

Prescribed Fire on the Monongahela National Forest

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Monongahela NF background info

- Established in 1920
- 921,000 ac (372,715 ha)
- Headwaters of 6 rivers

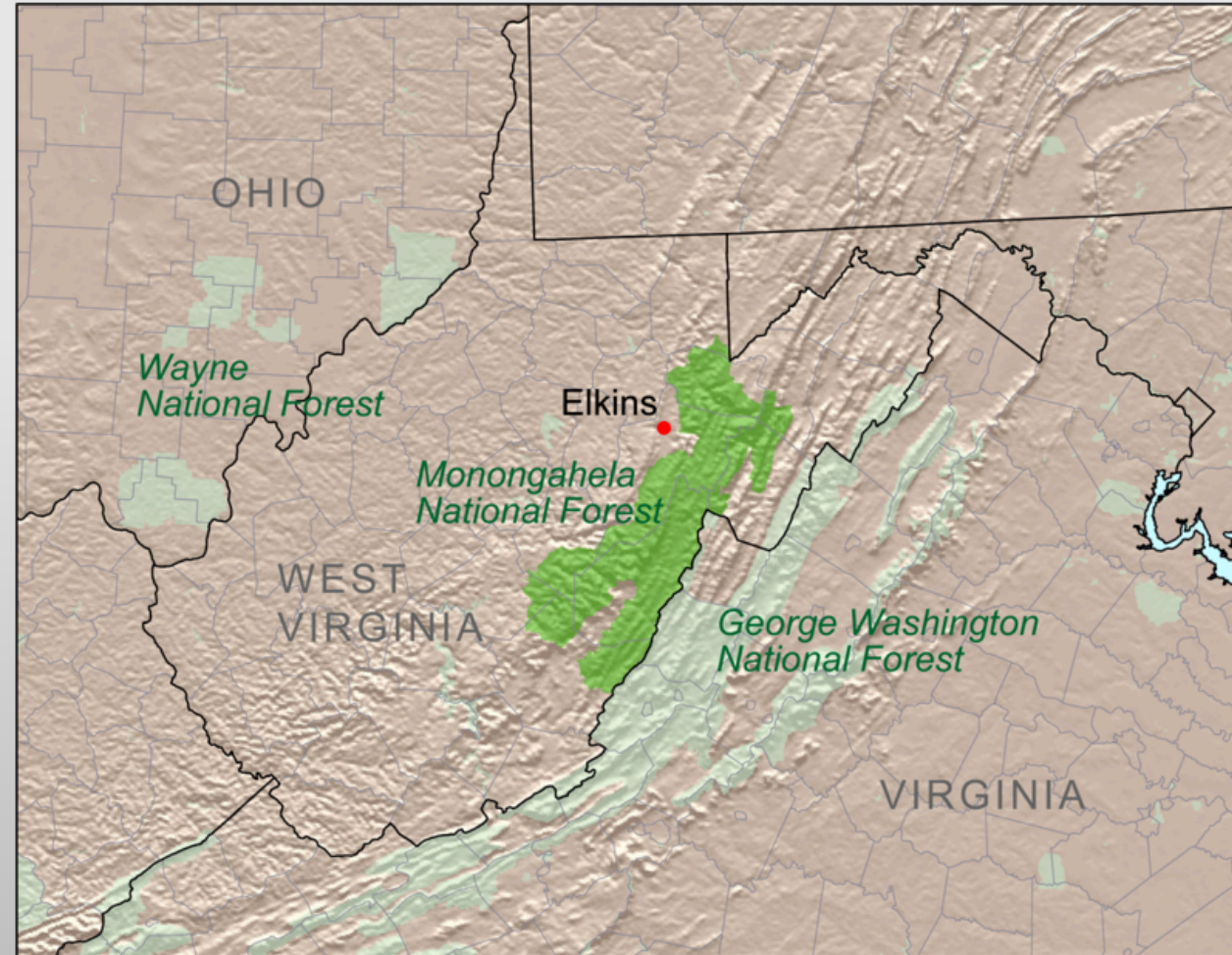


Image credit: Wikipedia Commons

MNF background continued

- Contains most of the high elevation in the state.

