



# SOUTHERN Fire Exchange

A JFSP Knowledge Exchange Consortium



## FIRE LINES

A Joint Newsletter of the Southern Fire Exchange and the Southeastern Section of the Association for Fire Ecology

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### SFE Spotlight on GIS and Mapping

In March and April, the Southern Fire Exchange (SFE) Spotlight focuses on topics related to mapping and GIS. We hope you can join us for the following webinars, or watch the archived recordings at your convenience:

**\* MTBS Applications in the South, March 12 at 1pm Eastern**

Josh Picotte, USGS Technical Specialist, will provide an introduction to the Monitoring Trends in Burn Severity (MTBS) dataset and discuss MTBS data applications in the South.

**\* Advancement of Smoke Emissions Models Utilizing Geospatial and Remote Sensing Data, March 26 at 1pm Eastern**

Siamak Khorram, Ph.D. and Joe Roise, Ph.D. of NCSU, will introduce the utility of satellite and airborne remote sensing data for improving smoke emissions models of wildland fires.

**\* GIS Migration from Desktop to Web, April 17 at 1pm Eastern**

Justin Shedd, Research Associate and GIS Specialist at NCSU, will discuss natural resource management examples and lessons from moving GIS applications from the desktop environment to a web platform.

And, if you missed the **LANDFIRE in the Southeast** webinar presented by Dr. Jim Smith, Program Manager for TNC LANDFIRE, you can watch the archived recording on the **SFE YouTube page**.

### USFWS Symposium Recap: Wetlands, Fire, and Climate Change

In November 2013, more than 50 managers and scientists gathered on Roanoke Island, North Carolina at the Alligator River National Wildlife Refuge for the *Managing Forested Wetlands with Fire in a Changing Climate Symposium*. The goal of this symposium, organized by the US Fish and Wildlife Service and funded through the Joint Fire Science Program, was to increase the knowledge base for issues regarding the management of forested wetlands with fire in an environment affected by climate change.

The symposium included 14 presentations, discussion sessions, and a full day field tour of Alligator River National Wildlife Refuge. During this 2½ day program, participants learned about the successes and challenges of managing fire in forested wetland landscapes with significant ground fuels and where water flow has been altered through extensive drainage systems. Participants discussed future management options considering projected sea level rise, storms, and other ecosystem stressors.

Several **presentations and the symposium program** (with presentation abstracts) are available on the SFE website. Extended abstracts and a symposium summary will be available later this spring.

### CONTACT INFORMATION

For general questions and to provide feedback, email [sfe@ifas.ufl.edu](mailto:sfe@ifas.ufl.edu).

#### Consortium Leads

- Leda Kobziar (PI)
- Alan Long (Director, Co-PI)
- Annie Hermansen-Baez (Co-PI)
- Kevin Robertson (Co-PI)
- Joe Roise (Co-PI)

#### Consortium Staff

- Carol Armstrong (TTRS Librarian)
- Chet Buell (IT Specialist)
- David Godwin (Program Coordinator)
- Annie Oxarart (Tech Transfer)
- Justin Shedd (GIS Specialist)

Learn more about our **Partners** and the **JFSP Knowledge Exchange Consortia**.

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

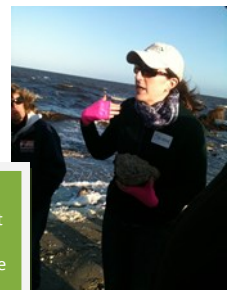
Stay Connected with SFE



Participants visit a field tour site that was treated with prescribed fire during winter, 2007.



Gary Curcio talks about the Estimated Smoldering Potential (ESP) Fire Danger Station, positioned on a study site on the Alligator River NWR.



Participants learn from Christine Pickens, TNC, about oyster restoration projects being implemented to reduce shoreline erosion on the refuge.

Photos by Annie Oxarart, SFE

## Partner Spotlight: National Woodland Owners Association

The **National Woodland Owners Association** (NWOA) was initiated in 1983 to promote the interests of non-industrial private forest landowners. By working through 36 affiliated state organizations (collectively known as the Alliance of Landowners Association), NWOA works to share relevant and pertinent information with private landowners, including best management practices for foresters. NWOA produces several resources, including a quarterly magazine, weekly newsletter, and website, which has numerous links directed toward the needs of private landowners.



