



CONSORTIUM OF APPALACHIAN FIRE MANAGERS AND SCIENTISTS

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White-spotted slimy salamander. Image Source: Lindsey Hosier

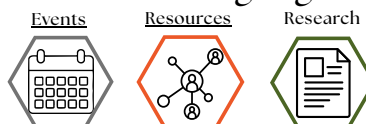


ESTCP crew members monitoring on the GWJeff. Image Source: Chris Harris



Rare perennial Sneezeweed (*Helenium autumnale*). Image Source: Lindsey Hosier

Newsletter Highlights



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plain language [briefs](#) on our website

Modeling the Future of Fire

The Environmental Security Technology Certification Program (ESTCP) Project is a 18 month grant from the U.S. Department of Defense to validate vegetation and fuels data for eastern hardwood forests



Crews have begun gathering monitoring data in the George Washington – Jefferson National Forest



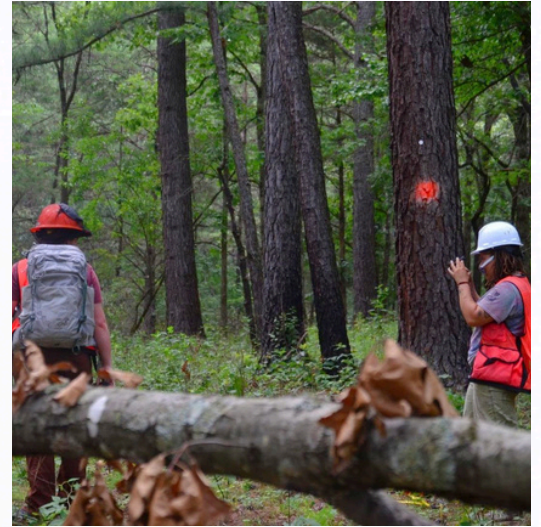
Crew members walking to a monitoring plot in the George Washington – Jefferson National Forest. Image Source: Chris Harris

Modeling the Future of Fire

Over the last decade, terrestrial laser scanning (TLS) and fire modeling tools, such as QUIC-Fire, lacked the ability to characterize and quantify fuels in hardwood-dominated ecosystems of the eastern United States. The increased threat of wildfire activity (Chathuranika et al. 2026, Cunningham et al. 2024), Hurricane Helene impacts across the region (Dale et al. 2025), and the expanded use of prescribed fire necessitates the validity of these tools.

To address this gap, Dr. Adam Coates, CAFMS PI and Associate Professor in the Department of Forest Resources and Environmental Conservation in Virginia Tech's College of Natural Resources and Environment, secured a \$3 million, 18-month grant from the U.S. Department of War (DoW) Environmental Security Technology Certification Program (ESTCP). This project will evaluate and validate the efficiency of TLS, UAS Structure from Motion (SfM), and aerial LiDar. The findings will be integrated into QUIC-Fire, providing greater accuracy in the modeling of wildfire spread, fire intensity, and prescribed fire outcomes in eastern hardwood – dominated forests.

To begin this project, this summer Chris Harris, Research Project Managers Virginia Tech, organized field crews to collect vegetation and fuels data from The Nature Conservancy's Heart of the Appalachians Fire Learning Network plots (HOAFLN). These plots span six districts across the George Washington – Jefferson National Forest: Mt. Rogers, Eastern Divide, Warm Springs, North River, Lee, and Glenwood-Pedlar. At each sampling plot, trees (> 1.83 m tall and diameter breast height (DBH) > 5.08 cm) were measured for their species, DBH, total height, and crown base height. Nested circular plots determined the density and vegetative cover of woody species and the vegetative cover of herbaceous species. Litter, duff, and down-and-dead woody fuels were approximated for both depth and mass. Furthermore, using the BLK360 G2 scanner, the crew members collected TLS plot center scans from each sampling plot.



