



# 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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Learn more about our [Partners](#) and  
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## Defensible Space: How Much Is Necessary?

A major element in all wildland-urban interface programs that address wildfire risk for individual homes is defensible space—the landscaping and area around homes that reduce the likelihood of home ignition while also providing safety for firefighters to protect the structure. Guidelines for defensible space vary around the country, in terms of size of clearing and amount/type of vegetation to remove or retain. In extreme cases on slopes in the western US, guidelines or regulations may call for as much as 300 feet of cleared vegetation. Most guidelines in the South recommend 30 to 100 feet of defensible space with various levels of vegetation retained within that landscape. Most of these guidelines have been derived from post-fire studies in communities exposed to wildfires rather than designed research studies.

A recent study in southern California (Syphard, Brennan, and Keeley, 2014) attempted to evaluate defensible space characteristics for a much larger sample of homes than was included in most previous studies. The research was funded by the U.S. Geological Survey Fire Risk Scenario Project. The authors looked at 2,000 homes in San Diego County, half of which had been burned in fires between 2001 and 2010. Their primary metric was the probability that a home would burn based on defensible space measurements such as distance of clearing from home, vegetation adjacent to the structure, percentage vegetation clearance, vegetation type at the end of the defensible space, slope and housing density.

Although the research was conducted for application in California landscapes, the following key findings are relevant for the South also:

- Most effective defensible space distances were between 15 and 60 feet from the structure.
- Distances greater than 100 feet did not provide additional protection, even on steep slopes.
- Removing woody vegetation closest to or overhanging a structure is critical.
- Clearing more than 40% of the woody vegetation within the overall defensible space was not essential.
- Low housing density and long distances to major roads were as important as defensible space in determining vulnerability.

In the authors' words, "percentage clearance did not need to be draconian to be effective...the idea behind defensible space is to reduce the continuity of fuels" and "we suggest the term 'clearance' be replaced with 'fuel treatment' as a better way of communicating fire hazard reduction needs to home owners."

A. Syphard, T. Brennan & J. Keeley. 2014. The role of defensible space for residential structure protection during wildfires. *International Journal of Wildland Fire* 23: 1165-1175.



Photos from Firewise.org

## Partner Spotlight: America's Longleaf Restoration Initiative Regional Implementation Teams

The **America's Longleaf Restoration Initiative (ALRI)** is a multi-partner collaboration among thirty-three federal, state, non-profit, and private organizations focused on restoring and conserving the iconic longleaf pine across the historical range of the species. The ALRI program is administered by the National Fish and Wildlife Federation with funding provided by the Southern Company, US Fish and Wildlife Service, USDA Forest Service, Department of Defense and the Natural Resources Conservation Service. As on-the-ground catalysts of this effort, the ALRI funds 17 regional and local implementation teams designed to connect managers and land-owners with the resources, science-based information, and funds to achieve local successes in longleaf pine conservation and restoration. In recent years, the Southern Fire Exchange has partnered with two regional implementation teams: the Apalachicola Regional Stewardship Alliance (Florida) and the Chattahoochee Fall Line Conservation Partnership (Georgia). This spring, we're working with the Osceola National Forest / Okefenokee NWR Regional Implementation Team on a pair of workshops in the Okefenokee region of Georgia (April 21<sup>st</sup> registration coming soon) and the Osceola National Forest region of Florida (date and registration coming soon), and we look forward to working with other regional implementation teams over the next few years.



For more information, visit the [ALRI website](#), which also includes links to several [prescribed fire publications](#).

## Season of Burn Effects: Another Resource



When is the best season for prescribed burning? There never seems to be a definitive answer for that question; most answers begin with: "It all depends..." About 10 years ago, Lin Roth and Robert Franklin, Extension Specialists at Clemson University, wrote a summary of research that provided a variety of answers to the season of burn question. *Timing of Prescribed Fire in Longleaf Pine Management: Benefits, Risks, and Roles by*

*Season*, Clemson Forestry Leaflet 32 is no longer in print but we received permission to post a copy on the SFE Resource Center at [www.southernfireexchange.org/SFE\\_Publications/etc/Clemsonforfl32.pdf](http://www.southernfireexchange.org/SFE_Publications/etc/Clemsonforfl32.pdf). Roth and Franklin first describe seasonal effects on burning conditions, followed by an overview of historical fire seasons in the South. These historical fire seasons were identified as the months when lightning-set fires were most frequent—during late spring when fuels and vegetation had been through dry spells, and summer thunderstorms were just beginning.

