rapid Response and Recovery:** The immediate and crucial actions Extension must take during and after a climate event or natural resource disaster, drawing on real-world examples like the recovery efforts following Hurricane Helene in 2024.
- **Extension's Pivotal Role:** How local Extension offices become central, trusted sources of information and support, and the leadership required from County Directors in times of crisis.
- **Innovative Program Models:** Discussion of successful disaster assessment and recovery programs, and how Extension can best leverage its unique position within the university system to support local needs.

**Moderator**

**Dr. Mike Yoder**, Associate Director & State Program Leader, 4-H with NC State Extension; Coordinator: Emergency Programs

**Panelists**

**Dr. Monty Dozier,** Director of the Disaster Assessment and Recovery Team for Texas A&M AgriLife Extension

**Mr. Jerry Moody,** Avery County Extension Director with North Carolina Cooperative Extension

**Dr. Gavin Smith,** Department of Landscape Architecture and Environmental Planning at NC State University

# Concurrent Sessions

Abstracts begin on page 17.

**Concurrent Session 1 – Oral Presentations**
**Wednesday, May 13 10:00 am – 11:30 am**

| Time | Title | Presenters & Authors |
|---|---|---|
| **Room U402** | **Forest & Urban Management** | |
| 10:00 am | Helping Landowners Overcome Barriers to Entry to Forest Management: The Illinois Beginning Forest Landowner Program | Chris Evans & Kevin Rohling |
| 10:30 am | Long-Term Impacts of Multi-Session Courses vs. Single Day Education Events for Family Forest Owners | Kevin Zobrist |
| 11:00 am | The Woods in Your Backyard: Impacts & Lessons Learned from Ten Years of a Residential Natural Areas Management Course | Daniel Pratson, Jonathan Kays, & Andrew Kling |
| **Room U404** | **Environmental Education & Youth Engagement** | |
| 10:00 am | Game-Based Learning for Resilient Communities: Strengthening Local Decisions & Collaboration with the Watershed Game | Susan Lunt |
| 10:30 am | Going Nuts for ACORNS: Developing an Extension Tree Seed Collection Course | Kira Pollack |
| 11:00 am | Unbridled Truths: Youth Curriculum at the Crossroads of the Mustang Management Debate | Steven Price, Jessie Hadfield, Laura Snell, Nikki Frey, Kalen Taylor, & David Lile |
| **Room U405** | **Ecosystem Health, Climate & Fire** | |
| 10:00 am | Community-Driven Flood Mitigation in Wilson, NC: The Process is the Product | Vinicius Taguchi, Angela Allen, Maribel Herrera, & William Hunt |
| 10:30 am | Climate-Ready Woodlands: A Resilience Toolbox for Woodland Stewards | Anna Stockstad, Angela Gupta, & Emily Dombeck |
| 11:00 am | Agrivoltaics as Land Stewardship: Decision Tools for Extension Educators | Drew Schiavone, Paul Goeringer & Elizabeth Thilmany |
| **Room U406** | **Water Resources & Sustainable Ag & Horticulture** | |
| 10:00 am | Increasing Awareness of Health Risks Through Private Water Supply Education & Water Testing | Susan Boser & Danielle Rhea |
| 10:30 am | Building Extension Impact Through Utility Partnerships | Nick Taylor & Kaitlin Robb Price |
| 11:00 am | Collaborative Planning for Green Stormwater Infrastructure to Enhance Coastal Resilience | Holly Abeels |
| **Room U408** | **Community Development, Leadership, Land Use, & Other** | |
| 10:00 am | The Pitch Party: Harnessing Partner Networks to Build Flexible, Fundable Conservation Projects | Catie Geib |
| 10:30 am | Trawl to Trash: The Building of a NETwork | Brooke Saari & Bryan Fluech |
| 11:00 am | Talking Trash: Community-Engaged Efforts to Reduce Litter in Urban Waterways | Madison Haley, Barbara Doll, Gloria Putnam, & Christy Perrin |

**Concurrent Session 1 – Ignite Presentations**
**Wednesday, May 13 11:30 am – 12:00 pm**

| Time | Title | Presenters & Authors |
|---|---|---|
| **Room U402** | **Program Design & Delivery A** | |
| 11:30 am | Packing Light, Saving Heavy: A Tiered Extension Model for Energy and Water | Lesly Jerome |
| 11:40 am | Lifelong Learners: Adult Coastal Camp Engages the Community in Estuarine Ecology & Conservation | Carolyn Kovacs |
| 11:50 am | Saving Water Through a Statewide Landscape Irrigation Evaluation Program | Kaitlin Robb Price & Nicholas Taylor |
| **Room U404** | **Program Design & Delivery B** | |
| 11:30 am | Making Onboarding Less Off-Putting: A Peer-to-Peer Mentoring Prog. For New Extension Agents | Amy Rowe |
| 11:40 am | Factors and Barriers of Extension Programming Adoption: A Case Study of Georgia Green Landscape Stewards | Martin Wunderly & Heather Kolich |
| 11:50 am | Creating Synergy Between the MI Naturalist & the MI Conservation Stewards Programs | Bindu Bhakta & Julie Crick |
| **Room U405** | **Innovative Approaches** | |
| 11:30 am | Working with Artists and Technology to Create Engaging Learning Tools | Megan Weber |
| 11:40 am | Who Eats Your Guts? Participatory Science & Understanding Scavenger Biology Through the Offal Wildlife Watching Project | Grace Milanowski, Ellen Candler, Joseph Bump, & Amy Rager |
| 11:50 am | Coming Home to Roost: Building Nest Boxes for Georgia's Native Species | Carsen Dean, Allison Johnson, Laura Ney, & Derrick Jones |
| **Room U406** | **Partnership & Collaborations** | |
| 11:30 am | International Extension Exchange | Kurt Smith & Robert Bardon |
| 11:40 am | See the Forest for the Careers: ForestryWorks of Kentucky | Chad Niman |
| 11:50 am | Learn About the National Extension Native Plant Initiative (NENPI) | Cathryn Pugh & Michele Bakacs |
| **Room U408** | **Program Evaluation & Impact, & Needs Assessment** | |
| 11:30 am | We Give a Shuck: Evaluating NC Oyster Trail Visitor Experiences | Ann Savage, Whitney Knollenberg, & Jane Harrison |
| 11:40 am | Connecting Knowledge with Care: Trauma-Informed Strategies for Extension | Carrie Berger |
| 11:50 am | Team Collaboration and Overcoming Challenges in Meadow Establishment | Glen Bupp, Lacey Goldberg, & Carey McDougall |

**Concurrent Session 2 – Oral Presentations**
**Wednesday, May 13 1:30 pm – 3:00 pm**

| Time | Title | Presenters & Authors |
|---|---|---|
| **Room U402** | **Forest & Urban Management** | |
| 1:30 pm | Digital Forest Mgmt: Connecting Landowners to Their Land Through Smartphone Mapping | Alicia Christiansen & Norma Kline |
| 2:00 pm | Guided Engagement: Using Asynchronous Learning to Create Forest Stewards | Kathryn Brooks |
| 2:30 pm | From the Woods Today: Bridging the Digital Gap Between Forests & the Public - Assessing the Impact of an Online Program | Renee' Williams, Billy Thomas, & Ellen Crocker |
| **Room U404** | **Environmental Education & Youth Engagement** | |
| 1:30 pm | Bats Are Where It's At! | Kasey Bozeman |
| 2:00 pm | Building Skills and Confidence: A New Era of Foraging, Fishing, & Hunting Education in Ohio | Erika Lyon, Janessa Hill, Carrie Brown, & Caitlin Harris |
| 2:30 pm | Virginia Master Naturalist Program Collaborates with State Wildlife Agency to Improve Human-Wildlife Interactions | Michelle Prysby, Courtney Hallacher, Lisa Mease, & Meagan Thomas |
| **Room U405** | **Ecosystem Health, Climate & Fire** | |
| 1:30 pm | Tees, Trees, & Natural Enemies: Integrating Biodiversity & Water Resource Conservation into Turfgrass Extension | Bonnie Wells |
| 2:00 pm | Eyes on Seagrass: A Statewide Community Science Seagrass Monitoring Program | Lisa Krimsky, Katherine Rose, Holly Abeels, Vincent Encomio, Carolyn Kovacs, & Andrea Lazzari |
| 2:30 pm | Pollinator Ambassador Academy: Building Urban Leadership for Pollinator Conservation and Citizen Science | Jeremy Rhoden |
| **Room U406** | **Water Resources & Sustainable Ag & Horticulture** | |
| 1:30 pm | Failing Forward: What Stormwater BMP Maint. Can Teach Us About Resilient Practice | Amanda Rockler & Amy Scaroni |
| 2:00 pm | Water Quality Testing & Education on the Use of Roadside Springs in Pennsylvania | Justin Mansberger & Faith Kibuye |
| 2:30 pm | GROBucks: Supporting Residents to Grow Food | Amanda Bennett & Alisha Barton |
| **Room U408** | **Community Development, Leadership, Land Use, & Other** | |
| 1:30 pm | Propagating Native Plants for Restoration Plantings in Public Parks | William Errickson, Timothy Waller, Dennis McNamara, R.J. Curcio, & Maggie Coakley |
| 2:00 pm | Enriching Educators' Professional Development Experience Through Exploring a Variety of Stakeholder Voices | Jessica Ireland & Renee Strnad |
| 2:30 pm | Culturally Responsive Natural Resource & Hazards Extension with Latino & Mesoamerican Communities on Oregon's Coast | Aaron Groth, Beatriz Botello Salgado, Felicia Olmeta Schult, & Emily Reilly |

**Concurrent Session 2 – Ignite Presentations**
**Wednesday, May 13 3:30 pm – 4:00 pm**

| Time | Title | Presenters & Authors |
|---|---|---|
| **Room U402** | **Program Design & Delivery A** | |
| 3:30 pm | Building Statewide Consistency in Aquatic Invasive Species Monitoring Events | Emily Heald |
| 3:40 pm | Monitoring Agronomic and Horticultural Lepidopteran Pests Via an Ohio Scouting Network | Beth Scheckelhoff, Curtis Young, & Amy Raudenbush |
| 3:50 pm | From Research to Resources: Exploring Management for a New Invasive Pest | Delaney Serpan, Steven Frank, & Kelly Oten |
| **Room U404** | **Program Design & Delivery B** | |
| 3:30 pm | The Great Southeast Pollinator Census: A Model for Youth Engagement in Insect Conservation | Becky Griffin & Amanda Bratcher |
| 3:40 pm | Beyond the Surface: The Confluence of Art & Science | Heather Nix & Brooke Saari |
| 3:50 pm | Per-and Poly-Fluorinated Alkyl Substances (PFAS) Workshop for Extension Educators and Volunteers | Faith Kibuye, Andy Yencha, & Heather Preisendanz |
| **Room U405** | **Innovative Approaches** | |
| 3:30 pm | Developing Climate-Ready Windbreak and Silvopasture Recommendations Using a Delphi Process | Gary Wyatt, Kira Pollack, & Angela Gupta |
| 3:40 pm | How Rewilding Resulted in Two Novel Forests in Minnesota | Angela Gupta |
| 3:50 pm | Stinknet Patrol: Early Detection-Rapid Response Volunteer Task Force for Species Eradication and Control | Christopher Jones |
| **Room U406** | **Partnership & Collaborations** | |
| 3:30 pm | Building a Collaborative Woodland Owner Outreach Program in Support of the Ohio Interagency Forestry Network. | Jim Downs, Jessica Burns, Jenny Stoneking, Carrie Brown, Ryan Slaughter & Josh Winters |
| 3:40 pm | Taking a Collaborative Multi-State Approach to Urban Forestry Needs Assessment | Sarah Low, Miles Becker, & Joseph Hulbert |
| 3:50 pm | Ohio State Maple – A Sweet Collaboration | Carri Jagger, Gabriel Karns, Kathy Smith, & Jake Nicholson |
| **Room U408** | **Program Evaluation & Impact, & Needs Assessment** | |
| 3:30 pm | Public Perceptions About the Potential Use of RNA interference (RNAi) Technology to Manage Forest Pests and Pathogens | Ellen Crocker, Joy Miracle, Joshua Konkle, & Tyler Dreaden |
| 3:40 pm | Bye Bye Bradford: The Impact of Bradford Pear Bounty Programs | Courtney Johnson, Jordan Bailey, David Coyle, & Kelly Oten |
| 3:50 pm | It Takes a Village (and Extension Agents) to Stop a Spotted Lanternfly | Rebecca Craps |

**Concurrent Session 3 – Oral Presentations**
**Friday, May 15 1:30 pm – 3:00 pm**

| Time | Title | Presenters & Authors |
|---|---|---|
| **Room U402** | **Forest & Urban Management** | |
| 9:30 am | Co-Developing & Disseminating Digital Forestry Tools: Strategies & Products from a Research-Extension Collaboration | Erica Kronenberger, Zhao Ma, Elizabeth Jackson, Lenny Farlee, Leslie Boby, & Krista Merry, *University of Georgia* |
| 10:00 am | Public Attitudes Towards Creative AI Uses in Extension, with a Focus on Ethical and Environmental Challenges | Melissa Kreye |
| 10:30 am | Mudflow! Collaborative Site Mitigation Workshops After Hurricane Helene | Jameson Boone & Kurt Smith |
| **Room U404** | **Environmental Education & Youth Engagement** | |
| 9:30 am | Tips for Offering Forest Resiliency Outreach Education for Forestry Professionals in the South | Puskar Khanal |
| 10:00 am | Shells of Change: Vertical Oyster Garden Community Science | Megan Moore & Lara Milligan |
| 10:30 am | Developing and Evaluating Interpretive Extension Programs: A Pilot Study in an Extension Garden | Jamielyn Daugherty |
| **Room U405** | **Ecosystem Health, Climate & Fire** | |
| 9:30 am | What Training Do They Need Most? Identifying Priorities with the Borich Model & a Prescribed Fire Example | Jennifer Fawcett |
| 10:00 am | Lessons Learned from Extension 'Master' Programs: Informing Future Volunteer Educational Initiatives | Sarah Cain, Jennifer Fawcett, Carrie Berger, & J. Holly Campbell |
| 10:30 am | Navigating a Path to Wildfire Recovery for Forest Landowners | Kara Baylog, & Aaron Groth |
| **Room U406** | **Water Resources & Sustainable Ag & Horticulture** | |
| 9:30 am | Silvopasture at the Crossroads: Merging Forestry and Livestock for Sustainable Land Use | Sanjok Poudel, Colby Lambert, & Brian Parrish |
| 10:00 am | The Roots of Profit: Soil Health as the Key to Sustainable Farming | Biswanath Dari |
| 10:30 am | Empowering Conservation Practitioners Working at the Agriculture-Conservation Interface | Adam Janke & Julia Baker |
| **Room U408** | **Community Development, Leadership, Land Use, & Other** | |
| 9:30 am | Engaging Your Audience Through Social Media: Current Tips & Tricks for Extension | Savannah Moore, Renee Strnad, & Robert Bardon |
| 10:00 am | Media that Connects: The Everyday Environment Project | Amy Lefringhouse, Erin Garrett, Abigail Garofalo, & Emily Steele |
| 10:30 am | Heated Topics, Warm Approaches: Science Communication Tips for Tough Conversations | Ginger Orton |

**Concurrent Session 3 – Ignite Presentations**
**Friday, May 15 11:00 am – 11:30 am**

| Time | Title | Presenters & Authors |
|---|---|---|
| **Room U402** | **Program Design & Delivery A** | |
| 11:00 am | Woodland Wisdom: A Blended Learning Model for Sustainable Forest Stewardship | Erika Lyon, Carrie Brown, Ashley Kulhanek, Kathy Smith, & *Marne Titchenell* |
| 11:10 am | Managing Pine for Timber or Wildlife? A User-Friendly Decision-Making Tool for forestry stakeholders | Sabhyata Lamichhane, Sushma Bhattarai, Adam Polinko, & Brady Self |
| 11:20 am | Promoting Active Stewardship of Minnesota's Family Forests Through the MN Woodland Steward Program | Anna Stockstad |
| **Room U404** | **Program Design & Delivery B** | |
| 11:00 am | Growing Coast Redwood & Giant Sequoia in OR - A Resource Guide for Small Woodland Owners | Dan Stark, Norma Kline, Lauren Grand, Alicia Christiansen, & Stephen Fitzgerald |
| 11:10 am | Cultivating Knowledge: A Native Plant and Forest Farming Initiative in Appalachia | Jacob Williams |
| 11:20 am | A Biochar Teaching Tour of Alaska | Darren McAvoy, DeShana York, & Caley Gasch |
| **Room U405** | **Innovative Approaches** | |
| 11:00 am | Engaging New Landowners in Forest Management: Lessons from the Wisconsin Stewardship Plan Project | Johanna Desprez |
| 11:10 am | Extension-Based Urban & Community Forestry: A Unique Approach to Direct Service | Keith O'Herrin |
| 11:20 am | Wake County Nature Smart Yards: Transforming Lawns into Living Landscapes | Kelsey Sosa |
| **Room U406** | **Partnership & Collaborations** | |
| 11:00 am | Brewing Up Change: Three Years of Collaborative Invasive Species Prevention Education | Kelsey Bockelman |
| 11:10 am | Spotting the Lanternfly: Meeting the Public's Needs for Invasive Species Information | Abigail Ratcliff & Kelly Oten |
| 11:20 am | Sea Grant Partnering with SASMI to Assess the State of the South Atlantic Salt Marsh | Michelle Covi, Sarah Spiegler, Landon Knapp, Sydney Williams, Anna Braswell, & Amanda Gobeli |
| **Room U408** | **Program Evaluation & Impact, & Needs Assessment** | |
| 11:00 am | Understanding Barrier & Opportunities for Water-Efficient Landscaping in Florida's Green Industry | Yilin Zhuang & Ondine Wells |
| 11:10 am | Yaupon: Increasing Sustainable Agriculture Interest in North America's Only Caffeinated Tea Plant | Holly Campbell |
| 11:20 am | Trees and Homeowners Insurance: Bridging Tree Care and Insurance for Safer Homes | Beau Brodbeck, Jason Gordon, & Matthew Gauldin |

# Organized Sessions

Abstracts begin on page 55.

**Thursday, May 14 10:30 am – 11:45 am**

| Title | Presenters & Authors | Location |
|---|---|---|
| Envisioning the Future of Extension Forestry Climate Change Programming | Keith Phelps, Johanna Desprez, & Scott Hershberger | Room U402 |
| Communicating for Change: Media Tools to Drive Engagement in Natural Resource Issues | Holly Campbell, Julie McConnell, David Outerbridge, Marguerite Beckford, Thomas Derbes, & Sourabh Chakraborty | Room U404 |
| Let's Map it Out: Strategic Stakeholder Identification and Engagement Planning | Ginger Orton | Room U405 |
| Training Conservation Professionals to Recognize and Address Natural Resource Concerns on Ag Lands | Brad Kunsman, Chris Canfield, & Genny Christ | Room U406 |
| Strengthening Agricultural Disaster Response: Building Resilience and Preparedness Through Psychological First Aid | McKayla Robinette | Room U408 |

# Poster Session

Abstracts begin on page 58.

**Wednesday, May 13 4:00 pm – 6:00 pm**

| Titles | Presenters & Authors |
|---|---|
| A Green Stormwater Infrastructure Demonstration Site for Many Audiences | Martin Wunderly & Rolando Orellana |
| Addressing Community Needs in the Wake of Hurricane Helene | Nathan Gatlin & Jameson Boone |
| Analyzing Pathways for Increased Landowner Participation in Floodwise Nature-Based Solutions | Savannah Moore, Robert Bardon, Frederick Cubbage & Megan Lupek |
| Bee the Change: 4-H Youth Pollinator Ambassador Program | Kasey Bozeman, Becky Griffin & Laura Mirarchi |
| Beyond the Bin: Cultivating Solutions to Reduce Food Waste | Amy Rowe, Sara Elnakib, Jen Shukaitis & Sabrina Subhit |
| Bridging Cultures & Conservation: Engaging Southeast Asian Communities in Invasive Species Awareness through Foraging | Hana Kim & Angela Gupta |
| Charting Fire Adapted Futures: Local Capacity Building Through Idaho's Wildfire Adaptation Pilot Program | Madeline Goebel, Sarah Wilson, Travis Paveglio, & Tyre Holfeltz |
| Confluence of Water & Livestock: The Mystery of the Dying Cows | Heather Nix, Sarah White, Debabrata Sahoo & Lindsey Craig |
| Connecting Urban Youth to Natural Resources Through 4-H Programming | Leeoria Willis & Rebecca Supinger |
| Creating Chronic Wasting Disease Ambassadors in Iowa | Adam Janke |
| Developing the 'Sea Salt' Salinity Level Monitoring Program with North Carolina Oyster Growers | Whitney Knollenberg, Natalie Nelson, Marcelo Ardon, Tal Ben-Horin, Eric Herbst & Chris Osborn |
| Eco-Anxiety: What it is, Why it Matters, and How you can Empower Hope & Agency | Angela Gupta |
| Empowering Lake Stewardship: Insights from Michigan State University Extension's Introduction to Lakes Online Course | Paige Filice |
| Enhancing Forest Stewardship Through Student & Community Engagement at a University Botanical Garden | Lauren Errickson |
| Expanding Groundwater Testing: A Tri-County Model for Private Well Safety in Oregon | Christina Lucas & Kelci Free |
| Fire Festivals: Fueling Support for Prescribed Fire | Sarah Cain, Jennifer Fawcett, David Godwin; & Sarah Crate |
| First Investigation of Stream Health Protocol & Educator Workshops | Susan Boser |
| Fishing for Clues: Using eDNA to Spot Invasive Carp | Emily Heald & Amy Workman |
| Floridian Flora Fridays: Like, Share, Grow Native | Heather Kalaman |
| Forager to Forester: Teaching Forestry and Forest Ecology Through Wild Harvesting | Lorelle Sherman |
| Fraser Fir IPM: Combining Pesticide Trials, Natural Parasitoids, & Phenology to Untangle Armored Scale Control | Jamie Bookwalter |
| Georgia Mountain Agroforestry: Revitalizing Old Appalachian Knowledge | Jacob Williams |
| Going Batty in Oconee County: Engaging Families, Busting Myths, & Promoting Bat Education Through a Community Festival | Carsen Dean & Allison Johnson |
| Habitat Happens Here: Building Biodiversity Through Backyard Gardening | Tracy Winters & Jessica Burns |
| Learn How to Broaden Extension Through Graduate Student Training | Sarah Widderich & Melissa Kreye |

| Titles | Presenters & Authors |
|---|---|
| Lights Off, Fireflies On: Engaging Youth and Community in Firefly Conservation and Tourism | Becky Griffin |
| Mobilizing Invasive Species Ambassadors- Assessing the Kentucky Invasive Plant Education Training | Ellen Crocker, Frannie Preston, & Matthew Springer |
| Northwest Arkansas Urban Creek Guide | Kristen Crawley |
| Northwest Florida Seafood Heritage Series | Carrie Stevenson, Lawrence O'Connor, & Thomas Derbes |
| Paws, Claws, and Cause: Youth Teaching Wildlife Conservation | Kasey Bozeman & Josie Davis |
| Planting Ideas, Growing Listeners: Master Gardeners on the (Podcast) Mic | Theresa Badurek |
| Rebuilding Resilience: Extension-Led Septic and Well Recovery in Lincoln County, Oregon | Kelci Free, Chrissy Lucas-Woodruff, & Wiley Thompson |
| Resident Awareness and Fertilizer Use in Florida Counties with Local Ordinances | Yilin Zhuang, Hayk Khachatryan, Younghyeon Jeon Jeon, William Lester, Heather Kalaman, & Tina McIntyre |
| Science Under the Stars for National Moth Week: Combining Research and Community | Kevin Rohling & Kimberly Rohling |
| Showing off Native Plants in the Landscape | Laura Ney |
| Solar Kilns Increase Wood Use Options for Portable Sawmill Operators | Patrick Hiesl, Bart Swecker, Janet Steele, & Jeff Fellers |
| Sustainable Beekeeping: Equipping Newbies with Tools for Success | Amanda Bennett, Gregory Meyer, Trevor Corboy, Nanette Neal, J.T. Benitez, & Marina Miquilini |
| Tackling Food Waste: Household Insights for Sustainable Communities | Ashley Belle, Brenna Ellison, Karen Byrd, & Melissa Prescott |
| Three Counties, One Goal: The Florida-Friendly Landscaping Tri-County Summit | Amanda Marek, Norma Samuel, Claire Lewis, Brooke Moffis, & Jamielyn Daugherty |
| University of Georgia's Onsite Wastewater Program: Having Fun While Educating about Onsite Wastewater Treatment | Gary Hawkins, Brooklyne Wassel, & M C Halbrook |
| Where Learning Takes Root: Student-Driven Research on Seedling Protection Treatments | Audra Cochran, Ava Goetz, Madeline Goebel, & Louise Allen |
| Wild Native Seed Collection and Propagation Teaches Extension Volunteers about Biodiversity | Michele Bakacs & Angela Monaghan |

# Abstracts

## Concurrent Sessions

**Holly Abeels, The University of Florida**

***Collaborative Planning for Green Stormwater Infrastructure to Enhance Coastal Resilience***

Since early 2020, Stetson University's Institute for Water and Environmental Resilience, the East Central Florida Regional Planning Council, and Florida Sea Grant have partnered with the City of Cape Canaveral, FL, to explore opportunities and barriers to implementing green stormwater infrastructure (GSI) as a strategy for enhancing urban coastal resilience. This partnership exemplifies the confluence of academic, governmental, and community knowledge to chart a more adaptive and inclusive approach to natural resource extension. The project's goal was to support Cape Canaveral in developing planning, policy, and evaluation tools to implement GSI, which reduces flood risk in transportation corridors vulnerable to sea-level rise over the next 30-50 years. Funded by the Karl Havens Memorial South Atlantic Sea Grant Regional Research Competition and the NSF Civic Innovation Challenge, the team collaborated with city staff, elected officials, and residents to co-design a GSI demonstration project on municipal property. Despite disruptions from the COVID-19 pandemic and tropical storms, the team adapted its outreach strategies to maintain momentum. Engagement activities included an outdoor open house, sea-level rise training sessions for city staff and council members, participatory community workshops, and community science activities. The City promoted these events through diverse communication platforms, ensuring broad access and participation both in person and online. This collaborative, community-centered process highlights how natural resource extension professionals can integrate science, policy, and local knowledge to build trust, foster resilience, and co-create solutions for climate adaptation in coastal communities.