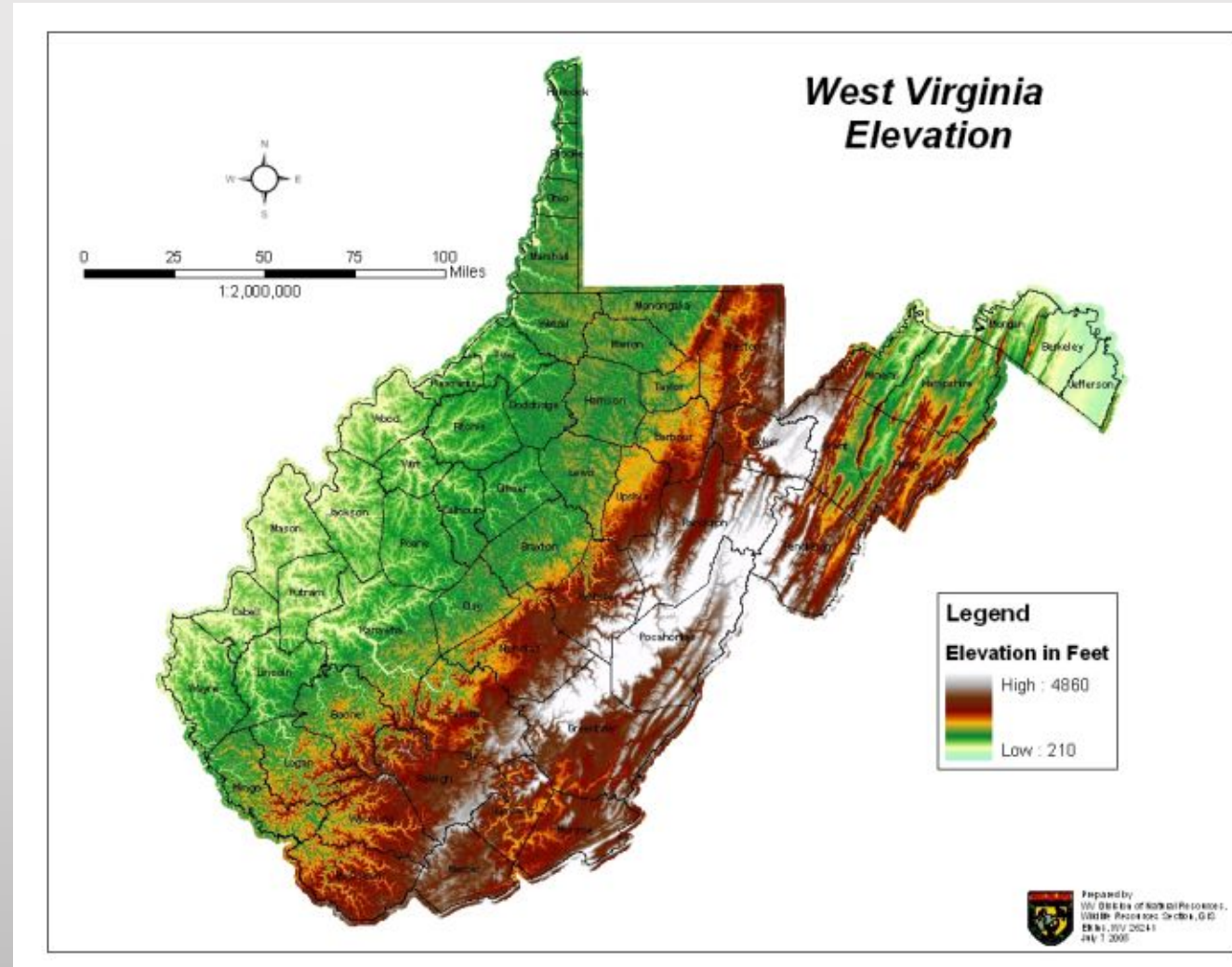
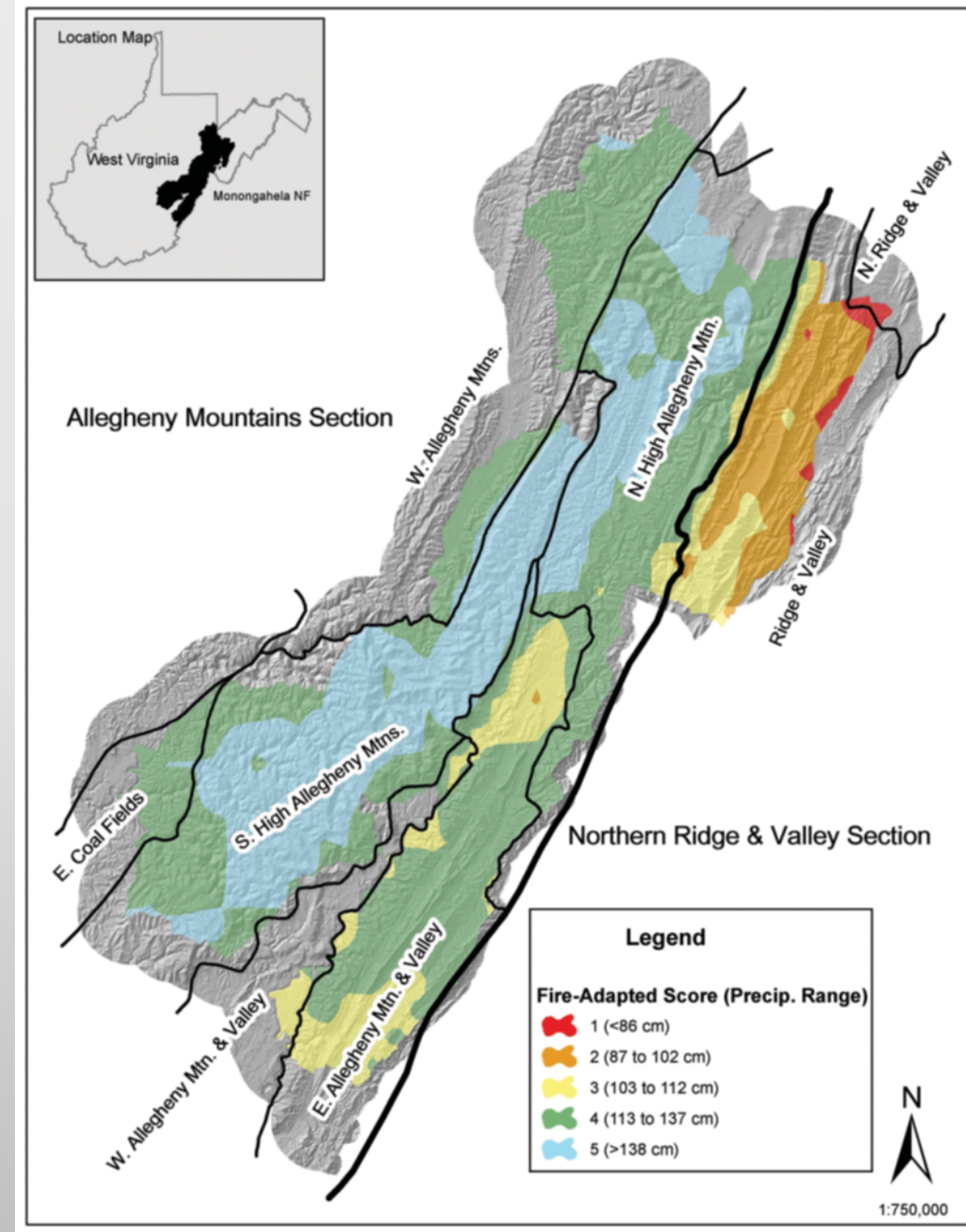


