



**SOUTHERN
Fire Exchange**

Uniting Fire Science and Natural Resource Management



FIRE LINES

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Fire After Hurricanes: What Does the Research Say?

The fall 2018 hurricane season has had an incredible impact on the forest fuels in many areas of the South due to hurricanes Michael and Florence. In the areas affected, managers are likely anticipating the impacts of these events on future wildland fires. To assist in this effort, we are working to gather and share the existing fire science information related to storm impacts on wildland fire. Some research suggests that hurricane events “promote the fires that are of higher than normal intensity” (Myers and Lear, 1998) while other research suggests that the relationship between wind events and fire can be much more complex with impacts differing by spatial and temporal scale (Canon et al. 2017). You may find the following publications and resources valuable for making decisions regarding the impacts of hurricanes and extreme wind events on Southern forests and wildland fire.

Research and Reviews:

- Hurricane-fire interactions in coastal forests of the south: a review and hypothesis (Myers and Lear, 1998)
- A review and classification of interactions between forest disturbance from wind and fire (Canon et al. 2017)
- Fire management ramifications of Hurricane Hugo (Saveland and Wade, 1991)
- The influence of experimental wind disturbance on forest fuels and fire characteristics (Cannon et al. 2014)
- Hurricane Hugo: South Carolina forest land research and management related to the storm Haymond and Harms (Eds.) 1996
- Disturbance and coastal forests: A strategic approach to forest management in hurricane impact zones Stanturf et al. 2007
- Fuels management on the National Forests in Mississippi after Hurricane Katrina Bryant and Boykin 2007



Hurricane Michael Damage near Panama City, FL [Photo by Glenn Fawcett](#), U.S. Customs and Border Protection

Fuel Loading Resources:

- Digital Photo Series (includes Hurricane series)
- Stereo photo series for quantifying natural fuels. Volume XII: Post-hurricane fuels in forests of the Southeast United States
- Photo Series for Estimating Post-Hurricane Residues and Fire Behavior in Southern Pine

SFE Thanks Dr. Alan Long, Welcomes Dr. Raelene Crandall

On October 1st, 2018, Dr. Alan Long retired from Southern Fire Exchange after starting and leading the program for nearly 10 years. The SFE team presented him with an award for his many years of service at their annual planning meeting in late August. We will miss him dearly and wish him all the best as he stays busy in retirement.

Dr. David Godwin, who has been with SFE since 2013, will be stepping up to fill his position as administrative director. Dr. Raelene Crandall, assistant professor of fire ecology at the University of Florida, will take over as lead Principal Investigator.



SFE PIs at the Annual Meeting. From left: Dr. David Godwin, Dr. Raelene Crandall, Dr. Alan Long, Dr. Joseph Roise, Dr. Kevin Robertson

SFE WEBINAR:

LESSONS LEARNED FROM LEARN-N-BURN EVENTS

STRATEGIES FOR
SUCCESSFUL PROGRAMS

NOV 29TH 1:00 - 2:00 PM ET

LEARNNBURN.EVENTBRITE.COM



Lessons Learned from Hosting Learn-n-Burn Events Webinar Rescheduled

Due to Hurricane Michael, the webinar on “Learn-n-Burn” originally scheduled for October

10th has been rescheduled. The webinar will now take place on Thursday, November 29th at 1:00 PM ET. Anyone who has already registered will be sent an updated link to access the webinar on the 29th. Those who have not registered can visit <http://learnnburn.eventbrite.com>.

WHAT'S NEW?

USDA Forest Service Research and Development Newsletter Fire Issue

The most recent edition of the monthly [Research and Development newsletter](#) from the USDA Forest Service was devoted to wildland fire issues. Featured stories include the recent Yale E360 article on the Forest Service’s increased use of prescribed fire for wildfire risk reduction and the development of a remote-sensing photogrammetry technique to obtain data that can be used to construct 3-D representations of landscapes.

Article Highlights Success of the Joint Fire Science Program and Fire Science Exchange Network

[An article](#) in the most recent edition of Wildfire Magazine connects organizational divides working against the effective application of wildland fire science to the many wildland fire issues we face today. In part, the piece highlights the great strides made in science delivery through the Joint Fire Science Program’s Fire Science Exchange Network.

