



# SOUTHERN Fire Exchange

Uniting Fire Science and Natural Resource Management



## FIRE LINES

A Bimonthly Newsletter of the Southern Fire Exchange

July-August 2017  
Volume 7 - Issue 4

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Learn more about our [Partners](#) and the [JFSP Fire Science Exchange Network](#).

Visit the SFE Resource Center  
[www.southernfireexchange.org](http://www.southernfireexchange.org)



## FIRE VISION 20/20

### The 7th Association for Fire Ecology International Congress

Register now for a great line-up with distinguished plenary speakers, the latest research results and applications presented in traditional and innovative workshops and sessions at the **7<sup>th</sup> Association for Fire Ecology's International Fire Congress in Orlando, FL November 28 -December 2<sup>nd</sup>**.

The mix of learning opportunities for managers, practitioners and researchers include:

- **20 special sessions** on topics such as prescribed fire science, the role of Extension in fire education and the Southern Appalachian wildfires of 2016;
- **13 Workshops** on topics ranging from fire behavior modeling to smoke and highways to RX310;
- **18 Round-Table Fire Circles**, discussion groups on a wide variety of topics, including one designed for you to contribute your stories of how fire science has made a difference in your job.
- **Seven field trips** on Saturday provide an opportunity to see "Wild (or not so wild) Florida," ranging from a tour of Big Cypress National Preserve to Archbold Biological Station to Merritt Island to the wildland-urban interface east of Orlando.

All the field trips and several of the workshops require registration and are filling up – a good reason to register soon. Three plenary sessions include Dr. Reed Noss, of the Florida Institute for Conservation Science, Dr. Stephen Pyne, Arizona State University, Dr. Leda Kobziar, University of Idaho, Kevin Hiers, Tall Timbers Research Station, and a number of other national and international speakers. The Wednesday morning plenary session will be Fire AFEx talks delivered in TED and TEDx style, featuring 10 outstanding speakers from around the country, including Steve Miller, Florida, Mike Stambaugh, Missouri and Johnny Stowe, South Carolina.

#### FireVision 20/20 – The 7th AFE International Fire Congress

Hosted by the Association for Fire Ecology



In cooperation with the  
Southern Fire Exchange



[Register Now](#) for FireVision 20/20

[Submit your Poster Abstract](#) by September 15, 2017

## SFE Hosts Duff Fire Science and Management Workshop

### SAVE THE DATE: OCTOBER 19TH, ST. TERESA, FL

Join us as we bridge the gap between science and management when it comes to issues related to duff in southeastern upland ecosystems. This workshop will be a true exchange designed to expose natural resource managers to useful scientific studies and expose scientists to issues and concerns from the perspective of the resource managers. Presentations will include the latest information related to pine mortality associated with duff accumulations and management strategies for mitigating tree losses due to duff build up. Registration information will be posted [here](#) soon.

## Provide Your Feedback for the New LANDFIRE Review Website

The newly developed and released LANDFIRE data product review website (<https://landfire.nkn.uidaho.edu/>) is structured to help users provide feedback. LANDFIRE has established a date of **September 17, 2017 as a deadline for feedback** for what information could be used in the LANDFIRE remap. Now is the time to provide your feedback that could help make remap and future landscape data better. For more information about this effort please click [here](#).



## SFE Welcomes New Outreach Specialist

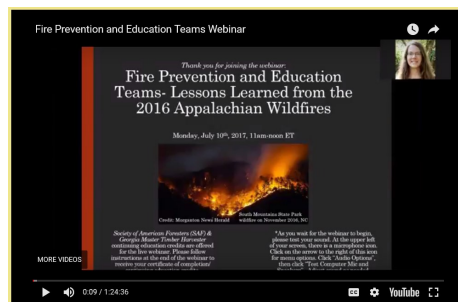
Leslie Bobby has joined the Southern Fire Exchange team as the new Outreach Specialist, replacing Annie Oxarart. Leslie will split her time between SFE duties and work as an Extension Associate with Southern Regional Extension Forestry, which is part of the Cooperative Extension Service. Over the past few years, she has worked on forestry issues related to climate change, bioenergy and forest economics. She has a background in wildland firefighting and prescribed fire. She studied fire effects in Alaska as part of her MS in forest ecology, which she obtained at the University of Florida. Leslie's office is at the University of Georgia, in Athens, GA. She is excited to be back in the fire world and to find new ways to promote and share developments in fire research and management with managers, Extension personnel and landowners.