The rest of the publication addresses seasonal effects of fire on different ecosystem components and ends with a summary table of suggested seasons for achieving different burn objectives. Some readers may be familiar with the highlights from Roth and Franklin, but we list them here again to let you know the range of results that the authors address.

- Dormant season fires, especially if burned at two year intervals or longer, generally increase hardwood densities.
- Late summer and autumn fires can be problematic for pines, especially if they result in substantial needle scorch.
- Increased frequency of fires is generally more important than season for increasing diversity and abundance of grasses and forbs.
- Immediate reduction of food resources for wildlife occurs with burning at any time, but that situation is likely to last longer following winter burns than burns in other seasons.
- For many land management objectives, varying the season of burn may be better than always burning in the same season.

Check out the publication for possible answers to the season of burn questions that are haunting you. SFE plans to prepare a similar fact sheet in the next year that will summarize more recent research on season of burn effects.

## 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 [contactus@southernfireexchange.org](mailto:contactus@southernfireexchange.org).

### Webinars

**JFSP 2015 Extreme Fire Behavior Webinar Series**

**Fire Columns and Plume Dynamics**

February 26, 3pm Eastern

**Spot Fires**

March 12, 3pm Eastern

**Vortices and Wildland Fire**

April 30, 3pm Eastern

**Crown Fire Behavior in Conifer Forests**

May 7, 3pm Eastern

### Workshops and Trainings

**Basic Wildland Fire Training**

March 2-15, 2015 (Online portion)

March 17-20, 2015 (In-person : Gainesville, FL)

**Fire Curriculum and PLT Workshop**

March 14, 2015

Gainesville, FL

**Prescribed Fire Field Day for Landowners**

April 1, 2015

Wakefield, VA

**Ignition Planning and Prescribed Fire Techniques for Wildlife**

April 6-9, 2015

Archbold Biological Station

Venus, FL

**East River TREX**

April 27-May 6 or May 11-20, 2015

Applications due March 2

Eastern South Dakota

**Southern Blue Ridge FLN Regional Workshop**

May 12-14

Morganton, NC

### Conferences

**Wildland Urban Interface Conference**

March 24-26, 2015 in Reno, NV

**13<sup>th</sup> International Wildland Fire Safety Summit & 4<sup>th</sup> Human Dimensions of Wildland Fire Conference**

April 20-24, 2015

Boise, ID

**11<sup>th</sup> Symposium on Fire and Forest Meteorology**

May 5-7, 2015

Minneapolis, MN

**Fire in Eastern Oak Forests Conference**

May 27-29, 2015

Tuscaloosa, AL

**Backyards & Beyond: Wildland Fire Education Conference**

October 22-24, 2015

Myrtle Beach, SC

**6<sup>th</sup> International Association for Fire Ecology Congress**

November 16-20, 2015

San Antonio, TX



## Proposed Changes to Air Quality Standards

In an effort to strengthen the National Ambient Air Quality Standards, the US Environmental Protection Agency (EPA) recently proposed updates for ground-level ozone. The proposed changes are based on the current scientific understanding of ozone's effects on public health and welfare. As air quality standards influence prescribed fire use in the South, fire and natural resource managers, specialists, and scientists are encouraged to learn more about the proposed changes and to participate in the EPA comment process.

The proposal suggests 8-hour standards be set within a range of 65 to 70 parts per billion (ppb), although the EPA is considering a health standard as low as 60 ppb and as high as the existing standard of 75 ppb. EPA is also proposing to update the Air Quality Index (AQI) by changing the breakpoints for the AQI categories (good, moderate, unhealthy for sensitive groups, unhealthy). Lastly, the EPA is suggesting changes to monitoring, such as increases in ozone monitoring season, and to permitting requirements to assist with the transition of implementing the updated standards.