Image credit: WV DNR

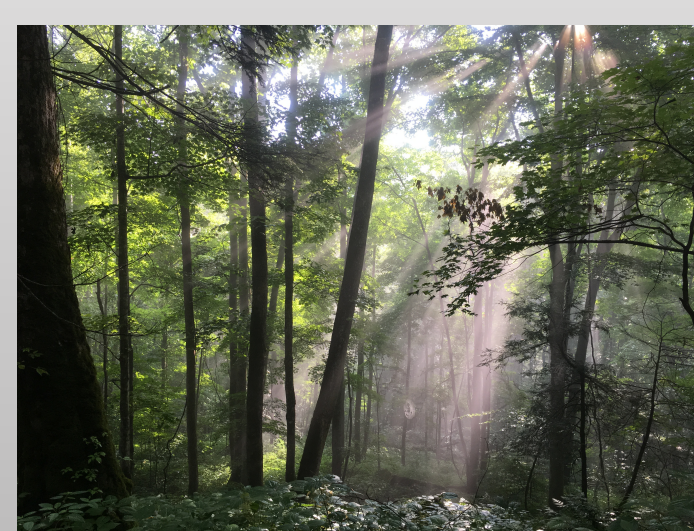
Annual precipitation

- Wide range of precipitation (>60" to < 35")
- High elevation creates a rain shadow effect in the eastern portion of the Forest.