Crew members collecting data. Image Source: Chris Harris



Crew member walking to plot. Image Source: Chris Harris



Crew members collecting data. Image Source: Chris Harris

The crews successfully sampled approximately 350 of the 400 plots. Jean Lorber, Forest Ecologist with The Nature Conservancy (TNC) Virginia Chapter, is excited to be part of this project and sees an opportunity to improve how prescribed burns are monitored across TNC's extensive burn program. Lorber explains, "One of the primary goals of our prescribed burning is to create a new generation of oak forest. We do monitoring to assess our progress, but with over 150,000 acres in our burn portfolio, we would greatly welcome new ways to make that monitoring more efficient. We hope the ESTCP project and what we learn about TLS will aid us as we evaluate our burn outcomes."

Data from the remaining 48 HOAFLN plots in the Clinch Ranger District will be collected next summer. Field crews have begun collecting data from the DoW installations and bases, and will complete collections by summer 2027.



Crew member collecting data. Image Source: Chris Harris



Crew member collecting data. Image Source: Chris Harris



Crew members walking through burn unit. Image Source: Chris Harris



Finding the Window: Burning in the Growing Season

Virginia Department of Conservation and Recreation – Division
of Natural Heritage – Shenandoah Valley Region performed a
growing season burn

The objective was to increase the presence of shortleaf pine,
particularly advanced regeneration

Finding the Window: Burning in the Growing Season

Mount Joy Pond Natural Area Preserve (MJP NAP) is a 359-acre state-owned unit located west of the George Washington National Forest in Augusta County, Virginia. The Department of Conservation and Recreation (DCR) - Division of Natural Heritage manages MJP NAP, which is part of the Virginia Natural Area Preserve System.

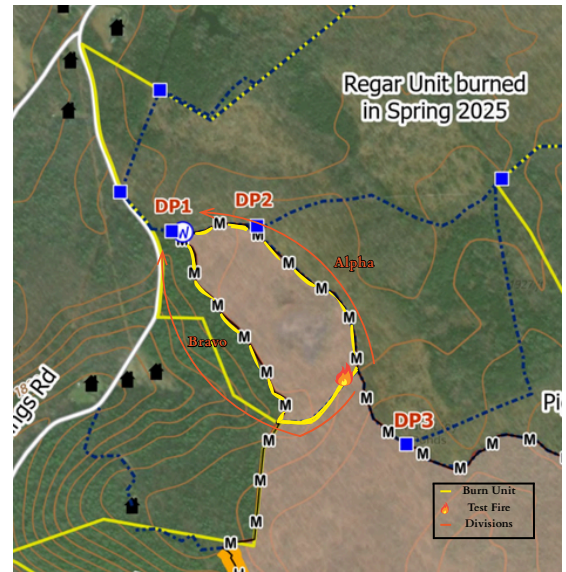
Mount Joy Pond is a significant conservation site. The globally significant Shenandoah Valley Sinkhole Pond wetland communities provide crucial breeding for rare and endemic flora and fauna species, including the federally-listed Virginia Sneezeweed (*Helenium virginicum*), the Tiger Salamander (*Ambystoma tigrinum*), and Black-fruited Spikerush (*Eleocharis melanocarpa*). The water levels naturally rise and fall throughout the year, creating seasonal wetland habitats through natural disturbance.

These once open oak-pine dominated woodlands are shifting to an undesirable red maple-white pine dominated landscape. DCR's MJP NAP Restoration Plan highlights this ecological shift, "The current high tree density at the preserve has increased forest evapotranspiration, altering the hydro-periods of sinkhole pond wetlands. Restoration work is needed to return upland forest composition and structure to what would have been present under the historical fire regime, which in turn will facilitate normal hydrological function of the sinkhole ponds."

