



**SOUTHERN  
Fire Exchange**

Uniting Fire Science and Natural Resource Management



SFE 10 Minutes 2013-4

## 10 Minutes with the Southern Fire Exchange: Mark Melvin

*10 Minutes is an interview series where the Southern Fire Exchange talks with experts, leaders, and sages in southern wildland fire management and research. In this interview, the SFE speaks with Mark Melvin, who has more than 20 years of land management and fire experience on private lands in the South.*

### In what ways does prescribed fire application in the South differ from other parts of the country?

“Most, in fact over 80 percent, of all annual silvicultural burning in the U.S. occurs in the 13 southern states. So, more prescribed fire occurs here than anywhere else in the country. We have state agencies, policies, and laws that support the appropriate use of fire for resource benefit; this is not always the case in other regions. We also have more states with certified burn manager programs. And perhaps most importantly, landowners and managers are able to obtain burn authorizations the day of the burn, compared to the norm outside the South where states require multiple days, or longer, to acquire a burn authorization. This allows managers maximum flexibility in choosing the best fire weather conditions in real time. So in many advantageous ways fire use in the South is still in the hands of the practitioner.”

### What key factors do you consider when deciding ignition techniques for your burns?

“Firing techniques should always match fuelbed and weather conditions to meet objectives. Every burn day is different, and weather conditions can change throughout the burn period. Determining the correct firing technique and pattern along with making adjustments during the

burn is key to achieving desired intensity. I always err on being conservative with fire, never burning hotter than required. Most days this can be a real balancing act, but for me, this is where the ‘art’ of using fire comes into play. Trust and rely on planning, training, and experience.”

### What is the biggest barrier to growing your prescribed fire program?

“I would have to say balancing smoke management concerns with available or acceptable burn days. On most burn days we have the capacity to accomplish more acres but are limited by smoke production. This is especially true on days when other burning activity is occurring in our area. Managing smoke is a major element of our fire planning process.”

### Do you have advice for fire managers who are working to overcome similar barriers?

“Prioritize your larger, or more complex, burns to utilize the best ventilation days. Additionally if your landowner objectives and ecosystem type allow, expand your burn season or window as much as possible to maximize the number of quality burn days in a given year. Incorporating these simple strategies into your fire management planning will help facilitate and utilize premium burn days.”



**Mark Melvin**  
**Conservation Management / Education Technician**  
**Joseph W. Jones Ecological Research Center at Ichauway**

Mark Melvin is employed at the Joseph W. Jones Ecological Research Center at Ichauway located in Newton, Georgia. Mark has 20+ years of land management experience on private lands in the south, including over 100,000 acres of prescribed fire experience. At Ichauway, he works with conservation management and education staff to promote the appropriate use of prescribed fire.



### **What are some of the resources that you use to find science-based information to incorporate into your burn plans?**

“Other than what we (Jones Center) conduct which is site specific to the longleaf ecosystem, I find almost exclusively on web or by email. I am very fortunate that I am networked to many researchers, universities, and various fire support groups (i.e. prescribed fire councils) that forward the latest in fire research. If I’m searching for something specific, I ‘Google’--a useful 21<sup>st</sup> century tool! More recently I have found newsletters from the many JFSP regional consortia useful, especially the SFE. These groups are bridging the information gap between current research and the fire manager on the ground.”

### **What is one example of fire science being successfully applied in planning and conducting prescribed fires?**

“Personally, I find research that is specific to a certain species most helpful. Ecosystem integrity is the ultimate goal, but the more we know about specific species, the better we can manage the system as a whole. It was not so many years ago that research demonstrated wiregrass burned during the growing season will flower and produce viable seed. This information has proven invaluable toward our restoration efforts. Likewise, understanding the individual needs of animal species allow managers to make science-based fire management decisions.”

### **What are some of the management and ecological questions that you would like to see addressed by fire science researchers?**

“From the management perspective I’d have to say smoke screening tools. Tightening air quality standards challenge state air regulatory agencies to manage and maintain air quality. In 2007 smoke from wildland fires (which includes prescribed fire) became part of the National Emissions Inventory. This was significant because it requires states to report annual emissions from fire activity. Most states have a poor ability to accurately estimate smoke impacts, which leads to over-estimating

in some cases and under-estimating in others. New and better tools are needed for fire managers and air quality regulators to understand and address smoke impacts from prescribed fire.”

“From an ecological perspective I think we need to better understand and quantify the societal benefits of well-maintained landscapes. And in the South most of the forested landscapes require periodic fire to remain healthy and viable. Science that contrasts the public health and safety benefits between managed and unmanaged forests is needed to direct future policy.”

### **Finally, what is one ‘must-hear’ message that you would like to share with fire managers in the South?**

“Twenty-first century prescribed fire managers face increasingly complex challenges that limit or potentially threaten the use of fire. Never before in history have land managers found these challenges broader in scope. Modern day prescribed fire managers must consider a complex web of policy, legal statutes, and liability, as well as public safety, health, and acceptance. Collectively these challenges are greater than any one land owner, group, agency, or state can address alone. The solution will require integrating the best science and policy from all stakeholders.”

Special thanks to Mark Melvin for sharing his perspectives and for being part of our 10 Minutes interview.

Do you have something to say? The SFE Discussion Forum is the perfect place to build on Mark’s responses and share your comments, questions, and ideas with the southern fire community.

For more information on the Southern Fire Exchange, visit [www.southernfireexchange.org](http://www.southernfireexchange.org).



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