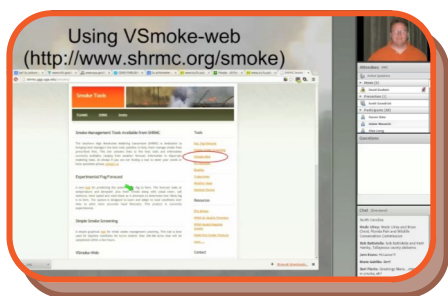
A key feature of NWOA is their grassroots organization that works on behalf of individual landowners to provide educational opportunities about forest management while also promoting favorable policy, legislation, and representation at both state and national levels. Topics including stewardship incentives, protecting forests from development, and certification of forest practices and practitioners are just a few of the initiatives NWOA supports. NWOA also strives to make prescribed burning more accessible to private landowners by directing them to helpful resources, such as links to individual state forest agencies, and by advocating for prescribed fire policies and regulations.

With so much of the South's forested lands in private ownership, NWOA is an important partner for the Southern Fire Exchange. A representative from NWOA serves on the SFE Advisory Board, and the group has been instrumental in helping raise awareness of our consortium to their members in the Southeast. Check out the NWOA website for helpful **publications**, archived issues of the **National Woodlands Magazine**, and links to **state resources**.

## VSmoke Web: Smoke Modeling Made Easy

**VSmoke web** is an online smoke model that is easy to use and appropriate for prescribed fire planning in the Southeast. The web browser based interface requires fairly minimal user inputs and provides estimates of wildland fire smoke plume direction, travel, and intensity. Using what is referred to as a Gaussian plume model, the VSmoke model output provides color-coded visual indicators of surface air quality thresholds based on predicted PM 2.5 concentrations and associated **National Air Quality Index** thresholds. As a planning tool, VSmoke web can be used by prescribed burners to understand how modifying the size of their burn or the conditions under which they burn, can influence smoke production, travel, and intensity. After exporting the model output into a .kml file, users can view the predicted smoke plume on **Google Earth** and use the Google Earth search tool to identify nearby smoke sensitive areas.

Limitations: it is important that fire managers understand that VSmoke web assumes constant weather conditions during and after the burn. With this understanding, managers should use the tool knowing that weather changes following ignitions could significantly alter predicted smoke movement and intensity. In addition, managers should also understand that VSmoke web assumes a flat terrain. In areas of significant topography or drainage, VSmoke may not accurately predict smoke plume movement and concentration, especially at night.



For more information on VSmoke web, see the SFE **VSmoke factsheet** and SFE **archived webinar** presentation by Dr. Scott Goodrick, USDA Forest Service Research Meteorologist.

## Reading Recommendation: Prescribed Fire and Air Quality Law

In a recent article titled, **Perverse Incentives: The Case of Wildfire Smoke Regulation**, author Kirsten H. Engel describes how current air pollution law and policy applies to both prescribed fire and wildfire, and how these regulations affect the amount of land treated by prescribed fire. Engel suggests that to increase the use of prescribed fire, both prescribed fires and wildfires should be subject to the same regulations. This article offers a different perspective on an important issue and is well worth your reading time!

## UPCOMING EVENTS

Visit the **SFE Calendar** and the **JFSP Calendar** to learn more about upcoming workshops, training, webinars, field trips, demonstrations, and other professional development opportunities. To add an event to our calendar, send the event information to [sfe@ifas.ufl.edu](mailto:sfe@ifas.ufl.edu).

### Webinars

**MTBS Applications in the South**  
March 12, 1pm EDT

**Smoke Consequences of New Wildfire Regimes Driven by Climate Change**  
March 19, 3pm EDT

**Advancement of Smoke Emissions Models Utilizing Geospatial and Remote Sensing Data**  
March 26, 1pm EDT

**Basic Smoke Management Practices**  
April 2, 1pm EDT

**LANDFIRE: Customizing Data**  
April 2, 2pm EDT

**GIS Migration from Desktop to Web**  
April 17, 1pm EDT

**Predicting Local Smoke Dispersion during Low-Intensity Wildland Fires in Forested Environments**  
May 7, 3pm EDT

**Prescribed Fire Council Meetings**  
**North Florida PFC Spring Meeting**  
March 19; Marianna, FL

### Workshops

**Ecological Forestry Workshop**  
April 28-May 1; Jones Center, Ichauway, GA

**Relationships between Fire Management and Quality of Foraging Habitat for Bats**  
April 30-May 1; Mammoth Cave NP, KY

**Southern Blue Ridge FLN Regional Workshop**  
May 20-22; Cashiers, NC  
Contact: **Margit Bucher** or **Beth Buchanan**

### Conferences

**Wildland Urban Interface Conference**  
March 17-19; Reno, NV

**8<sup>th</sup> Annual Wildland Fire Litigation Conference**  
April 25-27; Monterey, CA

**Large Wildland Fires: Social, Political, and Ecological Effects**  
May 19-23; Missoula, MT

**Prescribed Fire in the Mid-South: Field Tour and Conference**  
June 2-5; locations in KY and TN



## NEWS AND REMINDERS

### FIRESCIENCE.GOV

Join JFSP's [FireScience.gov](http://FireScience.gov) email list and receive weekly announcements with fire science and management news.