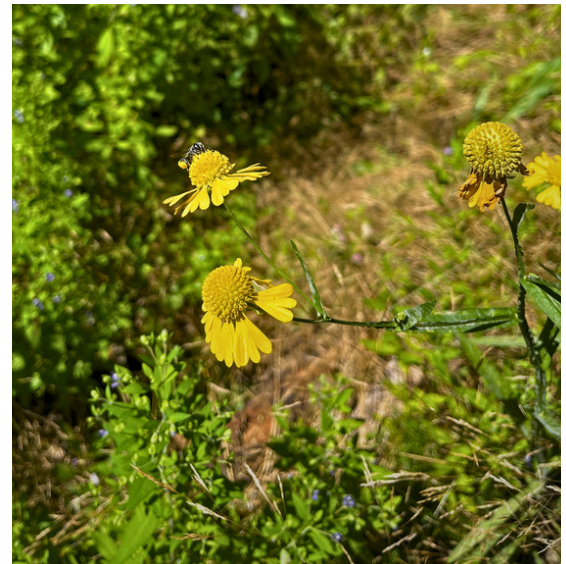
DCR Natural Heritage staff, along with partner agencies, conducted a growing season burn of 19 acres at MJP NAP in August 2026. Conditions of the burn consisted of a max ambient temperature of 80 degrees F, winds 2-5 mph out of the NW-W, and a minimum RH of 38%. A test fire was ignited at 12:30 p.m. Fuels were receptive throughout the unit, with a black line established with relative ease around the exterior of the unit. Hand ignitors lit the interior of the unit using drip torches, traversing south from the location of the test fire to the north end of the unit, using dots for the ignition pattern. No spotting occurred during the burn.

Tyler Urgo, Shenandoah Valley Regional Supervisor for Virginia Department of Conservation and Recreation, and burn boss during this burn, highlighted the ecological objectives, "We are trying to implement growing season fires to these units at MJP NAP to help continue to shift the forest structure and composition to open woodland conditions, with +/- 60 sq. ft. residual basal area... Without killing woody stems, we will struggle to keep the site open. Growing season burns can have a greater killing effect on woody stems and are shown to boost forb presence over time."

Growing season burns are increasing across the Appalachian landscape. As land managers witness the positive ecological impacts, they increasingly rely on empirical data to guide and justify these management decisions. Continued research is imperative in providing managers with foundational knowledge that allows them to make effective, ecologically sound, and evidence-based decisions.



Map of burn unit. Image Source: Lindsey Hosier



Virginia Sneezeweed (*Helenium virginicum*). Image Source: Lindsey Hosier

APPALACHIAN SPOTLIGHT



GREG PHILIPP

CAFMS's footprint spans much of the Appalachian region, providing the opportunity to collaboratively work with many managers and scientists. In this newsletter, we highlight Greg Philipp and his successful career in fire.

PASSING THE TORCH: A FAMILY LEGACY IN FIRE

Q: What is your title and what agency do you work for? How long have you been with the agency?

A: I am the Forest Assistant Fire Management Officer for the National Forests in North Carolina. I've been with the US Forest Service for just about 27 years so far.

Q: How did you get into this career field?

A: After graduating from the University of North Carolina at Asheville, I applied for a Smokechaser position in Buncombe County with the North Carolina Forest Service. They gave me a chance and I fell in love with wildland firefighting on the first fire I worked.

Q: What do you enjoy most about your work? What are you currently working on?

A: Undoubtedly it is the people you get to work with. It doesn't hurt that we get to work in amazing places, but even in less than desirable locations, the people can make all the difference. And it's not just Forest Service employees - I love getting to know partners, cooperators, and the public, building relationships that make our work easier when the pressure is on.

"It has been much more fulfilling being a part of something bigger than myself."

I am currently working on supporting our Western friends and neighbors with their fire season. I have been out on two (getting ready for a third) assignments as overhead, and have worked on sending new firefighters on assignments with engine crews, type 2 crews, and suppression modules. I am

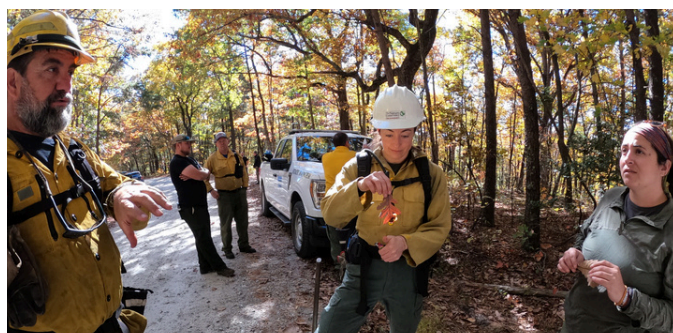


From left to right: Colten Webb, Greg Philipp, Michael Weeks assisting with a burn at the 2025 SBR TREX. Image Source: Fire Learning Network

really proud of the graduates from NC's first recruitment camp held in June at the Mountain Training Facility in Newland, NC. We have had eleven graduates take assignment, with many of them taking multiple. The future is looking bright!

