



# SOUTHERN Fire Exchange

Uniting Fire Science and Natural Resource Management



## FIRE LINES

A Bimonthly Newsletter of the Southern Fire Exchange

August 2018  
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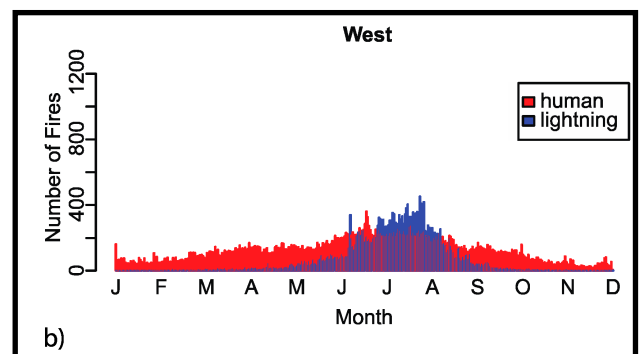
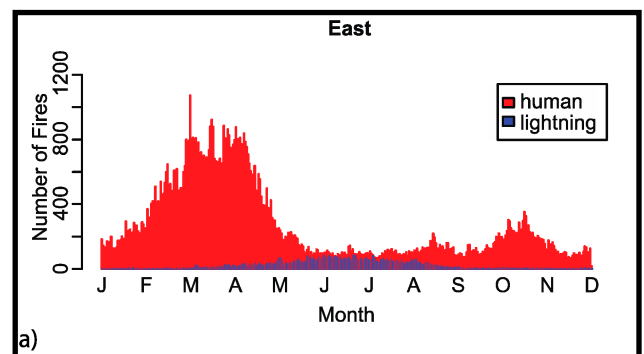
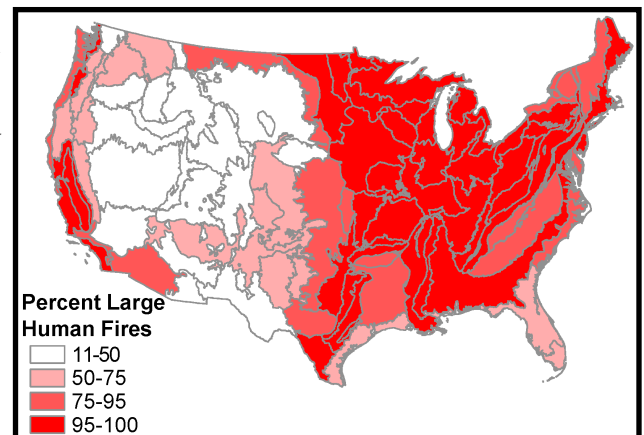
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## The Number of Large Wildfires Across the United States has Increased due to Human-related Ignitions - Why?

The frequency of 'large' wildfires has increased over the past 30 years across the United States. A recent nationwide study sought to understand how location, ignition source, fuels, and weather can influence large fire development. The results were published earlier this year in the open-access journal *Fire* (Nagy, R.C., Fusco, E., Bradley, B., Abatzoglou, J.T. and J. Balch. 2018 [Human-Related Ignitions Increase the Number of Large Wildfires Across U.S. Ecoregions. \*Fire\* 1 \(1\)](#)). To account for differences in average fire size across the country, the authors defined large fires as the largest 10% of fires within each of 84 U.S. ecoregions. From an analysis of 175,000 large wildfires that occurred between 1992-2015, the authors found that humans were the primary source of ignition in both the eastern U.S. and along the West Coast (Figure 1). Overall, four times more large fires were ignited by humans than lightning. In the interior West, lightning started most of the large fires. The authors also found that the season for human-caused large fires is much longer than the season for lightning-caused large fires. Large human-caused fires in the East occurred throughout the year with peaks in the spring and fall, while large lightning-caused fires occurred mainly in May-September (figure 2). The authors concluded, as have other studies, that human ignition sources (rather than weather) are the driving force for large wildfires in the East.



**Figure 1.** (top) Percent of large fires ignited by humans across the country; humans cause most of the large fires in the eastern U.S.

**Figures 2a. and 2b.** (middle and bottom) Seasonality of large fires (human-caused vs. lightning-caused) in the East and the West.

## Learn More About the Latest Smoke Research from JFSP in a New SFE Factsheet

For 20 years, the Joint Fire Science Program has funded a wide variety of fire science research, including a line of work focused on understanding and modeling smoke and air quality. A new factsheet from SFE, "[Summary of Smoke Related Joint Fire Science Program Grants Relevant to the Southeastern US](#)," summarizes the findings of a wide range of recently completed projects. Topics include smoke models, the health effects of smoke and smoke chemistry. Check out the factsheet to discover more about these subjects and links to some of the models.