**Kara Baylog, Oregon State University; Aaron Groth, OSU Extension**

**Navigating a Path to Wildfire Recovery for Forest Landowners**

Increases in catastrophic wildfire across the west presents forest management challenges for non-industrial forestland owners, as the path to post-wildfire forest recovery and reforestation is complex. Utilizing the results from the recent Landowner Experience After Fire (LEAF) Study by Oregon State University Extension, we identified ways in which Extension is playing an important role in the process and provide options for how we can better prepare to help forest landowners restore their forests following wildfire. The LEAF study surveyed over 200 fire affected forested landowners across Oregon and asked them to share their experiences with post-wildfire restoration, planned and completed restoration activities, barriers to success, and resources utilized to overcome these barriers. Results show that most are motivated to restore their forests despite emotions such as anger and grief. Challenges included seedling mortality, limited finances, and uncertainty about how to begin. Landowners who had done work prior to wildfire were more likely to successfully complete similar tasks for post-wildfire restoration, and landowners who interacted with at least one organization providing post-wildfire support were more likely to complete restoration work. Extension was listed as a common organization sought out for assistance and organizations with a local presence had higher numbers of interactions overall. These findings highlight the essential role of local capacity and coordination for effective post-wildfire recovery and suggests strengthening support for landowners through pre-wildfire education, technical assistance, and identifying local networks and accessible funding pathways.

**Amanda Bennett and Alisha Barton, Ohio State University**

**GROBucks: Supporting Residents to Grow Food**

Due to increased demand for locally grown produce, the office began a community garden project in partnership with the county's free health clinic and funded by a local foundation. The purpose was to increase the availability of vegetables to low-income residents of the county. This project garnered attention from locals who received produce, often asking about gardening. Therefore, we applied for and received a grant to begin GROBucks, a project centered around increasing fresh food access, equipping residents with gardening knowledge and empowering them to grow their own food. Specific activities included: gardening workshops and container gardening plant distribution. The goal was to allow residents to try simple container gardening in their own space and to increase confidence in growing their own food. We specifically endeavored to reach lower income and first-time gardeners with this program. The plant distribution participants were evaluated via a survey (n=110). Of the respondents, 37% were first time gardeners; 15% planned to garden on a patio, deck or in a container; 29% were planning to garden to save money due to a concern over food costs and 35% wanted more access to fresh food. Of those surveyed, the top three reasons for gardening were food production, outdoor physical activity, stress relief, and because it made them happy. In this session, we'll cover how partnerships were leveraged to create unique, grass roots opportunities to address local food insecurity.

**Carrie Berger, Oregon State University**

**Connecting Knowledge with Care: Trauma-Informed Strategies for Extension**

Extension professionals engage with individuals and communities who may carry lived experiences of trauma, which can be compounded by natural resource disasters such as wildfires, hurricanes, and floods, adding stress and disruption. Without careful design, educational programming and outreach can unintentionally trigger re-traumatization, which may undermine learning outcomes, trust, and community resilience. This presentation introduces the core principles of trauma-informed approaches and provides practical strategies for integrating them into Extension programming across natural resources topics. Attendees will learn what trauma is, the different types of traumas, and how to prevent re-traumatization in educational settings. We will explore how trauma responses may surface during programming events and how thoughtful choices in language, tone, visuals, and facilitation can help create environments that are safe, respectful, and empowering. Through interactive mini-activities, attendees will practice reframing outreach messages and designing trauma-informed materials that highlight resilience, compassion, and community strength. This presentation equips Extension professionals with tools to connect technical expertise with human-centered engagement, supporting healthier and more resilient communities in the face of natural resource challenges.

**Bindu Bhakta and Julie Crick, Michigan State University Extension**

**Creating Synergy Between the Michigan Naturalist and the Michigan Conservation Stewards Programs**

Since 2019 Michigan State University Extension has offered two statewide programs to adults interested in learning about natural resources: Conservation Stewards Program (CSP) and Michigan Naturalist (MiN). The programs are similar in nature, yet distinctly different in content and delivery. The Conservation Stewards Program introduces participants to the foundations of conservation, Michigan's natural communities, and ecosystem management. Through the program participants complete a capstone project by contributing to conservation efforts on public lands. Michigan Naturalist focuses on vocabulary and basic identification of landforms, climate, flora and fauna with a focus on spatial ecology and the use of backyard habitat to provide habitat islands or corridors. Program participants complete a

conservation plan for their own land and are encouraged to share learned concepts through interpretation. Both programs are delivered through a hybrid model, with online content designed to prepare the student for in-person, experiential learning. The delivery models differ widely, with CSP offered in a series of evening sessions that combine classroom learning and field experiences over a 10-week period each fall. Michigan Naturalist consists of one, four-hour session (classroom and field based) on one Saturday per month from April through October. Conservation partners, some of whom deliver both programs, are critical to the success of each program, delivering expert content and local field experiences. Learn more about dual program delivery and the synergy between the programs that develops high caliber participants who increase local capacity for conservation and stewardship activities on both private and public lands.

**Kelsey Bockelman, Michigan State University Extension**

**Brewing Up Change: Three Years of Collaborative Invasive Species Prevention Education**

Oral Presentation Looking for new engagement ideas for your program? Over the past three years, Michigan's Clean Boats, Clean Waters program has partnered with a local Michigan brewery to serve up aquatic invasive species education in a new, approachable way. Through interactive outreach events, creative messaging, and the production of educational craft beer cans, this initiative has engaged new audiences, fostered community connections, and inspired prevention action. Some takeaway ideas that we will focus on in this presentation include the various methods that were used to motivate behavior change in Michigan recreators. These methods included discussing what works in new and innovative education collaborations, how to utilize humor and storytelling to create relatable messaging on environmental issues, and, lastly, conducting hands-on outreach that builds trust and fosters one-on-one engagement with the community. Going into the fourth season of running this program, we will also discuss challenges so far and the future of the program!

**Jameson Boone and Kurt Smith, NC State University**

**Mudflow! Collaborative Site Mitigation Workshops After Hurricane Helene**

Hurricane Helene caused extensive forestry and property damage throughout the mountains of North Carolina. The mountains outside Asheville, North Carolina, were particularly hard hit by mudslides and debris flows, also known as mudflows, with nearly 2,000 mapped in the North Carolina mountains following Hurricane Helene. In response, NC Forestry Extension, led by Dr. Kurt Smith and Jameson Boone, partnered with the Extension Water Resources team, local county agents, and N.C. Geological Survey experts to design and deliver two extension workshops in heavily affected counties in North Carolina. These workshops provided landowners, natural resource professionals, and community leaders with tools to assess damaged sites, explore remediation strategies, and connect with technical expertise. This presentation will share the evaluation data, resources, and lessons learned from these workshops. We will highlight the collaborative extension approach that combines forestry and water resources expertise, leverages federal and local partnerships, and addresses the long-term needs of landowners following a natural disaster. Participants will take away information about how forestry extension can be leveraged to improve disaster-impacted land and a program that can be replicated in mudslide-prone areas. The workshop format and collaborative model are broadly applicable to Extension professionals working in forestry, water, horticulture, and community resilience.

**Susan Boser and Danielle Rhea, Penn State Extension**

**Increasing Awareness of Health Risks Through Private Water Supply Education and Water Testing**

There are over one million residences in Pennsylvania with a private water supply. Pennsylvania is the only State lacking private drinking water regulations or guidance. Consequently, many private water supply users rarely or never test their well, spring, or cistern, and most of the contaminants that have the greatest health implications are undetectable without testing. Extension is in its fifth year of a grant from the PA Department of Health to educate Pennsylvania private water system users. The objectives of this program were to improve the understanding of private water supply management and to increase awareness of health-impacting contaminants through free water testing with the goal of improving the safety of private drinking water in Pennsylvania. Program participants attended a one-hour presentation and then collected a water sample to be tested by a Pennsylvania Department of Environmental Protection accredited laboratory. Participants were provided with a recorded webinar on interpreting their water test results and one-on-one assistance by phone or email if needed. In the first 4 years of this program, 1,272 PA residents have received free water testing, and follow-up surveys indicate that 60% of respondents have made a change to improve their private water supply because of the program. This presentation will discuss the results of this education and testing program and plans for future outreach to Pennsylvania private water system users.

**Beau Brodbeck, Auburn University Extension; Jason Gordon, University of Georgia; Matthew Gauldin, University of Georiga**

**Trees and Homeowners Insurance: Bridging Tree Care and Insurance for Safer Homes**

Across the globe, more frequent and severe storms, floods, wildfires, and other weather?related hazards are driving significant increases in insurance losses. In response, insurers are intensifying efforts to reduce exposure, often by imposing stricter requirements on property owners-including measures aimed at minimizing tree-related damage. However, emerging evidence suggests that some insurers are conducting tree assessments and recommending interventions based on internal policy rather than established arboricultural standards, which emphasize species-specific risk profiles, proper pruning, and tree health care. Such practices can lead to unnecessary canopy removal and the loss of critical ecosystem services that support climate resilience. This research seeks to strengthen communication and foster collaboration between the often-misaligned insurance and tree care sectors. Using surveys and qualitative interviews, our presentation will (1) describe current trends in insurance-driven tree risk mitigation, and (2) examine how stakeholders' risk perceptions-measured with an innovative risk-perception scale-relate to insurance claims and patterns of natural disaster occurrence across U.S. coastal zones. Findings reveal widespread influence of insurance underwriting on tree management decisions and limited dialogue between insurers and arborists. Property owners also reported elevated concerns about storm impacts regardless of proximity to past events. In addition, we report outcomes from a cross-industry summit designed to build a shared understanding of tree-related risk from both insurance and arboricultural perspectives. Summit participants will identify gaps in terminology, risk assessment approaches, and opportunities for collaboration.

**Kathryn Brooks, Penn State Extension**

**Guided Engagement: Using Asynchronous Learning to Create Forest Stewards**

As counterintuitive as it may seem, the future of natural resource extension lies in the ability to utilize online resources to our advantage. At times, this requires an innovative approach to facilitate connection and peer-to-peer learning in an online environment. Since the spring of 2022, the Penn State Extension Forestry and Wildlife Team has used an asynchronous approach to facilitate the Woodland Stewardship:

Guided Engagement with Your Land online course. This "premier course" takes the learning modules from an existing online course and breaks them up into sections with live Zoom meetings occurring every two weeks. Participants view the assigned modules that cover a variety of forestry topics, including forest ecology, tree ID, wildlife management, and legacy planning. Team members then host a live Zoom to review the covered material; answer questions the participants may have about the topics covered and facilitate discussion with and among participants. Discussion board prompts encourage participants to get to know one another, and a mapping project encourages assessment of their property and serves as an entry point for further forest management planning. Post-course evaluations show that a majority of respondents felt more confident in caring for their woods and have utilized information in the course to conduct some type of management practice since course completion. Many participants have also created a land plan or intend to since completing the course.

**Glen Bupp, Penn State Extension; Lacey Goldberg and Carey McDougall, Penn State University**

**Team Collaboration and Overcoming Challenges in Meadow Establishment**

The Meadow Establishment Project at the Penn State Beaver Campus is transforming 4.5 acres of unused turf into a landscape that benefits both the university and the wider community. Initiated through donor funding to enhance aesthetics in a highly visible area of campus, the meadow will also serve as a model for sustainability, collaboration, and education. The meadow increases biodiversity by providing habitat for pollinators, birds, and other wildlife, while reducing input compared to turf. This shift supports Penn State's commitment to sustainability on all campuses. Beyond environmental benefits, the meadow will be a resource for teaching and research. Faculty and students can use the site for hands-on learning and data collection. In addition, the space offers opportunities for community engagement, serving as an outdoor classroom to learn about biodiversity and sustainable landscaping practices. The meadow will serve as a resource for teaching meadow establishment and maintenance. Industry partners have expressed the need for resources focused on meadow establishment and maintenance for organizations and municipalities interested in successfully establishing and sustainably maintaining their own meadows. The project highlights a collaborative effort across Penn State University. Different departments worked together to design, plan, and establish the meadow, making the meadow a useful resource to serve a variety of departmental objectives. This presentation will focus on the cooperation between different departments within Penn State University leading to the successful initiation of a challenging natural resources project and highlight how others can strategize successful initiation of similar projects.

**Sarah Cain and Jennifer Fawcett, NC State Extension Forestry; Carrie Berger, Oregon State University, College of Forestry; J. Holly Campbell, University of Georgia**

**Lessons Learned from Extension 'Master' Programs: Informing Future Volunteer Educational Initiatives**

Extension "Master" programs are widely recognized for their success in building volunteer networks, expanding educational reach, and increasing community capacity across disciplines such as gardening, forestry, natural resources, and environmental stewardship. These programs share a common mission to train volunteers through science-based education and extend educational impact at the local level, but they vary in structure, content, and audience. To better understand the variety and effectiveness of these programs, NC State Extension Forestry, in partnership with the National Extension Wildland Fire Initiative (NEWFI) and the Southeast Regional Partnership for Planning and Sustainability (SERPPAS), conducted a national review of "Master"-type volunteer programs across a range of topics. Using snowball sampling, semi-structured interviews were conducted with program coordinators, followed up by a survey to gather standardized data on program structure, curriculum design, certification processes, funding mechanisms, participant engagement, and evaluation methods. Findings from this study will inform a comprehensive report that synthesizes lessons learned across programs and offers guidance for developing future volunteer-based educational initiatives, using a potential "Master Burner" program focused on prescribed

fire as an example. Although the "Master Burner" program serves as one example to potentially increase prescribed fire capacity and education, the report's insights and recommendations are broadly applicable to all "Master" program models and disciplines. This work demonstrates how Extension can leverage collective experience and knowledge across states and subject areas to strengthen volunteer education initiatives, enhance collaboration, and promote the next generation of and continued success for Extension "Master" programs.

**Holly Campbell, University of Georgia Warnell School of Forestry and Natural**

**Yaupon: Increasing Sustainable Agriculture Interest in North America's Only Caffeinated Tea Plant**

Yaupon tea is a health-benefitting beverage made from the roasted, brewed leaves of North America's only caffeinated tea plant, yaupon holly (Ilex vomitoria). The plant played an important role in Southeastern Native American culture as a ceremonial and daily tea. European Americans readily adopted the plant as a daily tea and even exported it to Europe in the eighteenth century. Despite the scientific name, yaupon yields a delicious, antioxidant rich, and energy-boosting beverage that will not cause you to feel jittery (or regurgitate). Although native to the Coastal Plains of Southeastern U.S. states, yaupon is well adapted to a variety of site and soil conditions in warmer latitudes. As a popular and hardy landscape shrub, yaupon is ubiquitous in Southern landscapes and has been bred extensively. Yaupon is also cultivated, harvested, processed, and marketed as an increasingly popular "tea," supporting a budding yaupon commercial industry across several Southern states. And the species' minimal pest and disease issues, irrigation needs, and nutritional inputs provides sustainable agriculture opportunities for small and medium growers. During this Ignite Presentation, the speaker will introduce the audience to the benefits of yaupon tea and a UGA project that established two yaupon field trials to test hardiness, post-harvest techniques, public preference, business opportunities, grower interest, and more. The speaker will make yaupon tea for interested participants to try.

**Alicia Christiansen and Norma Kline, Oregon State University**

**Digital Forest Management: Connecting Landowners to Their Land Through Smartphone Mapping**

Smartphone mapping applications offer landowners in forestry, natural resources, and agriculture powerful tools to support land management activities. To increase accessibility and adoption of these technologies, Oregon State University Extension developed a mixed-format educational program that includes a webinar series, companion articles, and an in-person workshop. Designed with adult learning principles and informed by direct experience with local communities, the program utilizes a flexible format to meet the diverse needs of landowners with varying technical skills, devices, and learning preferences. This session will illustrate how Extension educators addressed challenges in digital literacy, device compatibility, and engagement, while leveraging technology to build confidence and capacity among participants. With a focus on the in-person workshops offered around the state, this session will highlight the hands-on learning experience participants had with CalTopo and Avenza Maps-two smartphone mapping applications selected for their practical relevance to land management and accessibility across devices. Evaluation data collected six months post-program show early impacts on participants' mapping skills, confidence, and management practices. By integrating digital tools with hands-on learning and one-on-one support, this program offers a replicable model for Extension professionals seeking to enhance digital inclusion and promote active and engaged management across diverse landscapes and communities.

**Michelle Covi, University of Georgia Marine Extension and Georgia Sea Grant; Sarah Spiegler, North Carolina Sea Grant; Landon Knapp, South Carolina Sea Grant Consortium; Sydney Williams, University of Georgia Marine Extension and Georgia Sea Grant; Anna Braswell, Florida Sea Grant; Amanda Gobeli, Texas A&M Natural Resources Institute**

**Sea Grant Partnering with SASMI to Assess the State of the South Atlantic Salt Marsh**

In December 2025, faculty from Sea Grant programs in North Carolina, South Carolina, Georgia and Florida teamed up to host a virtual workshop to support the South Atlantic Salt Marsh Initiative (SASMI). The virtual workshop, State of the South Atlantic Salt Marsh, convened salt marsh scientists and local conservation and restoration experts to discuss the latest research related to salt marsh sustainability, despite sea level rise and other environmental changes. SASMI is a coalition of over 400 people from many sectors across the region who have come together to develop a plan to protect, restore and enable the migration of the 1 million acres of salt marsh in the South Atlantic. SASMI uses a voluntary, collaborative and nonregulatory approach that complements many existing state, federal and nongovernmental programs for conservation of these salt marshes. The State of the South Atlantic Salt Marsh workshop provided a baseline assessment of the health of the salt marsh as of 2025, informed priorities for conservation and restoration actions, helped to connect academic, federal and private industry scientists working in the region, and identified research gaps and collaboration opportunities. This presentation will provide an overview of SASMI, the roles of Sea Grant extension faculty, evaluation of the process, and key take-aways from the workshop

**Rebecca Craps, N.C. Cooperative Extension**

**It Takes a Village (and Extension Agents) to Stop a Spotted Lanternfly**

The spotted lanternfly (*Lycorma delicatula*) continues to pose significant threats to agriculture and community landscapes across the eastern United States, and its presence in North Carolina has raised growing concerns. While research has provided critical insights into its biology and management, long-term success relies heavily on public awareness, stakeholder collaboration, and community-driven action. In Forsyth County, N.C. Cooperative Extension is uniquely positioned at the intersection of science and the community to translate research into practice, foster partnerships, and empower communities to take part in management efforts. This presentation highlights strategies and lessons learned from engaging diverse audiences in Forsyth County-including homeowners, growers, green industry professionals, educators, media, and local governments-in the fight against the spotted lanternfly. Special emphasis is placed on tailoring outreach to audience needs, addressing misinformation, and creating opportunities for collaboration that build trust and sustained participation. Attendees will gain insight into how practical education and community engagement not only slow the spread of the spotted lanternfly in North Carolina but also strengthen local networks of resilience against future invasive species challenges. By sharing successes and challenges from N.C. Cooperative Extension - Forsyth County Center's experience, this presentation underscores the importance of equipping communities with knowledge, fostering shared responsibility, and transforming concern into meaningful action.

**Ellen Crocker, Joy Miracle, and Joshua Konkol, University of Kentucky; Tyler Dreaden, USDA Forest Service**

**Public Perceptions About the Potential Use of RNA interference (RNAi) Technology to Manage Forest Pests and Pathogens**

Forest trees are under increasing threat from a wide range of invasive pathogens and insects. Over the last century, chestnut blight and Dutch elm disease, along with more recent invasions by the emerald ash borer and laurel wilt disease, have caused widespread mortality of the trees and are fundamentally

changing our forests. Additional management tools are needed to manage current and future threats to forest health, and RNA interference (RNAi) technology is a promising new approach for controlling invasive forest threats. Also known as gene silencing, RNAi takes advantage of naturally occurring mechanisms for gene regulation and disease defense to kill or control a specific pest or pathogen. RNAi is already being used in a variety of contexts from agriculture to human medicine, but its use in forestry is more preliminary. While promising research trials are underway, it is less clear if there will be public support for future RNAi management tools. To better understand public opinion about RNAi for forest trees, we conducted a survey targeting forest and tree professionals, woodland owners, Extension educators and other key audiences. Here we present preliminary results from these surveys regarding the public's understanding of RNAi, attitudes towards its potential application in forestry, and concerns about the technology. This information will inform future research on RNAi in forestry and identify key public concerns that should be addressed in the future.

**Biswanath Dari, North Carolina A&T State University**

**The Roots of Profit: Soil Health as the Key to Sustainable Farming**

Soil health is the foundation of resilient, productive, and sustainable farming systems, especially for small and medium-scale producers facing the dual challenges of climate change and food security. Regenerative farming practices-such as cover cropping, no-till systems, diversified rotations, compost and biochar amendments, and integrated livestock-offer a "no-regrets" pathway to enhance soil fertility, improve water quality, and build climate resilience. These practices not only restore soil organic carbon and nutrient cycling but also strengthen microbial processes that sustain long-term soil health. This presentation highlights lessons learned from on-farm demonstrations, applied research, and farmer-focused training programs across North Carolina and the Southeast. Case studies include vegetable and specialty crop systems, agroforestry alley cropping, and climate-smart management of compost, biochar, and cover crops. Results from these projects show improvements in soil carbon pools, microbial activity, residue decomposition, and reduced nutrient losses, illustrating how regenerative practices connect soil health with broader ecosystem services. Beyond research outcomes, this session emphasizes the importance of community engagement, hands-on training, and farmer participation in bridging the gap between science and adoption. By integrating extension, education, and evaluation, regenerative farming can be scaled to meet the needs of diverse producers-including smallholders, urban farmers, and specialty crop growers. Participants will gain practical insights into soil health assessment and regenerative management strategies that not only sustain farms but also contribute to climate-smart natural resource stewardship.

**Jamielyn Daugherty, PhD, UF/IFAS Extension**

**Developing and Evaluating Interpretive Extension Programs: A Pilot Study in an Extension Garden**

Extension gardens support comprehensive educational programming and evaluation through faculty oversight with expertise in both assessment and programmatic content. Using educational interpretation practices such as audio tours, signs, and guided tours, and with TOP-model planning, agents can create tours that provide vital programmatic insights. This presentation showcases a case study in a UF/IFAS Extension Garden where these practices were employed. Developing interpretive programming takes time and knowledge. Educational interpretation enables tour participants to connect concepts to practical, real-world applications, helping them apply ideas back to their own gardens. While museums, zoos, and national parks frequently use these approaches, extension gardens do not yet fully adopt these practices, highlighting opportunities to improve resource use. This project aimed to develop interpretive tours and create an evaluation framework to collect data on tour outcomes and impacts. The goal was to provide usable information for others conducting interpretive programming in any Extension area, to achieve broad impacts. During spring and fall of 2023, data were collected to evaluate participants' knowledge gain and behavioral change for the guided, signage, and audio tours. The nine Florida-Friendly

Landscaping? Principles were used as a central theme. These principles were designed to educate on sustainable landscape practices surrounding water quality. In total 146 people completed both the pre- and post-tour surveys. All participants reported learning across the nine FFL principles. Rates of return on 6-month and 1-year surveys were too low to determine behavior change, but this informs recommendations for procedural changes.

**Carsen Dean, UGA Extension- Oconee County; Allison Johnson, UGA Extension- Dade County; Laura Ney, UGA Extension- Athens-Clarke County; Derrick Jones, UGA Extension- Jasper County**

**Coming Home to Roost: Building Nest Boxes for Georgia's Native Species**

Georgia's native bee, bat, and bird populations provide vital services for agricultural and natural systems, including pollination and pest management. However, these populations are declining, largely due to habitat and nesting site loss driven by urban and suburban sprawl. The Make & Take program allows participants to learn about target wildlife species that support surrounding ecosystems while also building nesting boxes for target species to hang up on their properties, thus providing new nesting options for declining species. The program is comprised of presentations, hands-on workshops, created media about wildlife, and a youth-focused field day. The Make & Take program took place across three counties, with twelve two-hour classes comprised of presentations and workshops and one youth-focused field day. Since April 2023, there were 104 total participants, and 91 nest boxes were built. 84 of the participants filled out a survey immediately after the program. 92% reported an increase in knowledge about wildlife, and 68% reported being likely or very likely to incorporate what they had learned into how they interacted with wildlife. Nine participants completed a survey 3-12 months after their program's completion. 100% reported a strong recognition of and appreciation for the importance of wildlife in agricultural and natural ecosystems. 100% also reported a sustained increase in knowledge about nest box site selection and maintenance. The team also received photo evidence of target species activity in nest boxes made at the Make & Takes that have been hung up in backyards across Northeast Georgia.