While the proposed changes might improve the health of trees, plants, and ecosystems through reduced exposure to ozone (see *Integrated Science Assessment for Ozone*, link below), they may also affect the amount of land that is treated with prescribed fire as the number of acres, especially in rural areas, that are in ozone nonattainment would increase with the new standard. There are several places where you can get more information:

- The [US EPA website](#) has an [overview of the proposed rule](#) and a [slide presentation](#), which provide a quick look at the suggested actions, scientific basis regarding public health and welfare, and the benefits and costs of the updates. The website also contains several fact sheets and additional documents that you might find helpful.
- The Coalition of Prescribed Fire Councils has an [alert document](#) sharing their recommendations for the prescribed fire community.
- If you are interested in digging into a summary of the science on how ozone affects trees and ecosystems, check out the 2013 [Integrated Science Assessment for Ozone and Related Photochemical Oxidants](#), but have a pot of coffee on! While it's a long read, numerous short topic summaries are provided.
- In addition to ozone effects on trees and ecosystems, another major issue is how ozone is generated by fires—wild or prescribed. It is complex, but several resources are available to bring you up to speed. Check out a [NWCG Smoke Committee poster](#) and look particularly for *Impact of Wildland Fires and Prescribed Burns on Ground Level Ozone Concentration* (which can also be located at [http://www.nifc.gov/smoke/documents/Impact\\_Wildland\\_fire\\_on\\_Ozone.pdf](http://www.nifc.gov/smoke/documents/Impact_Wildland_fire_on_Ozone.pdf)).

Comments on the proposed rule are being accepted until March 17, 2015 and can be submitted to EPA online, via email, fax, or mail. More information about the comment process is available on this webpage: <http://www.epa.gov/airquality/ozonepollution/how-to-comment.html>.

## COHESIVE STRATEGY UPDATE

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

As we begin 2015, we are looking at new ways to implement the key components of the Cohesive Strategy (CS) across the southern landscape. Several methods are beginning to take shape, including the following actions:

- **Multi-landowner, broad based strategies to position the Southeast to access grant funds and other mechanisms for large-scale “place-based” joint projects.** The Southern Regional Strategy Committee is identifying large landscapes with multiple overlapping priorities. Using supporting background information and data, the committee will then develop proposals to address the opportunities identified. Input is welcome for priority areas that have a high probability for successful on-the-ground actions that will achieve the CS goals.
- **Continued training and shared learning of existing tools and opportunities to assist the various partners and collaboratives.** As discussed in previous updates, the South has been progressive in training many agencies and groups regarding the rich data and information available. With the information and data being used by some groups, we will continue to facilitate learning among users as to how to use the information to enhance their decision making.
- **“Models for Action” that capture successes across the region to serve as learning tools for those who work on fire issues daily and those who are new to the topic (e.g., homeowners, community groups).** These models are being collected across the Southeast to showcase successful activities that can easily be adapted in other areas. The models will be used directly as opportunities arise as well as passively on the regional website that is nearing completion.
- **Survey tool that collected feedback from several hundred respondents.** In the last *Fire Lines* issue, we shared a survey that collected feedback on the CS in general along with capturing additional ideas for potential models for action. Thank you for responding! We gained many new ideas and contacts that we can work with in the near future.
- **Strategic placement of workshops focused on extension and outreach personnel across the Southeast.** We are planning a series of train-the-trainer type workshops across the Southeast for extension agents and others to share materials and science that can be utilized at the local level for on-the-ground actions. We are currently evaluating the science data and risk assessment as to where the best placement of the workshops might be located.

If you are interested in exploring any of the ideas above or have thoughts as to how we can better assist your organization or agency in any of the issues around the CS, please contact:

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## Coordinating Resources and Prescribed Fire Use in Longleaf Pine

A 2014 report written by several authors based at North Carolina State University provides information about opportunities in the longleaf pine region for sharing resources and collaborative management by organizations and agencies. The report, [Resource Availability and Coordination for Prescribed Fire Use across Significant Geographic Areas of Longleaf Pine](#), shares the results of a study that was conducted to advance the goals of the Southeastern Regional Partnership for Planning and Sustainability's (SERPPAS) Prescribed Fire Work Group. Data for the study were collected through two different online surveys distributed to key stakeholders in nine southeastern states (one survey assessed air quality collaborations and concerns, and the other assessed prescribed fire equipment and resource sharing). Survey results showed that collaborations between agencies and organizations are occurring in all states. However, respondents identified prescribed fire resource needs (e.g., personnel, trucks/engines, dozers/plows)—many of which may not be filled with additional collaborations since resources are used for both wildfire and prescribed fire activities and may be needed in multiple states at the same time. The report concludes that while agencies and organizations in the Southeast are collaborating in several ways, more resources will likely be needed to meet the fire management objectives in existing and future longleaf pine ecosystems in the region.



