



SOUTHERN Fire Exchange

A JFSP Knowledge Exchange Consortium



FIRE LINES

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Southeastern Section of the Association for Fire Ecology

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CONTACT INFORMATION

For general questions and to provide
feedback, email 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

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

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Consortia](#).

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Fire in the Wildland-Urban Interface

The concept of a wildland-urban interface (WUI), with its attendant problems with wildfires, is generally accepted as a relatively recent development. The confluence of human development and wildlands is far more widespread today than it was 40 to 50 years ago, but the intersection of human development and wildfires actually goes back much farther. Stephen Pyne's book, *Year of the Fires: The Story of the Great Fires of 1910* (2008), paints a remarkable and sobering picture of a decades long struggle between wildfires and human developments—towns and settlers—from one end of the country to the other in the late 1800s and early 1900s. The fuels, ignitions, and mitigation issues then bore a striking resemblance to the present. However, today, we understand these and other issues with greater clarity based on extensive research and experience.



Photo: Larry Korhnak, UF

This newsletter focuses on key research and development topics that influence fire in the wildland-urban interface and that may be helpful to you: risk assessment, human dimensions, home protection, and prescribed fire and other fuel mitigation measures.

WUI and Risk Assessment Resources

SOUTHWRAP

Risk assessment is important at landscape, neighborhood, and individual home scales as baseline information for policies, programs, and practices that will reduce fire risk. The [Southern Wildfire Risk Assessment Portal \(SouthWRAP\)](#) is a new GIS- and web-based technology developed under the guidance of the Southern Group of State Foresters. SouthWRAP provides several fire behavior, landscape characteristics, and WUI related indices. The SouthWRAP [Public Viewer](#) is a "web mapping application designed to let users zoom to a place of interest, explore map themes, and identify levels of risk and related landscape conditions..." The viewer includes easy-to-follow instructions as part of a Getting Started Tour. The SouthWRAP [Professional Viewer](#) allows for analysis of risk and mitigation projects in particular areas or across landscapes, as well as the generation of reports for those areas. The report is designed to enhance agency management plans, by providing maps and charts of WUI, fuel, or fire behavior indices. It is designed primarily for fire organizations and project managers and requires a login and password available through state fire agencies. SouthWRAP is available at www.southernwildfirerisk.com; tutorials are available at <http://vimeo.com/tag:southwrap>.

Join us November 17th for a joint
[LANDFIRE](#) and [SFE](#) webinar to
learn about the custom LAND-
FIRE datasets that support the
SouthWRAP program.

RISK ASSESSMENT AND FIRE IN THE INTERFACE PUBLICATIONS

Although regional and state scale risk assessments help landowners understand the potential fire risk in their vicinity, they generally cannot inform landowners of their specific risk which may vary significantly depending on structural materials and landscaping adjacent to or near their home. Post-fire evaluations and research studies have characterized major factors that may influence a home's vulnerability during a wildfire. Based on such studies, the University of Florida and US Forest Service Southern Research Station collaborated on a series of publications designed to help homeowners assess their individual risks and actions they could take to mitigate that risk. The [Wildfire Risk Assessment Guide for Homeowners in the Southern United States](#) is based on structural materials, landscaping features, and nearby vegetation and is applicable across most of the South. Other publications in the Fire in the Interface Fact Sheet series

Continued on Page 2

Continued—WUI and Risk Assessment Resources

focus on shrub and firewise plant selection, balancing landscape objectives, and fire behavior. All are available on the [InterfaceSouth website](#) and may be useful for your own property or for professionals who work with homeowners.



Fire in the Interface Fact Sheets

Quick Guide to Firewise Shrubs

Selecting Firewise Shrubs to Reduce Wildfire Risk

Selecting and Maintaining Firewise Plants for Landscaping

Reducing Wildfire Risk While Achieving Other Landscaping Goals*

Understanding Fire Behavior*

Preparing a Firewise Plant List for WUI Residents*

*We have boxes of printed copies of these publications; if you can use a full or partial box, email [Annie Oxarart](#).