**Johanna Desprez, University of Wisconsin Division of Extension**

**Engaging New Landowners in Forest Management: Lessons from the Wisconsin Stewardship Plan Project**

Use of a forest management plan can improve forest sustainability but an estimated 75% of Wisconsin landowners do not have a plan. In May 2024, the University of Wisconsin Extension, along with the Department of Natural Resources (DNR), launched the Wisconsin Stewardship Plan Project to support private woodland owners in sustainable forest management. In this presentation, I will share more information about the program's development, responses in the first year including evaluation results, lessons learned, and year two growth. Further evaluation will be completed this winter, exploring landowner engagement after getting a plan, with results shared at the conference. The project connects eligible landowners-those with at least 10 acres of woodland and without a prior plan-with private foresters who develop plans that are free to the woodland owner. Designed with DNR and private foresters, the program emphasizes flexibility and smooth plan delivery. Unlike plans required for Wisconsin's tax program, these stewardship plans do not mandate implementation, serving instead as a voluntary tool to guide landowners. Following a successful first year, we are seeing even more landowners seeking a plan in year two. Using survey results from plan recipients, webinars were held in March 2025 to address common challenges. Future goals include continued outreach to unengaged woodland owners and integrating plan recipients into broader Extension programming to support long-term forest stewardship. The project represents a proactive approach to fostering sustainable forest management by lowering entry barriers and providing tailored support to Wisconsin's private landowners.

**Jim Downs, Jessica Burns, Jenny Stoneking, Carrie Brown, Ryan Slaughter, and Josh Winters, Ohio State University Extension**

**Building a Collaborative Woodland Owner Outreach Program in Support of the Ohio Interagency Forestry Network.**

Oak forests have dominated southeast Ohio for thousands of years. These forests are still here today but are at a tipping point - regeneration is not keeping pace with changing conditions. The Ohio Interagency Forestry Network (OIFN) is working to help "tip" these ecosystems back to health. Consistent, coordinated, and timely communications about Ohio's oak story is one of OIFN's top priorities. Partners present the Interagency Forestry Network and oak story consistently, ensuring that shared vision and mission messages are communicated collectively. The "A DAY in the WOODS" program is a collaborative effort of OIFN designed to support woodland owners in southeast Ohio. Since its launch in 2012, over 120 workshops with over 6,000 individuals impacting the management of over 175,000 woodland acres. Held primarily at the Vinton Furnace State Forest and other regional sites, these immersive, field-based sessions provide participants with practical knowledge on forest ecology, wildlife habitat, invasive species management, timber harvesting, and related forest management topics. While this program has had an extensive impact on the local area, widespread program participation is limited based upon the distance participants are willing to travel to attend. In 2023, a place-based forestry education program was developed to build collaboration efforts in areas outside of the traditional A DAY in the WOODS footprint. This expansion is extending the reach of oak-focused education, building regional capacity, and strengthening the long-term resilience of southeast Ohio's forests.

**William Errickson, Rutgers Cooperative Extension; R.J. Curcio, Monmouth County Park System; Maggie Coakley, Monmouth County Park System; Timothy Waller, and Dennis McNamara, Rutgers Cooperative Extension**

**Propagating Native Plants for Restoration Plantings in Public Parks**

Rutgers Cooperative Extension is collaborating with the Monmouth County Park System to collect seeds and cuttings from wild populations of native plants within local parks. Plants are propagated for field trials at the research farm and ultimately donated back for ecological restorations within the parks. Over twenty different native species have been successfully propagated, with an emphasis on deer resistant native shrubs. Rutgers Master Gardener volunteers participate as citizen scientists in the propagation process, with data collected on success rates relative to variables in substrates, rooting hormone concentrations, and timing to optimize native plant propagation protocols. Replicates of each specimen are transplanted into field trials that compare the characteristics and performance of locally derived native plants versus commercially available cultivars of the same species. In 2025, 18 Rutgers Master Gardener volunteers contributed a total of 204 hours to this program. Plants from the trials are donated back to the Park System for restoration projects, saving the Park System thousands of dollars while maintaining local plant genetics. Signage about native plants in the parks, workshops, and volunteer opportunities further enhance the educational outreach of this program. In total, 22 Park System volunteers planted 350 plants across 2 significant coastal sites totaling 104 volunteer hours in planting and maintenance of meadows. While the native plants species may differ depending on the region, this initiative can serve as a model for collaboration between Extension professionals and local Park Systems to engage public participation in propagating native plants for ecological restoration of public spaces.

**Chris Evans and Kevin Rohling, University of Illinois**

**Helping Landowners Overcome Barriers to Entry to Forest Management: The Illinois Beginning Forest Landowner Program**

Active forest management is necessary for the sustainability of Illinois' forested ecosystems. However, many privately owned forests are not being actively managed. The Illinois Beginning Forest Landowner Program was developed by the University of Illinois Extension Forestry program, along with many partners, as a way of assisting new landowners to overcome any barriers of entry. This program uses a combination of traditional instruction, hands-on field training, virtual learning, site tours, mentorship by experienced forest landowners, and networking to build the skills sets, experience, and connections needed to help landowners actively manage their forest. Cohorts participate in a year-long program that covers forestry topics such as forest ecology, setting goals for forest management, developing forest management plans, tree identification, invasive species, prescribed fire, safe use of chainsaws, cost-share and other assistance available to landowners, forest taxes, soils, timber harvests, working with consultant foresters, managing for wildlife, and others. Pre- and post- participant surveys were used to determine project impacts and actions taken by landowners as a result of the program and yearly evaluations and partner feedback were used to adapt the program. This presentation will cover the initial 3-year establishment period for the program and detail the creation of the program, partnerships, curriculum development, educational approaches used, program evolution, and on-the-ground impacts.

**Jennifer Fawcett, North Carolina State University**

**What Training Do They Need Most? Identifying Priorities with the Borich Model and a Prescribed Fire Example**

Extension professionals across natural resource disciplines must continually identify and prioritize the training needs of their audiences to ensure programs remain relevant, effective, and impactful. The Borich Needs Assessment Model offers a straightforward, evidence-based framework that compares the perceived importance of specific competencies with participants' self-rated competence levels, allowing Extension practitioners to identify and rank priority training needs. This presentation will introduce the Borich model as a broadly applicable approach to Extension evaluation and planning. To demonstrate the model in practice, results will be shared from a recent national study of Prescribed Burn Association members, where the Borich method was applied to training areas related to smoke management, safety and risk management, prescribed fire planning, burn operations, communication, and leadership. While training needs were identified across all competency areas, results pointed to especially high priorities in leadership and communication, burn operations, and risk management and safety. Findings revealed both strengths and gaps in members' competencies, illustrating how the Borich approach generates clear, data-driven priorities to guide targeted Extension programming. Grounding the session in both the method and a practical case study, participants will gain a deeper understanding of how the Borich model works, why it is valuable, and how it can be adapted for their own audiences and program areas. This approach aligns with the conference theme, "Confluence of Knowledge," by highlighting a shared evaluation tool that strengthens Extension's ability to address diverse training needs and chart the future of natural resource programming across disciplines.

**Catie Geib, UW-Madison Division of Extension**

**The Pitch Party: Harnessing Partner Networks to Build Flexible, Fundable Conservation Projects**

Securing conservation funding is increasingly difficult, with partners facing shrinking budgets, shifting priorities, and short turnaround times. New approaches are needed to make the most of scarce resources while ensuring that projects on the ground align with shared regional priorities. The Lake Superior

Collaborative (LSC) Pitch Party is one such approach. Designed as a supportive, low-pressure space, the Pitch Party allows partners to share early-stage or developing project ideas, receive feedback, and connect with the people, programs, and funding sources that can move those ideas forward. Rather than functioning as a grant application, it serves as an incubator where concepts are strengthened, vetted through the Collaborative, and connected to the Headwaters to Coast conservation blueprint, a regional plan guiding watershed-scale conservation priorities. The Pitch Party also builds nimbleness into conservation planning. When project funds are de-obligated, end-of-year resources become available, partners need match, or priorities shift unexpectedly, projects surfaced through this process are ready to advance. Because they have already been peer reviewed, networked, and aligned with regional strategies, they can make immediate and effective use of available dollars. The process strengthens collective capacity by broadening awareness of emerging needs, reducing duplication, and sharing the load of project development and implementation across organizations. This presentation will share the evolution of the Pitch Party, highlight lessons learned, and show how the process has supported more coordinated, effective conservation planning.

**Becky Griffin, University of Georgia Extension/Ctr. for Urban Ag; Amanda Bratcher, North Carolina Extension**

**The Great Southeast Pollinator Census: A Model for Youth Engagement in Insect Conservation**

The Great Southeast Pollinator Census (GSEPC) is a community science initiative that connects environmental education with hands-on conservation. Held annually each August, the project invites participants to observe a blooming plant for 15 minutes and record insect visitors in one of eight categories: carpenter bee, bumble bee, small bee, honey bee, wasp, fly, butterfly, or "other." Though designed as a conservation project, its foundation is education, with a strong emphasis on STEM learning. GSEPC (https://GSePC.org) supports educators through standards-based lesson plan ideas, insect identification guides, online resources, e-newsletters, and workshops. "Train the Trainer" sessions led by Extension agents and project partners equip educators to confidently guide students through the process. The project calendar is intentionally designed to align with the school year, enabling teachers to integrate activities like pollinator garden planning, practice counts, and data analysis into existing curricula. Students develop observation skills, analyze real data, and gain experience with scientific thinking. This interactive session will showcase GSEPC as a model for integrating youth engagement into environmental education. Presenters will outline project design, highlight educator involvement, and share strategies for overcoming implementation challenges. Attendees will leave with actionable steps to involve young learners in meaningful conservation work. The Census's impact lasts far beyond its two-day count. Educators report student gains in confidence and scientific curiosity, with some expressing interest in careers like entomology. The addition of The Great Pollinator Count children's book further extends reach-cultivating the next generation of environmental stewards.

**Aaron Groth, Oregon State University Extension Service Fire Program; Beatriz Botello Salgado, Oregon State University Extension Service; Felicia Olmeta Schult, Oregon Sea Grant/Oregon State University Extension Service; Emily Reilly, Oregon State University Extension Service**

**Culturally Responsive Natural Resource and Hazards Extension with Latino and Mesoamerican Communities on Oregon's Coast**

In Oregon's coastal communities, Latino and Mesoamerican Indigenous residents face disproportionate risks from natural hazards due to language barriers, limited access to emergency information, and systemic inequities. To address these challenges, OSU Extension colleagues and local partners, undertake work reflecting the "Confluence of Knowledge" by integrating community needs, multi-lingual outreach, and place-based programming through culturally and linguistically responsive natural resource and hazards education. Efforts include closing emergency communication gaps for Latino and Mesoamerican Indigenous residents through multi-lingual messaging and workshops, to boost

emergency preparedness. Innovative events like Café Aquarium and Café Resource create welcoming spaces for dialogue around disasters and natural hazards. Bilingual field tours centered on fishing, foraging, watersheds, coastal hazards and/or wildland fire connect families to natural resource topics through hands-on learning and cultural relevance. Partnerships with Consejo Hispano have supported heat emergency and wildfire preparedness workshops for Latina women, while collaborations with the Newport Fire Department's Listos Program have expanded access to wildfire training and materials for community volunteers and leaders. Spanish-language radio programming further amplifies outreach across rural communities. These efforts reflect a commitment to language justice, community co-design, and sustained engagement. This presentation will share replicable strategies for building trust and partnerships, co-developing content with community partners, considerations for program evaluation, and adapting Extension programming to meet the needs of multilingual audiences. Culturally grounded approaches can strengthen trust, resilience, deepen engagement, and chart a more equitable future for natural resource, hazards, and wildland fire Extension.

**Angela Gupta, UMN Extension**

**How Rewilding Resulted in Two Novel Forests in Minnesota**

What do we mean by "novel" or "rewilded" ecosystems, and how do they differ from "traditional" restoration? This session will define these terms in the context of the University of Minnesota Extension (UMN) Climate-Ready Woodlands program (https://z.umn.edu/ClimateReady) and discuss two examples of novel forests that have emerged in one small Rochester, Minnesota park. A volunteer-led invasive plant removal effort sparked deeper exploration into the site's history and ecology. Volunteers documented flora and fauna currently found on the site, revealing two distinct and functioning novel forest types. These forests include native and near-native tree species and support multiple trophic levels of wildlife, offering insight on what future forests in southeastern Minnesota may look like. Drawing on iNaturalist observations, trail camera images, and aerial photos, we show how a combination of active management, benign neglect, and volunteer efforts resulted in the emergence of these novel ecosystems. This presentation will also explore how the Climate-Ready Woodlands program addresses the anxiety many people feel about the changing climate and ecological uncertainty. We'll share a real example of an eco-anxiety misstep and correction, and show how clear communication and participatory science approaches can shift fear and anxiety into hope when engaging with the topics of near-native species, novel ecosystems, and rewilding. If the Climate-ready woodlands Organized Session abstract submission is accepted please disregard this submission.

**Madison Haley, North Carolina State University; Barbara Doll, NC Sea Grant & NC State University Gloria Putnam, NC Sea Grant; Christy Perrin, NC Sea Grant & Water Resources Research Institute**

**Talking Trash: Community-Engaged Efforts to Reduce Litter in Urban Waterways**

Litter in urban waterways poses ecological, public health, and community challenges, with stormwater systems acting as direct pathways to rivers and coastal environments. This project in the Marsh Creek watershed of Raleigh, NC, integrates research, technology, and community engagement to trace litter pathways and, in partnership with local organizations, identify strategies to reduce debris at its source. The foundation of this effort is the creation of a "Litter Reduction Coalition" led by NC Sea Grant extension professionals in collaboration with the City of Raleigh, Wake County, and nonprofits including The Great Raleigh Cleanup, Sound Rivers, and Plastic Ocean Project. Together, these partners are conducting research to better understand the sources and movement of litter in the urban environment. Methods include GPS-tracked bottles to trace transport, in-stream trash traps to quantify debris load, microplastic sampling to examine plastic breakdown, behavioral surveys and mapping to identify "hot spots," and field testing of interventions designed to reduce litter at its source. Beyond generating valuable scientific findings, this initiative is creating a collaborative roadmap for reducing litter in Raleigh and beyond. By pairing applied research with community science and direct engagement of decision-

makers, the coalition is building both knowledge and capacity to address a complex and persistent challenge in communities across the country. For natural resource extension professionals, this case study demonstrates the power of partnerships, innovative methods, and volunteer engagement to advance practical solutions for cleaner, more resilient waterways.

**Emily Heald, University of Wisconsin Madison Division of Extension**

**Building Statewide Consistency in Aquatic Invasive Species Monitoring Events**

Snapshot Day is a one-day, statewide event that unites volunteers, water enthusiasts, and local conservation partners in the search for aquatic invasive species. Since its launch over 14 years ago, the event has engaged hundreds of participants, strengthened local conservation networks, and contributed valuable early detection data. This session will highlight the program's success in creating a consistent statewide framework for both professionals and volunteers-covering training, educational messaging, and monitoring protocols. Attendees will gain insight into how a coordinated approach not only improves data quality and detection capacity but also enhances volunteer engagement and retention. Lessons learned from Snapshot Day can be applied to other large-scale, community-driven natural resource initiatives.

**Jessica Ireland, North Carolina Forestry Association; Renee Strnad, North Carolina State University, College of Natural Resource**

**Enriching Educators' Professional Development Experience Through Exploring a Variety of Stakeholder Voices**

Industry-sponsored programs can be perceived as one-sided in their presentation of information and education. This perception can leave participants wondering if they have received a well-rounded and balanced program and information. Since 2021, the North Carolina Forestry Association has worked with partners, including North Carolina State University Extension Forestry, to revamp the North Carolina Sustainable Forestry Teachers Experience (SFTE) program. The SFTE is an intensive, 5-day professional development program for North Carolina educators. This includes participating in tours of forest management operations and forest products manufacturing facilities; engaging with a wide range of forestry stakeholders; participating in experiential environmental education activities; and developing an action plan for applying what they have learned in their classrooms or programs. Evaluations demonstrate the SFTE program significantly enhances educators' sustainable forestry knowledge, shifts their perceptions of the forest products industry, and boosts their confidence in teaching forestry in their classrooms/programs. By building stronger collaborations and bringing a wider range of stakeholders into the program, educator's experiences are enriched by exploring the variety of voices and approaches to forest management. In this session we will explore how a program's message can be amplified by engaging a diverse set of stakeholders and the value of intensive professional development programs for educators.

**Carri Jagger, Ohio State University; Gabriel Karns, Ohio State School of Environment and Natural Resources; Kathy Smith, Ohio State University Extension; Jake Nicholson, Ohio State School of Environment and Natural Resources**

**Ohio State Maple: A Sweet Collaboration**

Ohio State Maple started in 2015 as a student project and has grown over the last 7 years into an amazing research station and outdoor classroom. Key partners - Ohio State School of Environment and Natural Resources, undergraduate students, Ohio State University Extension, and Ohio Maple Producers Association (OMPA), turned a 19-acre section of forest at the Ohio State Mansfield Campus into a

research and demonstration Maple Sugarbush. Each year 1,200 maple trees are tapped, sap is collected, turned into delicious maple syrup, and sold. Profits then hire students for internship and fellowship opportunities. Research includes maple tree variety sap sugar content and crop tree management. Demonstration areas feature remote sensors, vacuum systems, tapping, tubing, buckets/bags, reverse osmosis and a teaching evaporator. Students help at the sugar bush with research and data collection. OSU Extension hosts programs for natural resources professionals, beginner/novice and existing commercial maple producers on-site and around the state. These programs help producers remain sustainable in the southern ranges of maple production which pose unique challenges to sugaring. A digital tool kit is available on the Ohio Maple website to help woodland owners looking to get started and producers needing assistance, and OMPA partners with the Ohio State Maple Team to offer workshops and open houses at producer operations around the state. Through these collaborative efforts over the past 7 years, over 1000 people ranging from natural resources professionals to backyard hobbyists have attended maple educational programming offered by Ohio State University.

**Adam Janke and Julia Baker, Iowa State University**

**Empowering Conservation Practitioners Working at the Agriculture-Conservation Interface**

Growing global demand for food, fuel, and fiber has proliferated a suite of negative environmental externalities that conservation practices seek to resolve. But conservation adoption by private actors remains low. Conservation practitioners facilitate adoption, but they often lack understanding of the agricultural production systems in which they work. We developed a professional development program to help conservation practitioners better understand farming and farmers to empower them to increase conservation adoption in Iowa. The Land Stewardship Leadership Academy curriculum combined instructional techniques, disciplinary experts, and farmers to explore the complexities of the agricultural system in which participants worked. Three cohorts of conservation practitioners working for a wide variety of organizations completed the program. Our evaluation methods demonstrated widespread satisfaction with the experience and knowledge gains in agriculture, conservation, private land decision making, and behavior change. Validated scales indicated participants increased empathy towards farmers, increased communication self-efficacy, and improved intention to apply behavior change principles, which collectively impacted thousands of acres of land. Comparable professional development interventions may be implemented in similar Extension systems to foster greater conservation adoption and ultimately reduce entrenched negative environmental externalities arising from agriculture.

**Lesly Jerome, Program for Resource Efficient Communities**

**Packing Light, Saving Heavy: A Tiered Extension Model for Energy and Water**

Households across Florida are searching for practical ways to lower utility costs, conserve water, and build resilience. Extension is uniquely positioned to respond with education and tools that connect directly to daily life. This Ignite presentation will share the implementation of a new tiered program designed to introduce broad knowledge, offer applied practice, and provide individualized support. The first stage is a workshop that helps participants understand the systems driving household energy and water use. Attendees explore both behaviors and technologies that can reduce demand, and they leave with a starter kit to apply what they learned right away. Some participants choose to continue their home exploration by checking out an energy efficiency backpack. Each backpack includes diagnostic tools and a self-audit guide that allows residents to investigate their own homes, identify inefficiencies, and connect these findings to their utility bills. The final stage is the in-home tune-up. This Extension-led but volunteer-driven model trains vetted community members to help residents interpret their home systems while implementing low-cost interventions that save energy and water. The desired outcome of this Ignite talk is to inform participants about the process of implementing this program, from design to early rollout, with lessons learned along the way. By layering education, applied practice, and in-home support, the program demonstrates how Extension can strengthen its role in advancing household sustainability.

**Courtney Johnson, North Carolina State University; Jordan Bailey and David Coyle, Clemson University; Kelly Oten, North Carolina State University**

**Bye Bye, Bradford: The Impact of Bradford Pear Bounty Programs**

The Callery pear, *Pyrus calleryana*, is an ornamental pear tree native to Asia with over 20 cultivars planted throughout the southeastern U.S. The most well-known of these, the Bradford pear, was once prized. Initially thought to be sterile, Bradford pears can cross-pollinate with newer cultivars of *P. calleryana* and produce fertile seeds. Once animals eat the fruit and spread seeds, invasive trees grow in fields, roadsides, and natural and managed forests. Wild *P. calleryana* offspring revert to the parent form, forming dense thickets which can restrict wildlife movement and prevent management activities. Wild *P. calleryana* also outcompetes understory vegetation by leafing out earlier than native species. These traits make *P. calleryana* a serious problem for our ecosystems. To raise awareness about the invasiveness of Bradford/Callery pear and promote native trees, Bradford Pear Bounty programs were established in North Carolina (2022) and South Carolina (2019). These programs offer up to five free, native replacement trees as rewards for removing Bradford pears. Tree pick-up events are held at varying locations across the Carolinas each year. As of October 2025, there have been 18 events in each state. At each event, surveys are distributed to gather information on the background of participants and their knowledge of invasive species. Follow-up surveys assess participants' satisfaction and the survival of planted trees. These surveys demonstrate a high rate of satisfaction, knowledge gained, and survival of planted trees, providing insight into the success and impact of the Bradford Pear Bounty programs.

**Christopher Jones, University of Arizona**

**Stinknet Patrol: Early Detection-Rapid Response Volunteer Task Force for Species Eradication and Control**

Nonnative invasive plants have long been a natural resources concern, and they aren't going away. By being proactive, Extension educators can minimize their impact and be the unsung heroes of problems that don't happen. *Oncosiphon pilulifer*, or Globe chamomile, is a winter-season annual plant from South Africa that was first detected in Arizona in 1997. It is called stinknet to convey its unpleasant scent and net-like leaf characteristics. In the past decade it has spread rapidly across large swaths of urban and rural land in the Sonoran Desert (Chamberland 2023). As stinknet was not yet well established in Agent Jones' service area, he recruited volunteers in 2023, dubbed the "Stinknet Patrol." Jones raised awareness about stinknet through an annual Master Gardener weed class, webinars, YouTube recordings, FaceBook posts, newspaper articles, presentations to local organizations, and consultation with county officials. Between April and June 2023-2025, Agent Jones and a small band of volunteers have conducted early detection surveys and rapid response field days to bag stinknet plants and dispose of them at the county landfill. These pulling events resulted in eradication or significant reduction in regrowth and presence. Due to these efforts, the weed has little foothold in the area and is managed with minimal funds and outreach and volunteer effort, and minimal or no herbicides. This presentation's audience will learn about noxious weed management strategies (Dewey 1995), program design, delivery and evaluation, and effective if not innovative methods and techniques for novel weed control.

**Puskar Khanal, Clemson University**
**Adam Maggard, Auburn University**

**Tips for Offering Forest Resiliency Outreach Education for Forestry Professionals in the South**

Forestry professionals in the southern U.S. face increasing forest resiliency challenges from the extreme natural events, emerging forest health threats, and emerging markets-issues that traditional forestry education does not always fully address. To better prepare the forest managers and Extension

professionals, this study conducted a professional education needs assessment focused on sustainability and forest resilience in the southern region. The survey examined current understanding, perceived needs, and knowledge gaps among natural resource managers across the region. Results indicate moderate familiarity with core resiliency concepts but significant gaps in newer approaches such as climate-smart and ecosystem-based management. Respondents emphasized the need for substantial shifts in management strategies to address risks from extreme weather events, including hurricanes, droughts, and wildfires. Pine and urban forests were identified as especially vulnerable. While professionals recognize these emerging threats, they reported a strong need for enhanced technical knowledge, regionally adapted tools, and targeted training to apply forest resiliency on a scale. The findings highlight the importance of expanding education, outreach, and certification programs to build resilience in southern forest landscapes. The presentation will also share lessons learned in developing a forest resiliency educational module tailored for the regional professionals.

**Faith Kibuye, Andy Yencha, and Heather Preisendanz, Penn State University**

**Per-and Poly-Fluorinated Alkyl Substances (PFAS) Workshop for Extension Educators and Volunteers**

Per-and polyfluoroalkyl substances (PFAS) are a broad class of anthropogenic chemicals of emerging concern that are in the spotlight due to their potential human and environmental health risks. Because of the pervasive uncertainty surrounding PFAS and the perceived immediate public health concern, the general public has a growing sense of urgency to understand this class of emerging contaminants, with local Extension Educators often the first contact. Because the science behind PFAS exposure, human health risks, treatment, and regulations are continually evolving, PFAS communication to the public can be challenging and can become more sensitive when dealing with communities trying to navigate existing contamination. Extension programming can be critical in educating the public about PFAS by providing research-based information and resources to local communities. Therefore, Extension educators must stay informed on the latest research updates and regulatory guidelines to implement successful outreach initiatives that address specific community concerns about PFAS. This presentation will discuss key outcomes, including program design, delivery, and evaluations, of a one-day PFAS training workshop for Penn State Extension Educators and Extension volunteers. The workshop will be held in the winter of 2026 and will cover the following topics: introduction to PFAS, testing methods and resources, human health risks and current regulations, PFAS risk communication, and the state of the science of PFAS management and mitigation strategies on the farm and at home. This work was funded through the Environmental Education Program by the Pennsylvania Department of Environmental Protection.

**Carolyn Kovacs, UF/IFAS Extension**

**Lifelong Learners: Adult Coastal Camp Engages the Community in Estuarine Ecology and Conservation**

Flagler County houses the southern portion of the Guana Tolomato Matanzas National Estuarine Research Reserve (GTM NERR); however, there has been little education to connect the local community to these protected lands. The purpose of the Lifelong Learners program is to improve residents' understanding of our estuaries and coastal ecosystems and how they can help conserve them. In addition, we aim for participants to become confident in speaking about these ecosystems to others, serving as nodes of engagement in their community. The program is a partnership between UF/IFAS Extension Sea Grant and the GTM NERR and uses local research to educate residents. Forty adults participated in the three-day "summer camps" in 2024 and 2025. These programs engaged participants in classroom-based learning as well as outdoor activities, including an estuarine plant identification walk and kayaking through the reserve. Participants reported a 43% knowledge gain of information related to marsh and mangrove habitats, water quality, and dune ecosystems. In a six-month follow-up survey, 75% of respondents adopted one or more personal stewardship behaviors, 100% shared the information they

learned with others, and 67% used the information in a volunteer or work-related context. Many of the program participants interact with the public by working as teachers or park rangers or volunteering as Master Gardeners or docents at the NERR. In addition to gaining knowledge of their estuaries, this program strengthened participants' connection to the NERR and expanded its impact as they educated others in the community.