FY2020 Strategic Environmental Research and Development Program (SERDP) Solicitations Released

The Department of Defense is seeking environmental research and development proposals for funding beginning in Fiscal Year 2020. Projects will be selected through a competitive process and details are available on the [program website](#).

UPCOMING EVENTS

To add your event to our calendar,
email us at
contactus@southernfireexchange.org

Prescribed Fire Council (PFC) Meetings North Georgia Prescribed Fire Council

February 7, 2019
Jasper, GA

Trainings

South Carolina Certified Prescribed Fire Manager Courses

November 7, 2018
Columbia, SC
November 28, 2018
Moncks Corner, SC
January 9, 2019
Columbia, SC

Bottomland Hardwoods Learning Exchange

Nov. 7-9, 2018
Brunswick, GA

Georgia Prescribed Fire Certification

Dec. 4-5, 2018
Tifton, GA

Longleaf 101 Training

Dec. 4-6, 2018
Georgetown, SC

Georgia Blue Ridge Mountains FLN

Dec. 11, 2018
Dahlonega, GA

Florida Certified Burn Manager Courses

Various dates and locations

Conferences & Workshops

Working Together- Fire Managers & Archaeologists

Nov. 27-29, 2018
Tuscon, AZ

Find More Resources at

www.SouthernFireExchange.org

UPCOMING EVENTS CONTINUED

International Wildland Fire Safety Summit and Human Dimensions of Wildland Fire Conference

Dec. 10-14, 2018

Asheville, NC

Wildland Urban Interface Conference

March 26-28, 2019

Reno, NV

6th International Fire Behavior and Fuels Conference

Apr. 29-May 3, 2019

Albuquerque, NM

3rd Cohesive Strategy Workshop

October 21-24, 2019

Plymouth, MA

Webinars

Advanced Fire Environment Learning Unit 2018

Fall Season AAR

November 7, 2018 - 12:00 PM ET

Current Efforts to Reignite Prescribed Burning Across Central Hardwood Forests

November 20, 2018 - 2:00 PM ET/1:00 PM CT

SFE Webinar: Prescribed Burning after Drought

November 28, 2018 - 1:00 PM ET

SFE Webinar: Lessons Learned from Hosting Learn-n-Burn Events

RESCHEDULED due to Hurricane Michael! November 29, 2018 - 1:00 PM ET

Prescribed Fire Policy Barriers: Findings from a JFSP Project on Challenges and Strategies on Federal Lands Across the West

November 29, 2018 - 2:30 PM ET

Fire and Herbivory

December 4, 2018 - 2:00 PM ET/1:00 PM CT

Patch-Burn Grazing and Native Pollinators

December 11, 2018 - 2:00 PM ET/1:00 PM CT



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.

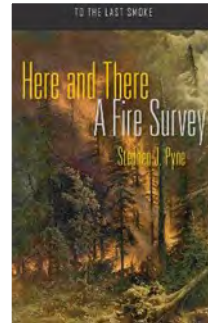
Women and Diversity in Fire Science

Recognizing underrepresented groups in fire science can encourage others to follow them into the field. This is important as fire science works to include and support people of all backgrounds. To that end, [an August editorial](#) in the open access journal *Fire* recognized women leaders in fire science research and announced a new Special Collection devoted to acknowledging current and future [Diversity Leaders in Fire Science](#).

The [Tallahassee Woman](#) magazine also recently highlighted women in science, including fire science, who are working at Tall Timbers Research Station. And in case you missed it, read the essay published in the October 2017 issue of Wildfire Magazine on [one man's experience](#) attending a women-centered TREX.

New Book by Stephen J. Pyne, [Here and There: A Fire Survey](#) Now Available

The University of Arizona press recently published [Here and There: A Fire Survey](#) by Dr. Stephen J. Pyne. In this collection of essays, Pyne reflects on wildland fire history, management, and policy in the U.S. and across the globe. The book is available in paperback, as a PDF, and as an ebook.



Final Reports Released for Two Joint Fire Science Program Projects

Final reports are available for two JFSP-funded projects. The [first project](#) examined the impacts of smoke exposure on the health of wildland firefighters. Key findings included a need for further research on acute and longer-term health effects of smoke exposure beyond populations already susceptible due to age or health condition. The researchers also found that firefighters, particularly those participating in certain activities may face increased health risks from smoke exposure.