### NEW FIRE SCIENCE DIGEST

A new JFSP publication, [Building Trust, Establishing Credibility, And Communicating Fire Issues With The Public](#), summarizes important results from several studies and includes effective communication strategies and tips for creating an effective message. Also, check out a new [Planning Guide](#) that aims to help fire managers and practitioners build and evaluate trust amongst stakeholders.

### GUIDE UPDATES

An updated version of the [Incident Response Pocket Guide \(IRPG\)](#) was released in PDF format in January 2014. The NWCG publication, [Inter-agency Prescribed Fire Planning and Implementation Procedures Guide](#), was updated and released in November 2013.

### WILDFIRE COMMUNITY PREPAREDNESS DAY

Join communities throughout the nation on Saturday, May 3, 2014 as NFPA launches its first [National Wildfire Community Preparedness Day!](#)

### 2013 INCIDENT REVIEW SUMMARY

The Wildland Fire Lessons Learned Center recently released the [2013 Incident Review Summary](#) and encourages you to use this information for your upcoming training topics and discussions.

### FL SMOKE MANAGEMENT PLAN

Read the new [Florida Certified Smoke Management Plan](#), recently released by the Florida Forest Service.

### FIRE LINES CONTRIBUTIONS

Send your fire-related news, field stories, or photos to Annie Oxarart ([oxarart@ufl.edu](mailto:oxarart@ufl.edu)) to be included in future issues of Fire Lines.



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.

## Wrapping Up Smoke and Fog

From webinars to new publications, January and February were filled with information about wildland fire smoke management. The SFE recently released the fact sheet, [Superfog: State of the Science](#), which summarizes information on superfog prediction that was presented at the International Association of Wildland Fire Smoke Symposium last fall. We also worked with Pete Lahm, US Forest Service Fire Weather and Air Quality Specialist, to develop a [2-page summary](#) of the [2011 USFS-NRCS guide to Basic Smoke Management Practices](#). We are excited to announce that Pete will be presenting a webinar on [Basic Smoke Management Practices](#) at 1pm EDT on April 2 to finish out our Smoke and Fog Webinar Series. If you missed the other webinars in this series, you can watch the archived versions on the SFE YouTube page.

[Smoke Management: It IS The Name of The Game](#), presented by Dale Wade  
[Introduction to VSmoke](#), presented by Scott Goodrick  
[Integrated Smoke Management Curriculum](#), presented by Jennifer Evans

Over the next couple of months, the Joint Fire Science Program, International Association of Wildland Fire, and the Wildland Fire Lessons Learned Center webinar series will continue to feature science from the JFSP Smoke Line of Work. On March 19 at 3pm eastern, Don McKenzie will present [Smoke Consequences of New Wildfire Regimes Driven by Climate Change](#), and on May 7 at 3pm eastern, Warren Heilman will present [Predicting Local Smoke Dispersion during Low-Intensity Wildland Fires in Forested Environments](#). The webinars listed below have already been presented and recorded versions are now available. You may also want to check out the [Fast Facts](#), which quickly tell you Why Is This Work Important, What Did We Learn, and the Management Implications of the science being presented.

[A Dataset for the Evaluation of Smoke Models – Emissions, Plume Rise, and Dispersion](#), presented by Shawn Urbanski

⇒ Check out the [Fast Facts](#)

[Evaluation and Improvement of Smoke Plume Rise Models](#), presented by Yong Liu

⇒ Check out the [Fast Facts](#)

[New Superfog Screening Tool – Development and Validations through Laboratory Experiments](#), presented by Marko Princevac and Christian Bartolome

⇒ Check out the [Fast Facts](#)

[Predicting Smoke Impacts with Uncertain Emissions and Meteorology](#), presented by Talat Odman

⇒ Check out the [Fast Facts](#)

[Validation of Fuel Consumption Models for Smoke Management Planning in the Eastern United States](#), presented by Roger Ottmar and Susan Prichard

## New on SFE YouTube:

### Strategies to Restore Longleaf Pine Forests

The [Range Technology and Equipment Council \(RTEC\)](#) annual meeting: [Strategies and Treatments to Restore Longleaf Pine Forests](#) was held at the February 2014 [Society for Range Management](#) conference in Orlando, Florida. The RTEC workshop featured nine experts in longleaf pine restoration who gave presentations on topics ranging from longleaf pine forest [mechanical fuels mastication](#) treatments to understory restoration [seed production](#). All of the presentations from the workshop were recorded and are now posted on the [SFE YouTube page](#).



Photo by Larry Korhnek, UF