**Melissa Kreye, Penn State University**

**Public Attitudes Towards Creative AI Uses in Extension, with a Focus on Ethical and Environmental Challanges**

We conducted a pilot project to examine how different audiences perceive the role of artificial intelligence (AI) in creative Extension practices, with a focus on music generated to communicate natural resource conservation concepts. AI-assisted platforms that produce songs and artwork present a new opportunity for Extension to engage diverse audiences on complex topics, yet questions persist around environmental impacts, copyright, authenticity, and the acceptance of AI in educational contexts. To explore these questions, we distributed a survey in October 2025 to three stakeholder groups: members of the public in Pennsylvania, natural resource Extension professionals, and Penn State students (n= 400+). Respondents are asked about their familiarity with Extension services, attitudes toward AI in teaching, and approval or concerns about AI-generated educational songs on conservation topics such as bird conservation, habitat management, and prescribed fire. The study also probes opinions on the environmental costs of AI, intellectual property challenges, and the perceived artistic and educational value of AI-assisted music. By comparing responses across stakeholder groups, the study highlights how demographic and professional backgrounds shape views on the ethical and sustainable integration of AI into Extension programming. Our findings will provide timely guidance for charting the future regarding how AI may be used within the broader Cooperative Extension System.

**Lisa Krimsky, Katherine Rose, Holly Abeels, Vincent Encomio, Carolyn Kovacs, and Andrea Lazzari, University of Florida IFAS**

**Eyes on Seagrass: A Statewide Community Science Seagrass Monitoring Program**

Seagrass loss is occurring globally, including in Florida. Seagrasses are ecologically and economically important, serving as a food source and habitat, while providing shoreline and sediment stabilization, carbon sequestration, and improvements in water quality. Excess coastal nutrients are the primary driver for seagrass loss in Florida. Harmful algae assimilate these nutrients, shading seagrass, which results in die-offs. Once seagrass is lost, recovery is challenging, so monitoring is crucial to track the health and diversity of seagrass ecosystems. However, monitoring is time- and resource-intensive, and in some estuaries, it is completely lacking. Eyes on Seagrass was developed by Florida Sea Grant to fill monitoring gaps by utilizing trained volunteers to provide high-quality data for seagrass management across Florida. Now available in 10 Florida counties and all three coasts, this presentation will provide case studies for two regional Eyes on Seagrass programs. Charlotte Harbor Eyes on Seagrass was one of the foundational programs, created to monitor observed increases in macroalgae. Volunteers provide in-water transect data, which is used to document macroalgal distribution patterns and aid in distinguishing between interannual variability and management-linked changes in macroalgal biomass. The Indian River Lagoon program is designed as a bioblitz to validate anecdotal reports of seagrass regrowth. Data from this program is being used to prioritize seagrass restoration areas and to inform aerial monitoring surveys. Collectively, Eyes on Seagrass data are helping scientists gain a better understanding of the health of Florida's seagrasses statewide and inform management decisions.

**Erica Kronenberger and Zhao Ma, Purdue University; Leslie Boby, Southern Regional Extension Forestry; Krista Merry, The University of Georgia; Elizabeth Jackson and Lenny Farlee, Purdue University**

**Co-Developing & Disseminating Digital Forestry Tools: Strategies & Products from a Research-Extension Collaboration**

Newer technology for conducting "digital forestry" - such as remote sensing data collected from satellites, drones (UAVs), and backpack systems, as well as measurements taken from smartphone apps - has higher efficiency, accuracy, and coverage compared to traditional forest data collection and analysis methods. While forests in the Eastern U.S. are predominantly privately owned, landowners and forest business owners may not understand or have easy access to these new management tools. Forestry professionals and Extension personnel likewise need the current and reliable data generated by these tools to make informed recommendations that support forest resources. Promoting Economic Resilience and Sustainability of the Eastern U.S. Forests (PERSEUS) - a collaboration between Purdue University, the University of Georgia, and the University of Maine - aims to advance digital technologies for forest inventory and analysis through both product development and dissemination. PERSEUS Extension personnel are gathering feedback from stakeholders to inform co-production of the tools. Simultaneously, we are conducting extension efforts to educate potential end-users on how the data is collected, the models are created, and what they can be used for. These Extension efforts will create more robust products and help end-users to better trust the data. Data collected from the digital tools will also be used to create a publicly available online geospatial database for forest information. This presentation will provide an overview of the PERSEUS products and highlight extension strategies for engaging stakeholders, including the opportunities and challenges of reaching relevant audiences given a broad set of potential applications.

**Sabhyata Lamichhane, Sushma Bhattarai, Adam Polinko, and Brady Self, Mississippi State University**

**Managing Loblolly Pine for Timber or Wildlife? A User-Friendly Decision-Making Tool for forestry stakeholders**

Loblolly pine dominates the southern U.S. forest landscape, where it is often managed for timber production. At the same time, these forests provide essential habitat for wildlife, creating potential trade-offs for landowners and managers. This session will introduce and demonstrate a user-friendly decision-support tool designed to help forestry stakeholders analyze the financial implications of managing loblolly pine for timber revenues versus enhancing wildlife habitat for species such as white-tailed deer, wild turkey, and northern bobwhite quail. Audience will engage in a hands-on exploration of the tool, working through scenarios that simulate stand growth and yield under different silvicultural strategies, planting densities, and site conditions. They will work through the tool to compare approaches, identify trade-offs, and reflect on how the tool can support decision-making in their own contexts. By the end of the session, participants will gain increased awareness of how timber and wildlife objectives intersect and practice using a tool that simplifies complex economic trade-offs. In the short term, participants will be able to apply the tool to test alternative management strategies and communicate trade-offs more clearly with landowners. Over the longer term, the desired outcome is that participants will incorporate the tool into their extension programming and decision-support efforts, leading to more informed, sustainable forest management decisions that balance economic and ecological goals.

**Amy Lefringhouse, Erin Garrett, Abigail Garofalo, and Emily Steele, University of Illinois Extension**

**Media that Connects: The Everyday Environment Project**

Everyday Environment is a digital content series - blogs, podcasts, social media videos, and webinars - exploring the human connection to the natural world. The series engages listeners through science-backed pedagogy to enhance understanding of their everyday environment and make environmental topics accessible and actionable. The Everyday Environment team, three Extension Educators, and one Media and Communications Manager, took an innovative, cross-platform approach to expand audience reach, increase environmental outreach efforts, and bridge the gap between content experts and the public. Everyday Environment releases three-month seasons of content in spring and fall. Each season includes twelve weekly blog posts with accompanying podcast episodes, a series of social media videos, and two webinars focused on a single topic, such as climate, water, wildlife, and invasives. Each week features guest contributors from Extension, universities, and partner organizations who provide content in both blog and podcast formats, supporting different learning preferences. Short-form social media videos deliver key takeaways to inspire action, while two webinars per season offer deeper dives into the topic. Since launching in July 2024, the series has reached broad audiences: over 14,500 blog views, over 8,100 podcast downloads, 66,000+ video views across social media, and engaged 665 live webinar participants with more than 1,700 recording views. This presentation will share lessons learned in designing and implementing the series, showcase its impacts, and explore how a multi-format approach can support more inclusive, scalable, and effective environmental outreach.

**Sarah Low, Oregon State University; Miles Becker, Utah State University; Joseph Hulbert, Washington State University**

**Taking a Collaborative Multi-State Approach to Urban Forestry Needs Assessment**

Urban forestry is a growing field and, in the last few years, there has been an increase in the number of Urban Forestry Extension Specialists hired into State University Extension Programs. Many of these new Urban Forestry Extension Specialists are developing new state-wide programs and need to develop needs assessments to determine priorities for programming, publications, and other educational resource sharing activities. Extension professionals from Utah State University, Washington State University, and Oregon State University teamed up to implement a multi-state survey of urban forestry needs and perceptions. During this talk, Assistant Professor of Practice and Urban Forestry Extension Specialist, Sarah C. Low, will share how this collaboration came to be, what developed along the way, and how things are going now. Sarah will discuss how this work is being used to develop programming and publications, and Sarah will share the surprising learning that came out of this collaboration.

**Susan Lunt, Clemson University**

**Game-Based Learning for Resilient Communities: Strengthening Local Decisions and Collaboration with the Watershed Game**

Building community resilience and restoring water resources takes more than technical solutions. It requires local leaders and residents to understand the impacts of their land and water decisions and to work together toward shared goals. This session introduces the Coast Model of the Watershed Game, an interactive role-playing simulation that sparks conversation and collaboration around flood resilience and water quality. Originally developed by Minnesota Sea Grant and its partners, the Watershed Game is a proven tool used in 24 states to engage diverse audiences in meaningful dialogue about land use, pollution reduction, and resilience. It has documented impacts and is continually refined to meet the evolving needs of communities and educators. The Coast Model is tailored to coastal areas facing growing challenges from flooding and nonpoint source pollution. In the session, participants will work in

teams to reduce pollution and flood risk within a limited budget, while reacting to unexpected watershed events. The goal is to meet clean water targets while navigating trade-offs and building consensus. Participants will gain collaboration skills and explore best management practices that can support real-world planning efforts. The session includes a guided game demonstration and discussion on how to integrate it into education, outreach, or planning programs. A free game loan will be offered to try it with local audiences. The game fosters trust, encourages creative problem-solving, and creates a welcoming space for diverse perspectives which are all key elements of community-driven resilience.

**Erika Lyon, Janessa Hill, and Carrie Brown, Ohio State University Extension; Caitlin Harris, Harrison County Soil & Water Conservation District**

**Building Skills and Confidence: A New Era of Foraging, Fishing, and Hunting Education in Ohio**

Roughly a fifth of Ohioans engage in outdoor recreation such as fishing and hunting (Ohio Department of Natural Resources, 2022). While foraging participation is less documented, Extension educators have observed growing interest through questions at events, one-on-one conversations, and social media engagement. This interest is often driven by curiosity, food security concerns, and a desire to reconnect with nature. Many participants express a need for beginner-level instruction in foraging, fishing, and hunting, highlighting demand for immersive, hands-on learning that builds confidence and practical skills. To address this need, Ohio's first Wild Harvest Academy launched in August 2025 through a partnership with the Harrison Soil and Water Conservation District and the Muskingum Watershed Conservancy District. The academy featured seven indoor and outdoor sessions focused on wild food exploration, sustainable harvest ing, and skill-building. Participants engaged in activities such as fly fishing, deer dressing, and plant and mushroom identification, while sampling regional foods like walleye tacos, tree syrups, and pawpaw desserts. This presentation will share insights from the academy's development, implementation, and evaluation, including participant feedback and reported increases in confidence and abilities. It will explore how Extension can respond to emerging public interest in wild food and product education by integrating traditional knowledge, applied research, digital tools, and experiential learning while addressing safety and regulations. Finally, it will highlight how cross-sector collaboration and responsive programming can help chart a more adaptive and engaged future for Extension wild edibles, medicinal, and product education.

**Erika Lyon, Ohio State University Extension; Carrie Brown, University of California Cooperative Extension; Ashley Kulhanek, Kathy Smith, and Marne Titchenell, Ohio State University Extension**

**Woodland Wisdom: A Blended Learning Model for Sustainable Forest Stewardship**

Woodland Wisdom is a blended Extension program that combines a live webinar series with a structured online course to build woodland owners' knowledge and confidence in sustainable forest management. Developed with materials from The Woods in Your Backyard: Learning to Create and Enhance Natural Areas Around Your Home and offered by Ohio State University Extension's Ohio Woodland Stewards Program, the series is designed to meet the diverse learning needs of woodland owners while expanding Extension's digital reach. The program features eight online modules, including "Getting to Know Your Woods," "Basics of Woodland Management," and "Putting Your Knowledge to Work." Each module integrates text, videos, knowledge checks, and assignments. Progress is tracked in-platform, and a certificate of completion is issued once all coursework is finished. To complement these modules, live webinars are offered biweekly, August through December, with recordings posted for asynchronous access. Each webinar provides expert-led presentations, interactive discussions, and opportunities for participants to bring forward questions informed by their module work. This pairing of structured, self-paced coursework with live engagement allows participants to both learn and apply concepts in real time. Evaluation results from 2024 indicate strong impact: 100% of participants planned to use knowledge gained to implement practices such as wildlife habitat improvement (91%) and invasive species control (36%). All reported increased enjoyment, ecological understanding, and confidence in woodland

management, with most finalizing or beginning management project plans. These outcomes demonstrate Woodland Wisdom's effectiveness in fostering stewardship while expanding Extension's reach.

**Justin Mansberger, Pennsylvania State Extension; Faith Kibuye, Penn State University**

**Water Quality Testing and Education on the Use of Roadside Springs in Pennsylvania**

Roadside springs are unregulated drinking water sources commonly used by rural communities in the US without treatment because of the perceived purity and taste. Despite their popularity, studies assessing water quality and human health risks associated with these unregulated and untreated drinking water sources are minimal. To assess water quality and educate local communities on the risks associated with roadside springs, Penn State Extension conducted a statewide monitoring campaign of 70 roadside springs in 2024. Grab samples were collected and analyzed for bacteria, heavy metals, pesticides, pharmaceuticals, personal care products, and per- and polyfluoroalkyl substances (PFAS). 80% of the sites met secondary maximum contaminant levels for contaminants that alter the aesthetic properties of water (i.e., taste and odor). However, total coliforms and E. coli were present in 86% and 21% of the roadside springs, respectively. 90% of the springs were corrosive, which can result in the potential exposure of metals such as lead and copper in plumbing, fixtures, or storage containers. Lead exceeded the Maximum Contaminant Level Goal at 17% of the sites. The results were presented at two statewide webinars and several in-person workshops targeting counties with heavy contamination of roadside springs. Over 72% of attendees ( n =48) reported learning either "a lot" or "a great deal" from the programs. Additionally, web-based and printed fact sheets have been developed. This presentation will cover the importance of testing and educating about roadside springs, the results of the monitoring campaign, and the negative consequences of these contaminants.

**Darren McAvoy, Utah State University Forestry Extension; DeShana York, University of Alaska Fairbanks Extension; Caley Gasch, University of Alaska Fairbanks Extension**

**A Biochar Teaching Tour of Alaska**

In the summer of 2024, Extension Associate Professor Darren McAvoy conducted biochar workshops in remote villages and major cities across Alaska, supported by a USDA Sustainable Agriculture Research and Education Grant. Workshop participants numbered in the hundreds, and most were introduced to biochar for the first time. Utilizing accessible technologies, workshops featured Ring of Fire kilns, while the limitations of some communities required the simplest form of biochar production using earthen pits. We are evaluating how Alaska-produced biochar influences soil nutrient availability, carbon content, and water-holding capacity after applying this Alaska made biochar to three farms in the limited agricultural regions of Alaska. This program was successful in jumpstarting biochar production and application in Alaska, as workshop participants have taught dozens more Alaskans how to produce biochar with these methods and one local forestry leader has constructed the US Army's first and the nation's largest Big Box biochar kiln, with assistance from the author. Although Alaska's landscape and communities are unique, the insights gained can help inform biochar programs in diverse locations.

**Grace Milanowski, Conservation Sciences, University of Minnesota/UMN Extension; Ellen Candler, University of Alaska- Fairbanks; Joseph Bump, University of Minnesota; Amy Rager, University of Minnesota Extension**

**Who Eats Your Guts? Participatory Science & Understanding Scavenger Biology Through the Offal Wildlife Watching Project**

Offal Wildlife Watching is a participatory science project that engages the deer hunting community in wildlife research. The goal of the project is to better understand the ecology of scavenger species that visit deer gut piles (offal) across Minnesota and to create a novel and meaningful program for hunter participation in research. We recruit and invite hunters to deploy remote cameras at white-tailed deer gut piles that resulted from their freshly killed deer. Over 7 hunting seasons, over 400 hunters have signed up to help us collect data and contribute images to the project. We have recorded at least 60 different scavenger species visiting offal, have observed scavengers hunting other scavengers and recorded scavenger visitation differences among biomes. The Offal Wildlife Watching project has excellent potential to establish a rapport and trust with hunters that may also allow for exploration into influences and motivations to participation (i.e. why do some hunters participate and others do not?) This project can easily be adapted to other hunted species, biomes, and states.

**Megan Moore, UF/IFAS Extension Florida Sea Grant; Lara Milligan, UF/IFAS Extension Pinellas County**

**Shells of Change: Vertical Oyster Garden Community Science**

Elevate your understanding of how science and community stewardship converge in our Vertical Oyster Garden (VOG) Program. By utilizing recycled oyster shells that are strung together and hung in coastal waterways, we promote oyster reef growth and provide ecosystem services to strengthen our natural resources. Our VOG Extension program serves as an innovative method of oyster conservation and education, utilizing community participation to drive the program's success and expansion. We have utilized a multifaceted approach to drive the education and environmental impacts of our program, where our free online educational class, in-person seminars, and workshops have recruited over 750 community members since November 2023. Between our 13 community volunteer workshops, over 2,400 VOGs have been created, with over 380 already installed by residents in our coastal waterways. Results will be provided detailing the growth and sustainability of the installed oyster gardens and how they are serving as a natural community resource, helping to enhance water quality and deliver ecosystem services. Currently, of the program survey respondents (140), 96% have reported an increase in knowledge, 91% indicated intent to increase environmental stewardship, and 52% had adopted a nature-based solution as a result of their involvement in our programming. Community-driven participatory science is expanding, yet it faces considerable hurdles in program design and long-term viability. As we unfold own program successes and difficulties, we will highlight the insights gained along the way, equipping attendees with practical guidance for building their own research-based, community-centric programs.

**Savannah Moore, Renee Strnad, and Robert Bardon, NC State University**

**Engaging Your Audience through Social Media: Current Tips and Tricks for Extension**

Social media platforms provide a unique space for the "confluence of knowledge" that is key to Extension, where expertise, research, and resources can meet the public. Using this tool effectively requires more than simply posting content; it requires strategy, intentionality, and adaptability. This presentation explores lessons learned from NC State Extension Forestry's use of social media as an outreach tool and offers practical strategies for Extension professionals to strengthen their digital presence. Drawing from this analysis, four key considerations will be highlighted: (1) efficiently planning, archiving, and creating

content, (2) maintaining responsiveness and authenticity, (3) tracking and interpreting engagement metrics to inform future efforts, and (4) understanding the platform-specific factors that drive reach and visibility. Findings suggest that the most powerful indicator of impact is not likes or followers, but the extent to which content is shared and reshared (also known as reach). Extending the reach of Extension knowledge beyond traditional audiences is key. By integrating these practices, Extension professionals can more effectively position social media as a key component of their natural resource education and engagement.

**Chad Niman, University of Kentucky FNR- Extension**

**See the Forest for the Careers: ForestryWorks of Kentucky**

Forestry is essential to Kentucky's economy, environment, and culture. There is a need for the next generation to understand forestry and the careers they can pursue in it. To fulfill this need, ForestryWorks was created. The ForestryWorks Forest Worker Certificate Program is a program designed to help high school students begin a career in forestry. We have established ForestryWorks in Kentucky by coordinating trainings for high school teachers to implement the certification in their classrooms. This program collaborates with forestry professionals from state and private organizations for the trainings, which also gives the students the opportunity to network with potential employers. ForestryWorks KY also hosts a field course held at Robinson Forest, Robinson Wood Utilization Center, and industry facilities for student experiential learning. High school students who are certified through the ForestryWorks program are given the education and resources they need to explore jobs in the forest industry. This will benefit the future of forestry in the state by increasing awareness of the importance of forestry, and it will give those entering the workforce the knowledge and experience they need.

**Heather Nix, Clemson University; Brooke Saari, South Carolina Sea Grant Consortium**

**Beyond the Surface: The Confluence of Art & Science**

Water is a shared resource that is necessary for all life. Beyond the Surface was a unique collaboration between scientists and artists to host a juried art exhibition that highlighted the importance of and challenges to water resources in the Southeastern United States. This exhibition was held in March 2025 as the result of partnerships between the South Carolina Sea Grant Consortium, Clemson Extension, South Carolina Water Resources Center, and the Tiger Strikes Asteroid art gallery in Greenville, SC. Initially a student intern's idea, the project was accepted as the 2025 Special Project of the already successful Water Chats program. Beyond the Surface partners released an open call inviting artwork with key themes from Water Chats Season 2: water quality, contaminants of emerging concern, or water resilience. Ultimately, the exhibition featured artwork from 25 artists addressing topics showcasing diverse pieces including paintings, sculptures, audio recordings, and installations. Each piece was accompanied by an educational fact to connect the art to its scientific theme. Monetary prizes were provided to the five award-winning art pieces. This unique project brought in an estimated 130 visitors from across the country, $8,500 in leveraged funding, and $10,320 total economic benefit over its six-day run. This presentation aligns with the conference theme by highlighting how the confluence of art and science can foster new collaborations and clientele.

**Keith O'Herrin, NC Cooperative Extension**

**Extension-Based Urban and Community Forestry: A Unique Approach to Direct Service**

Urban foresters are generally employed by state-level forest services or local towns and cities. However, for over 17 years Union County, NC has been providing urban and community forestry support to 10+

small towns and cities through cost-share funding of a County Extension-based urban forester, all of which are too small to justify funding an employee on their own. This role provides expert consultation to municipalities on tree preservation and tree ordinances during construction and development as they face intense development pressure from the expansion of Charlotte. This role also provides direct service to residents and HOAs on trees and landscaping, youth enrichment through Arbor Day tree planting events and environmental education, and supports a local tree-planting non-profit, TreesUnion. Learn how this role is successfully funded (100% local funding), and learn about novel programs such as starting the TreesUnion non-profit and starting a tree nursery with a middle school agriculture program.

**Ginger Orton, University of Georgia**

**Heated Topics, Warm Approaches: Science Communication Tips for Tough Conversations**

Extension professionals regularly engage with stakeholders, landowners, and community members on natural resource issues that can spark controversy-climate change, prescribed burning, wildlife management, and water conservation, among others. In these moments, the success of outreach is often determined less by technical expertise and more by the ability to foster trust, connection, and dialogue. This session introduces participants to research-based strategies that emphasize the role of "warmth" in science communication. Drawing on social science findings, we will explore how warmth-conveyed through active listening, empathy, open dialogue, and the occasional deep breath-can reduce defensiveness and encourage constructive conversations about contentious natural resource issues. The session directly supports the conference theme, Confluence of Knowledge: Charting the Future of Natural Resource Extension, by equipping professionals with interpersonal tools needed to bridge divides and integrate diverse perspectives into decision-making about sustainable natural resources. Furthermore, in a society with increasing polarization around and distrust of science, Extension professionals are uniquely positioned as representatives of science in their communities. Their ability to communicate with warmth and tact about natural resource science can directly contribute to strengthening public trust in science as an institution. Participants will leave with actionable tools for integrating warmth into their own programs, an understanding of the science underpinning these strategies, and tips for gauging their communication effectiveness. By strengthening Extension professionals' ability and confidence to navigate "heated" conversations, this session supports Extension's role as a trusted, science-based resource in an increasingly polarized society.

**Kira Pollack, University of Minnesota**

**Going Nuts for ACORNS: Developing an Extension Tree Seed Collection Course**

Like many other states, in Minnesota we need more tree seed! Seed is the first and most crucial link in the tree seedling supply chain, and the pool of people who have the knowledge and skill to collect it is small and dwindling. We worked with local governmental, nonprofit, cooperative, and research organizations to develop ACORNS (Access, Collection, Organization, and Redistribution of Nuts and Seeds), a flipped classroom-style course with the goal of creating a responsive network of seed collectors. Participants worked through modular video content focused on six high priority species of deciduous trees projected to do well in our changing climate. Videos covered species identification, seed development, forecasting, collection tools and strategies, and site selection. Participants created a personal collection plan, and then gathered in regional cohorts to practice the skills during a field session. In addition to technical knowledge, the workshops and online discussion boards were designed to build confidence and connection. In just over a year, about 150 people have engaged in this programming. Early evaluation data suggests that participants appreciate the convenience, content, and pace of the hybrid program model, though there is a desire for fully in-person training as well. We are working with state agency partners to expand content and develop a seed collector certification process to meet agency needs. We're excited about the early success of this program and planning for growth to address tree seed production areas as well.

**Sanjok Poudel, North Carolina A&T State University; Colby Lambert, and Brian Parrish, NC Cooperative Extension**

**Silvopasture at the Crossroads: Merging Forestry and Livestock for Sustainable Land Use**

Silvopasture, the intentional integration of trees, forages, and livestock, is one of the most promising agroforestry practices that balances productivity with natural resource conservation. By combining trees and livestock, silvopasture offers multiple benefits, including improved livestock comfort, enhanced soil and water quality, and diversified income streams. In this session, we will introduce the fundamentals of silvopasture and highlight its three key components: trees, forages, and livestock. We will discuss how these elements interact within a managed system, the management considerations that influence success (including species selection, shade and forage balance, and economic trade-offs), and how extension services can guide producers through these decisions. We will share case examples drawn from field experiences with producers across the region, demonstrating both the opportunities and challenges of adopting silvopasture. These practical insights emphasize the importance of tailoring recommendations to landowners' goals while fostering collaboration between forestry and livestock extension programs. Aligned with the conference theme, "Confluence of Knowledge: Charting the Future of Natural Resource Extension, " this presentation showcases how interdisciplinary extension approaches can strengthen natural resource sustainability while meeting agricultural production needs. Attendees will leave with a practical framework for introducing silvopasture to their own audiences and a deeper understanding of how integrated management can support resilient landscapes and rural economies.