COMMUNITY MITIGATION PROGRAMS

At the neighborhood and community level, Firewise, Fire Adapted Communities, and a variety of state guides have been developed to understand and mitigate fire risk.

Firewise is a National Fire Protection Association program which “encourages local solutions for safety by involving homeowners in taking individual responsibility for preparing their homes from the risk of wildfire.” The program has a collection of **teaching and outreach tools** that may be helpful for land managers, outreach coordinators, and public information officers. Firewise specific resources include brochures and booklets, PowerPoint presentations, handouts with homeowner recommendations, newsletter templates, and more. You can also find three online courses offered through the Firewise website:

- * **Firewise Landscaping** (for homeowners)
- * **Conducting a Community Assessment in the WUI** (for homeowners, civic leaders, and firefighters)
- * **Firefighter Safety in the Wildland/Urban Interface** (for firefighters)



Fire Adapted Communities (FAC) is a collaborative effort to bring together effective programs, tools, and resources for reducing community wildfire risk. In an effort to communicate and clarify the traits, goals, and central concepts of FACs, the Fire Adapted Communities Coalition released a comprehensive **Guide to Fire Adapted Communities** in July of 2014. This 36-page document discusses the FAC program in detail and includes examples of how various community members (from the individual homeowner to the city planner and policy-maker) can improve community wildfire preparedness at various spatial scales.



New Mitigation Reference Guide Now Available from NWCG

The National Wildfire Coordinating Group recently released the **Wildland Urban Interface Wildfire Mitigation Desk Reference Guide**. This booklet was designed to provide agency personnel and community members with background information, a common set of terminology, and resources for WUI wildfire mitigation efforts.

FUEL MANAGEMENT IN THE WUI

Fuel and vegetation management in the WUI might use all the practices described in our **Spotlight Series on Fuel Treatments**. Methods, results, costs, and benefits are thoroughly covered in the two JFSP hazardous fuels management guidebooks that were mentioned in a recent issue of the **Fire Lines newsletter** (see bottom of page 4) and at recent Prescribed Fire Council meetings around the South. Strategically, the biggest difference between using these methods near homes versus away from developments is the need for close interaction with adjacent homeowners. A webinar presented by Steve Miller, Bureau Chief of Land Management for the St. John's River Water Management District in Florida, shares information about how to do this effectively. You can view the archived webinar, **Burning in Their Backyard and Having Them Say Thank You**, on the Wildland Fire Lessons Learned Center YouTube channel. In addition, in an upcoming fact sheet co-produced by SFE and Conserved Forest Ecosystems: Outreach and Research (CFEOR), Steve and co-author Matthew Corby will describe an example of using prescribed fire in the WUI.

UPCOMING EVENTS

Visit the [SFE Calendar](#) and the [JFSP Calendar](#) to learn more about upcoming events. To add an event to our calendar, send the event information to sfe@ifas.ufl.edu.

Webinars

Effectiveness of Suppression Resources in Large Fire Management
October 8, 3pm Eastern

LANDFIRE Assessing Needs: Understanding Recent and Potential Threats to Southern Ecosystems
October 10, 12pm Eastern

Tracking Forest and Landscape Change from Space Using the ForWarn System
October 15, 1pm Eastern

Customizing Data: Custom LANDFIRE Data in SouthWRAP
November 17, 12pm Eastern

State and Transition Modeling for Ecosystem Assessment, Restoration Planning and Collaborative Learning
December 11, 12pm Eastern