Q: What is the biggest challenge you face in your line of work?

A: Work/life balance is an incredible challenge. These jobs will take everything you throw at them and ask for more, many times without as much as a thank you. So deciding when to take part in the "nice to do's" so you are ready for when there are "have to do's" is the major challenge. I still haven't mastered that one yet but I am making progress!



From left to right: Greg Philipp, Sasha Berleman, Chelsea MacKenzie assisting with a burn at the 2025 SBR TREX. Image Source: Lindsey Hosier CAFMS

Q: What is the most valuable lesson you have learned? Is there something you have learned that has taken you by surprise?

A: I have learned so many lessons in this career. They range from simple ones - like remembering to bring an ax and wedges when cutting even if I think I won't need them - to double checking the latch on the trailer. Safety chains saved my butt on that one!

The most valuable lesson I have learned was from my friend and mentor, retired Croatan National Forest District Fire Management Officer James Cherry. Delivered in barely more than a whisper as we were conducting a prescribed burn on the Croatan he said, "You need to listen, if you would have listened you would know."

Something that has surprised me is the depth of relationships you can develop with people through shared accomplishments, and sometimes shared suffering, in short amounts of time. The first few years of my career I didn't lean in to that. I went to work, did my job, and when it was over I went home. I have learned from my colleagues - new firefighters and retirees alike - that you get out what you put in. It has been much more fulfilling being a part of something bigger than myself.



*Top: Greg with his son on a western assignment. Image Source: Greg Philipp
Right: Greg sawing with his daughter. Image Source: Greg Philipp*

Q: What advice would you offer someone entering into this field?

A: Be on time, be ready, listen, and pay attention. Know what is going on, ask questions if you don't understand, and participate. Don't be a bystander; be part of the crew.

Q: What has been the most rewarding moment?

A: I have been on fire assignments with both of my kids. There is something about sharing this with them now, when this is what took me away from them when they were little. It fills me with pride and gratitude. It has been so rewarding watching and taking part in their successes.

Q: Outside of work, what do you enjoy doing with your time?

A: I love going on daily walks with my wife in our neighborhood. We spend time traveling to see our son play music. I enjoy working at our shop, riding motorcycles, and hanging out with old friends. I enjoy doing nothing at times. I look forward to having a dog again when the time is right. If I'm honest, I really love burning a brush pile.



Conferences



Eastern Native Grasslands Symposium

October 13 - 16, 2026

Hopkinsville, KY

The Eastern Native Grasslands Symposium is a biennial gathering made possible by the growing interest and collaboration of a diverse community dedicated to native grasses, forbs, and wetland plants of the eastern United States. This community includes restorationists, landscape architects, ecologists, landowners, forage producers, biologists, wildlife and pollinator enthusiasts, private consultants, government agencies, seed and plant producers, and many others.

For more information visit the [Eastern Native Grasslands website](#).

15th Biennial Longleaf Conference

October 25-29, 2026

Williamsburg, VA



The Biennial Longleaf Conference, sponsored by [The Longleaf Alliance](#), is a regional conference that is focused on the restoration and conservation of the longleaf ecosystem that once dominated the landscape within the southeastern United States. The conference provides the opportunity for people from all over the southeast to get together, share, learn, and celebrate longleaf. It also serves as a rallying spot for several other organizations and government agencies seeking to stage additional events in order to better collaborate on the conference topics.

For more information visit the [Longleaf Alliance website](#).



10th International Conference on Forest Fire Research & 19th International Wildland Fire Safety Summit

October 31 - November 6, 2026

Coimbra, Portugal

ICFFR presents itself as an opportunity to meet people and institutions, to promote international cooperation in this research and management area. In November 2026, the 10th edition of the Conference will once again be held in Coimbra, and again in conjunction with the International Wildland Fire Safety Summit, an initiative of the International Association of Wildland Fire. In all its editions, several related events have been promoted: short-courses, workshops, seminars, meetings, technology dissemination forums, etc.