**Daniel Pratson, Jonathan Kays, and Andrew Kling, University of Maryland**

**The Woods in Your Backyard: Impacts and Lessons Learned from Ten Years of a Residential Natural Areas Management Course**

The establishment and management of natural areas within residential properties can contribute to a landscape that supports biodiversity and related ecosystem services. However, property owners may not have background knowledge of ecological principles that justify certain management practices, thus, their adoption may be limited by knowledge deficiency. The Woods in Your Backyard, authored by a multi-state team of extension and natural resource professionals across the Mid-Atlantic region, has guided programming on managing natural areas in residential properties, and has been adapted for an online course held bi-annually since 2016. We sent a survey to all participants of the course since its inception to document their natural areas management, and to better understand the factors that influenced any behavior changes. Our findings indicate that participants adopted an average of six different management actions after taking the course. More specifically, participants were committed to maintaining actions such as invasives control and creating wildlife habitat and were polarized on their engagement with pesticides and cutting trees. Participants reported highest knowledge gains in mapping habitat units across properties and natural area project management skills. Reported knowledge gain predicted only one action. Participants spent an average of $16,000/ac. and 155 hours/yr. on natural areas management and reported that stewarding and caring for natural areas was most important in guiding their management actions. Our results present a descriptive characterization of small acreage residential property owners willing to engage with natural areas management and identify areas of improvement for future programming.

**Steven Price, Utah State University Extension - Carbon Co.; Jessie Hadfield, Utah State University Extension; Laura Snell, University of California Agriculture and Natural Resources; Nikki Frey, Utah State University Extension/USU Wildland Resources Dept.; Kalen Taylor, Utah State University Extension - Millard Co.; David Lile, University of California Agriculture and Natural Resources**

**Unbridled Truths: Youth Curriculum at the Crossroads of the Mustang Management Debate**

Mustang and burro management is a contentious natural resource issue throughout the West. Public misunderstandings about free-roaming horses further complicate discussions surrounding their management for the future sustainability of rangelands. We sought to understand how Extension/4-H can use research-based programming to bridge the gap between advocacy and management. Our "Mustang Camp: Promoting Healthy Lands and Healthy Horses" curriculum has been taught over five years, impacting over 120 youth, and adopted in three states. We use a combination of presentations from diverse educators and agency personnel, on-range experiences, and cross-disciplinary learning activities to explore the history and science behind mustangs and their impacts on rangelands. Programmatic information and impacts will be presented. Evaluations confirm gained factual knowledge as well as increased support of mustang population management, particularly preventive measures. For example, when asked if "In free-roaming horse management, nature should be allowed to take its course without human intervention", opinion agreement rates decreased by 47.74% while disagreement increased by 146.18%. Likewise, when asked "What is your opinion on annually rounding-up a portion of the free-roaming horses and holding them in a long-term holding facility?", the agreement rate increased by 112.05% while disagreement decreased by 70.13%. Evaluations also indicated that participants viewed federal management of natural resources more positively post-program. When presented "Using scientific research is the best way to solve environmental problems", overall agreement increased by 14.28% with strong agreement increasing by 80.15%.

**Michelle Prysby, Virginia Tech; Courtney Hallacher, Lisa Mease, and Meagan Thomas, Virginia Department of Wildlife Resources**

**Virginia Master Naturalist Program Collaborates with State Wildlife Agency to Improve Human-Wildlife Interactions**

For 20 years, a strong partnership with the Virginia Department of Wildlife Resources (DWR) has been a key component of the Virginia Master Naturalist (VMN) program, a natural resource volunteer program based in Virginia Cooperative Extension. Within the last three years, we have collaborated to launch several new projects that rely on VMN volunteers to advance DWR's agency initiatives through education and participatory science while also addressing Extension goals. In each case, there was a clear need based on data that VMN volunteers were well-positioned to help DWR address. For example, DWR noted that a high percentage of calls to the Wildlife Conflict hotline relate to black bears, so the Living with Black Bears project engages VMN volunteers in providing presentations and outreach to encourage people to adopt behaviors that reduce human-bear conflict. Evaluation results show that, after attending a Living with Black Bears program, more participants plan to adopt new behaviors such as removing bird feeders during bear season. Similarly, the agency's Wildlife Viewing Plan showed a need for accessible wildlife viewing areas. VMN volunteers are now conducting accessibility reviews of sites across the state for inclusion on the Birdability Map, increasing the number of sites in the state with clear information about accessibility features. In this presentation, we will discuss the key elements of our DWR-VMN collaborative projects, how they could be replicated in other states, and outcomes observed.

**Cathryn Pugh, Penn State Extension; Michele Bakacs, Rutgers Cooperative Extension**

**Learn About the National Extension Native Plant Initiative (NENPI)**

Interest in using native plants as part of sustainable landscapes is on the rise across the country. In the newly formed National Extension Native Plant Initiative (NENPI), natural resources extension professionals have been working to create educational tools and professional development opportunities for our peers. This presentation will introduce the goals of NENPI, highlight our collaborative efforts so far, outline our future projects, and provide information about how others can get involved. The initiative seeks diverse perspectives to best serve national needs around native plant education and accessibility. Join us to learn more.

**Abigail Ratcliff and Kelly Oten, NC State University**

**Spotting the Lanternfly: Meeting the Public's Needs for Invasive Species Information**

The spotted lanternfly (SLF) has been a major pest of concern since its introduction to the US in 2014. Feeding on over 100 woody and herbaceous plants, it bridges the gap between agricultural and forest pest. As its invasive range has expanded throughout the eastern US, states have had to develop strong messaging surrounding detection and reporting. NC State Extension's role in SLF outreach and education started as a series of workshops and information tables promoting identification and detection years before its detection in Forsyth County in 2022. Events were organized in conjunction with the North Carolina Department of Agriculture. In the time since its detection, the program has expanded to include field research investigating phenology and field-testing novel trapping methods. Data output from this research has helped to inform state management plans and support federal efforts at controlling SLF nationally. The detection and management of SLF relies heavily on an informed public. Physical and digital materials have been created to support county extension agents in infested and adjacent counties in educating concerned home and business owners. Current materials for SLF in NC include a dedicated landing page on the Extension website, 1-page management and identification guides, a peer-reviewed publication and a handmade SLF costume for Extension events.

**Jeremy Rhoden, University of Florida**

**Pollinator Ambassador Academy: Building Urban Leadership for Pollinator Conservation and Citizen Science**

Introduction: In 2024, the Pollinator Ambassador Academy (PAA) was launched to equip Floridians with tools to promote pollinator conservation and the Great Southeast Pollinator Census (GSEPC). Objectives: The Academy aimed to create a network of trained advocates who would extend research-based practices into their communities, increasing pollinator habitat, awareness, and data collection for long-term sustainability. Methods: Using a train-the-trainer approach, participants received a full-day training on various topics, outreach materials, customizable presentations for their use, a pollinator gardening guide, and research-based resources. Ambassadors were encouraged to engage with local decision-makers, conduct pollinator outreach, and participate in pollinator field surveys following the Academy. Results: To date, 169 individuals have completed the training. Of those, 88% created or modified pollinator-friendly gardens, contributing over 3,700 square feet of habitat, and 100% adopted three or more pollinator-friendly landscape practices. Collectively, ambassadors reported speaking to over 2,000 people on pollinator sustainability. In Florida's inaugural GSEPC year, over 2,800 residents participated from 53 counties, largely due to the outreach of the Pollinator Ambassadors. Field surveys conducted by ambassadors revealed higher insect activity in landscapes with greater plant diversity and during temperatures between 80°F and 90°F. Conclusion: The PAA demonstrates the impact of targeted Extension programming in building local leadership, advancing sustainable landscaping, and increasing

public participation in citizen science. The program reflects a confluence of knowledge, merging education, outreach, and data collection to support the future of natural resources in Extension.

**Kaitlin Robb Price and Nicholas Taylor, University of Florida**

**Saving Water Through a Statewide Landscape Irrigation Evaluation Program**

To effectively save water, it's important to identify what the biggest opportunities are for reducing water use. While there are many ways to save water indoors and outdoors, irrigation is a key driver of high water use for many residents in Florida and across the nation. In-ground irrigation systems, however, can be complex, and many homeowners may not be aware of the common problems that could affect their system. Leaks, mismatched precipitation rates, and overspray can increase the amount of water inefficiently used by an in-ground irrigation system. Perhaps most importantly, irrigation timers can be set to irrigate too frequently or for too long, overwatering a landscape while wasting resources. Extension can fill an important role by extending the university's research and knowledge on irrigation and conducting site visits to homes with excessively high water use. With the help of a working group of experts representing all five UF/IFAS Extension districts, we've developed an irrigation evaluation process that agents can use to effectively evaluate a home's in-ground irrigation system. This includes identifying leaks, noting established plants that no longer need irrigation, and providing recommendations for proper run times. UF/IFAS Extension county agents now have access to a standard operating procedure for conducting irrigation evaluations, as well as a workflow form for use in the field. The form has the added benefit of collecting data on a statewide level, which will be used to improve programming, conduct research, and support impact reporting.

**McKayla Robinette, NC Agromedicine Institute**

**Strengthening Agricultural Disaster Response: Building Resilience and Preparedness Through Psychological First Aid**

North Carolina's natural resource communities have faced repeated disruptions from hurricanes, wildfires, flooding, and emerging diseases. Each disaster highlights the vulnerabilities of communities and ecosystems and the heavy toll on the Extension professionals who support recovery. Responders often prioritize community needs over their own, leaving them at risk for stress, burnout, and long-term emotional strain. This organized session reviews recent disaster relief and recovery efforts in agriculture and natural resources, identifying lessons learned in multi-agency collaboration, resource mobilization, and mental health integration. Building on these experiences, the session pivots toward preparedness by equipping Extension professionals with practical tools to strengthen resilience in themselves and their communities. Participants will also be trained and certified in Psychological First Aid: Listen, Protect, Connect, a nationally recognized framework for reducing stress, promoting resilience, and supporting individuals in crisis. The session incorporates presentation, group discussion, and hands-on practice, including real-world case examples and role-play activities. By the conclusion, participants will: (1) recognize the mental health dimensions of disaster response, (2) apply core Psychological First Aid skills with peers and community members, and (3) leave certified to implement these practices in their own disaster contexts. Immediate outcomes include improved awareness and confidence in applying PFA. Long-term impacts (3-12 months) include stronger Extension-led disaster preparedness, enhanced community trust, and greater resilience across natural resource systems.

**Amanda Rockler, University of Maryland, Sea Grant Extension; Amy Scaroni, Clemson University**

**Failing Forward: What Stormwater BMP Maintenance Can Teach Us About Resilient Practice**

Stormwater Best Management Practices (BMPs) are often installed with great fanfare-but over time, many fail to function as intended. The culprit is rarely flashy: it's maintenance. Inadequate maintenance remains one of the most common and underfunded causes of BMP under-performance and failure. This presentation examines how stormwater programs can transition from reactive problem-solving to proactive resilience by learning from past failures. Through case studies from Maryland and South Carolina, we'll examine examples of poorly maintained BMPs, including rain gardens choked by invasive species, bioswales where the water can't get in, floating wetlands grazed by geese, and bioretention systems rendered useless by upstream debris. These failures are not just technical-they're social. Participants will explore how lack of community buy-in, unrealistic maintenance expectations, and unclear ownership structures all contribute to systemic breakdown. We'll highlight how failure, when embraced as a teaching tool, can drive better design, more durable partnerships, and community stewardship. Drawing on lessons from behavior change theory and adult education, the session will provide attendees with tools to: Build programs that emphasize long-term care Engage landowners and volunteers more effectively Incorporate failure analysis into adaptive program design By confronting what doesn't work, we can build more resilient, sustainable, and community-supported stormwater infrastructure.

**Amy Rowe, Rutgers University**

**Making Onboarding Less Off-Putting: A Peer-to-Peer Mentoring Program for New Extension Agents**

Rutgers Cooperative Extension (RCE) recently launched an onboarding program designed to support pre-promotion agents by fostering peer-learning, providing professional development, giving guidance on administrative systems, and managing promotion and tenure paperwork. RCE currently has 27 pre-tenure faculty across extension at various stages -- with some about to go up for tenure, several that have been reappointed, and others that were just hired. The recent hires learn from those that have been in extension for years, while also bringing fresh perspectives and ideas for collaboration. It is expected that this peer-to-peer support network will lead to partnerships and camaraderie in addition to the formal mentoring committee provided by each extension department. Some examples of the training events provided include networking sessions, impact evaluation, publishing in extension, self-care, and the Institutional Review Board submission process. The planning team for this program is made up of representatives from each extension department, as well as from administration. This allows the leveraging of resources and to ensure that the needs of agents across extension are being met. Participation is voluntary, but more than 85% of pre-promotion extension faculty have attended at least one event. Anecdotal feedback has been positive, but the program's impact will be assessed upon reaching a more advanced stage of implementation. This presentation relates to the Confluence of Knowledge theme by demonstrating the power of peer-to-peer knowledge sharing and how important it is to support new hires in extension to ensure their success.

**Brooke Saari, South Carolina Sea Grant Consortium; Bryan Fluech, University of Georgia Marine Extension and Georgia Sea Grant**

**Trawl to Trash: The Building of a NETwork**

The Trawl to Trash program was created in 2021 by UGA Marine Extension and Georgia Sea Grant and expanded into South Carolina through the South Carolina Sea Grant Consortium. The goal is to build community capacity for long-term marine debris prevention through outreach and education. This innovative program provides supplementary income for commercial shrimpers during their off-season

through creation of upcycled stow bags made from derelict shrimp nets. The bags are then distributed to resource users to prevent littering, and to collect and remove debris from waterways. With additional marine debris grant funding, expanded program efforts in 2023 to enhance education and outreach capacity with existing and new collaborators including the Gullah Geechee Cultural Heritage Corridor. The objectives of the program are to: 1) Work directly with the commercial shrimping industry to make bags from derelict net material; 2) Engage with students to provide internship opportunities focusing on marine debris prevention and removal outreach; 3) Increase public knowledge and awareness of marine debris through prevention and removal opportunities, data collection, creative outreach, and environmental stewardship programming. Over $330,000 in grants have been awarded to support the multi-state initiative, which has resulted in 15 Georgia and South Carolina commercial shrimpers earning $48,200 by making 2,500 bags. Over 3000 adults and youth have been engaged through education and outreach events; and five graduate and undergraduate interns have been hired between 2021 and 2025. This presentation will discuss funding, collaborations, impacts, and overall results from the program.

**Ann Savage and Whitney Knollenberg, NC State University; Jane Harrison, NC Sea Grant**

**We Give a Shuck: Evaluating NC Oyster Trail Visitor Experiences**

The North Carolina Oyster Trail (NCOT) is designed to promote experiences showcasing locally produced North Carolina (NC) oysters, sustaining the economic, environmental, and social benefits to the seafood industry and coastal communities. The NCOT is made up of members that are shellfish producers, seafood markets & restaurants, educational venues, and partners that sell or promote the state's oysters year-round. Early organizers recognized that to ensure value in membership and continued trust of the experiences offered on the NCOT website, a survey was needed to assess the quality of the experiences visitors were having at trail sites. The Trail survey, launched in 2022, has garnered over 400 responses to date. The survey was designed to be simple for visitors to fill out at the end of their experience with questions on satisfaction with experience (e.g., quality of service, facilities), if the visitor would revisit and recommend, visitors affects (e.g., interest, knowledge in environmental benefits), how they heard about the Trail, and then general comments about their visit. Overall, results show visitors have been satisfied with their experiences, have an interest in returning and recommending, and have increased knowledge and interest. These results inform NCOT leaders on how to sustain high-quality visitor experiences and assess progress toward trail goals and objectives.

**Beth Scheckelhoff, Curtis Young, and Amy Raudenbush, The Ohio State University**

**Monitoring Agronomic and Horticultural Lepidopteran Pests Via an Ohio Scouting Network**

The Ohio State University has utilized a network of Extension Educators to monitor peak flights of several moth species whose larvae are significant pests of agronomic and/or horticultural crops. Over the past decade, the scouting network has expanded in scope to encompass a larger number of educators and key pests, particularly in Northwest Ohio. Educators currently monitor for western bean cutworm (WBC) (*Striacosta albicosta*), black cutworm (*Agrotis ipsilon*), true armyworm (*Pseuduletia unipuncta*), European corn borer (*Ostrinia nubilalisi*), corn earworm (*Helicoverpa zea*), fall armyworm (*Spodoptera frugiperda*), squash vine borer (*Melittia cucurbitae*), and box tree moth (*Cydalima perspectalis*). The scouting network was initially coordinated through the Department of Entomology in 2016 and has since been accomplished by county-based Extension Educators. Educators maintain bucket, wing, or heliothis traps with pheromone lures at local sites in their respective counties. Weekly moth counts are collected during the monitoring season, and pest updates are provided via an online newsletter, the Ohio State University Extension Crop Observation and Recommendation Network (C.O.R.N.) and blog site, the Buckeye Yard and Garden Online (BYGL). The scouting network has demonstrated the importance of monitoring for pests of interest as population numbers vary from year to year, affecting pest management practices. Trends in peak flight numbers for pests in Ohio, including resulting outbreaks, outreach efforts, and future plans for the scouting network will be discussed.

**Drew Schiavone, Paul Goeringer, and Elizabeth Thilmany, University of Maryland**

**Agrivoltaics as Land Stewardship: Decision Tools for Extension Educators**

As solar development expands across agricultural landscapes, Extension professionals are increasingly called upon to help landowners explore dual-use strategies that balance energy production with agricultural viability. Agrivoltaics, the co-location of solar arrays and agricultural activity, offers a land stewardship approach that addresses land-use conflicts while enhancing farm resilience. Agrivoltaics is inherently a natural resource Extension issue, where decisions about land use, energy infrastructure, and productivity intersect. This work showcases how Extension can lead interdisciplinary efforts supporting sustainable land use, economic diversification, and informed decision-making in rural communities. This presentation introduces two decision-support tools developed by University of Maryland Extension: a branching decision tree and cropping compatibility table. These tools synthesize agronomic, economic, and operational data for over 30 crops to help educators and stakeholders evaluate site-specific tradeoffs and identify viable agrivoltaic configurations. Developed through literature reviews, Extension interviews, and demonstration site planning, the tools support two core research streams: customizable decision-making resources for educators and lessons learned from engaging Extension professionals in agrivoltaic outreach and system design. Designed as flexible, educator-friendly resources (not prescriptive models), the tools can be adapted to local conditions and used in workshops, consultations, or planning processes. This session will walk through example use cases, outline evaluation strategies, and discuss future refinements based on user feedback. By integrating knowledge from energy, agriculture, and outreach, this work demonstrates how Extension can lead interdisciplinary efforts to support informed decision-making and sustainable land use in evolving rural landscapes.

**Delaney Serpan, Steven Frank, and Kelly Oten, North Carolina State University**

**From Research to Resources: Exploring Management for a New Invasive Pest**

In 2020, elm zigzag sawfly (EZS, Aproceros leucopoda), a defoliator native to eastern Asia, was documented in North America for the first time in Québec, Canada. Since then, EZS has been detected in at least 14 states in the eastern U.S. as far south as North Carolina. As a novel pest, little is known about the behavior and management of EZS in its recently expanded range. To address this, we conducted a pilot pesticide trial to evaluate the efficacy of two systemic insecticides that are accessible to stakeholders in much of the U.S., imidacloprid and dinotefuran. Both active ingredients significantly reduced larvae populations on infested trees when compared to the control. Treated trees also exhibited less defoliation and branch dieback when assessed visually. While conducting the pesticide trial, we simultaneously worked to engage and educate the public on EZS through the publication of various Extension materials. The materials primarily focused on identification and how to report EZS detections. Since the completion of the pesticide trial, we have shifted to also include management recommendations that provide tangible results to landowners and managers in the U.S.

**Kurt Smith and Robert Bardon, NC State University**

**International Extension Exchange**

Extension exists in part to translate research and solutions from the university to the community to solve real problems and address community needs and interests. The system well evolved in the United States. A recent effort between North Carolina State University and Penn State University has been launched to share our US system of extension and learn how our neighbors in Europe do outreach and engagement from the university to the community. In Europe the effort is sometimes referred to as the 'third task' or 'third discipline'. Teaching and research being the other two. Attempts are being made to launch an inaugural program between the United States, Finland, Sweden, Germany and the Czech Republic to

compare and learn from each other. The first workshop to be offered to both faculty and graduate students in either May of 2026 or December of 2026 in Prague in the Czech Republic at the European Center. This program will provide an update, and report on the program, and any lessons learned prior to the presentation.

**Kelsey Sosa, Wake County Cooperative Extension**

**Wake County Nature Smart Yards: Transforming Lawns into Living Landscapes**

It is time to rethink the typical American yard- the sprawling turf grass and manicured hedges that bear little resemblance to the native landscape. These yards are high maintenance and low reward. What if our yards could reduce homeowner headaches like erosion and flooding while multiplying their positive ecological impact? Wake County Nature Smart Yards introduces the nine principles of eco-friendly residential landscaping and encourages residents to start their environmental stewardship in their own backyard. In a populous, rapidly growing county like Wake County, these changes add up to real ecosystem benefits: more water infiltrating into the soil and recharging groundwater, less pollution reaching streams, more habitat for wildlife, and more vegetation and tree canopy. This initiative directly supports the Wake County One Water plan- a 50 year plan to support equal access to clean and abundant water- and Wake County's Growth, Land Use and Environment goals. The program utilizes a blended learning model of online videos and in-person special topics classes and demonstrations. Residents who complete the program and take action can achieve yard certification and proudly display a Wake County Nature Smart Yards sign. This presentation will share lessons from program design, implementation, and community response, with implications for other fast-growing regions looking to scale environmental stewardship at the household level.

**Dan Stark, Oregon State University; Norma Kline, Lauren Grand, Alicia Christiansen, and Stephen Fitzgerald, Oregon State University Extension Forestry and Natural Resources**

**Growing Coast Redwood and Giant Sequoia in Oregon - A Resource Guide for Small Woodland Owners**

Oregon State University Forestry & Natural Resources Extension agents were lacking practical information and resources to share with woodland owners who are currently growing, or interested in growing, coast redwood (Sequoia sempervirens) and/or giant sequoia (Sequoiadendron giganteum). Since both of these large tree species are native to California, an approach and tools were needed for woodland owners to determine whether redwoods and sequoias are suitable to meet their management objectives. A resources guide was developed to help landowners determine suitability and understand management considerations for these species, from suitability and growth requirements to harvesting and selling logs. Specifically, this project: Developed a needs assessment and user survey to assess who is growing redwoods or has a desire to, seedling sources, reasons for growing, etc.; Convened a Redwoods Science Meeting of researchers, forest managers, silviculturists, and other experts on redwoods for a facilitated, information-gathering meeting to help develop resources; Created a directory of redwood clones and seeds/seedlings sources. List of nurseries and other sources for redwoods and giant sequoia; Explored preliminary (early) assessment of growth & yield from existing plantings of redwoods; Produced an Extension publication for woodland owners in Oregon; and Provided a workshop for small woodland owners and others interested in various aspects of growing redwoods in Oregon. Although this project is specific to Oregon, coast redwood and giant sequoia are planted ubiquitously offsite throughout the United States as well in many other countries, including United Kingdom, Australia, Canada, and New Zealand.

**Anna Stockstad, University of Minnesota Extension; Angela Gupta, University of Minnesota; Emily Dombeck, University of Minnesota Extension**

**Climate-Ready Woodlands: A Resilience Toolbox for Woodland Stewards**

As Minnesota's climate changes, forests will face pressures from tree diseases and pests, heavier and more frequent rainfalls, warmer temperatures, and prolonged drought. The University of Minnesota Extension Forestry team responded to demand for climate-resilient tree and plant recommendations with an updated iteration of the Climate-Ready Woodlands program, including 33 region-specific lists developed through a multi-stage review process with agency partners in 2024. Using climate response data from the Minnesota Department of Natural Resources and the USDA Northern Research Station Climate Change Tree Atlas, we launched an updated and expanded suite of regionally specific recommendation lists for climate-resilient trees and understory plants with microfaunal benefits to support ecosystem biodiversity. To avoid the binary framing of climate "winners" versus "losers", we also developed lists of tree species for each ecoregion that are projected to be more vulnerable to climate change and/or forest health threats, with associated "refugia" management strategies to promote long-term resilience. These updated lists provide a robust spectrum of adaptation options for woodland stewards that meet diverse management objectives and can be applied on small or large acreages. By providing a toolbox of resilience-focused stewardship options, the Climate-Ready Woodlands program empowers woodland stewards to manage their woodlands for long-term health and resilience under a changing climate.

**Anna Stockstad, University of Minnesota Extension**

**Promoting Active Stewardship of Minnesota's Family Forests Through the Minnesota Woodland Steward Program**

The University of Minnesota Extension's Minnesota Woodland Steward program aims to improve the health and resilience of Minnesota's family forests through an intensive stewardship curriculum and direct participant engagement with landowner service providers. Offered 17 times since its 2016 launch, this 14-week hybrid course has reached almost 400 family woodland owners and impacted 22,000 acres across Minnesota. To evaluate long-term outcomes and impacts of this program on family woodland owners in Minnesota, we first administered a longitudinal survey to all past participants in 2024 and 2025. Nearly all survey respondents implemented stewardship practices after taking the course (95%) and worked with a natural resource professional in some capacity, such as asking questions (58%), getting a stewardship plan written (52%), and accessing cost-share funds (30%). The results of this summative evaluation, in addition to formative (post-course) surveys, indicated participants' desire for 1) a larger number of peer-to-peer learning opportunities, 2) increased communication from the Extension Forestry team after completion of the program, and 3) short-form, advanced training offerings on specific topics. In alignment with other Extension Forestry peer-learning programs across the country, the Minnesota Woodland Steward program engages woodland owners to support the active stewardship of family forests using a flexible, easily deployable course curriculum.