## New SFE Factsheet Synthesizes Duff Fire Science

Duff is a layer of partially decayed organic material on the forest floor that can accumulate in long-unburned stands and can be a serious challenge for reintroducing fire. Duff fires can smolder for weeks and are often the cause of significant delayed mortality in mature pines. "[Reintroducing Fire into Long-Unburned Pine Stands: The Duff Problem](#)," a new factsheet from SFE, summarizes research from a variety of scientific papers and provides insights into the challenges and management recommendations for tackling duff problems.



## SFE Fire in Wetlands Webinar Recording Available

More than 96 southern species are at risk of disappearing due to loss of fire from wetland habitats. The July SFE fire in wetlands webinar used examples from the Ocala National Forest to discuss the role of fire in wetland ecology, restoring and maintaining wetlands with fire by incorporating ecological goals in fire planning and adjusting tactics during wetland burns to achieve the desired results. Check out the full webinar recording on our [SFE YouTube channel](#).



## SFE Featured on Radio Show Talking About Prescribed Fire & Fire Science

SFE team members Kevin Robertson (Tall Timbers), David Godwin (University of Florida) and colleague Kevin Hiers (Tall Timbers) led a one hour panel discussion about prescribed fire and fire science on a recent WFSU Public Radio show. [You can listen to the recording here](#).



## UPCOMING EVENTS

To add an event to our calendar, information to us at [contactus@southernfireexchange.org](mailto:contactus@southernfireexchange.org)

### Prescribed Fire Council (PFC) Meetings

#### Louisiana PFC Annual Meeting

Sep. 19, 2018

Alexandria, LA

[Email Keith Hawkins](#) for more information

#### Kentucky PFC Annual Meeting with Consortium of Appalachian Fire Managers & Scientists, Bats & Fire Workshop

Sep. 24-25, 2018

Cave City, KY

#### Georgia PFC Annual Meeting

September 27, 2018

Tifton, GA

#### South Carolina PFC Annual Meeting

September 26-27, 2018

Georgetown, SC

#### Central Florida PFC Annual Meeting

September 28, 2018

Kissimmee, FL

#### North Florida PFC Fall Meeting

October 9, 2018

Tallahassee, FL

#### South Florida Interagency Fire Management Council Annual Meeting

October 11, 2018

Naples, FL

### Trainings

#### Prescribed Fire Training Exchanges (TREX)

##### Cal-TREX North

Oct. 22 –Nov 3, 2018

Chico, CA

Applications due by Sep. 29

*Find More Resources at*

[www.SouthernFireExchange.org](http://www.SouthernFireExchange.org)



## UPCOMING EVENTS CONTINUED

### RxFire Certified Burn Manager Course

Sep. 25-27, 2018

Virginia Dep. Of Forestry

\$50 fee, email [sandy.mills@dof.virginia.gov](mailto:sandy.mills@dof.virginia.gov) for registration

Charlottesville, VA

### Certified Burn Boss Workshop

Sep. 26-28, 2018

Cave City, KY

### Georgia Prescribed Fire Certification

Oct. 24-25, 2018

Athens, GA

Dec 4-6

Tifton GA

### Longleaf 101 Training

Dec. 4-6, 2018

Georgetown, SC

### Workshops and Conferences

#### Society of American Foresters (SAF) National Convention

Oct. 3-7, 2018

Portland, OR

### Fire Effects Monitoring & Technology Workshop

Oct. 15-22, 2018

Santa Fe, NM

Applications due by August 29

### Central Appalachians FLN

Oct. 23-24, 2018

Location TBD

### 12th Biennial Longleaf Conference

Oct 23-26, 2018

Alexandria, LA

### VIII International Conference on Forest Fire Research

Nov. 10-16 2018

Coimbra, Portugal



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.