Workshops and Trainings

Mississippi Wildland Fire Academy
October 20-31, 2014
Pearl, MS

Coastal Fire Ecology Field Workshop
October 30-31, 2014
Georgetown, SC

Conferences

Wildland Fire Canada Conference
October 7-9, 2014
Halifax, Nova Scotia

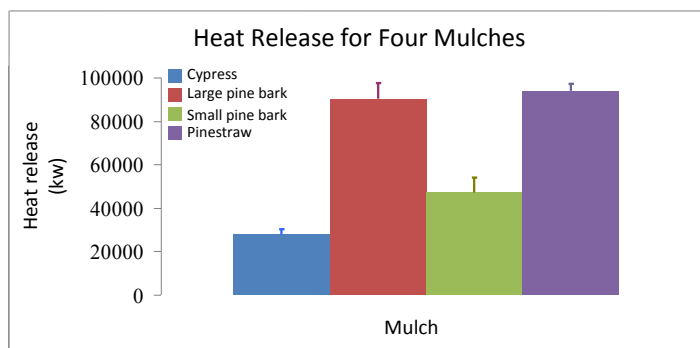
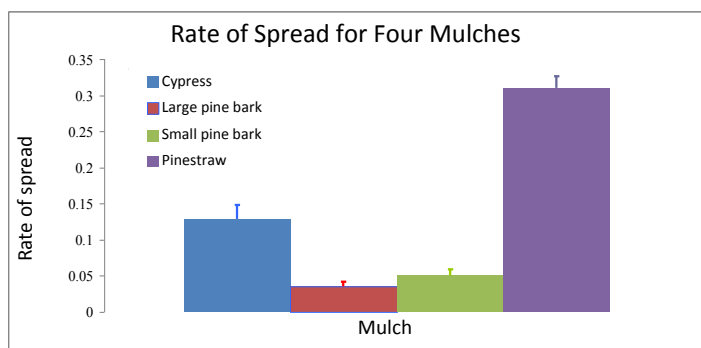
Natural Areas Annual Conference
October 15-17, 2014
Dayton, OH

Longleaf Alliance Regional Conference
October 21-24, 2014
Mobile, AL

SE Regional Forest Resource Owner and Manager Conference
October 28-29, 2014
Valdosta, GA

Landscaping Mulches and Fire Risk

Landscaping mulches near or adjacent to structures can add to fire risk. A recent University of Florida study evaluated various flammability characteristics of four mulches commonly used in the South: pine straw, pine bark nuggets (large and small), and shredded cypress (similar to other shredded wood materials). Each of the tested mulches burned and none are 100 percent safe for landscaping immediately adjacent to flammable structures. Mulch should not be used next to wood or vinyl surfaces on buildings, as the heat released from each of the burning mulches may ignite or melt adjacent wood or vinyl, respectively. Pine straw demonstrated the potential to be the greatest threat in terms of both rate of spread and peak heat production, but pine bark also presents a significant hazard once ignited and if allowed to burn for a long time. For more information on this study, contact Alan Long at ajl2@ufl.edu.



Presidential Management Fellows Application Period Open

The 2015 **Presidential Management Fellows** (PMF) program application period is open until October 15, 2014. This program is a unique and highly competitive leadership development opportunity for those with graduate degrees (upcoming and recent) to enter the federal workforce. While most PMF positions are not in the natural resources field, the USDA Forest Service and the National Park Service typically offer a range of opportunities to PMF Finalists interested in science and natural resource management. For individuals interested in working in the South, the USDA Forest Service has a **well-established PMF program** that anticipates selecting one or more 2015 PMF Finalists for placement within the Forest Service Southern Region.

COHESIVE STRATEGY UPDATE

Contributed by Mike Zupko, Chair, Southern Regional Strategy Committee, Cohesive Wildland Fire Strategy

The National Science and Analysis Team (NSAT) of the Cohesive Wildland Fire Management Strategy has worked to compile an extensive data set that utilizes hundreds of inputs from existing reporting mechanisms of nationally available data. So, what does that mean to us in the Southeast and how can we best utilize the data? In addition to simply compiling the data, the NSAT also refined the data, fixed gaps and reporting issues, and developed an understandable format for presenting the data for use at the national, regional and local level. Through classification by county, the data can be reviewed and manipulated to better understand opportunities that exist for managers at a variety of levels. You can view the data on the [Science Analysis of the Cohesive Strategy website](#).