**Vinicius Taguchi and Angela Allen, North Carolina State University; Maribel Herrera, SeaGrant; William Hunt, North Carolina State University**

**Community-Driven Flood Mitigation in Wilson, NC: The Process is the Product**

The eastern portion of downtown Wilson, NC, located "east of the tracks," is a historically underserved community with a long history of flooding, deteriorating infrastructure, and underserved needs. However, East Wilson also has a long history of community organizing with several officially recognized neighborhood associations and is a National Register Historic District. Recently, the City of Wilson and

NC State secured a grant from the Golden Leaf Foundation to alleviate some of the chronic flooding affecting residents around two urban parks, where flood mitigation infrastructure will be constructed. Local knowledge is at the center of this effort. From the initial conceptualization of the project based on community-identified needs, we have relied on community partners to guide our efforts and direct our project. At the time of abstract submission, the community has been engaged in a meaningful, iterative, community-driven design process to retain the community's agency in defining the future of their built environment. This was not a requirement by the sponsor or any regulatory body; instead, it is simply the best way to ensure the best result for the people we are serving. Through two sets of community forums, surveys, and one-on-one canvassing by a SeaGrant intern, the community expressed preferences and concerns surrounding different flood mitigation strategies and infrastructure land uses. We would like to share this mutually beneficial and productive process with the ANREP audience. Engineering designs are currently being developed and should be ready for construction by the time of the conference.

**Nick Taylor and Kaitlin Robb Price, University of Florida**

**Building Extension Impact Through Utility Partnerships**

The UF/IFAS H 2 OSAV program demonstrates how Extension can increase its impact by partnering directly with water utilities to improve the effectiveness of conservation programs. Utilities have valuable data but are often resource constrained. Extension can bring educational expertise, community trust, and the ability to move households toward behavior change. H 2 OSAV bridges these strengths by using detailed water use data to identify high water-using homes and neighborhoods and then tailoring conservation outreach to those audiences. Through this data?driven approach, Extension professionals help utilities focus their limited resources where they can achieve the greatest water savings. The program has shown that targeted interventions, supported by Extension's credibility and outreach networks, result in more efficient conservation programs, stronger utility-community relationships, and measurable reductions in residential water use. This presentation will share lessons from H 2 OSAV, including strategies for building utility partnerships, methods for analyzing program impact, and examples of customized outreach and education activities that have proven successful in Florida communities. Participants will gain practical ideas for how Extension can leverage similar partnerships to expand its relevance, demonstrate measurable outcomes, and contribute to long?term water sustainability in their own states.

**Megan Weber, University of Minnesota Extension**

**Working with Artists and Technology to Create Engaging Learning Tools**

This session explores innovative, reproducible approaches for creating high-quality, hands-on learning tools for natural resources Extension programs, using examples from aquatic invasive species education. Our program collaborates with artists to create realistic, durable replicas of key invasive species and native look-alikes. One artist collaboration uses digital sculpting and 3D printing to produce accurate, hand-painted fish and crayfish models. A second creates precise aquatic plant replicas using paper. These models support an engaging, interactive learning environment for species identification that appeals to a diverse range of participants. This approach overcomes challenges like specimen availability (especially off-season), permitting, storage, decay, and participant discomfort with handling preserved specimens. Furthermore, we incorporate technology tools to enhance virtual learning. These tools allow participants to explore interactive images and digital environments on their own devices, adding context and helping them grasp complex concepts related to invasive species ecology, prevention, and management. This blend of physical and virtual resources significantly contributes to professional development by showcasing easily adaptable methods. In this session, I'll share examples of these collaborations and digital tools, what participants have said about them, and spark ideas about how these types of tools could be incorporated into your own Extension programming.

**Bonnie Wells, University of Florida/IFAS Extension Osceola County**

**Tees, Trees, and Natural Enemies: Integrating Biodiversity and Water Resource Conservation into Turfgrass Extension**

As Florida's population grows and urban development expands into natural habitats, Extension professionals must adopt innovative strategies and partnerships to sustain biodiversity and water resources. Golf courses, with permanent green spaces and minimally maintained out-of-play areas, offer a unique opportunity to enhance biodiversity and ecosystem services within urbanizing landscapes. This presentation highlights a five-year Extension program engaging golf course superintendents to implement biodiversity and water quality and conservation practices. Through site visits, educational workshops, and collaboration with the golf industry, the program has facilitated wildflower plantings for beneficial insects, bird nesting boxes, and littoral zone enhancements, resulting in eight Florida golf courses earning Audubon International Cooperative Sanctuary Program (ACSP) certification since 2020. As an active ACSP recertification auditor and statewide educator for the Lake and Aquatic Plant Management module of the Florida Golf Course Best Management Practices Certification program, I integrate applied research, environmental education, and field consultation to promote sustainable golf course management. This initiative has reached over 1,100 professionals, garnered national recognition including an excellence in Extension for environmental quality and natural resources award, and led to invited webinars for the Golf Course Superintendents Association of America. Attendees will learn how Extension can shape the future of natural resource conservation by leveraging nontraditional landscapes like golf courses to protect biodiversity and water resources across Florida and beyond. This program exemplifies a confluence of knowledge by integrating research, education, and industry collaboration to chart a sustainable future for natural resource Extension in evolving landscapes.

**Jacob Wiliams, UGA Extension**

**Cultivating Knowledge: A Native Plant and Forest Farming Initiative in Appalachia**

Crops such as ginseng, goldenseal, bloodroot, elderberry, and pawpaw are steeped in cultural lore that captures public interest, yet Extension resources to engage communities around these plants are limited. In Union County, Georgia, Extension is addressing this gap by developing an outdoor classroom, supported by the Georgia Soil and Water Conservation Commission, to teach prospective growers how to establish forest farms. A central feature of the project is a riparian buffer that also serves as a native orchard, including red mulberry, elderberry, pawpaw, and persimmon-plants that thrive in riparian habitats while producing edible fruits. The forest farming demonstration area educates the public on managing rare, non-timber forest crops (NTFCs) to enhance property value. Invasive species such as kudzu, Chinese privet, and hemlock woolly adelgid have been removed to protect native plants and create space for new plantings. Additionally, the site's stream, stocked with trout, provides hands-on opportunities for youth to explore aquatic macroinvertebrates and understand ecosystem connections. By integrating forest farming, invasive species management, and aquatic education, the project promotes a holistic understanding of how forests, waterways, wildlife, and plants are interconnected while fostering sustainable stewardship of local natural resources.

**Renee' Williams, Billy Thomas, and Ellen Crocker, UK Forestry and Natural Resources Extension**

**From the Woods Today: Bridging the Digital Gap Between Forests and the Public - Assessing the Impact of an Online Progra**

From the Woods Today is a weekly, live streamed on-line program produced by the University of Kentucky's Forestry and Natural Resources Extension team. It launched in response to the COVID-19 pandemic, when in-person Extension programming became challenging to conduct but the public's need

for information was greater than ever. This show features current information on woodlands and wildlife topics including regular segments on woodland management, tree identification, invasive species, forest health, wildlife habitat management, and many other forestry-related segments. The program has evolved into a multi-platform outreach tool that connects Kentuckians and beyond to forestry and natural resource information. More than 260 episodes of the show have aired since it started in 2020. While it has been very popular (over 113,000 views on YouTube, over 16,000 watching live shows and 64,000 podcast downloads) and consistently earned positive remarks from viewers, assessing its impact is more challenging to determine. To better understand the value, we surveyed viewers to learn how the show has influenced their engagement with woodland and wildlife management. We also asked viewers to estimate the changes they have perceived due to what they have learned on the show (financially and on-the-ground) to provide us with more concrete information about the impact of this program and solicit ideas for future improvement. This session will explore those survey findings and how From the Woods Today leverages digital storytelling and audience engagement to expand the reach of Extension programming.

**Martin Wunderly and Heather Kolich, University of Georgia**

**Factors and Barriers of Extension Programming Adoption: A Case Study of Georgia Green Landscape Stewards**

Because Cooperative Extension agents decide what educational programs to offer to community clients, they are the gatekeepers of Extension information dispersal. The decision of agents to adopt or not adopt a statewide Extension program impacts program success and longevity. This case study examined agent awareness, attitude, and factors influencing adoption of a sustainable landscapes program. Agents who adopted the program identified several factors that influenced their decision: relevant topics, fits client needs, plan of work, or the program provided convenient resources. Lack of awareness of the program was a primary barrier to adoption. Single factors, such as lack of personnel or lack of time, prevented adoption by some agents, despite indication that their clients would be well served with this program. A comparison across four different organizational districts and population densities provide insight for program delivery in the future. Teaching the program in person increased participation and metro areas were more active, yet population density did not fully explain program use. A few rural counties offered the sustainable landscape program series and found interest amount certain demographic client groups.

**Gary Wyatt, University of Minnesota; Kira Pollack and Angela Gupta, University of Minnesota Extension**

**Developing Climate-Ready Windbreak and Silvopasture Recommendations Using a Delphi Process**

Members of the University of Minnesota Extension Forestry forestry team used an interactive Delphi process to engage agroforestry professionals and practitioners to develop climate-ready agroforestry practices. The result of three rounds of asynchronous, survey-style feedback are recommendations for climate-ready windbreaks and silvopasture practices. This presentation will include successes and challenges of finding participants for the Delphi process, the Delphi methodology and how it can be applied to other challenging problems, and how the Extension Forestry Team combined that information to create windbreak and silvopasture recommendations. We will also discuss why we did not create recommendations for the other three types of agroforestry practices: alley cropping, forest farming and riparian buffers, and the team's plans to continue to develop management recommendations from the Climate-ready woodlands tree and plant lists. There will be time for discussion during this presentation. If the Climate-ready woodlands Organized Session abstract submission is accepted please disregard this submission.

**Yilin Zhuang, University of Florida**
**Ondine Wells, UF/IFAS Extension Marion County**

**Understanding Barrier and Opportunities for Water-Efficient Landscaping in Florida's Green Industry**

This project represents the initial stage of engaging Florida's green industry to better understand the current situation surrounding water-efficient landscaping. Through interviews, surveys, virtual focus groups, and a stakeholder open house, we gathered insights from ornamental growers, turf producers, builders, developers, irrigation professionals, homeowner associations, utilities, and regulatory partners. Participants identified barriers such as high upfront costs, limited availability of water-efficient plant materials, fragmented regulations, and gaps in both professional training and homeowner knowledge. Opportunities for progress included breeding drought-tolerant cultivars, expanding adoption of native plants, improving soil health practices, and integrating digital tools such as water metering and water budgeting. A recurring theme was the importance of cross-sector collaboration to align industry practices, policy development, and homeowner education. These findings provide a foundation for Extension programming and future research, ensuring that subsequent efforts build on stakeholder-identified needs and priorities for advancing water-efficient landscapes in Florida.

**Kevin Zobrist, Washington State University**

**Long-Term Impacts of Multi-Session Courses vs. Single Day Education Events for Family Forest Owners**

Extension forestry education programs are offered at multiple scales, including comprehensive multi-session courses, single day events, and individual topical workshops. Washington State University (WSU) Extension offers family forest owners a comprehensive multi-session forestry course, a full day summer field day, and a full day winter school. These programs represent different levels of investment in time and resources for both Extension and the participants. This study looks at the relative effectiveness of multi-session vs. single day education programs in terms of long-term impacts. For the period of 2008 - 2024, follow-up surveys were sent to program participants one and three years following the event. This presentation summarizes the results of those surveys and compares levels of behavior and condition changes resulting from knowledge gained at these education programs. This presentation also discusses the implications for forestry educators in terms of where to best invest program resources to maximize long-term impacts.

## Organized Sessions

**Holly Campbell, University of Georgia; Julie McConnell and David Outerbridge, University of Florida-IFAS Extension; Marguerite Beckford and Thomas Derbes, University of Florida-IFAS; Sourabh Chakraborty, North Carolina A&T University**

**Communicating for Change: Media Tools to Drive Engagement in Natural Resource Issues**

During 2025, the ANREP Professional and Leadership Development Committee provided a 12-part webinar series, training approximately 1140 ANREP members, Extension, and other professionals to better reach their target audiences. Over the course of the series, twelve expert speakers spotlighted traditional and modern media outlets to extend the reach of Extension programming, helping increase Extension relevancy and value in the digital age and into the future. Two of the webinar topics included high impact video production and implementing the Rule of Three for public messaging. Speakers will introduce Rule of Three concepts and best practices for the development of a video storyboard. Participants will then work together in groups to (1) develop their Rule of Three key messages and talking points using a common natural resource issue (ex., threatened species) and (2) work together to build a storyboard to communicate their key messages and talking points though video. A video storyboard is a practical outline that provides a pre-production blueprint for a video project in chronological order, helping creators visualize the narrative and save time on filming and editing. Group(s) will present their video storyboard(s) for feedback. This session prepares participants to apply new skills in technology to provide leadership and civic engagement in natural resources. Outcomes from the session include participants developing ideas for communicating key messages through video, immediately after the session (short-term outcome) and applying their new skills through video delivery 9-12 months following the session (long-term outcome).

**Brad Kunsman, Chris Canfield, and Genny Christ, Penn State Extension – CACAT**

**Training Conservation Professionals to Recognize and Address Natural Resource Concerns on Ag Lands**

Pennsylvania has developed a novel approach to natural resource conservation by integrating dedicated state funding with comprehensive workforce training. This unique statewide approach equips natural resource professionals to identify soil and water resource concerns on agricultural lands and translate them into actionable best management practices (BMPs). Th is seminar will include both instructional content and applied, hands-on activities. Participants will experience a training modul e from Pennsylvania's program, where they will analyze aerial imagery and field scenarios to identify potential soil, water, and nutrient resource concerns. They will then practice aligning those concerns with appropriate BMP recommendations, reinforcing the connection between technical assessment, planning, and program funding opportunities. Group discussions will encourage knowledge exchange across disciplines, linking local practices to broader strategies for water quality and resource protection. Desired outcomes include increased awareness of how Pennsylvania's training program represent s a replicable model for professional training in other states, and improved confidence in recognizing and addressing natural resource concerns on ag lands. Following the session, participants will demonstrate the ability to identify priority concerns and match them with potential BMPs. Within 3-6 months, attendees can apply these skills in their professional roles, leading to more effective soil and water conservation. By connecting funding, workforce training, and practical assessment tools, this session embodies the conference theme, Confluence of Knowledge: Charting the Future of Natural Resource Extension, and highlights Pennsylvania's leadership in conservation innovation.

**Ginger Orton, University of Georgia**

**Let's Map it Out: Strategic Stakeholder Identification and Engagement Planning**

Effective Extension programs in natural resources depend not only on strong technical expertise but also on the ability to build trust, coordinate diverse partners, and plan for long-term engagement. Stakeholder mapping is a practical, research-based tool that helps Extension professionals visualize relationships, prioritize efforts, and develop intentional strategies for collaboration. This interactive workshop will introduce participants to stakeholder mapping techniques, including influence-interest grids and other visual and theoretical frameworks, that can be applied to natural resource projects at multiple scales. Through small-group exercises, participants will practice mapping real-world scenarios from their own work, identify opportunities and gaps in outreach, and begin drafting a tailored engagement plan for key stakeholders. Group discussions will highlight common challenges and innovative approaches for translating maps into effective communication and partnership strategies, perhaps revealing untapped potential. The session directly aligns with the conference theme, Confluence of Knowledge: Charting the Future of Natural Resource Extension, by providing tools for integrating diverse knowledge streams and strengthening stakeholder networks around sustainable resource management. Outcomes: At the conclusion of the session, participants will leave with hands-on experience using mapping tools, a draft plan to guide engagement in their own programs, and resources for independent mapping and strategizing. In the following 3-6 months, participants can apply these skills to improve collaboration, increase stakeholder buy-in, and strategically allocate limited resources. Over 9-12 months, successful use of these tools can support more impactful and efficient partnerships.

**Keith Phelps, Johanna Desprez, and Scott Hershberger, University of Wisconsin-Madison Division of Extension**

**Envisioning the Future of Extension Forestry Climate Change Programming**

Climate change presents many challenges to the resilience and economic viability of forests. At the same time, forests can play an important role in mitigating climate change. Successfully addressing climate change will require Extension to take new approaches in outreach to woodland owners and natural resource professionals. In this session, we will facilitate small-group discussions on three main topics related to the future of forestry outreach: Best practices for Extension programming on forest carbon. Extension's role in building tree nursery capacity. Extension's role in incorporating climate change considerations into forest management plans. In each small-group discussion, we will provide the opportunity for attendees to share the programming that they have been involved with, the resources they have found most helpful, and the lessons they have learned. We will end with a full-group discussion reflection activity. This session is designed for members of the Extension Forestry Climate Community of Practice in the Midwest and Northeast, but anyone working at the intersection of forestry and climate change is welcome to attend and contribute. End-of-session outcomes: You will understand the Extension programming your colleagues are doing related to forestry and climate change. You will build a network of colleagues for sharing and/or collaborating on outreach materials. Outcomes 9-12 months following the session: You will apply what you learned to your own Extension programming. You will be comfortable reaching out to colleagues in other states to collaborate with and continue sharing lessons learned.

**McKayla Robinette, NC Agromedicine Institute**

**Strengthening Agricultural Disaster Response: Building Resilience and Preparedness Through Psychological First Aid**

North Carolina's natural resource communities have faced repeated disruptions from hurricanes, wildfires, flooding, and emerging diseases. Each disaster highlights the vulnerabilities of communities and

ecosystems and the heavy toll on the Extension professionals who support recovery. Responders often prioritize community needs over their own, leaving them at risk for stress, burnout, and long-term emotional strain. This organized session reviews recent disaster relief and recovery efforts in agriculture and natural resources, identifying lessons learned in multi-agency collaboration, resource mobilization, and mental health integration. Building on these experiences, the session pivots toward preparedness by equipping Extension professionals with practical tools to strengthen resilience in themselves and their communities. Participants will also be trained and certified in Psychological First Aid: Listen, Protect, Connect, a nationally recognized framework for reducing stress, promoting resilience, and supporting individuals in crisis. The session incorporates presentation, group discussion, and hands-on practice, including real-world case examples and role-play activities. By the conclusion, participants will: (1) recognize the mental health dimensions of disaster response, (2) apply core Psychological First Aid skills with peers and community members, and (3) leave certified to implement these practices in their own disaster contexts. Immediate outcomes include improved awareness and confidence in applying PFA. Long-term impacts (3-12 months) include stronger Extension-led disaster preparedness, enhanced community trust, and greater resilience across natural resource systems.

# Posters

**Theresa Badurek, University of Florida**

***Planting Ideas, Growing Listeners: Master Gardeners on the (Podcast) Mic***

Podcasts are a popular way to share information to a wide and diverse audience in an entertaining way. Listeners can tune in and learn while gardening, doing chores, exercising, driving, etc. Bringing a podcast to life and regularly publishing is very time consuming, which is a barrier to many extension professionals. OBJECTIVES: The objective of this program includes creating, recording, editing, posting, and marketing a monthly podcast utilizing Master Gardener Volunteers and featuring extension faculty, staff, and other Master Gardener Volunteers as guests. METHODS: The Master Gardener volunteer podcast team worked with agent and other UF/IFAS faculty to determine the hardware and software needed to host and promote a successful podcast called "Planting Pinellas". Volunteers write content, host, edit, publish, and market every episode. RESULTS: Extension faculty, staff, and volunteers learned how to set up the hardware and software for podcast support. New technology was learned by the whole team, but especially by the Master Gardener Volunteer podcast team. Promotional materials and social media were created to support this project- and all done almost exclusively by Master Gardener Volunteers. CONCLUSIONS: Utilizing Master Gardener Volunteers to host and promote an educational podcast is a great way to reach a wide and diverse audience while expanding the technology skills of the volunteer team and saving faculty and staff time.

**Michele Bakacs, Rutgers Cooperative Extension- Middlesex and Union Counties; Angela Monaghan, Rutgers Cooperative Extension of Middlesex County**

**Wild Native Seed Collection and Propagation Teaches Extension Volunteers About Biodiversity**

Since 2019, Rutgers Cooperative Extension of Middlesex County has trained Extension volunteers in habitat conservation through our native plant teaching nursery. More recently, we launched a wild native seed collection project focused on herbaceous perennials that serve as keystone species. Now in its third year, the project aims to propagate native plants from local ecotypes and enhance biodiversity in managed landscapes across central New Jersey. In response to public interest, we've expanded our educational offerings to include winter native seed sowing and native seed libraries. Our objective is to deepen Extension volunteer knowledge and skills in these areas, thereby increasing our capacity to deliver public education. Volunteers receive training in species identification, botanical nomenclature, seed collection protocols and permissions, ethical collection practices, dispersal mechanisms, seed quality and care, dormancy, and germination techniques. Seeds are germinated in our nursery, and the resulting plants are donated to local habitat projects. To date, 36 volunteers have been trained and organized into 10 genera-specific teams (e.g., Solidago sp . team, Eutrochium sp . team), which monitor and collect seeds at field sites. This has been a new experience for many-requiring patience and long-term observation of wild plant species. Most volunteers had experience only with vegetable seeds, making wild native seed monitoring a significant shift. Post-training surveys revealed the greatest gains in seed collection protocols, ethical practices, maintaining genetic diversity, and recognizing seed maturity. Challenges include preventing over-collection and harvesting immature seeds and improving species identification skills.

**Ashley Belle, University of Illinois; Brenna Ellison, Purdue University, Karen Byrd, Purdue University; Melissa Prescott, Case Western Reserve University**

**Tackling Food Waste: Household Insights for Sustainable Communities**

Our presentation will explain the magnitude of food waste in the United States, with a particular focus on household-level waste. We will highlight the economic, environmental, and social impacts of food waste to demonstrate the urgency of addressing this issue. Next, we will introduce the questions guiding our applied research study: What do food management behaviors look like among households in the Champaign-Urbana, Illinois community? How do these behaviors relate to the amount of food waste generated? In what areas are households seeking to improve their satisfaction, confidence, and skills related to food management? We will then present our data collection strategy, which includes an online survey and a food waste audit conducted in the Champaign-Urbana community. Following this, we will present our findings using a variety of visual aids. These will include charts and graphs summarizing results from the food waste audits, as well as tables illustrating associations between food management behaviors and waste generation. We will also examine how food management behaviors and waste may differ by socio-demographic factors such as age, income, and household size. In the final section, we will discuss the implications of our research and how our findings can inform targeted Extension education and outreach efforts that address the specific needs of households. By analyzing household behaviors that drive food waste, this research supports the sustainable use of natural resources.

**Amanda Bennett, Gregory Meyer, Trevor Corboy, Nanette Neal, J.T. Benitez, and Marina Miquilini, Ohio State University**

**Sustainable Beekeeping: Equipping Newbies with Tools for Success**

The Southwestern Ohio Beekeeper School has been a staple for beekeeper education in the area for many years. Media attention to the decline in bee numbers, combined with a renewed interest in sustainable agriculture and local foods has led to a spike in people desiring information about beekeeping. Extension is uniquely posed to provide this education with timely scientific research and non-biased information. Although it is hard to capture, many sources agree the average age of a beekeeper in the U.S. is close to 50 years of age. There is a need to get more young people involved in the pursuit. For that reason, the target audience for this school is beekeepers with less than five years of experience, which includes people that have never kept bees. A "Getting Started" series of four classes is offered to teach individuals about bee equipment, bee biology, installing packages and first year management. Evaluations indicated that 85.1% of people that had never kept bees were more likely to become beekeepers after attending the school. More advanced classes for moderately experienced beekeepers or those that have attended in the past are also offered. In this session, we will cover the specifics of this grass roots program and ways to collaborate with local Extension educators, beekeeping associations, and other organizations to replicate the content. The results from a thorough post-program survey will be shared to inform educators who are considering offering similar programs.

**Jamie Bookwalter, NC State University**

**Fraser Fir IPM: Combining Pesticide Trials, Natural Parasitoids, and Phenology to Untangle Armored Scale Control**

Fraser fir IPM is extremely difficult due to two invasive species of armored scales (cryptomeria and elongate hemlock scale). Armored scale control in general is laborious due to armored scale protective covering and feeding habits, and the fact that their populations in Christmas tree fields can spike due to the relatively lengthy harvest cycle of the trees. In addition, these two armored scales are of particular regulatory concern as the economic thresholds of these scales on trees bound for shipment to many

states is zero. Therefore, creating a protocol for treatment that is both environmentally and economically sustainable is challenging. To address these challenges the NC Christmas Tree IPM program is conducting basic and applied research to create armored scale management decision protocol. We are performing multi-year phenological studies to understand armored scale life cycles and are working to connect life events, growing degree days, and natural parasitoid population dynamics to the efficacy of neonicotinoids and other pesticides.

**Susan Boser, Penn State Extension**

**First Investigation of Stream Health Protocol & Educator Workshops**

Penn State Extension's First Investigation of Stream Health (FISH) protocol is a visual assessment survey designed to detect early signs of improvements on small streams. This protocol was designed to be easy to learn, family-friendly, and require minimal to no equipment, making the protocol accessible to anyone's budget. As users walk through the protocol, they learn how various stream parameters, such as amount and quality of streambank vegetation, embeddedness of stream bottom habitat, and presence of stream life and other organisms, are impacted by land use changes and stream improvement projects. This presentation will introduce attendees to the protocol and the importance of the parameters included. Additionally, this presentation will look at the impacts of a newly funded project to launch free educator workshops and distribute educator kits to help with implementing the FISH protocol and further stream studies. These tools can help high school and middle school teachers address Environmental Literacy and Sustainability STEEL standards.