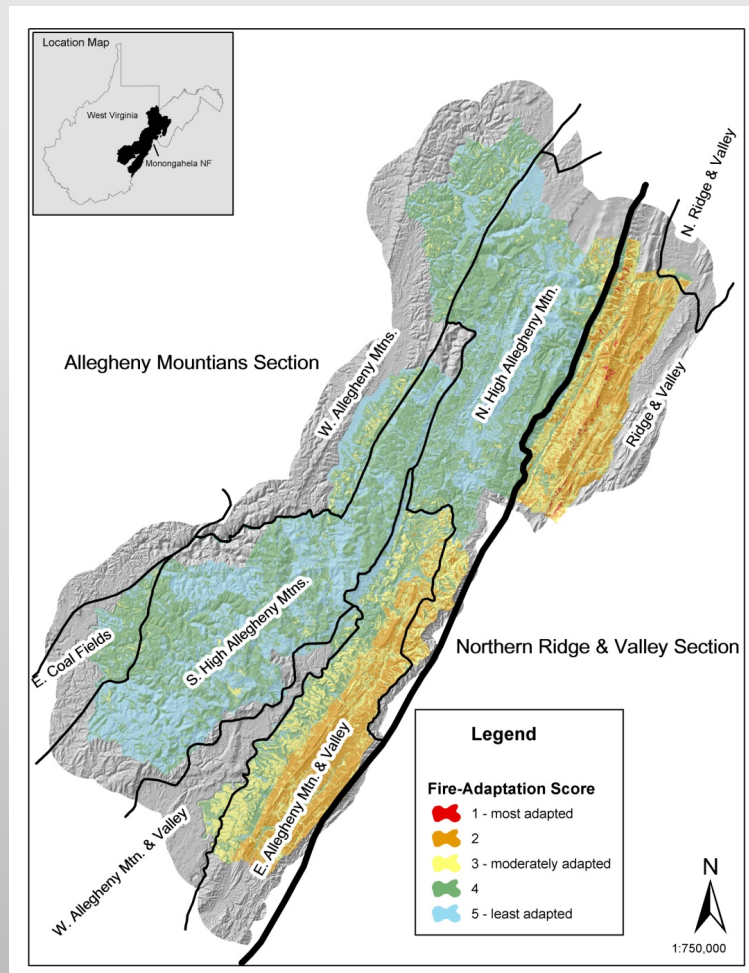
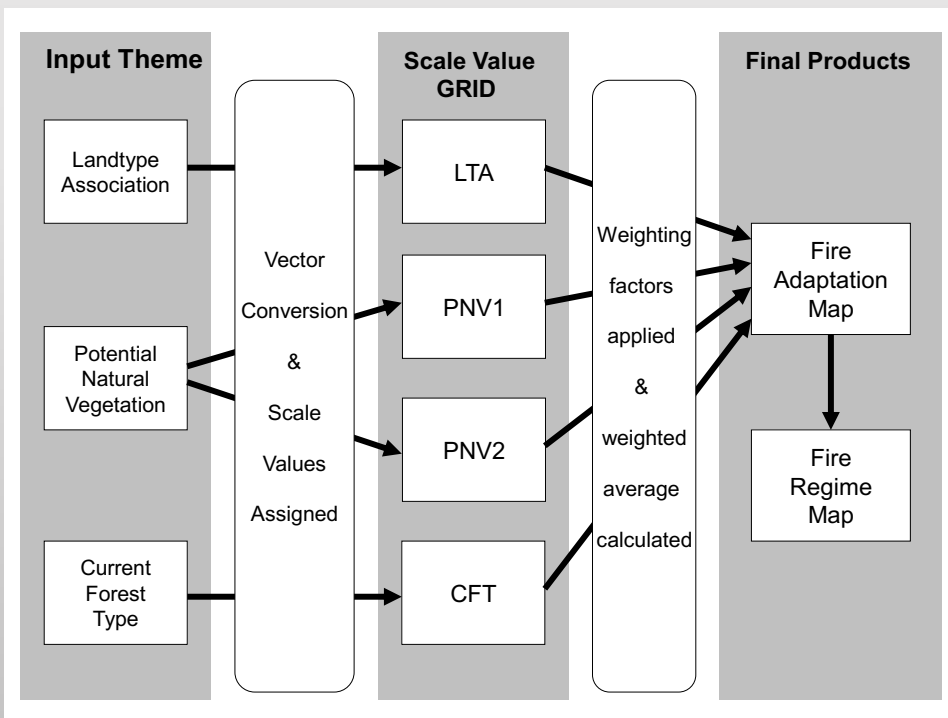
Vegetation Communities

- Northern hardwoods
- Red spruce and spruce hardwood
- Oak and oak-pine
- Mixed mesophytic cove
- Warm-season grasslands
- Shale barrens and limestone glades