The [second project](#) estimated the effects of climate change on wildland fires and the consequences for air quality. In part, the study found that fire area burned is predicted to increase globally throughout the 21st century due to climate and population density changes. PM 2.5 concentrations over North America are predicted to increase significantly as a result of increased fire activity. These increases in fire-related emissions could offset benefits from reductions in anthropogenic PM 2.5 and significantly affect future ozone air quality.

Interview with Steve Miller, 2017 IAWF Excellence in Fire Management Award Winner



Steve Miller, Photo by Wildfire Magazine

The April issue of Wildfire Magazine included an [interview with Steve Miller](#), the winner of the 2017 Excellence in Fire Management Award. Steve was formerly the Chief of the Bureau of Land Resources for the St. John River Water Management District. The interview covers Steve's career and background as well as his thoughts on the state of wildland fire management and advice for others in the field. Steve has been a great friend and supporter of the Southern Fire Exchange and we're excited for him to receive this recognition. For more about Steve, check out his [SFE 10 Minute Interview](#)

UPCOMING EVENTS CONTINUED

[Fire Ecology of Longleaf and Ponderosa Pine: How History Can Be Your Guide](#)

January 17, 2019- 1:00 PM ET

[Prescribed Fire Tracking Using New USGS Remote Sensing Tools](#)

January 24, 2019- 1:00 PM ET

[Homeowner Preparedness in the WUI: What Motivates Action?](#)

February 20, 2019- 1:00 PM ET

Webinar Recordings Available [Prescribed Fire Tracking with SIPFIS](#)

[Fire in Wetlands Webinar](#)

[Air Quality 101 SFE Webinar](#)

[Lessons Learned from Hosting Fire Festivals](#)

***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.*

Upcoming FIRETEC Workshop at Fort Stewart

A workshop for experienced prescribed burners will be held on November 8th at Fort Stewart, Georgia. The workshop will focus on showcasing, evaluating, and exploring options for best use of FIRETEC prescribed fire simulations. If you are interested in attending, contact James Furman at jameshfurman@fs.fed.us by October 31st. Additional information on logistics will be sent to those who RSVP. For more information about FIRETEC and this Department of Defense funded project check out this Southern Fire Exchange [webinar from last spring](#).

NEW TECHNOLOGY AND TOOLS

WindNinja Requests User Testimonials

WindNinja is a computer program that computes spatially varying wind fields for wildland fire application. The [WindNinja](#) team is [seeking input from users](#) on how and why WindNinja has been useful. There is currently no dedicated funding to support further development, maintenance, and growth of WindNinja. Responses from end-users will help in the search for additional funding to support the continuation of the tool.

FWAS Fire Weather Alert System Tutorial Now Available

The Missoula Fire Sciences Lab has created a [video tutorial](#) for their [Fire Weather Alert System](#). This new system is designed to provide text and email alerts whenever weather conditions near a specific location cross a pre-identified threshold. This could be used by prescribed burners or wildfire managers to get automated alerts when critical RH or windspeed thresholds are observed at nearby weather stations. The video covers the current proof-of concept, state of the system, possible future development, and how to set up custom alerts.

The Hot-Dry-Windy Index

The new [Hot-Dry-Windy Index \(HDW\)](#) is a simple program to use when determining which days are more likely to have atmospheric conditions good for prescribed burning. Two articles on the development and use of the HDW appeared in the recent special issue of *Atmosphere* entitled [“Fire and the Atmosphere”](#) (open access).

RECENT FIRE SCIENCE PUBLICATIONS FOR THE SOUTH

[Bioturbation by mammals and fire interact to alter ecosystem-level nutrient dynamics in longleaf pine forests](#)

[Fire effects on a fire-adapted species: response of grass stage longleaf pine seedlings to experimental burning](#)

[Nest and brood site selection of eastern wild turkeys](#)

[Atmosphere special issue “Fire and the Atmosphere”](#) (Thirteen publications on smoke, smoke modeling, weather and air quality.)

[A reconceptualization of open oak and pine ecosystems of eastern North America using a forest structure spectrum](#)

[Plant Community Response to the Management of an Invasive Tree \(Chinese Tallow\)](#)