**Bozeman, University of Georgia**

**Bats Are Where It's At!**

Bats are critical for ecosystem health, providing pest control, pollination, and seed dispersal, yet many species face population declines due to habitat loss, disease, and human disturbance. To engage youth in bat conservation and build community awareness, Georgia 4-H partnered with the Georgia Bat Working Group to launch a bat education program for 2025. The program trains Extension professionals, 4-H volunteers, and youth leaders to deliver hands-on, research-based lessons about bat biology, ecology, and conservation. The program emphasizes easy-to-implement lesson plans and experiential learning activities suitable for school clubs, community programs, and informal education settings like fairs and festivals. Participants learn about bat life cycles, echolocation, roosting behavior, and threats to populations, and then adapt these lessons for their communities. Evaluation data from pilot sessions indicate high satisfaction among adult and youth participants, increased knowledge about bat ecology, and enhanced confidence in teaching bat conservation. This program demonstrates the power of youth-adult partnerships and scalable, research-based curriculum to foster conservation awareness. Attendees will gain access to lesson plans, training materials, and implementation strategies, providing a replicable model for Extension and 4-H programs seeking to engage communities in bat and wildlife conservation. During the session, participants will receive an overview of the lessons and educational displays developed and sample one of the activities. As part of a reflection exercise, attendees will brainstorm ways these free resources could be used within their work as Extension professionals.

**Kasey Bozeman and Josie Davis, University of Georgia**

**Paws, Claws, and Cause: Youth Teaching Wildlife Conservation**

The Georgia 4-H Wildlife Ambassador Program, launched in partnership with the Georgia Department of Natural Resources (DNR), equips high school youth to become advocates and educators for sustainable natural resources. Building on the long-standing 4-H Ambassador model, this innovative program certifies

participants as Project WILD educators during a multi-day residential training, where they gain content knowledge, facilitation skills, and experience leading hands-on, research-based activities. The program's objectives are threefold: (1) increase youth knowledge of Georgia's wildlife through research-based curricula and ongoing professional input, (2) develop facilitation and leadership skills so youth can effectively teach others, and (3) expand conservation education outreach in Georgia communities. Following their initial training, Ambassadors commit to completing six learning and six teaching experiences. Throughout the year, DNR Wildlife Biologists provide webinars highlighting timely species updates and emerging conservation issues, connecting youth to real-world science and management practices. Educational methods emphasize experiential learning, peer-to-peer teaching, and sustained mentorship. Evaluation data from program surveys and anecdotal stories indicate strong outcomes: Ambassadors report increased knowledge, improved teaching confidence, and a deeper connection to natural resources. This session will highlight program design, evaluation results, and partnership strategies, while offering practical tools for replication in other states. With Project WILD as a national curriculum and state natural resource agencies as potential partners, this model is highly transferable and impactful.

**Kasey Bozeman, Becky Griffin, and Laura Mirarchi, University of Georgia**

**Bee the Change: 4-H Youth Pollinator Ambassador Program**

Pollinators are essential to agriculture and healthy ecosystems, yet their populations continue to decline due to habitat loss, pathogens, pesticides, and climate change. To address this issue through youth leadership, Georgia 4-H launched a Pollinator Ambassador Program in 2020. For the past five years, nearly 60 high school students from across the state were selected and trained by university entomologists and environmental educators to serve as community educators and advocates for pollinator conservation. The Ambassador model emphasizes both self-learning activities (gaining knowledge and skills) and sharing activities (teaching others). During the annual training, Ambassadors developed individualized action plans to guide their outreach throughout the school year. Extension professionals provided subject-matter expertise, youth development support, and ongoing mentorship. In 5 years, Ambassadors have conducted 200+ learning and sharing activities, directly reaching 2,500+ people and indirectly engaging nearly 12,000 more through other means. Activities ranged from creating community murals and educational signage in public parks to teaching interactive lessons in schools, hosting honey tastings, collaborating with local beekeepers, and developing social media campaigns. These creative approaches allowed youth to connect science with community action while raising awareness of pollinator conservation. The program demonstrates that youth-adult partnerships are a powerful strategy for natural resource education. Participants will learn about program design, training structure, evaluation results, and replication strategies for Extension systems through this poster. Promising practices and how youth-led outreach can inspire broader community engagement in protecting pollinators and sustaining ecosystems will also be shared.

**Sarah Cain and Jennifer Fawcett, NC State Extension Forestry; David Godwin, Southern Fire Exchange (SFE); Sarah Crate, Longleaf Alliance**

**Fire Festivals: Fueling Support for Prescribed Fire**

Prescribed fire is a critical tool for maintaining fire-dependent ecosystems and reducing wildfire risks. However, public perception and understanding of prescribed fire can significantly influence its implementation. This poster explores the growing role of prescribed fire festivals as an innovative science communication and extension education tool to enhance public engagement and support for prescribed fire practices. Fire festivals are community events designed to celebrate and educate the public about the benefits of prescribed fire. These festivals feature interactive, hands-on activities, live burn demonstrations, and information sessions led by trusted messengers. By providing opportunities for public observation and engagement, fire festivals aim to shift public perception positively and foster a

deeper understanding of fire management practices. Our poster highlights some of the longest-running fire festivals in the U.S., examines their impact on public awareness and support for prescribed fire programs, and offers suggestions for those interested in coordinating new prescribed fire festivals. We present case studies from established festivals, showcasing their effectiveness in communicating the science and necessity of prescribed fire. Additionally, we discuss methods for measuring the impact of these festivals on public perception and the potential for expanding this model to other regions. Feedback from these events suggests that fire festivals are a valuable tool for science communication, capable of building community support and enhancing the implementation of prescribed fire programs. By fostering a collaborative environment, these events contribute to the broader goal of sustainable fire management and ecosystem health.

**Audra Cochran, University of Idaho Extension; Ava Goetz, University of Idaho; Louise Allen, Orofino High School; Madeline Goebel, University of Idaho**

**Where Learning Takes Root: Student-Driven Research on Seedling Protection Treatments**

University of Idaho Extension partnered with the Orofino High School dual-credit forestry class to establish a western white pine survival trial that engaged students directly in applied field research. Working alongside Extension educators, students helped design the study, plant seedlings, implement treatments, and collect and analyze data. Additional support from Kwizda and the Idaho Department of Lands made the trial possible through treatment materials, technical insight, and site coordination. The study consisted of nine plots at the Clearwater County Boy Scout Camp site, arranged across three treatment groups: Vexar tubing, Trico repellent, and an untreated control. Preliminary data collected in October 2025 indicated substantial variation in survival among treatments. Seedling survival in Vexar plots averaged 71.8%, compared to 25.6% in control plots and 18.0% in Trico-treated plots. Most mortality appears linked to drought stress and competition from surrounding vegetation. Browse damage was minimal, despite clear signs of deer and elk presence in the area. Vexar tubes may have contributed to improved survival by providing both physical protection and microclimate buffering. This collaborative project demonstrates the value of student participation in authentic natural resource research while generating actionable insights for reforestation efforts. Future work will include replanting all plots with ponderosa pine to evaluate species-specific resilience and continuing to engage students in data-driven inquiry. One student expanded this project into an undergraduate research program at the University of Idaho, further demonstrating the study's role in building a pipeline of future natural resource professionals.

**Kristen Crawley, University of Arkansas Cooperative Extension Service**

**Northwest Arkansas Urban Creek Guide**

With an estimated 36 people moving to Northwest Arkansas daily, the area has risen to eighteenth on the list of fastest growing metropolitan areas. With this rapid growth comes many issues to infrastructure and natural resources. One rising issue is the number of newcomers with little to no connection to their waterways. NWA sits at the headwaters of three major watersheds and has many beautiful creeks and streams, if one knows where to look. The NWA Urban Creek Guide is currently a webpage with future print modes to introduce these newcomers to creeks near them that they can visit, recreate in, and learn more about. The Creek Guide lists fourteen creeks, their public access point, the creek's route to the Ocean, what activity guests might say the creek is best for, and a short description. This guide will help get people in the water, where they can connect and feel a sense of place in their new home, while also planting a seed to promote water protection strategies in this fast-changing landscape.

**Ellen Crocker, Frannie Preston, and Matthew Springer, University of Kentucky**

**Mobilizing Invasive Species Ambassadors- Assessing the Kentucky Invasive Plant Education Training**

Kentucky has a wide range of invasive plants, with new species arriving regularly and known invasives continuing to be sold. Unfortunately, the state lacks public resources to facilitate widespread monitoring for and management of invasive plants, and there is a lack of public awareness about invasives in general. To fill some of these gaps, we developed an in-depth educational program targeted at engaged members of the public. We used a train-the-trainer model to train Extension agents, master naturalists, master gardeners, and other community leaders. This program, which included both in-person training and a range of other resources, trained participants to monitor for invasive plants, select non-invasive plants for landscaping, and respond to infestations. The program also included guidance for the participants to lead invasive plant programming in their communities. To understand the impact of this program we surveyed participants before their training, immediately after the training, and 6-months after their training. We assessed changes in the ability of participants to identify, report, and manage invasive plant species as well as their leadership in local invasive plant-related efforts.

**Carsen Dean, Oconee County Extension; Allison Johnson, UGA Extension- Dade County**

**Going Batty in Oconee County: Engaging Families, Busting Myths, and Promoting Bat Education Through a Community Festival**

Bats play a vital role in pest management across both natural and agricultural ecosystems in Georgia. However, their populations are declining due to habitat loss, and disease. Misunderstandings about bats also can lead to conflict, especially when they roost in homes or other structures. Educating the public about the benefits of Georgia's flying mammals and offering solutions for coexisting with them is crucial. To address this need, Oconee County Extension created the Oconee County Bat Festival. The 4-hour event aimed to raise awareness about bats and demonstrate practical ways to mitigate human-bat conflict, such as installing bat houses for a local park's large bat population. The festival attracted 94 participants and featured educational activities, art exhibits that dispelled common bat myths, and the installation of six new bat houses. Attendees were invited to complete a survey immediately following the event. All respondents (100%) reported either sustained or increased awareness and appreciation of bats' ecological role. Additionally, 69% noted a rise in their knowledge about bats, their benefits, and how to support them. 94% said they were likely or very likely to adopt new bat-friendly practices. By implementing what they learned, participants can help support local bat populations through actions like providing housing, reducing pesticide use, and promoting insect diversity, steps that ultimately benefit both natural habitats and agricultural systems.

**Lauren Errickson, Rutgers Gardens**

**Enhancing Forest Stewardship Through Student and Community Engagement at a University Botanical Garden**

Helyar Woods, the 60+ acre forest within the Rutgers University botanical garden, presents opportunities for widespread, collaborative engagement of diverse public audiences. This case study highlights key initiatives that provide a robust model for ecological and programmatic sustainability. Ecological forest stewardship includes collaboration with Extension-based Environmental Stewards leading a Strike Team removing invasive plants; concurrently, forestry students and volunteers learn proper techniques planting native trees alongside expert botanical garden staff. Collaborative design, fabrication, and installation of a woodland boardwalk constructed with lumber milled by forestry students following a campus tree removal project demonstrates sustainable improvement of public trail access. Community Eagle Scout candidates

led volunteers constructing a footbridge, ensuring ecologically-sound access near wetland areas; clearing trails to improve visitor experience and forest health; and installing trail markers toward safe, low-impact access. Youth engagement cultivates the next generation of forest stewards: 4-H Camp welcomes children to experience and learn from the forest. Opportunities for students of natural resources abound, and recent initiatives to expand engagement yielded 'Chromatic Canopies,' a low-impact public art installation highlighting forest ecology. Engagement to support restoration is exemplified by alumni who donated to collectively rebuild a footbridge that now stands in tribute to their cohort, allowing visitors trail access and connection to ecology. These broad and successful educational partnerships across Extension, university, and community members enable collaborative forest stewardship practices that address current issues in natural resources and conservation through a lens of sustainability, preserving campus-based forest ecosystems for future generations.

**Paige Filice, Michigan State University Extension**

**Empowering Lake Stewardship: Insights from Michigan State University Extension's Introduction to Lakes Online Course**

Inland lakes are dynamic ecosystems that present complex management challenges for local communities. Effective stewardship often depends on the decisions of local governments and stakeholders, who may lack access to the latest scientific knowledge and resources. Sound lake management requires a foundational understanding of lake ecology, available management strategies, and relevant legal frameworks. Michigan State University Extension's Introduction to Lakes Online course addresses this need by equipping residents, decision-makers, and community leaders with research-based information and tools to support informed lake management. Since its launch in 2015, more than 2,500 participants from across the United States have completed the course. Offered annually, this interactive, synchronous program includes six thematic units featuring video lectures, discussion forums, hands-on activities, quizzes, curated resources, and live webinars. Course evaluations consistently demonstrate strong outcomes: 97% of participants report increased awareness of lake management techniques, and 98% would recommend the course to others. In 2025, a long-term evaluation was conducted to compare the knowledge and attitudes of Michigan inland lake riparian's who completed the course with those who had not. This study provides valuable insights into the course's lasting impact on inland lake stewardship and can be used as a guide for future educational efforts.

**Kelci Free, Chrissy Lucas-Woodruff, and Wiley Thompson, Oregon State University**

**Rebuilding Resilience: Extension-Led Septic and Well Recovery in Lincoln County, Oregon**

In the aftermath of the 2020 Echo Mountain Complex Fire, over 400 homes in Otis, Oregon were left without functioning septic systems or wells-critical infrastructure for safe housing and environmental health. In response, Lincoln County partnered with Oregon State University Extension Service to launch the Septic and Well Repair Program, initially focused on fire-impacted households. As implementation progressed, the program revealed broader infrastructure vulnerabilities across the region. This Extension-led initiative combines technical assistance, education, and outreach to guide residents through the repair and replacement of domestic wells and septic systems. Participants receive support navigating permitting and compliance, ensuring projects meet regulatory standards while avoiding fines. By 2025, the program had disbursed $4.4 million in state and federal funds-including Oregon legislative dollars and ARPA allocations-completing 413 septic and 206 well projects. These efforts have significantly reduced untreated waste entering waterways and improved drinking water access. The program's inclusive design, use of bilingual materials, and community-based delivery model demonstrate how Extension can lead disaster recovery while advancing sustainable natural resource stewardship. Its success highlights the power of cross-sector partnerships and adaptive programming in meeting urgent infrastructure needs. Aligned with the conference theme, this poster offers an innovative model for Extension professionals working in water quality, disaster recovery, and rural resilience. It provides evidence of impact, innovative

use of funding and outreach tools, and strategies for engaging diverse audiences in long-term environmental health solutions.

**Nathan Gatlin, NC State Cooperative Extension; Jameson Boone, NC State Extension**

**Addressing Community Needs in the Wake of Hurricane Helene**

Immediately following Hurricane Helene, community needs in the wake of the disaster were abundant. NC State Extension Forestry found unique opportunities to address those needs and provide solutions to area forest landowners and homeowners. We provided opportunities to help forest landowners and homeowners recover, strengthened partnerships with in-kind agencies, and expanded upon the role of natural resources responsibilities in the Extension environment. Many lesson were learned that can be implemented in the future as other disasters occur. This presentation will relay those experiences and lesson learned and provide insight into preparing to take advantage of opportunities in the future.

**Madeline Goebel and Sarah Wilson, University of Idaho and Idaho Department of Lands; Travis Paveglio, College of Natural Resources, University of Idaho; Tyre Holfeltz, Idaho Department of Lands**

**Charting Fire Adapted Futures: Local Capacity Building Through Idaho's Wildfire Adaptation Pilot Program**

Wildfires continue to challenge communities across the United States, underscoring the need for fire-adapted communities and stronger local capacity to reduce risk. Numerous organizations work in the wildfire mitigation space, yet many face persistent barriers that limit their ability to carry out those efforts. To address these challenges in Idaho, the University of Idaho and the Idaho Department of Lands have developed two Wildfire Adaptation Coordinator positions designed to support more effective, locally driven wildfire adaptation. This poster will summarize program accomplishments to date, share lessons learned, and highlight how coordinators can help chart a more resilient future by increasing local capacity, fostering partnerships, and supporting community centered approaches to wildfire adaptation.

**Becky Griffin, UGA Extension**

**Lights Off, Fireflies On: Engaging Youth and Community in Firefly Conservation and Tourism**

Georgia is home to approximately 50 firefly species, many of which are experiencing population decline due to habitat loss and light pollution. In response, a team in Fannin County, Georgia, launched Lights Off, Fireflies On -a multifaceted campaign that blends youth environmental education with community-based conservation and sustainable tourism. University of Georgia Extension in partnership with the Fannin County Chamber of Commerce and Board of Education is creating a culture of firefly appreciation and stewardship. A dedicated website (www.FirefliesOn.com), classroom curriculum for elementary through high school, and broad community engagement strategies support the project's goals. Younger students explore the biology and ecological importance of fireflies, while older students focus on habitat creation and conservation strategies. Each spring, learning culminates in a Firefly Community Day, where students distribute native plants they've grown and share conservation messages with the public. The project team works with local businesses, such as cabin rental agencies, to promote firefly-friendly practices through signage and outreach. An interactive "firefly fact" game, tied to kiosks in local parks, rewards participants with a collectible pin-making environmental learning fun and memorable. The campaign has helped position Fannin County as a firefly-viewing destination. Visitors now plan trips around the peak flashing season, and the County has officially declared July 2nd as Firefly Day. This

poster demonstrates how creative partnerships and youth-centered education can elevate conservation, boost local pride, and draw attention to the small but brilliant creatures that light up our summer skies.

**Angela Gupta, UMN Extension**

**Eco-Anxiety: What It Is, Why It Matters and How You Can Empower Hope and Agency**

Studies show that 68% of Americans have experienced at least a little eco-anxiety and natural resource professionals are some of the most impacted. This presentation will define eco-anxiety and review the feelings evoked by our changing ecosystem, including invasive species and climate change. It will provide resources on how to assess your climate risk and offer approaches to develop resilient personal and cultural practices. Understanding these emotions and how to develop resilience cultural practices is important for natural resource professionals and to offer hope and agency to Extension natural resource audiences. Extension staff can frame messages and programs to minimize eco-anxiety and empower hope and agency. This work can be done directly through education and outreach and indirectly through message framing and program development. This presentation will include some simple steps to incorporate into Extension activities to nurture your audiences, so we all have the capacity to steward resilient ecosystems. If the Climate-ready woodlands Organized Session abstract submission is accepted please disregard this submission.

**Gary Hawkins, Brooklyne Wassel, and M Chalbrook, University of Georgia**

**University of Georgia's Onsite Wastewater Program:  Having Fun While Educating about Onsite Wastewater Treatment**

Natural resources and environmental management come in many different forms. This organized session will look at how we at the University of Georgia (UGA) use fun ways to educate homeowners on protecting the environment by properly operating and maintaining their onsite wastewater treatment system or septic system. The septic system is used by most in the rural areas and is being used more in suburban neighborhoods as expansion of communities is increasing and the sewer system is not available. The session will showcase many of the fun ways the Water Resource Specialist and fellow UGA Agents use a "Lunch and Learn" presentation to communicate the basics of septic systems, how we use different activities during festivals, community events, and school STEAM fairs to educate a variety of individuals. As part of the session there will also be audience participation planned to allow attendees to be part of the educational aspect of having fun while learning. This will allow the attendees to see how different hands-on activities can be used in their programming. The thought of septic system operation and maintenance is not something most people think about and is somewhat not spoken about. So let's see how we are having fun and learning how to better operate and maintain a home onsite wastewater treatment system or septic system.

**Emily Heald and Amy Workman, University of Wisconsin Madison Division of Extension**

**Fishing for Clues: Using eDNA to Spot Invasive Carp**

Environmental DNA (eDNA) is an emerging conservation tool used to detect species presence, including invasive carp in the Wisconsin River. This project developed and tested curriculum that engages middle and high school students in authentic field and laboratory investigations using eDNA. Students collect aquatic samples, isolate eDNA, and apply species-specific primers to identify organisms, gaining hands-on experience with biotechnology while contributing to community-based water quality monitoring. The project also emphasizes educator support through detailed field and lab protocols, educational materials, and alignment with K-12 science standards. Here highlight project development, methods, and early

impacts, as well as opportunities for integrating eDNA into STEM education and conservation efforts. This project is a collaborative effort between the UW Madison Division of Extension, UW-Madison Genetics & Biotechnology Center, Freshwater@UW Collaborative, Wisconsin 4-H, Wisconsin Sea Grant Institute, and the U.S. Geological Survey, and was made possible by a Wisconsin Sea Grant and Division of Extension Innovation Grant.

**Patrick Hiesl, Clemson University Department of Forestry & Environmental Conservation; Bart Swecker, Clemson University; Janet Steele and Jeff Fellers, Clemson Cooperative Extension**

**Solar Kilns Increase Wood Use Options for Portable Sawmill Operators**

Commercial harvesting options can be limited for small- and medium-sized properties, and landowners may manage their forestland by processing their own timber. Portable bandsaw mills can be affordable for processing logs into lumber for resale or private use. The growing use of portable bandsaw sawmills has increased demand for effective, low-cost lumber drying systems. Lumber must generally reach 6-8% moisture content (MC) for interior applications. Kiln drying achieves this through controlled heat and airflow to remove free and bound water. Solar kilns, which use a transparent roof to capture solar radiation and fans for circulation, have been investigated since the 1960s. Designs range from large (~2,000 bf) and medium (~1,000 bf) capacities to tropical adaptations, external collectors, and hybrid systems with supplemental heat. This study evaluated a micro-scale solar kiln with a ~250-300 board feet capacity and a construction budget under $1,000. Homeowner-grade and commercial-grade sensors were installed to record temperature and relative humidity at multiple points within the kiln and lumber. Summer operation produced peak internal air temperatures above 140°F and wood temperatures up to 133°F. During spring and fall, solar radiation was lower; however, the kiln environment consistently remained above ambient temperature and below ambient relative humidity, maintaining drying conditions, albeit with extended schedules. Performance data indicate that compact, low-cost solar kilns can replicate larger solar kilns' thermal and humidity regimes and effectively dry lumber, supporting the feasibility of small-scale milling operations.

**Adam Janke, Iowa State University**

**Creating Chronic Wasting Disease Ambassadors in Iowa**

Managing Chronic Wasting Disease (CWD) will be one of the premier challenges for wildlife resource agencies in the next decade and beyond. The plurality of challenges related to population management, disease mitigation, and human health considerations presented by this deer disease is perhaps unprecedented and may lead to challenges in maintaining public support and engagement in the long term. Short term educational interventions about CWD are ubiquitous and have variable impacts on behavior and attitudes toward the disease and its management. We sought to meet the complexity of the disease through an intensive, 3-week educational curriculum about CWD that helped community leaders appreciate the complexity of the disease and become competent in the delivery of key messages for disease mitigation strategies. Our team of biologists and educators with the Iowa DNR and Iowa State University Extension and Outreach collaborated to train community leaders in core CWD endemic areas throughout the state. Post-course evaluations revealed graduates demonstrated improved knowledge on technical aspects of the disease and its management and qualitative survey results suggested widespread satisfaction in the curriculum. The program seeks to equip local leaders with the knowledge and talking points to become ambassadors for effective CWD education in communities across the state. Training and engaging these leaders may be an effective long-term strategy for addressing CWD challenges and maintaining trust among core constituencies.

**Heather Kalaman, UF IFAS Extension Orange County**

**Floridian Flora Fridays: Like, Share, Grow Native**

Floridian Flora Fridays is a monthly educational video series shared on UF/IFAS Extension Orange County's Facebook and Instagram platforms, highlighting Florida's native plant diversity. Designed to blend science with entertainment, the series makes native plant education engaging and accessible to a wide audience. Each video emphasizes ecological and aesthetic benefits of species that are low maintenance, attract wildlife, conserve water, and support sustainable urban landscapes. Filmed in the UF/IFAS Extension Orange County Demonstration Gardens, the videos feature plant details including common and scientific names, growth conditions, flower or fruit characteristics, along with wildlife value and cultural significance. Edited into short, music-accompanied reels with narration, the content appeals to social media users while providing research-based guidance for incorporating native plants into home and public landscapes. The program has been highly successful, reaching nearly 200,000 unique users and generating thousands of interactions-likes, comments, shares, and saves-that demonstrate both visibility and engagement. A feature on Florida's native skyblue clustervine (*Jacquemontia pentanthos*) reached 84,669 people, earned nearly 1,500 likes and comments, and was saved 133 times. Other posts featuring Simpson's stopper, beautyberry, and cocoplum have also consistently drawn strong engagement. By harnessing the reach of social media, Floridian Flora Fridays extends UF/IFAS Extension's impact across the local community, inspiring residents and professionals statewide and beyond. The program fosters appreciation for native species, promotes biodiversity, and supports sustainable landscaping practices-ultimately contributing to a more resilient and environmentally sound future.

**Hana Kim and Angela Gupta, University of Minnesota Extension**

**Bridging Cultures and Conservation: Engaging Southeast Asian Communities in Invasive Species Awareness through Foraging**

Hmong and Southeast Asian communities play an important role in the ecological and cultural landscapes of Minnesota and other United States regions. These communities are deeply connected to the land through foraging, hunting, fishing, and small-scale agriculture. However, apprehension around authorities, language, cultural, and other barriers have limited their access to conservation and land stewardship education, particularly around the prevention and management of invasive species. This presentation will explore efforts from the University of Minnesota Extension to connect culturally relevant outreach and programming with conservation goals, focusing on how we can use community science to co-create knowledge with Southeast Asian communities to foster shared stewardship of natural resources. Building trust is a core goal. To achieve this, UMN Extension worked hard to hire staff with Southeast Asian cultural experience. This process led to new collaborations between Extension Natural Resources and SNAP-Ed educators, which resulted in Extension Forestry staff co-teaching several garlic mustard foraging events with community-engaged Southeast Asian organizations. While the larger community science aspect of this work is in the initial phase, we will share experiences, community insights, challenges, and strategies to develop and retain these new partnerships. In addition to building trust, other goals include building relationships, increasing awareness of invasive species issues, correct reporting of high-priority invasive species, and supporting culturally relevant conservation practices. This work reflects the merging of the extensive traditional ecological knowledge within the Southeast Asian community and current natural resource management strategies.