## WHAT'S NEW?

### National Association of State Foresters Sends Letters to Congress to Support Joint Fire Science Program (JFSP)

The [NASF](#) (the nation's 59 state and territorial foresters) sent letters this summer to the leadership of the Senate and House Appropriations Subcommittees on Interior, Environment, and Related Agencies, to underscore the value of the Joint Fire Science program. Funding for the JFSP (the primary funding source for the Southern Fire Exchange) has been declining in recent years and all funding was slated to be eliminated in early drafts of the federal FY19 budget. [Check out the NASF letter here.](#)

### Virginia Forest Landowners Learn the Science and Art of Prescribed Fire

In many areas, collaborative efforts are underway to encourage forest landowners to conduct prescribed fires on their land. In support of that goal, this past May partners from across Virginia and the Southeast hosted a landowner "Learn and Burn" event in Wakefield, VA that gave local landowners the opportunity to learn and experience fire on the ground. [Read more](#) about this event and [watch a video](#). If you want to learn how to develop a successful learn and burn event, join [our upcoming SFE webinar](#) on October 10th, as North Carolina State University Extension Associate Jennifer Fawcett will summarize the lessons learned from hosting and planning a variety of learn and burn events across the South.



#### SFE WEBINAR:

### LESSONS LEARNED FROM LEARN-N-BURN EVENTS

STRATEGIES FOR  
SUCCESSFUL PROGRAMS

OCT 10TH 1:00 - 2:00 PM ET

[LEARNNBURN.EVENTBRITE.COM](http://LEARNNBURN.EVENTBRITE.COM)



### Help Keep FEIS Species Reviews Up to Date

The [Fire Effects Information System](#) (FEIS) provides "an online collection of reviews of the scientific literature about fire effects on plants and animals and about fire regimes of plant communities in the United States." The staff from FEIS are looking to partner with instructors and academics to develop and update species specific synthesis. Instructors: consider how you could fit FEIS into your next course (students could write factsheets, update species reviews, and more.) Contact Ilana Abrahamson [ilanalabrahamson@fs.fed.us](mailto:ilanalabrahamson@fs.fed.us) for more information. Learn more about FEIS from our [SFE FEIS factsheet](#) and [webinar recording](#).

## UPCOMING EVENTS CONTINUED

### Working Together—Fire Managers & Archaeologists

Nov. 27-29, 2018

Tucson, AZ

### 15th International Wildland Fire Safety Summit and 5th Human Dimensions of Wildland Fire Conf

Dec. 10-14, 2018

Asheville, NC

### 6th International Fire Behavior and Fuels Conference

Apr. 29– May 3, 2019

Albuquerque, NM

### Webinars

#### Lessons learned from hosting Learn –n–burn events Strategies for Successful Programs

Oct. 10, 1-2 pm ET

#### SIPFIS: Integrated Prescribed Fire Tracking System

Oct. 5, 1-2 pm ET

### Webinar Recordings Available

#### Fire in Wetlands Webinar

#### Air Quality 101 SFE Webinar

#### Lessons Learned from Hosting Fire Festivals

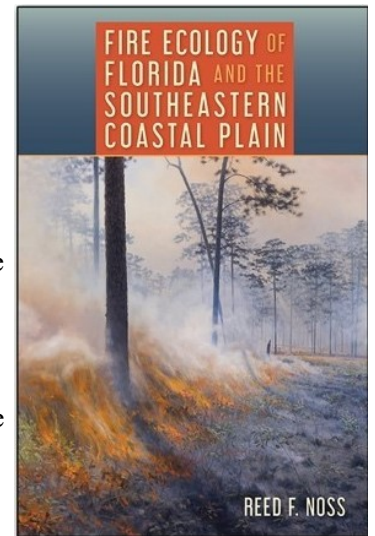
## LANDFIRE Team Receives Award

The LANDFIRE team received a prestigious 2017 Environmental Achievement award from the Department of the Interior. LANDFIRE was selected for being an “inter-agency team of environmental champions and agents of change.” The LANDFIRE program is led by staff from the US Department of Interior (DOI), US Forest Service and the Nature Conservancy (TNC). The program provides more than 20 contiguous geospatial mapping layers of fuels, fire regime and fire history for the U.S.. Information from LANDFIRE is frequently used for strategic fire and resource management planning and analysis. Learn more about LANDFIRE from several past archived Southern Fire Exchange Webinars [here](#).



## A New Book by Dr. Reed Noss: Fire Ecology of Florida and the Southeastern Coastal Plain

The University Press of Florida recently published a new book by Dr. Reed Noss [Fire Ecology of Florida and the Southeastern Coastal Plain](#) that explores the roles of fire in Florida’s diverse ecosystems. Available now through September 30<sup>th</sup>, the publisher is offering a discount for SFE readers: use the code SFE18 for 50% off when ordering. Visit the [University Press of Florida](#) website for more information.



