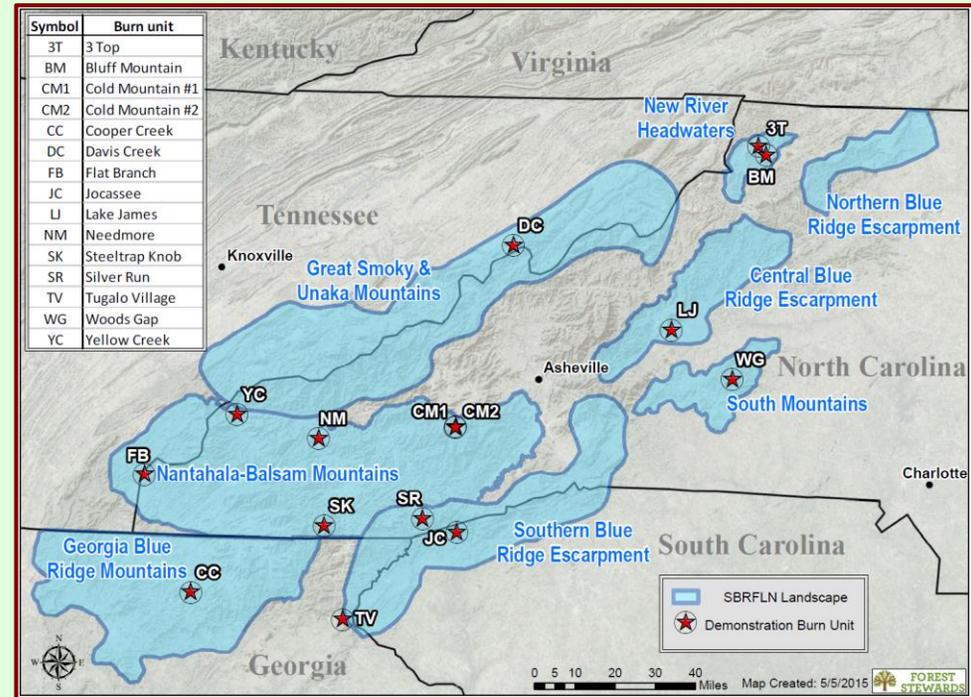


# SOUTHERN BLUE RIDGE FIRE LEARNING NETWORK PRESCRIBED FIRE MONITORING PROGRAM

## Overview

The Southern Blue Ridge Fire Learning Network is monitoring prescribed fire effects on 15 demonstration burn units (see figure at right). Demonstration burn units contain significant acreages targeted for the restoration or maintenance of fire-adapted plant communities, and land managers are committed to a long-term program of repeated prescribed burns on these sites. As of spring 2015, 14 demonstration units have been burned once and 9 have been burned twice (Table 1). The goals of the monitoring program are to assess long-term effects of repeated fires on species composition and forest stand structure. Ultimately, our goal is to provide information so that fire managers can better implement prescribed burning in their landscapes.



## Monitoring Design

Fire-effects are evaluated using 1/10 acre permanent plots that are established prior the initial burn and remeasured during the 2<sup>nd</sup> growing season following each burn. Typically, 15 plots are located within each burn unit (randomly located in areas targeted for restoration) and 5 plots are located outside of the burn unit. The following data are collected at each plot:

- **Overstory** (species, diameter, crown class, and condition)
- **Tree regeneration** (density, origin (sprout or single stem), and height)
- Percent cover of **vegetative life forms**
- **Fuels** (Litter, duff, 1-hour, 10-hour, 100-hour, and 1000 hour)
- **Photographs**

**Table 1. Target restoration communities and prescribed burn schedule for SBRFLN demonstration units.**

Burn unit	Target communities <sup>†</sup>	1 <sup>st</sup> burn	2 <sup>nd</sup> burn	3 <sup>rd</sup> burn
3 Top	HERO	Fall 2011	Fall 2015	Fall 2018 <sup>‡</sup>
Bluff Mountain	HERO	Fall 2011	Fall 2015	Fall 2018 <sup>‡</sup>
Cold Mountain #1	HERO, MOH	Spring 2006	Spring 2010	Fall 2015 <sup>‡</sup>
Cold Mountain #2	HERO	Spring 2010	Fall 2015 <sup>‡</sup>	Fall 2018 <sup>‡</sup>
Cooper Creek	MOH	Spring 2015	Spring 2018 <sup>‡</sup>	
Davis Creek	HERO, MOH	Spring 2013	Spring 2017 <sup>‡</sup>	
Flat Branch	YelP	Spring 2011	Spring 2015	Spring 2018 <sup>‡</sup>
Jocassee	ShPO, POH	Spring 2014	Spring 2017 <sup>‡</sup>	
Lake James	YelP	Spring 2011	Spring 2015	Spring 2018 <sup>‡</sup>
Needmore	YelP, ChO	Spring 2011	Spring 2015	Spring 2018 <sup>‡</sup>
Steeltrap Knob	HERO, MOH	Fall 2010	Spring 2014	Spring 2018 <sup>‡</sup>
Silver Run	MOH	Fall 2015 <sup>‡</sup>		
Tugallo Village	YelP	Spring 2013	Spring 2016 <sup>‡</sup>	
Woods Gap	MOH	Spring 2012	Spring 2015	Spring 2018 <sup>‡</sup>
Yellow Creek	YelP, ChO	Spring 2010	Spring 2014	Spring 2018 <sup>‡</sup>

<sup>†</sup> Target communities: ChO = Chestnut oak, HERO = High elevation red oak, MOH = Montane oak hickory, YelP = Yellow pine

<sup>‡</sup> Tentatively scheduled

# SAMPLE RESULTS FOLLOWING A SINGLE BURN (POOLED FROM 9 DEMONSTRATION UNITS)

### Fuels

**Methods:** At each plot, fuels were evaluated along 3, 50-foot transects arranged in a turkey-foot pattern following procedures outlined by Brown (1974)




Goal: Monitor long-term trends as opposed to fire consumption