## Curt Stripling Wins Vice Chancellor's Award in Excellence for Public Service

Curt Stripling, a Geospatial Systems Coordinator with the Texas A&M Forest Service, was recently recognized with an award for his work developing tools to assess wildfire risk in Texas and throughout the Southeast. The Vice Chancellor's Award in Excellence for Public Service in Forestry is presented annually to honor a Texas A&M Agrilife employee who makes exceptional contributions to the agency's mission. Through his work on the Southern Wildfire Risk Assessment (SouthWRAP) project, Curt helped develop a new GIS and web-based technology, with applications for the public and professionals, for assessing wildfire risk levels. To learn more about SouthWRAP, check out the archived webinar, [Customizing Data: Leveraging LANDFIRE for the Southern Wildfire Risk Assessment](#) that Curt presented with David Buckley during the SFE and LANDFIRE webinar series last fall. Congratulations Curt, for this well-earned award and many thanks for your excellent work in helping improve wildfire risk assessment in the Southeast! To read a related news release, [click here](#).

## AFE International Congress in San Antonio, Texas

The Association for Fire Ecology (AFE) is holding the [Sixth International Fire Ecology and Management Congress](#) in San Antonio, Texas from November 16-20, 2015. This event is held every three years and is the largest meeting on the research and management of wildland fire in the world! The theme of the 6<sup>th</sup> Fire Congress is "Advancing Ecology in Fire Management." There are many reasons to attend—workshops, concurrent and special sessions, networking, and more. The SFE and the rest of the JFSP fire science exchange network will be there sharing information, and we are in the process of developing a workshop proposal specifically aimed at bringing more fire managers from the South to the event. We'll keep you updated, and we hope to see you there!

**Find out more about the 6<sup>th</sup> Fire Congress**

[Conference Website](#)

[Save the Date Flyer](#)

[Call for Abstracts/Proposals](#)

## The First Place to Search: Tall Timbers Fire Ecology Database

If you are looking for information on a specific fire science topic, the [Tall Timbers E.V. Komarek Fire Ecology Database](#) is a great place to start! This searchable database provides access to bibliographic records for more than 30,000 citations. You can narrow your keyword search by topic, region, authors, or years. Search results include a list of related references and publications, with an abstract for many citations. The database does not provide full documents for most citations, but you can often locate the documents through university or public libraries. For tips on using the database, check out the SFE fact sheet, [Getting the Most from Online Fire Resources: Tall Timbers Fire Ecology Database](#).

## NEWS AND REMINDERS

### GEOSPATIAL AND GIS RESOURCES

A new [50-page white paper report](#) from the National Fire Protection Association provides a broad summary of common geospatial and GIS resources that can be used to manage wildland fire in various situations and contexts.

### NEW RESOURCE FOR COLLABORATIVE GROUPS

The Ecological Restoration Institute published a white paper in partnership with the Western Environmental Law Center titled [Administrative and Legal Review Opportunities for Collaborative Groups](#), which provides information about the US Forest Service's administrative and judicial review process and opportunities for participating as a collaborative group at both levels.

### GOOGLE EARTH PRO FOR FREE

For those familiar with Google Earth, access to [Google Earth Pro](#) (now free) opens up the ability to import spatial data (shape files), measure areas, and print in high resolution. See our [GIS and Mapping Spotlight](#) and [PDF Maps fact sheet](#) for additional related resources.

### FIRE ADAPTED COMMUNITIES (FAC) QUICK GUIDES

The FAC Learning Network is creating quick guides to highlight best practices, lessons learned, and practitioner tips. Check out the set of guides on [Increasing Watershed Resilience to Promote Fire Adapted Communities](#).

### PROJECT FUNDING FOR WILDFIRE COMMUNITY PREPAREDNESS DAY

National Wildfire Community Preparedness Day is Saturday, May 2, 2015. To assist in local projects being implemented, sixty-five \$500 project funding awards will be provided through generous support from State Farm. The deadline to apply is Thursday, March 5, at 11:59pm ET. The application is easy to complete and only takes a few minutes. Details available in [Fire Break](#) and on [WildfirePrepDay.org](#).



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