## Looking for more information on a specific topic?

### Check out the [publications](#) section on the SFE website.

*There are more than 50 factsheets that explore different aspects of fire science available, and archived issues of Fire Lines.*

### Factsheet topics include:

- [Fire Ecology and Effects](#)
- [Fire Science Information, Programs, and Resources](#)
- [Prescribed Fire](#)
- [Public Education](#)
- [Smoke Management, Air Quality and Weather](#)
- [Wildfire](#)

## Get Certified as a Wildland Fire Professional Through the Association for Fire Ecology!

The Association for Fire Ecology (AFE) is accepting 2018 applications for their Wildland Fire Professional Certification Program until **October 15<sup>th</sup>**. This certification formally acknowledges your education, experience, and accomplishments in fire ecology, and offers employers a way to identify you as a recognized fire ecology professional. For students and young professionals, the Certification Program provides a clear pathway to define and achieve career goals. AFE offers 6 different certification pathways: Wildland Fire Technician, Wildland Fire Practitioner, Wildland Fire Manager, Senior Wildland Fire Manager, Wildland Fire Ecologist, and Senior Wildland Fire Ecologist. The application cost is \$60 to \$150, depending on the certification level. [Apply online here](#), and review the Professional Certification Guidebook as you prepare your application. AFE now has more than 100 certified wildland fire ecologists, managers, and technicians.

## New Wildfire Factsheet from OK Extension

A new factsheet from the Oklahoma Cooperative Extension Service provides recommendations for protecting a ranch or farm from wildfire. Topics include: risk management, creating firebreaks, evacuating and steps to take when a wildfire approaches. Check it out [here](#).

## Fall Online Course to Teach Extension and Outreach Tools and Techniques

An [online course](#) offered this fall provides information relevant to conducting outreach and Extension for forestry and natural resource professionals. Learn more about program development and delivery, audiences and needs assessments, evaluation and impact, as well as funding and partnership negotiation. [Sign up here](#) for further updates. Course is offered Tuesdays at 1 pm ET, from September 11<sup>th</sup> through December 11<sup>th</sup>

 **SEEDING SUCCESS**  
**Tools, Technology and Techniques**  
for a Successful Extension Natural Resources Career



## NEW TECHNOLOGY AND TOOLS

### WindNinja 3.4.0 Released

[WindNinja](#), a computer model created by the USFS Rocky Mountain Research Station, spatially estimates wind fields for wildland fire applications. WindNinja was recently updated to include more features and to fix some issues which had prevented users from downloading HRRR forecasts. Access the new version of WindNinja [here](#) and check out a [SFE webinar](#) that included a demonstration of the model.

### Track Active Wildfires on Twitter @wildfiresignal- #Fire Name

A Twitter bot- [@wildfiresignal](#) posts satellite imagery of active wildfires every six hours. To follow a specific fire, look for the “hashtag”- with the fire name, for example, the Carr Fire would be #CarrFire. An [article](#) in the magazine VentureBeat describes this twitterbot in more detail.

## RECENT FIRE SCIENCE PUBLICATIONS FOR THE SOUTH

Do you have a recent peer-reviewed publication that you would like to share in our next newsletter? Send us an email ([contactus@southernfireexchange.org](mailto:contactus@southernfireexchange.org)).

### Longleaf Pine Restoration in Context: Comparisons of Frequent Fire Forests

S. Bigelow, M. Stambaugh, J. O'Brien, A. Larson, M. Battaglia.

In: L Kirkman and S. Jack: *Ecological Restoration and Management of Longleaf Pine*. CRC Press. Taylor and Francis Group. Book Chapter. 2018.

(\*Open Access)

### Fire Season, Overstory Density and Groundcover Composition Affect Understory Hardwood Sprout Demography in Longleaf Pine Woodlands

A. Whelan, S. Bigelow, M. Nieminen and S. Jack. *Forests*. 9(7). 2018.

(\*Open Access)

### Dynamics of gaps created by burning in Florida oak-saw palmetto (Quercus, Fagaceae-Serenoa repens, Arecaceae) scrub

P. Schmalzer and T. Foster. *The Journal of the Torrey Botanical Society*. 145 (3). 2018

### Ecosystem multifunctionality increases with beta diversity in restored prairies

E. Grman, C. Zirbel, T. Bassett, L. Brudvig. *Oecologia*. 2018.

### Nutrient limitation of plant productivity in scrubby flatwoods: does fire shift nitrogen versus phosphorus limitation?

Schafer, J. and M. Mack. *Plant Ecology*. 219 (9). 2018.