## SFE Webinar Recordings Available Now

### Fire Prevention Education Teams: Lessons Learned from the 2016 Appalachian Wildfires

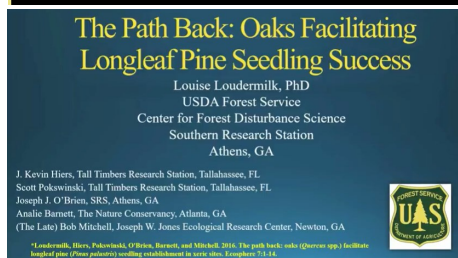
This hour-long webinar, which can be found [here](#), described the unique methods employed by an interagency Fire Prevention Education Team (FPET) to reach six of the states affected by the 2016 Appalachian wildfires. It included the value of consistent messaging, a multi-media campaign, coordination with outreach groups, encouraging celebrities to be spokespeople (as in the case of Dolly Parton), and the many lessons learned.



### The Path Back: Oaks Facilitating Loblolly Pine Seedling Success

Do deciduous midstory oaks on xeric sandhill sites hurt or help loblolly pine seedlings?

Dr. Louise Loudermilk of the USFS Southern Research Station presented new research suggesting that the presence of midstory oaks on xeric sandhill sites can significantly improve microsite conditions for < 2-year old loblolly pine seedlings. Over longer time-scales, data suggests that understanding and managing for the facilitative roles of native midstory oaks may be important for loblolly pine forest sustainability during droughts, wildfires, and hurricanes. Find the webinar [here](#).



## UPCOMING EVENTS

Visit the **SFE Calendar** to learn more about upcoming events. To add an event to our calendar, **email us** the information.

### Prescribed Fire Council (PFC) Meetings

#### Alabama PFC Annual Meeting

September 6, 2017

Canton, AL

#### North Carolina PFC Annual Meeting

September 6-7, 2017

Asheville, NC

#### Kentucky PFC Annual Meeting

September 11-13, 2017

Greenville, KY

#### Virginia PFC Annual Meeting

September 14-15, 2017

Natural Bridge, VA

#### Central Florida PFC Annual Meeting

September 22, 2017

Kissimmee, FL

#### South Carolina PFC Annual Meeting

September 26-27, 2017

Hartsville, SC

#### Georgia PFC Annual Meeting

September 28, 2017

Tifton, GA

#### South Florida Interagency Fire Management Council

October 24, 2017

West Palm Beach, FL

#### North Florida PFC Annual Meeting

October 25, 2017

Tallahassee, FL

#### Louisiana PFC Annual Meeting

October 26, 2017

Alexandria, LA

### Trainings

#### Crew Boss Academy

October 4-13, 2017

Fort Custer Training Center, Michigan

#### Longleaf Academy: Understory Restoration 201

October 24-26, 2017, Andalusia, AL

This 2.5 day workshop will include class and field components focused on the understory. [Register Now!](#)

**Find More Resources at**  
[www.SouthernFireExchange.org](http://www.SouthernFireExchange.org)

## UPCOMING EVENTS CONTINUED

### Trainings

#### Agency Administrators Workshop

National Interagency Presc. Fire Training Center  
Nov. 30- Dec. 5, 2017  
Florida location (exact location TBD)

#### Prescribed Fire Training Center Schedule for Fiscal year 2018 released

[Application](#) deadlines are October 20, 2017!  
The 2018 schedule will also include new **Fire Leadership for Women** PFTC Modules in February and March of 2018.

### Workshops and Conferences

#### Fire & Forest Management in Central Tennessee Workshop & Field Tour

September 29, 2017  
Tullahoma, TN

#### Natural Areas Conference

October 10-12, 2017  
Fort Collins, CO

#### Ecological Forestry Workshop

Joseph W. Jones Ecological Research Center  
October 30-November 2, 2017

#### Society of American Foresters National Convention

November 15-19, 2017  
Albuquerque, NM

#### 2017 AFE International Fire Congress

November 28-December 2, 2017  
Orlando, FL

#### Wildland Urban Interface Conference

Feb. 27-Mar. 1, 2018  
Reno, NV

#### 2<sup>nd</sup> National Cohesive Wildland Fire

Mgmt Strategy Workshop  
Mar. 26-29, 2018  
Reno, NV

#### Fire Continuum Conference

May 21-24, 2018  
Missoula, MT

### News and Reminders

#### SEEKING COMMENTS FOR

#### NWCG AERIAL IGNITION GUIDE

NWCG 2015 Interagency Aerial Ignition Guide (PMS 501) is now available for review and comment. [Submit comments](#) by October 30, 2017.