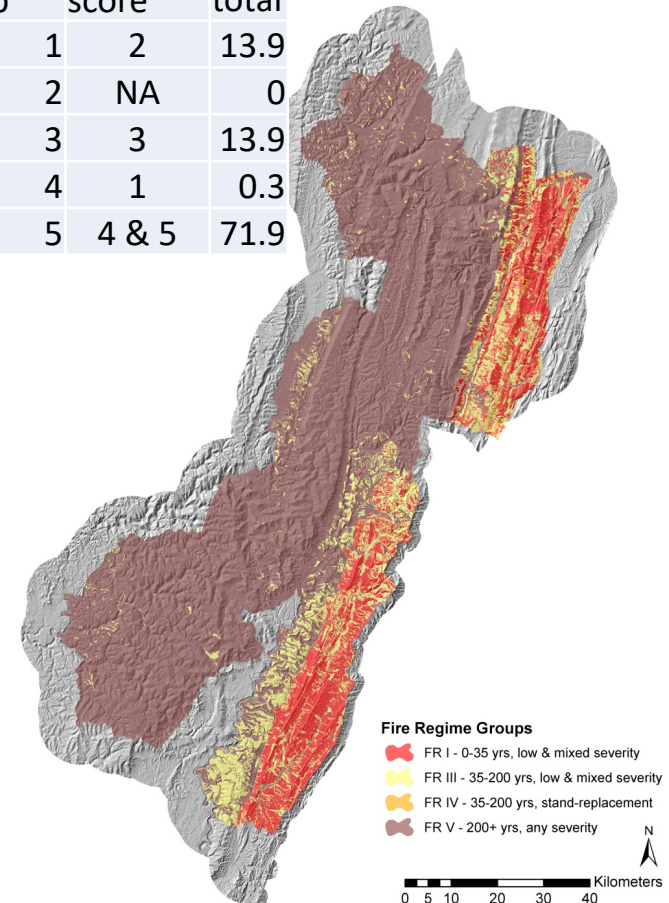


2007 Maps

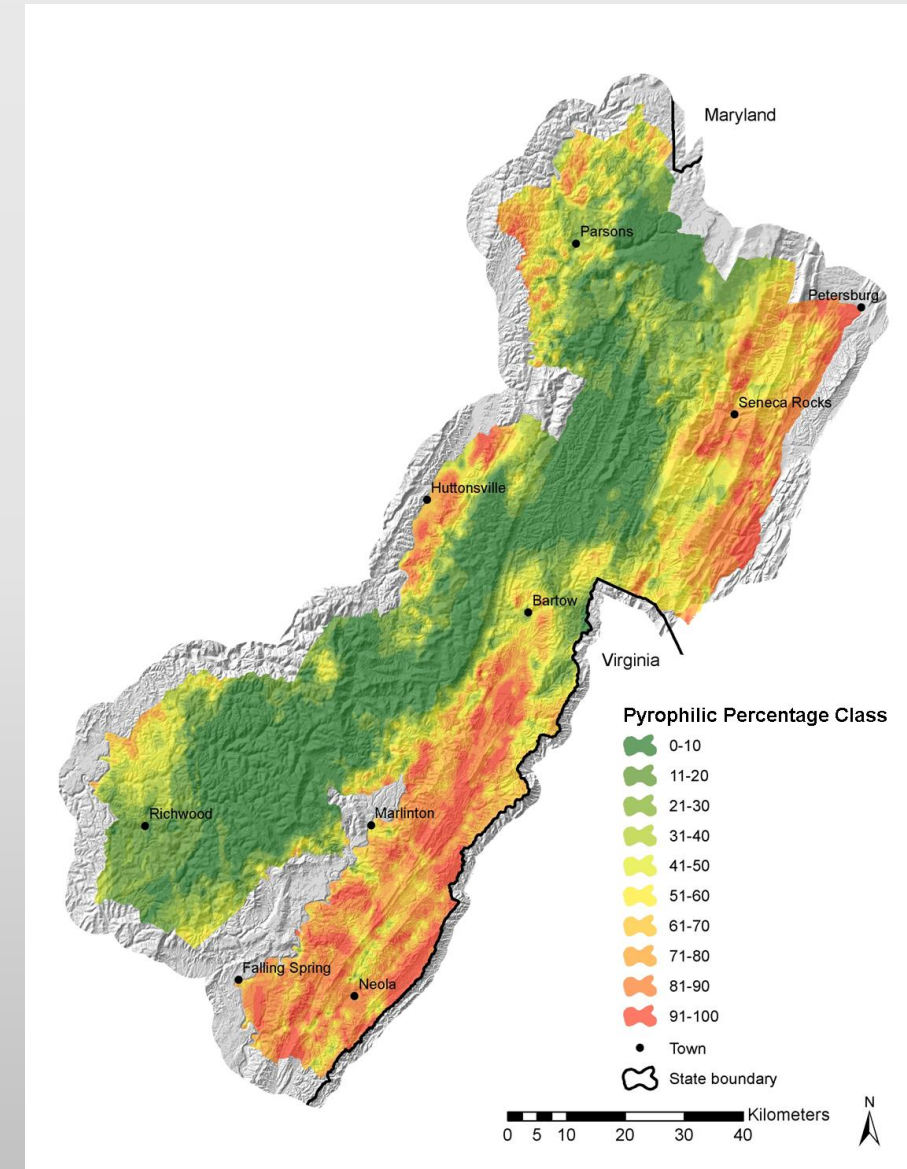
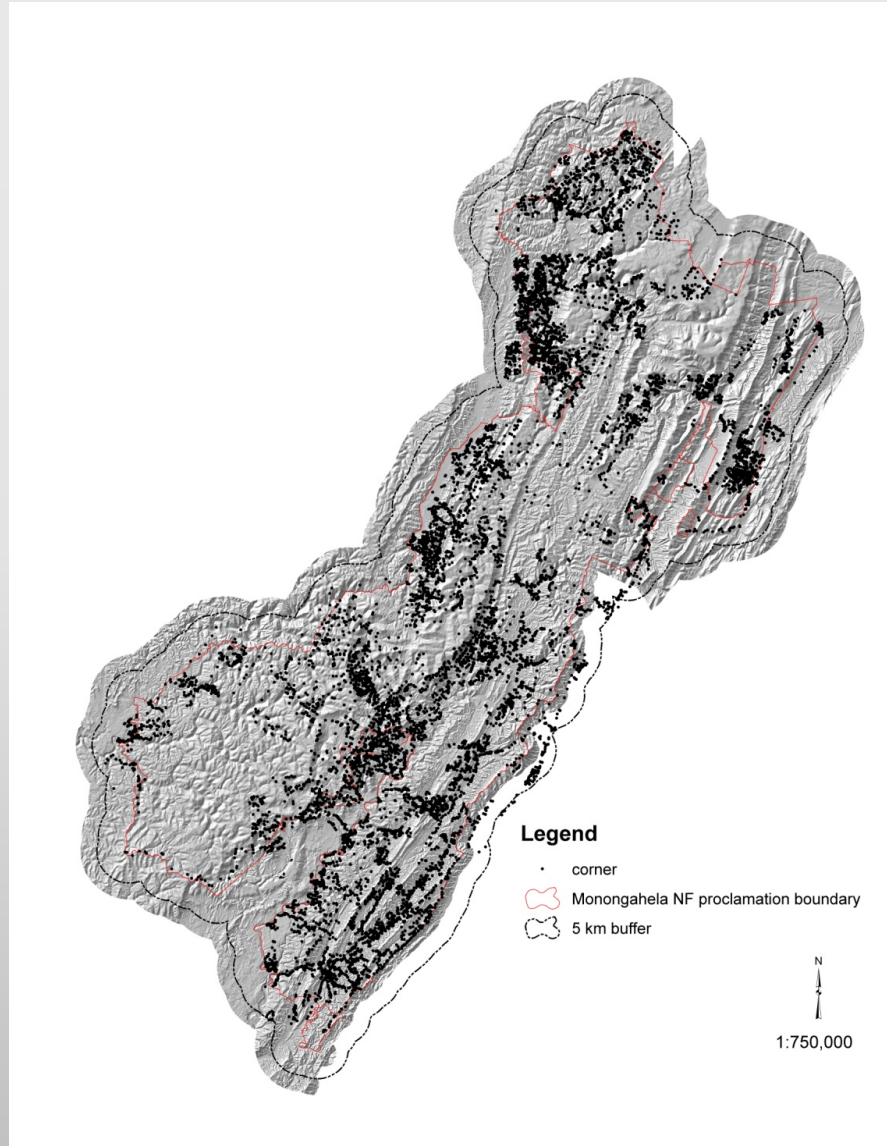
- Use ideas from Schmidt et al. (2002) to map fire-adapted vegetation
 - Biophysical settings
 - Past and current presence of fire-adapted vegetation



