

Monitoring Report
Fredericksburg and Spotsylvania National Military Park
Spotsy CH2
April 6, 2007

Introduction: The area consists of four fields for a total of 50 acres. Three fields were burned on March 13 and the remaining field, Landrum House Field, was burned today. The purpose of maintaining the fields as fields is so that park visitors can get a feeling for the battlefield as it was during the Civil War and to promote the growth of native tall grasses and reduce nonnative invasive plants in order to promote habitat for native wildlife. In the past fields were bush-hogged by park maintenance one to two times a year. The purpose of burning is to use fire to retard the growth of woody species in order to open up and maintain fields and vistas so that park maintenance will no longer need to use time, equipment, and fuel to maintain these open fields.

Description: The area to be burned is located in the Spotsylvania Courthouse Unit of Fredericksburg and Spotsylvania National Military Park in Spotsylvania County, Virginia. The unit is partially surrounded by blacktop road and mixed hardwood forest and is best represented by fuel models 1 and 3. The vegetation consists of warm season native grasses, cool season exotic grasses, and patches of shrub/scrub, mostly oak, up to four feet tall. At the time of this burn, the dogwoods had been out for three days, the mixed hardwood forest surrounding the unit was at 10-20% of green-up, 5% of the buds on oak brush in the field were opening, and about 50% of the shortest grasses were green, and woodcocks were peenting (mating) three weeks ago.

Briefing: A total of 11 personnel were assembled at the Bloody Angle parking area at 0900. At 0930 am Burn Boss Gregg Kneipp conducted the briefing and made assignments as shown in Table 1. The spot weather forecast for a proposed ignition time of 0930 indicated partly cloudy skies with a dry bulb temperature of 34°F and a relative humidity of 43%, no chance of wetting rain, mixing height 2,500', and transport winds out of the northwest at 10 mph. Winds at 20' were predicted to be northwest at 8 mph at 0930, west at 12 mph at 1230, southwest at 12 mph at 1500, and southwest at 10 mph at 1830. The fire weather forecast for the day indicated partly cloudy skies, maximum temperature 51°F, minimum relative humidity 24%, 20' winds out of the west all day at 7 to 8 mph with gusts to 20 mph in the morning, and mixing height 10,160' with transport winds 15 mph out of the west for a ventilation rate of 139,040.

Table 1. Burn Day Personnel.

Name	Position Qualification	Home Unit
Gregg Kneipp	Burn Boss / RXB2	FRSP
Keith Kelly	Ignition Boss / CRWB	FRSP
Rocky Shroder	Ignition Boss / CRWB and EMT	PRWI
Bob Howard	Holding Specialist / CRWB	AD-FRSP
John Stoddard	FRSP Engine / ENOP	FRSP
Rod Howard	FRSP Engine / FFT2	PRWI
Joe Temple	RICH Engine / CRWB	RICH
Leslie Winston	RICH Engine / FFT2	RICH
John Rifenberg, Craig Johnson	Holding Crew / FFT2	FRSP
KellyAnn Gorman	Fire Effects Monitor / FEMO	SHEN

Burn Day Chronology:

- 0900 – Personnel gather for briefing.
0930 – Briefing.
1025 – Begin ignition with test fire in first finger in northeast corner of unit.
1035 – Test fire determined to be successful and ignition continuing with burning out the first finger in the northeast corner.
1055 – Ignition continuing into the second (middle) finger on the east side of the unit; the fire is mostly flanking with good residence times with occasional flaring in scrub.
1115 – The second finger is burned out and ignition is continuing in the third and last finger on the east side of the unit.
1130 – Third finger is burned out; half of ignition team is returning to the northeast corner to begin ignition of the main body of the unit.
1145 – Begin ignition of the main body of the unit at the northeast corner; smoke is drifting easterly without much lifting and dispersing quickly.
1200 – Igniter is running strips into the wind down the small ridge through the center of the unit between the second and third fingers, successfully creating flanking fire; flanking fire is exhibiting flaring in oak brush with flame lengths up to 6'; other igniters are still bringing the sides along.
1230 – Finished igniting interior flanking strips.
1300 – Heavy smoke, not lifting a lot but still dissipating quickly, column drifting to the east with the wind; ground nest with two eggs was protected from fire.
1215 – South side ignition tied into west side boundary trail.
1315 – North side ignition tied into west side boundary trail; ignition complete; simply waiting for the unit to burn out by backing and flanking.
1340 – Unit burned out; holding forces beginning to mop-up to secure the perimeter.

Weather: Skies were sunny with a few wispy clouds for the duration of the burn. Temperature was 40 to 50°F, relative humidity was 46 to 28%, winds were westerly 2 to 6 mph with frequent gusts to 8 mph. Conditions were generally sunnier and moister but otherwise as predicted.

Table 2. Weather Observations.

Obs. Time	Temp °F	RH %	Wind mph	Wind Dir	FDFM (calc)	Skies	Notes
0910	40	46	0-2 G6	SSW	11	sunny	
0930	34	43	8 (@20')	NW	--	pcloudy	forecasted spot weather
1010	41	40	2-4 G10	WNW	9	sunny	
1040	42	34	1-3 G6	SW	7	sunny	
1100	45	32	1-3 G6	W		sunny	
1130	45	32	2-4 G8	SW	7	sunny	
1200	45	32	2-6 G8	SW	6	sunny	
1230	46	28	3-6 G8	WSW	6	sunny	
1310	47	29	2-4 G8	NW	6	sunny	
1330	50	28	2-4 G8	NW	6	sunny	
(peak)	51	24	7	W	--	pcloudy	forecasted fire weather

Fire Behavior: Flame lengths on the backing fire were generally 0.5 to 1.0 foot and on the flanking fire, 1.0 foot (see Table 3 below). Flaring in patches of brush within the unit created flames lengths of 3 to 6 feet for brief periods (less than one minute at a time). Flaming zone depths averaged 0.5 foot.

Table 3. Fire Behavior Observations.

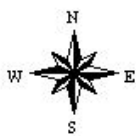
Time	Fire Spread Dir	Rate of Spread (ch/hr)	Flame Length (ft)	Flame Depth (ft)	Notes
1040	B	(na)	0.5-1.5	0.5-1.0	
1100	F	4.0	0.5	0.5	
1130	B	0.75	0.25-1.0	< 0.5	
1145	B	1.75	0.5	0.25	
1200	F	2.5	0.5-1.0	< 0.5	
1230	F	4.0	1.0	0.5	
1310	F	4.0	1.0-3.0	0.75	
1330	B	3.3	0.5-1.5	< 0.5	
1345	H	25+	3.0-6.0	1.0-2.0	

Preparer: KellyAnn Gorman, FEMO, April 16, 2007.

Fredericksburg and Spotsylvania National Military Park Spotsylvania Courthouse RX Burn, 2005



500 0 500 1000 1500 2000 Feet



- Trail
- Roads
 - paved
 - unpaved
- Earthworks
- Bndy
- Burn Unit