The data are used to create two primary classification systems—landscape classes and community classes. By doing so, each county falls into a classification scheme that tells the user basic information about the county while also highlighting the best opportunities for action for individual counties. By utilizing the information in tandem with local knowledge of a certain landscape/county, a user can make informed decisions, augmented with locally available data and knowledge.

In the South, we are exploring how to take this one step further through several channels:

- ⇒ **Integration with the Southern Wildfire Risk Assessment Portal (SouthWRAP).** The **SouthWRAP portal** was recently rolled out across the South through each state forestry agency and federal partners. The user interface accesses risk data and is an excellent tool for local communities, homeowners, and managers to understand the risk to wildfire. We are currently in discussions with the primary architects of SouthWRAP regarding the opportunity to integrate Cohesive Strategy data as an additional layer to show what opportunities for action exist in counties across the Southeast.
- ⇒ **Discussions with the International Association of Fire Chiefs to make county level data relevant to fire chiefs.** The data compiled at the county level is a strong tool for state and district managers considering landscape level decisions. At the county level and below, there are also opportunities for action that can be considered, but the data are not easy to break down at this level. Through construction of communications tools and understanding similar landscapes, we are looking at ways to present the data to local fire chiefs to give them a snapshot of activities that may be occurring in neighboring or similar communities that would be applicable in their fire districts.
- ⇒ **Training of state, federal, and partner groups.** Over the past year, we have trained around 40 individuals as “super users” of the data and processing to allow integration of the data with their home agencies/organizations. Several state forestry agencies have already utilized the data in conjunction with their state GIS systems to enhance strategic planning and communications opportunities and to focus projects and activities based on the combined output. We are looking to further understand the data and processing by evaluating how the data may be applied using a southern scope as opposed to the current national scope.

If you are interested in exploring the data or discussing how it may be applicable to your organization or agency, please contact: Mike Zupko, Chair, Southern Regional Strategy Committee, Cohesive Wildland Fire Strategy, Southern Governors’ Association Representative, 770-267-9630, mike@zup-co-inc.com

Looking Ahead: Fire in the South in 2060

Prescribed fire may be challenged by climate change in the South according to a recent USDA Forest Service report. The Southern Forest Futures Project was a multi-year research and analysis project initiated in 2008 by the USDA Forest Service Southern Research Station and the Southern Group of State Foresters. The program used the latest climate models and spatial datasets to predict forest conditions in the South from 2010 to 2060. Interestingly, one entire chapter ([Chapter 17](#)) of the report was dedicated to the forecasted role of fire in southern forests. Using climate change models that predicted changes in precipitation and temperature, the authors looked at the impacts of four different possible climate change scenarios on Potential Drought Index (PDI). Because current wildfire hazard indices, such as the NFDRS and KBDI, are difficult to model using climate change models, predicted PDI was used as a proxy indicator for wildfire potential.

In general, the analysis suggested that conditions favorable for wildfires would increase across the South, as models indicated lengthening of the spring and fall wildfire seasons. However, the authors suggested that increased wildfire potential was “fairly slight” due to climate alone. Instead, they stressed that since most wildfires in the South are caused by people, not lightning, future trends in human behavior and the extent of the WUI may be more influential than predicted changes due to climate. The study also suggested that there could be increases in the frequency and severity of regional droughts. These anticipated changes in precipitation and wildfire season, combined with region-wide land use changes and potential air quality regulations, led the authors to speculate that the use of prescribed fire may be restricted in many areas across the South over the next fifty years.