Fire Regime Group	Fire adapted score	% of total
1	2	13.9
2	NA	0
3	3	13.9
4	1	0.3
5	4 & 5	71.9



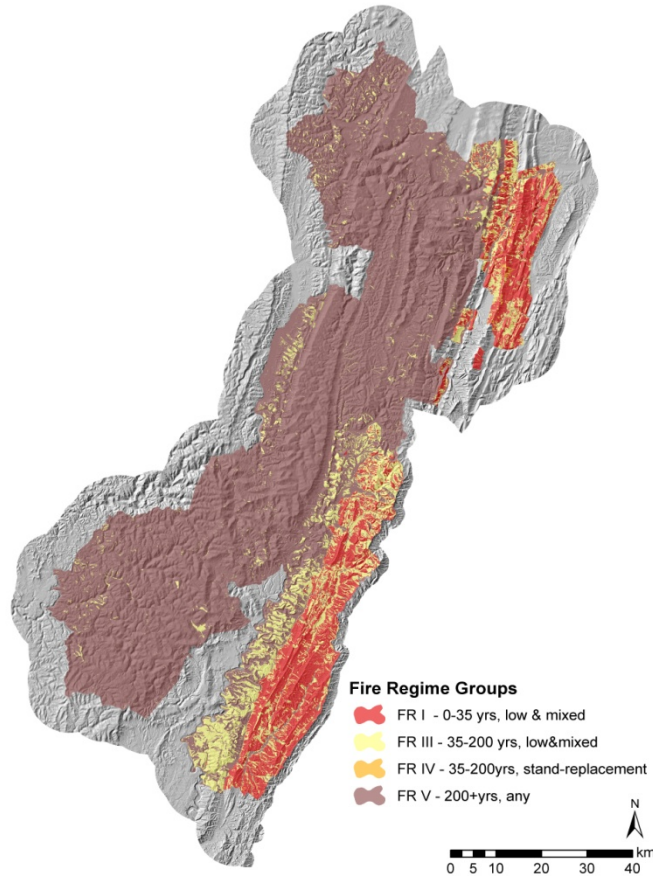
Witness trees



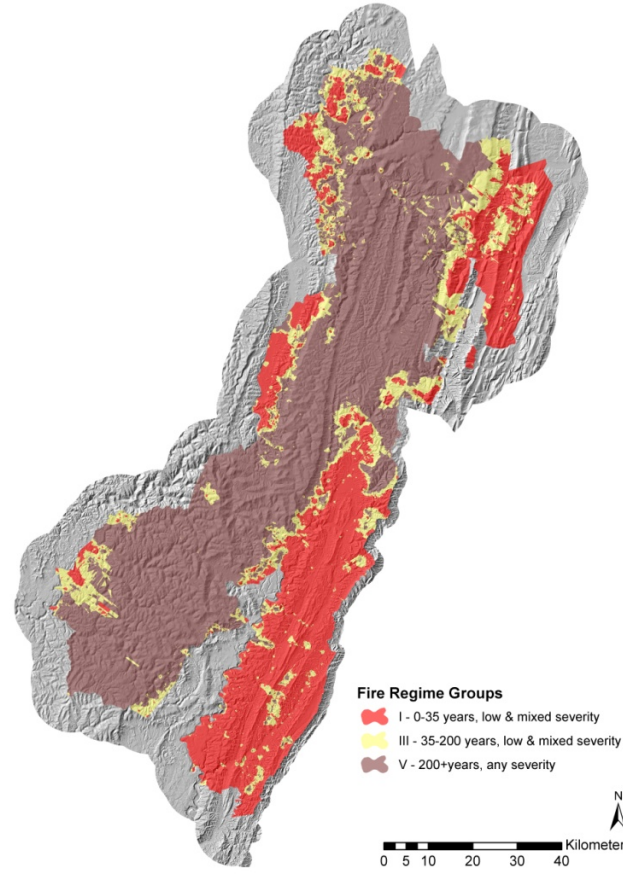
Thomas-Van Gundy, M. and Nowacki, G. 2013. The use of witness trees as pyro-indicators for mapping past fire conditions. *Forest ecology and Management* 304: 333-344.

Comparison

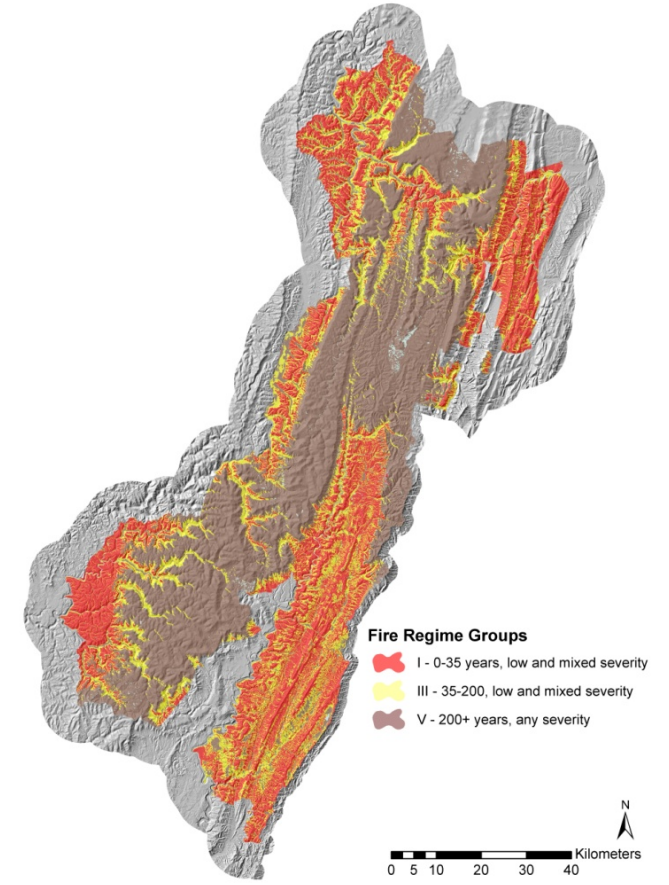
FRGs from 2007 map



FRGs from witness trees



FRGs from LANDFIRE



Prescribed fire goals

- Return fire to areas on the Forest that currently and historically supported fire-adapted ecosystems
 - Identify areas for Rx fire
 - Work with staff to get buy-in on doing the work necessary to be able to burn
- Promote oak and oak pine forest regeneration
 - Address mesophication
- Promote wildlife habitat
- Enhance forest structure
 - Promote uneven aged forest structure
- Reduce hazard fuels



Goals continued

- Monitoring and adaptive management
 - The Forest needs to do more in-depth post-fire vegetation monitoring
 - Follow Allegheny Highlands FLN Forest Structure & Composition Monitoring Protocol
- Integrating with resource specialists
 - Wildlife, vegetation, soils, water, timber, recreation



Hurdles

- Difficult topography makes burns highly variable
 - Difficult to monitor
- Private lands
- Promoting fire as a priority
- Lack of public familiarity with Rx fire
- Monitoring and analysis
- Deer browse