The Southern Fire Exchange is funded through the Joint Fire Science Program, in agreement with the United States Forest Service, Southern Research Station. This institution is an equal opportunity provider.

## NEW RESOURCES YOU CAN USE

### Prescribed Burning: Spotfires and Escapes Factsheet

John Weir of Oklahoma State University, and Extension specialists from six other universities wrote this new six-page Extension publication, which describes how spotfires and escapes happen and what can be done to prevent them or deal with them as they occur. Although focused on rangelands in the Midwest, this Oklahoma Cooperative Extension Service factsheet describes principles and practices relevant to most prescribed burning. [Download the factsheet here.](#)

### Open Access Fire Ecology Journal New Issue

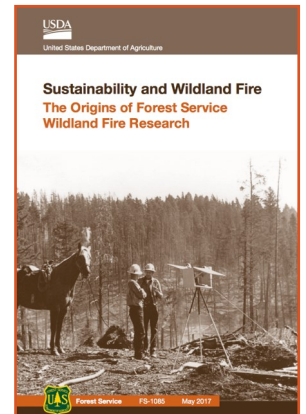
Volume 13 Issue 2 of the open-access journal Fire Ecology was published online in August 2017. With peer-reviewed publications spanning the globe, this journal and its back issues are free to read, access and download without subscription or download fees. <http://fireecologyjournal.org/>

### USFS Report Narrates the History of Wildland Fire Science

An interesting new 120 page report reads like a history book as it details the 100 years of wildland fire research led by the US Forest Service. Access it [here](#).

### August Driptorch Digest

The email newsletter the “[DripTorch Digest](#)” from the [Southeast Regional Partnership for Planning and Sustainability](#) (SERPPAS) is a great monthly resource for the southern prescribed fire community. Subscribe [here](#) for news and information related to prescribed fire in the South.



### National Wildland Fire Coordinating Group (NWCG) Releases Three New Resources

#### 2017 NWCG Fire Behavior Field Reference Guide Online

This 200-page guide ([PMS 437](#)) is full of fire behavior, fire weather, fuels and mapping information that can be used by Long Term Fire Analysts (LTANs), Fire Behavior Analysts (FBANs) and anyone else working in fire behavior monitoring. Given the amount of detail in the Guide, many of the topics are particularly applicable for experienced prescribed fire planners and practitioners.

#### Resource Advisors Guide for Wildland Fire (PMS 313) Now Available!

The revised READ Guide, created by the NWCG, is ready to [download](#). This guide will help you update your knowledge and prepare for serving as a Resource Advisor during wildfires or other all-hazard incidents.

#### Release of Revised NWCG Documents

Prescribed Fire Complexity Rating System Guide ([PMS 424](#)) and Interagency Prescribed Fire Planning and Implementation Procedures Guide ([PMS 484](#))

### The World of Wildland Fire

#### Science Videos Released

The Wildland Fire Education and Training Collaborative (WETC) created a six part YouTube video series with educational training videos created by fire scientists and researchers. The 7 – 11 min. videos explain concepts related to fuels, combustion, live fuel moisture, fire behavior and dead fuel moisture. [Click here](#) to see them.

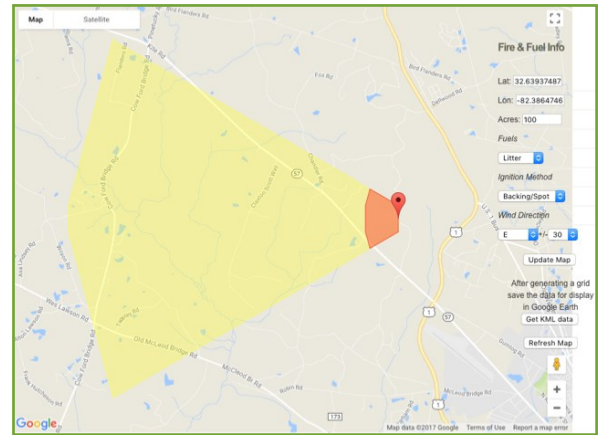


Introduction to Combustion – 1

## SFE Hosts Updated Simple Smoke Screening Tool

SFE is now hosting the Simple Smoke Screening Tool and has enhanced the interface to make it easier to determine potential smoke impacts and save/share the map. While basic smoke plotting for prescribed burns can be done with a protractor and a paper map, the Southern High Resolution Modeling Consortium (SHRMC) created a digital, location-based version of the Simple Smoke Screening Tool many years ago. This tool allows you to figure out your smoke plume path based on wind direction and fuel type.