**Whitney Knollenberg, NC State University Tourism Extension; Natalie Nelson, Marcelo Ardon, and Tal Ben-Horin, NC State University; Eric Herbst, NC Sea Grant; Chris Osburn, NC State University**

**Developing the 'See Salt' Salinity Level Monitoring Program with North Carolina Oyster Growers**

Salinity levels are a critical aspect of natural resource management in coastal environments but there has been limited development of accessible monitoring tools to provide reliable and valid salinity data. Oyster mariculture - the cultivation of oysters in saltwater environments - is an increasingly important industry for coastal areas that will benefit from improved access to salinity data as salinity levels impact yield and oyster quality. Yet, oyster growers have few options for measuring salinity levels on their farms due to the high costs and intensive maintenance requirements of existing monitoring tools. To address these limitations, our interdisciplinary team of researchers and Extension/Sea Grant specialists partnered with entrepreneurs developing a lower-cost monitoring system and five NC oyster growers to pilot test the "See Salt" salinity monitoring program. In addition to assessing the data quality of the lower-cost monitoring system we interviewed pilot program members and nine additional oyster growers who represent future See Salt participants to understand both perceived benefits and shortcomings of the program and the value of access to salinity data. This presentation reports on key themes from those interviews to inform Extension professionals on: 1.) the importance of accessible salinity data in sustaining natural resources in coastal environments; 2.) opportunities and challenges encountered in implementing the See Salt program and 3.) best practices for engaging end users in data gathering programs. This content benefits Extension professionals working with natural resources in coastal environments and those seeking to develop programs that engage participants in data collection.

**Christina Lucas and Kelci Free, Oregon State University Extension Service**

**Expanding Groundwater Testing: A Tri-County Model for Private Well Safety in Oregon**

Oregon State University Extension's Groundwater Education Program has implemented a replicable model for private well stewardship across Oregon piloted in 3 counties; Linn, Benton, & Clackamas. This tri-county initiative addresses the critical need for accessible, research-based drinking water education and testing for rural residents reliant on domestic wells. The program design integrates on-site sample collection modeling, well head inspection along with no-cost water quality testing for contaminants: nitrate, arsenic, coliform bacteria, and lead (risk-dependent). Follow-up required educational sessions focused on systems maintenance & understanding, emergency preparedness, and interpretation of lab results. In Benton County, 196 households participated, with 87% completing in-depth workshops on time. The Clackamas pilot informed streamlined logistics and community engagement strategies, while the Linn County expansion introduced bilingual outreach, GIS mapping of results, and digital scheduling tools to enhance accessibility and efficiency. This poster will present comparative data across counties, including contaminant prevalence, participant demographics, and evaluation outcomes. It will also highlight innovative delivery methods such as pop-up nitrate screening events, cross-county collaboration, and targeted outreach through food pantries, farmers markets, and regional webinars. Aligned with the theme, this project demonstrates how Extension can integrate scientific rigor, community partnerships, and adaptive outreach to protect groundwater resources. The model is grounded in Extension's core values; education, accessibility, and impact while offering a replicable framework for outreach & education. It will appeal to Extension professionals seeking inclusive, data-driven approaches to water quality education and community-based environmental stewardship.

**Amanda Marek, UF/IFAS Extension Marion County; Norma Samuel and Claire Lewis, UF/IFAS; Brooke Moffis, UF/IFAS Extension Lake County; Jamielyn Daugherty Hagyari, UF/IFAS Extension Sumter County**

**Three Counties, One Goal: The Florida-Friendly Landscaping Tri-County Summit**

The University of Florida/IFAS Florida-Friendly Landscaping (FFL) Program is a statewide initiative to conserve water and protect water quality through landscape practices. The availability of water resources is a concern as urban populations grow in Florida. From 2020 - 2023, Sumter County was one of the fastest growing counties in the state and metro areas of Marion, Lake and Sumter counties were some of the fastest growing nationwide. The UF/IFAS Extension Service of Marion, Lake and Sumter County initiated the FFL Tri-County Summit in 2021. Locations for programs rotated to each county in 2021, 2023 and 2025. The goal of the summit is to educate and encourage the adoption of FFL practices amongst green industry professionals, community association managers, property managers, developers and the like. In 2025, the Tri-County Summit added the Florida-Friendly Landscaping Certified Professionals (FFLCP) field module for green industry professionals. Providing participants with several CEU opportunities, FFLCP certification, and a variety of timely topics all in one setting led to a successful summit. 36 green industry professionals attended the all-day training and 7 earned FFLCP certification. Knowledge gain of the FFL topics and an intent to adopt associated landscape practices was reported by 100% of participants. Preliminary behavior change survey results also show that participants save over 1.7 million gallons of water annually. The FFL Tri-County Summit is an easily adopted environmental education framework that effectively reaches green industry professionals and decision makers.

**Savannah Moore, Robert Bardon, Frederick Cubbage, and Megan Lupek, NC State University**

**Analyzing Pathways for Increased Landowner Participation in FloodWise Nature-Based Solutions**

Frequent and intense storm events pose growing risks to rural communities in North Carolina, leading to flooding, landscape disruption, and declining water quality. Nature-based solutions (NBS) offer landowners practical strategies to enhance flood resilience while supporting long-term land stewardship. However, participation in cost-share and financial incentive programs that support NBS adoption remains low, limiting their potential impact. This poster shares findings from focus groups with farm and forest landowners in North Carolina's inner coastal plain, designed to better understand landowner values, perceptions, and barriers to program participation. Results highlight challenges such as program complexity, time constraints, and a greater need for improved technical assistance, but also reveal strong conservation values and a willingness to engage in resilience practices. Landowners identified clear opportunities for improvement, including simplified navigation tools, peer-to-peer engagement, and enhanced technical support. By centering landowner perspectives, this research provides pathways for improving program design and delivery while emphasizing the role of Extension in bridging the gap between resilience policy and on-the-ground action. This poster will highlight both landowner-driven recommendations and opportunities for Extension professionals to support the adoption of NBS as a part of broader disaster resilience strategies.

**Laura Ney, UGA Cooperative Extension**

**Showing off Native Plants in the Landscape**

In 2019 the Clarke County Extension Service moved into a new facility with a large outdoor footprint. There was a need for a creative option for covering the space that would satisfy LEED certification requirements. A traditional sod landscape was not an option. The Agriculture and Natural Resources Agent worked with the Clarke County Office of Sustainability, with the County Stormwater Management Department and with the County Landscape Manager to design a plan for an entirely native landscape at

the facility. The agent created a committee of Master Gardener and Master Naturalist Extension Volunteers to come up with lists of plants that would do well in the site and serve an educational purpose in the landscape. The group came up with a list of over 100 potential plants. With the help of the volunteers, the Athens-Clarke County Extension Agent selected and planted over 1,000 native plants, to begin this effort. This Garden has been officially registered as a "Connect to Protect" garden. Connect to Protect is a program created by the Georgia State Botanical Garden of Georgia that combines beautiful public displays of native plants with educational materials to foster an understanding of the role that native plants play in maintaining biodiversity in urban and suburban landscapes of Georgia. The space is being used in native plant workshops, as a public educational garden and a source of propagation material that can be used to support a variety of community efforts to increase native plantings in the Athens area.

**Heather Nix, Clemson University Cooperative Extension; Sarah White and Debabrata Sahoo, Clemson University; Lindsey Craig, Clemson University Cooperative Extension; Cal Sawyer, Clemson University**

**Confluence of Water & Livestock: The Mystery of the Dying Cows**

In May 2025, a South Carolina cattle farm with more than 40 years of successful operations faced a sudden and devastating crisis: within three weeks, 24 adult cows were dead. No major management changes had occurred, leaving the cause a mystery. Over the following months, at least eight laboratories across six universities joined the investigation. Analysis confirmed cyanobacteria and cyanotoxins in surface ponds, and unexpectedly, also in watering troughs supplied with treated drinking water. Was cyanotoxin poisoning the culprit? Were other factors at play? Can testing provide conclusive results? This unusual case underscores a growing challenge at the intersection of water quality, agriculture, and health. Natural resource professionals are increasingly on the front lines of these calls; yet few organizations have established protocols for rapid response, investigation, or cross-sector coordination. This presentation will walk through the case study, facilitate small group discussions on handling similar calls, share lessons learned, and introduce new tools and updated SOPs designed to guide natural resource professionals when faced with sudden livestock mortality events. Attendees will leave with practical strategies for collaboration, diagnostic planning, and communication with producers - resources that can be applied immediately in their own regions. Aligned with the conference theme, this session highlights a pressing and emerging issue where multiple disciplines converge, offering participants an intriguing mystery as well as actionable insights to strengthen preparedness for the next call.

**Kevin Rohling and Kimberly Rohling, University of Illinois Extension**

**Science Under the Stars for National Moth Week: Combining Research and Community**

To celebrate and study Lepidoptera, Illinois Extension developed a dynamic series of public events that blend scientific research with community outreach. Anchored around National Moth Week, these activities include nighttime hikes, educational workshops, family-friendly events, and citizen science opportunities. Participants engage directly in species identification and real-time data collection, contributing valuable information to research on moth abundance and ecological roles. These events are made possible through strong partnerships with local science centers, libraries, state and federal agencies helping to broaden reach and deepen impact. By encouraging collaboration, Illinois Extension increases awareness of moths as pollinators, herbivores, charismatic species, prey, and pests, while also strengthening community capacity for environmental stewardship and fostering a lasting appreciation for biodiversity.

**Amy Rowe, Sara Elnakib, Jen Shukaitis, and Sabrina Subhit, Rutgers University**

**Beyond the Bin: Cultivating Solutions to Reduce Food Waste**

Food production in the United States accounts for approximately 16% of energy use, nearly 50% of land use, and 67% of freshwater consumption, yet an astounding 40% of America's food supply is wasted annually. Alarmingly, the total dollar loss of food waste is equivalent to $161 billion per year in the United States. Rutgers Cooperative Extension (RCE)'s Food Waste Team has been working on food waste reduction in elementary schools since 2018, working with both school food service workers and students. After implementing proven practices and seeing a 58% food waste reduction post-intervention in the K-12 schools, the Food Waste Team is expanding their food waste reduction campaign and training to college campuses. This new initiative will: Provide food waste reduction education to college students. Conduct pre- and post-programming food waste audits at university dining halls or cafeterias Support the launch of a system connecting leftover food from campus events to food insecure students/food pantry patrons. Provide technical assistance and evaluation support for food pantries on campuses to most effectively use the system. Provide undergraduate education majors with guidance on providing climate change education to K-12 schools. This presentation is related to the "Confluence of Knowledge" theme as the food waste reduction program brings together food policy and environmental sustainability and educates adults that are preparing to enter the workforce and the real world.

**Lorelle Sherman, Oregon State University Extension Program**

**Forager to Forester: Teaching Forestry and Forest Ecology Through Wild Harvesting**

Foraging offers an entry point for engaging the public in forestry and forest ecology. Foraging is incorporated into programming by Oregon State University's Forestry & Natural Resource Extension Program to teach concepts that increase ecological literacy, such as species interactions, habitat and stand dynamics, forest structure and composition, silvicultural principles, phenology, and the role of disturbance in the ecosystem. This poster highlights case studies of how foraging facilitates place-based experiences that elucidate forest management decisions, connect people to disturbances on the landscape, and foster land stewardship.

**Carrie Stevenson, Lawrence O'Connor, and Thomas Derbes, UF IFAS Extension**

**Northwest Florida Seafood Heritage Series**

Northwest Florida has a long history of seafood production and shipping. Once known as the "Red Snapper Capital of the World," the region's productive fisheries attracted people from all over the world. Through interactive tours and workshops, our goal was to educate residents about the rich ecology and history of our community. Partnering with the University of West Florida (UWF) and Florida Public Archaeology Network (FPAN), UF IFAS Extension coordinated two public events designed to increase awareness of the seafood industry in the Pensacola area. The first was a guided tour called, "Dusk on the Gulf: Seafood Stories and Coastal Ecology Walking Tour in St. Michael's Cemetery." With markers from the 1780's, St. Michael's is the final resting place of many of the earliest European settlers in Pensacola. Archaeologists focused on human ties to the seafood industry, while Extension agents discussed the botanical and hydrological history of the cemetery. A second event, "A Mullet Story: Cast Nets and Cooking Traditions," featured presentations from fisheries experts and a seafood market owner on the importance and life history of the species. Afterwards, participants tasted four mullet-based dishes prepared by local chefs. Interactive exhibits offered hands-on experiences, including net-making demonstrations and fisheries history insights from community partners. Twenty-one people attended the cemetery walking tour and over 100 participated in the mullet workshop. The events sparked discussions on seafood traditions, conservation, and the evolving challenges of commercial fishing.

**Sarah Widderich and Melissa Kreye, Forest Owner Carbon and Climate Education Program- Penn State**

**Learn How to Broaden Extension Through Graduate Student Training**

Presentation Content (Part 1) The Broadening Extension through Graduate Student Training (BEST) program, established at Penn State University in 2022, aims to enhance the professional development of graduate students for careers in Extension and public engagement. This presentation will provide an overview of a new guide designed to support the advancement of similar programs at other academic institutions by serving as a resource for locally lead training initiatives. The guide outlines a practical teaching philosophy, curriculum development, logistical considerations, and pedagogical approaches. Users can select from a variety of activities, assignments, and recorded lectures about the history, organization, and funding of Extension, as well as strategies for extension program design, impact evaluation, and effective communication. A significant component of the program involves a capstone logic model assignment, which facilitates the application of theoretical knowledge to practical scenarios. The goal of BEST is to elevate awareness of careers in Extension and enhance the confidence of graduate students to deliver impactful education within their communities. Interactive Component (Part 2) Following the presentation, participants will break into groups with a facilitator to walk through a planning exercise for establishing a graduate student training program in extension. Participants will benefit from having a workbook to document plans. We expect participants will feel motivated and equipped to initiate plans to host their own program using the BEST approach at their institution in the next 9-12 months.

**Jacob Williams, UGA Extension**

**Georgia Mountain Agroforestry: Revitalizing Old Appalachian Knowledge**

There are many legends and fables surrounding crops like ginseng, goldenseal, bloodroot, elderberry, and pawpaw. These stories capture the imagination of the public, but the resources Extension has to engage the public regarding those crops are limited. In Union County Georgia, Extension is building capacity to have the knowledge and resources to address this issue. Through funding received from the Georgia Soil and Water Conservation Commission, an outdoor classroom that will teaches prospective growers how to start their own forest farm is underway. One element of the project includes a riparian buffer that also serves as a native orchard. Plants in the native orchard include red mulberry, elderberry, pawpaw, and persimmon. These dual-purpose plants thrive in a riparian habitat and produce edible fruits that can be used by people. Forest farming demonstration space teaches the public how to steward rare, non-timber forest crops (NTFCs) that add value to their property has also been created. Invasive species removal has also been conducted on this property, to open more space for native plantings and preserve existing native plants. Invasives that have been treated include kudzu, Chinese privet, and hemlock woolly adelgid. Since the stream running through the site is stocked with trout, this site has also been used to educate youth on the ecosystem through aquatic macroinvertebrates. Educating youth on how distinct parts of the ecosystem are connected gives them an appreciation for the whole picture, not just the trees, wildlife, or invertebrates individually.

**Leeoria Willis and Rebecca Supinger, The Ohio State University Extension**

**Connecting Urban Youth to Natural Resources Through 4-H Programming**

This session will cover how to plan and implement natural resources programming in urban youth settings using 4-H curriculum. Partnerships between the extension program areas and other entities make for successful programming all throughout the school year and during the summer. We will review schedule set ups, how to engage students, creating a positive environment, as well as working with partners to ensure that the programs are relevant and needed to the schools as well as the state standards. Working

with youth creates a pathway for them to explore natural resources ensuring a positive outlook for years to come with the potential for them to expand into a career field involving natural resources.

**Tracy Winters, Ohio State University Extension Gallia County; Jessica Burns, Ohio State University Extension Vinton County**

**Habitat Happens Here: Building Biodiversity Through Backyard Gardening**

Backyard habitats are a powerful tool for promoting biodiversity, ecosystem health, and sustainable land stewardship. This presentation equips participants with practical strategies for guiding individuals and communities in creating wildlife-friendly gardens. Participants will learn how to conduct a site assessment to evaluate existing conditions, identify ecological opportunities, and set realistic habitat goals. The session will highlight the use of mobile apps for plant and wildlife identification, customizable checklists for habitat planning, research-based fact sheets, and online resources to support education and outreach. Attendees will leave with actionable tools to help clients and community members transform everyday spaces into thriving habitats for pollinators, birds, and other wildlife. This presentation directly supports the ANREP conference theme of Ecosystem Health and Biodiversity by demonstrating how small-scale, intentional landscaping decisions can restore ecological function, enhance species diversity, and connect fragmented habitats. By linking backyard gardening to broader conservation goals, it empowers individuals to make meaningful environmental impacts-starting right at home.

**Martin Wunderly and Rolando Orellana, University of Georgia**

**A Green Stormwater Infrastructure Demonstration Site for Many Audiences**

Stormwater runoff from impervious surfaces causes soil erosion, water pollution, and flooding in streams and rivers. Green stormwater infrastructure is an alternative approach to stormwater control that reduces rainfall runoff from developed landscapes using plants, soils, and engineered materials. It promotes rainwater collection and infiltration to maintain the natural hydrologic cycle of water. A green stormwater infrastructure demonstration site was installed at the UGA-Griffin campus Research and Education Gardens in Griffin, GA. The stormwater demonstration is available for public viewing, along with a self-guided web resource with descriptions of the purpose, function and design for of each green infrastructure practice. Extension Master Gardeners and Master Naturalists participated in training at the demonstration site and increased their knowledge base of stormwater management in home landscapes. The demonstration site also serves as a training facility for Extension agents, landscape industries, and municipal managers that would like to learn about design, installation, and maintenance of the practices.

**Yilin Zhuang, Hayk Khachatryan, Younghyeon Jeon, University of Florida; William Lester, UF/IFAS Extension Hernando County; Heather Kalaman, UF/IFAS Extension Orange County; Tina McIntyre, UF/IFAS Extension Seminole County**

**Resident Awareness and Fertilizer Use in Florida Counties with Local Ordinances**

More than 100 Florida counties and municipalities have adopted residential fertilizer ordinances, each with unique restrictions on timing, products, and application. Although the environmental effectiveness of these ordinances remains debated, they influence how residents manage lawns and landscapes. The primary objective of this project is to assess residents' knowledge, behaviors, and attitudes toward fertilizer use and local ordinances, with the goal of developing educational materials that encourage responsible application practices. The study began with a case study in Hernando County, which recently amended its ordinance to expand seasonal restrictions. A survey instrument was developed to capture four categories of information: (1) general knowledge of lawn care and fertilizer through quiz-style

questions, (2) lawn and landscape management behaviors, (3) fertilizer purchasing and application practices, and (4) awareness and attitudes toward the ordinance. Results from Hernando County showed that most residents fertilize their lawns themselves, often without soil testing, and apply two to four 40-pound bags annually. Many understood fertilizer labeling, but knowledge of ordinance requirements such as restricted timeframes and buffer zones was limited. Following interest from Extension agents, the same survey is now being implemented in Orange and Seminole Counties, which are adjacent counties but have ordinances with different provisions. This expansion will allow for within-county insights and cross-county comparisons between metropolitan and non-metropolitan contexts. Findings will guide Extension programming by identifying knowledge gaps, clarifying ordinance requirements, and informing the development of targeted educational resources that address misconceptions and support sustainable landscape practices.

# Pre Conference & Field Experiences Descriptions

## Preconference Tours

### USS North Carolina Battleship

Across the Cape Fear River, and seen from our conference venue, the Battleship North Carolina has been moored in Wilmington since 1961. The highest decorated American battleship of World War II, she earned 15 battle stars before being decommissioned in 1947. There are 9 decks to explore, which includes climbing up and down stairs. More information can be found on the Battleship North Carolina website.

### New Hanover County Arboretum Tour

Join New Hanover County Extension Director, Amy Mead, on a guided tour of the Arboretum including over 10 demonstration gardens including the native plant garden, the Japanese Garden, Children's garden, and the stormwater infiltration zone. New Hanover County Arboretum advances horticultural knowledge and environmental stewardship through a diverse collection of trees, shrubs, and other plants. The arboretum serves as a living classroom for all residents, students, and green industry professionals, providing research-based education and practical training with an emphasis on plants adapted to the unique conditions of southeastern North Carolina. The arboretum is also home to the New Hanover County Cooperative Extension offices. More information about the arboretum is available on their website.

## Social Outing

### Ghost Walk of Old Wilmington

According to paranormal experts, Wilmington is one of the most paranormal active cities in the South. Centuries of history, from pre-Colonial times to the Civil War and beyond, Wilmington is filled with ghostly legends and paranormal activities. Join expert storytellers and guides on a 90-minute wander through historic downtown Wilmington, learning about the stories and haunts of the historic buildings, dimly lit streets, and historic homes along the waterfront.

## Field Experiences

### Silvopasture in Practice: Piney Woods Farm  Included

Discover the future of integrated agriculture with a half-day field excursion to Piney Woods Farm outside of Burgaw, North Carolina. Silvopasture, the intentional combination of livestock, forage, and trees, is one of the most innovative and important practices for enhancing farm resilience, diversity, and sustainability and this is your chance to see it working at scale!

Join farmers Buron and Sara Lanier for an insightful, farmer-led tour of their 400-acre operation. The Laniers have masterfully developed and managed over 100 acres of silvopasture, integrating cattle production directly beneath a maturing stand of 12- to 15-year-old loblolly pines. Participants will learn the critical steps required to transform traditional pine forests into productive grazing lands, including how the Laniers strategically manage thinning, understory preparation, and hay feeding.

### Festivals, Fire, and Flytraps: Exploring Prescribed Fire in Urban Landscapes

Welcome to the ultimate challenge in modern conservation: How do we continue to use fire as a land management tool when we are surrounded by rapidly growing cities? Southeastern North Carolina, particularly New Hanover County, is one of the fastest-growing regions in the nation. This urbanization presents a critical dilemma for land managers who rely on prescribed fire to keep these unique coastal ecosystems thriving.

Our afternoon begins with a tour of Carolina Beach State Park. We will hike through areas that have recently been burned to see firsthand how fire-adapted treasures like carnivorous plants survive and thrive in an ecosystem dependent on a fire regime, learning how conservation science and public communication

work together. The tour will also stop at Halyburton Park, home of one of the nation's most successful wildland fire-related festivals, Fire in the Pines. Hear directly from the organizers, park staff, and community partners about how they successfully turn a complex land management tool into a captivating, large-scale public education and celebration.

**Behind the Scenes of Clean Drinking Water**
Though not the first state to encounter PFAS (per- and polyfluoroalkyl) contamination, North Carolina became a focal point in 2017 when researchers found high levels of GenX in the Cape Fear River, linked to the Chemours facility. Decades long discharge of chemicals into the river, that serves of the drinking water source for nearly 1 million people, led to greater PFAS research and the establishment of the federal drinking water standards for several PFAS compounds.

This field excursion, led by members of UNC-Wilmington's Department of Environmental Sciences, will take participants on a tour of the Cape Fear Public Utility Authority's water treatment plant that has undertaking extensive research and innovation to reduce PFAS contamination. Participants will get an up-close view of the technology and hear directly from utility professionals about the ongoing work to protect the region's water supply. After the plant tour, the group will head to UNC-W for a showcase of local organizations working on the front line of monitoring and research.

**Paddle Wilmington's Hidden Gem: Greenfield Lake**
Nestled in the heart of Wilmington, just a few minutes from our conference location, Greenfield Lake is rich in history and full of wonderful views. This field excursion will include water and land experiences as participants explore this unique cypress ecosystem in the heart of Wilmington.

Guides with Wilmington Outdoor Adventures will lead a 90-minute kayak paddle around the Greenfield Lake where Spanish moss is draped over 100-year-old cypress trees and dozens of bird species congregate year-round. Your guide will share the lake's fascinating history, help identify plants and animals that inhabit the lake (including elusive resident alligators), and talk about the human impacts on the lake. On the shore, Page Turner with the NC Wildlife Federation, will share how many local and regional organizations have come together to help protect and support this unique ecosystem. Participants may even have the opportunity to take part in one of the native plant gardens being installed to support coastal resilience efforts.

**NC Oyster Trail**
Discover what makes North Carolina the Napa Valley of oysters! Explore North Carolina's oyster culture from seeding to shell recycling and all the interesting places oyster pop up in between (hint… one of them is beer). Learn how the creation of the NC Oyster Trail supports businesses and tourism while promoting NC oysters. This tour will visit the UNCW Center for Marine Studies Shellfish Research Hatchery, the NC Coastal Federation Office in Wilmington, and ends at Wrightsville Beach Brewing, showcasing the importance of oysters to our coastal communities and the research and programming that support them.

**Pocosins to Pines: North Carolina's Unique Ecosystems**
The southeastern corner of our state is a treasure trove of biodiversity, featuring everything from mysterious Carolina bays and lush maritime forests to dense pocosins and soaring longleaf pine savannas. Join Jeff Hall, a Herpetologist with the NC Wildlife Resources Commission and all-around naturalist, as he takes you on an exploration of the pocosin and majestic longleaf pine savannas at the renowned Holly Shelter Gamelands north of Wilmington.

This is an opportunity to work on your "lifer" list and discover plants and animals you won't see anywhere else! Keep your eyes and ears open for incredible sightings, including the endangered Red-cockaded Woodpecker, secretive gopher frogs, vibrant pitcher plant bogs, and an array of other incredible carnivorous plants. Plus, since we'll be exploring in mid-May, the chance to see other native wildflowers in bloom is high! As we explore, Jeff will explain what makes these ecosystems so unique, crucial land management practices that keep these ecosystems thriving, and current and future threats.