Read the entire [Chapter 17](#) for further discussion on the possible future of smoke regulations, carbon emissions, and mechanical treatments or see the full [Southern Forest Futures Project](#) report for additional chapters on forest productivity and invasive species.

Social Science Research for Creating Fire Adapted Communities

To better utilize existing social science research on the human dimensions of wildland fire, a team of researchers conducted a synthesis study which involved reviewing more than 200 publications and subsequently engaging 16 scientists in a workshop to discuss the review findings. A [US Forest Service report](#) published in March 2013 describes this JFSP study and presents the findings from the literature, specifically those that can be applied to developing fire adapted communities. The findings are organized around five themes (1) homeowner/community mitigation, (2) public acceptance of fuels treatments on public lands, (3) homeowner actions during a fire, (4) postfire response and recovery, and (5) wildland fire policy and planning. Each theme contains key lessons gleaned from the review, and the conclusions are presented in terms of pre, during, and postfire management implications. A brief look at the findings and implications is presented here:

- * Many WUI residents are aware of the risk and already taking migration actions; however, awareness and knowledge alone do not lead to participation in risk reduction activities.
- * Activities are more likely to be adopted when they are compatible with the residents' values and when the benefits of the action are perceived to outweigh the costs.
- * Communication and education programs should be designed to help residents understand that reducing wildfire risk is a continual process—one that requires maintenance over time.
- * The majority of the public is accepting of fuel treatments on public lands. Managers should work to establish trust and to build knowledge of fuel treatments, as these two factors are linked to public acceptance of fuel treatments.
- * Perceptions of action and decisions made before and during the fire can influence recovery and residents' attitudes, confidence, and acceptance levels.
- * Ongoing communication is important, both during and after a fire event. After a fire event, interactive communication (e.g., field tours) and engaging residents in recovery efforts, are particularly useful strategies.



Photo: Martha Monroe, UF

2015 JFSP Funding Opportunities

The 2015 Joint Fire Science Program (JFSP) Research Funding Opportunity Notice (FON) is now open. You can view the announcements for 7 primary research topics, as well as the Graduate Research Innovation Awards (GRIN) on the [JFSP website](#). Proposals are due by November 21 at 5 PM MST. As part of the SFE mission is to relate research needs from managers to scientists, if you are a manager with ideas for research fitting within this FON, please let us know and we'll extend the request to the appropriate people within our network.

NEWS AND REMINDERS

NORTH CAROLINA PRESCRIBED FIRE TRAINING EXCHANGE (TREX)

Several partners in North Carolina will be hosting a [Prescribed Fire Training Exchange \(Trex\)](#) for the positions of RXB2, FIRB, ENGB, FFT1, FEMO, and other positions as needed. The training event will be held in the Sandhills and Piedmont/Uwharries of North Carolina on February 15-28, 2015. Apply now; the deadline is November 10, 2014.

BACKYARDS AND BEYOND CONFERENCE: PROPOSAL DUE

The Backyards and Beyond 2015 Wildland Fire Education Conference will be held in Myrtle Beach, South Carolina next fall, October 22-24, 2015. [Submit your proposal](#) to participate as a speaker; the deadline is December 15.

APPLY NOW TO BECOME A CERTIFIED WILDLAND FIRE ECOLOGIST/MANAGER

The Association for Fire Ecology offers the country's first and only Wildland Fire Professional Certification and, for four-year higher education programs, a Wildland Fire Academic Program Certification. Applications are due October 15, 2014. See the [AFE website](#) for benefits and details.

SAVE THE DATE

The [Fire in Eastern Oaks Forests Conference](#) will be held May 27-29, 2015 in Tuscaloosa, Alabama and will emphasize topics relevant to management of oak and oak-pine forests and woodlands.

KY PFC VIDEO: IT'S TIME

Check out the KY Prescribed Fire Council's educational video, [It's Time](#), which promotes the safe and effective delivery of prescribed fire.

FIRE LINES CONTRIBUTIONS

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



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