For more information visit the [event website](#).



Beneficial Fire Summit
December 7 - 11, 2026
Mission Bay San Diego, CA



This event aims to bring together practitioners, researchers, community members, Tribes, agencies, NGOs, PBAs, and others to celebrate recent progress, share insights and ideas, and advance our collective work in beneficial fire. The program will focus on all three components of beneficial fire—prescribed fire, cultural fire, and managed wildfire—in California and across the West. We hope to create an engaging, productive space, with workshops, field tours, focused sessions, and plenty of time for networking and connection. This event is a collaboration with the Association for Fire Ecology, UC ANR Fire Network, California Fire Science Consortium, Northern California Prescribed Fire Council, Tall Timbers Research Station, and University of Nevada Extension/Living With Fire.

For more information visit the [event website](#).

Workshops



**Southern Blue Ridge Prescribed Burn
 Association Annual Meeting**
 October 10, 2026
[Information](#)

Jobs

- The Nature Conservancy South Carolina - South Carolina Forest Recovery Director. External Applicants [Application](#); Internal Applicants [Application](#).
- The Nature Conservancy Virginia - Zone Forest Recovery Program Coordinator (3 positions in Abingdon, Blacksburg and Lexington). External Applicants [Application](#); Internal Applicants [Application](#)
- The Nature Conservancy Mauk, Georgia - Senior Burn Crew Member. [Application](#)
- The Nature Conservancy Georgia - Northwest Georgia Burn Crew Manager. [Application](#)
- The Nature Conservancy South Carolina - SC Coast Burn Crew Manager. [Application](#)
- The Nature Conservancy South Carolina - SC Coast Burn Crew Memeber. [Application](#)



Trainings

- North Carolina Certified Burner Class offered by the NCFS. October 12–14, 2026 - [Details](#)
- Alabama Certified Prescribed Burn Manager Course: November 4, 2026 in Huntsville, AL. Cost to attend is \$150.00. ****Registration closes October 28th****. [Information](#)
- Southern Area Engine Academy: Offering trainings at 4 different locations in Florida November – March. [Information](#)

Webinars

- University of Wisconsin Stevens Point: Using Fire Festivals to Engage Communities: October 7, 2026 1:00 – 2:00 p.m. EST [Registration](#)
- USFS Research and Development Presents: National Forest Products Week – Nanocellulose: October 20, 2026 11:00 a.m. – 12:00 p.m. EST. [Registration](#)
- USFS Research and Development Presents: National Forest Products Week – Mass Timber: October 22, 2026 11:00 a.m. – 12:00 p.m. EST. [Registration](#)
- Oak Woodlands and Forests Fire Consortium: Fire history and tree invasion in an Ozark glade, barrens, and woodland complex: November 3, 2026 2:00 – 3:00 p.m. EST. [Registration](#)
- Oak Woodlands and Forests Fire Consortium: Monitoring methods and results to date of the Missouri Pine Oak Restoration Project: November 10, 2026 2:00 – 3:00 p.m. EST. [Registration](#)
- Oak Woodlands and Forests Fire Consortium: Air Quality and Health Impacts of Prescribed Burning in the Southeastern US; November 17, 2026 2:00 – 3:00 p.m. EST. [Registration](#)

Research

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<https://doi.org/10.1029/2025GL120413>
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- Maxwell, A.E., Gallagher, M.R., Stockton, S.R. et al. 2026. Repeat terrestrial laser scanning for documenting and monitoring prescribed fire efficacy. *Fire Ecology*, 22, 91.
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[Full article on CAFMS website](#)



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- Shuman, B.N., Stefanova, I., Stefanescu, I.C., Ray-Cozzens, T., Johnson, J., Nelson, D.M. 2026. The role of the climate niche in repeated abrupt tree declines and ecotone dynamics in the Appalachian Mountains during the Holocene. *Frontiers of Biogeography*, 19: e150642. <https://doi.org/10.21425/fob.19.150642>
[Full article on CAFMS website](#)

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Website: www.appalachianfire.org



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A Member of the JFSP
Fire Science Exchange Network