MONONGAHELA NATIONAL FOREST

FUELS MANAGEMENT

LIMITATIONS

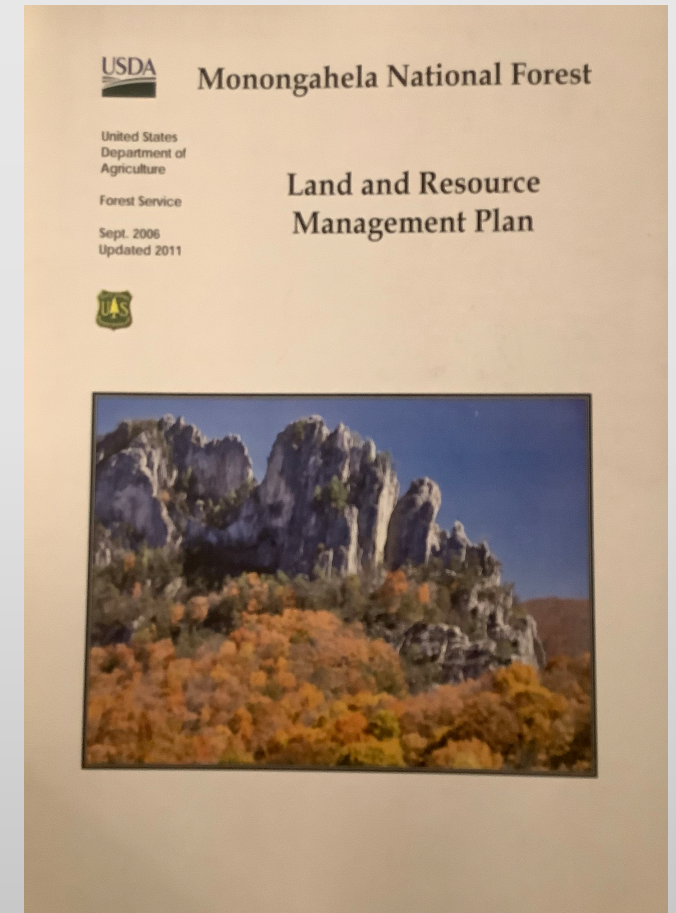
Prescribed fire history on the MNF

- Began using prescribed fire in 1998 (85 ac)
- No real consistency until 2008



MONONGAHELA NATIONAL FOREST LAND MANAGEMENT PLAN

USE PRESCRIBED FIRE ON 10,000 TO
30,000 ACRES OVER A TEN YR PERIOD



10 Year Prescribed Fire History



COMPLIANCE

PROJECT AREAS WERE SMALL SCALE

FIRE PERSONNEL ON EACH INTERDISCIPLINARY TEAM

INCREASED OPPORTUNITIES

LANDSCAPE LEVEL PLANNING – USING NATURAL
FEATURES



IMPLEMENTATION:

Sulphur Ranger District

Blue Ridge Omnibus Prescribed Fire Plan



The Blue Ridge Omnibus Prescribed Fire Plan is a hazardous fuels reduction plan in response to mountain pine beetle infestation in the Lodgepole pine (*Pinus contorta*) ecosystem found within the Sulphur Ranger District, Arapaho-Roosevelt National Forests. Of the 14,017 acres examined in the Blue Ridge Salvage and Fuels Reduction Project Environmental Assessment (EA), 11,652 acres are proposed for prescribed burning within the Decision Notice and Finding of No Significant Impact (FONSI/2007). Implementation of fuels treatment efforts on proposed prescribed burning acreage will be a multi-year and phased process.]

The goals of this project are to reduce surface fuel loading, aspen (*Populus tremuloides*) regeneration, and wildlife habitat restoration by reintroducing the historic role of fire as an ecological process to the fire adapted communities.

All prescribed fire on National Forest System (NFS) lands within the Sulphur Ranger District will be consistent with the 1997 Revision of the Land and Resource Management Plan for the Arapaho-Roosevelt National Forests and Pawnee national Grassland (Forest plan). Direction to utilize prescribed fire to achieve goals and objectives further stated in this fire plan come from the following sources:

- Land and Resource Management Plan-Revision 1997
- Forest Service Manual (FSM 5140) 2017
- Principles and policy elements (FSM 5103) and Wildland Fire Doctrine (FSM 5131) 2017
- Principles from the Cohesive Strategy (A National Cohesive Wildland Fire Management Strategy Phase II National Report) 2012
- Guidance for Implementation of Federal Wildland Fire Management Policy 2009

Specific prescribed fire operational details are not described in this document, but will be identified in the Incident Action Plan written for each individual prescribed fire treatment.

PRESCRIPTION PARAMETERS

SHORT BURN WINDOWS

EXPAND PARAMETERS SO BURN BOSS CAN MAKE DECISION BASED ON EXPERIENCE

PLAN FOR MULTIPLE BURNS IN ONE DAY

IMPLEMENTATION

AERIAL IGNITION / DRONES

FOCUS ON OBJECTIVES

SEASONALITY



PROGRAM CAPACITY

NETWORK WITH PARTNERS

PROVIDE TRAINING OPPORTUNITIES



MEETING OBJECTIVES (MONITORING)



PHOTOS

FUNDING / CAPACITY

DEVELOP MONITORING PROTOCOL

QUESTIONS