To use the tool, you can select a point on the map or enter latitude and longitude. Next, enter the number of acres of the burn, fuel type (grass, shrubs, litter, or slash), ignition method (backing/spot or head/aerial), wind direction and corresponding wind direction variability (+/- 15-60 mph), and then select “update map.” You will see a yellow highlighted cone-shaped area starting at your point of origin and the orange-shaded area will be the highest impact zone (see picture). The modeled smoke plume shows the probability of *high concentration* and *dispersed concentration levels* rather than specific concentration levels. You can save your results as a map that can be used in Google Earth and shared with others. To create a map, select the *Get KML data* button, which will fill in the text box below *KML output*. The text produced in that box can be copied and pasted into a text editor and saved as a .kml file. The map can be easily viewed in Google Earth or ArcGIS. [Find the Simple Smoke Screening Tool here.](#)



## Updated Version of FuelCalc Available

[FuelCalc is a fuel characteristics](#) simulation software program that calculates initial canopy fuel characteristics and the effects of thinning, pruning, piling and broadcast burning on ground, surface and canopy fuel characteristics. FuelCalc 1.5, released this August, has expanded options for creating species thinning priority lists and reading data from recently added protocols in the FFI monitoring application.

## Updated Version of First Order Fire Effects Model (FOFEM) Available

FOFEM is a computer program developed to aid resource managers, planners, and analysts in predicting and planning for four major fire effects: fuel consumption, smoke emissions, soil heating, and tree mortality. FOFEM 6.4, just released in August, now includes new emission factors and emission estimation logic, expanded options when running batch simulations and updated import utility that reads data from recently added protocols in the FFI monitoring application. Access the FOFEM website [here](#).

## Think about Fine Fuels When Planning Longleaf Restoration in Mesic Flatwoods Research Highlight

Research described in *Ecological Restoration* ([Hess and Tschinkel 2017](#)) from a study in the Apalachicola National Forest in north Florida shows that in mesic flatwoods sites, longleaf pine restoration projects should consider retaining some non-longleaf overstory pine species (i.e. slash pine and loblolly pine) because their needle cast provides an important fine fuel for prescribed fires. Due to intensive site preparation practices that were used to convert mesic flatwoods sites to commercially viable pine plantations over the past 60 years and subsequent changes in fire regimes, many sites now have understories comprised of shade tolerant woody shrubs (saw palmetto, gallberry, wax myrtle, fetterbush) instead of bunchgrasses and herbaceous vegetation.

In their publication Hess and Tschinkel reported that as woody vegetation cover (which had an inverse relationship with herbaceous vegetation cover) increased, the area of sampled plots burned by prescribed fire decreased. Because of the reduction in flammable bunchgrasses and forbs, overstory pine needle cast plays an important role in carrying fire in mesic flatwood sites that have understories dominated by woody shrubs. Following an experiment that mimicked several thinning treatments commonly used in longleaf pine restoration projects on mesic flatwoods sites, the authors reported that as canopy gap size increased, the surface needle cast fuel load decreased and the number of plots burned during prescribed fires decreased. They documented that even thinning treatments such as every third row (~33% BA removal) and every two rows (~50% BA removal) reduced the number of plots burned by prescribed fires. Their results showed that in large clear cuts only 26% of the plots burned. Hess and Tschinkel argue that in “...areas with high-herbaceous ground cover, needle cast is not needed for fire movement, but as herbaceous ground cover declines, pine density must increase to provide the fine fuels for fire.”

The authors also described the potential for mesic pine flatwoods plantations to fall into a “landscape trap” wherein understories once dominated by herbaceous groundcover become dominated by woody shrubs. This situation leads to decreased fire frequency, increased fire severity and limited options for pine regeneration and herbaceous understory restoration. Check out the [full publication](#) for additional details and a “landscape trap” conceptual model.