

Monitoring Report
Fredericksburg and Spotsylvania National Military Park
Spotsylvania Courthouse Unit
25 August 2004

Introduction: The area consists of one field of approximately 5 acres in size. This area is usually bush-hogged by park maintenance one to two times a year. The purposes of the burn are to reduce brushy fuels to open up the historic scene, open up and maintain vistas, and promote the growth of native tall grasses, so that park maintenance will no longer need to use time, equipment, and fuel to maintain these open fields, and so that park visitors can get a feeling for the battlefield as it was during the Civil War.

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 is fuel model 1 and 3. The area consists of warm season native grasses, cool season exotic grasses, and shrub/scrub to a height of 4-6 feet. A climax forest in this area is oak/hickory.

Briefing: The unit was burned on August 25, 2004. A total of 14 personnel (see Table 1) were assembled at the McCoull house parking area at 0930. At 10:30am Burn Boss trainee Gregg Kneipp went through introductions and gave quick briefing. The spot weather forecast predicted a maximum temperature of 85°F with 20 foot wind speed of 10-15 mph from the southeast. Transport winds were predicted to be from the southeast at 20 mph. Expected minimum RH was 50%. The decision was made to foam a line around a monument and half of the earthworks that would not be treated. The weather was taken during the briefing and the RH was 91%. Weather observations were taken every half hour to monitor the RH. Personnel were assigned to their tasks and the FRSP and NWR engine were staged (see Table 1).

Table 1. Burn Day Personnel.

Name	Position Qualification	Home Unit
Gregg Kneipp	Burn Boss trainee/RXB2(t)	FRSP
Tim Craig	Burn Boss/RXB2	Great Dismall Swamp NWR
Rebecca Wilson +2	Igniton	DNCR
Bob Howard +3	Holding	FRSP
John Reifenberg +3	Holding	FRSP
Missy Forder	Monitor/FEMO	SHEN

Burn Day Chronology August 25, 2004

- 1030 - Personnel gathered at the McCoull house parking area for the briefing and introductions.
- 1045 – A foam line was put down by the FRSP engine around the monument and around half of the earthworks.
- 1145 – A test burn is ignited and the decision is made to begin ignition.
- 1200 – Ignition is started in the NW corner of the unit. Fire is backed along the Anderson Road and flanked along the southwest forested edge.
- 1230 – The corners of the unit are reached and the fire is stripped through the remainder of the unit.
- 1300 - The fire burns well in certain areas and does not burn at all in other areas. A patchy mosaic is achieved.
- 1400 – Ignition halted and lunch break is taken.
- 1430 – Ignition begun to try and clean up some areas.
- 1515 – End Ignition.

Weather: The weather for the burn was mostly cloudy skies. Temperatures ranged from 71-83 ° F. Relative humidity's ranged from 62-95% with the lowest reading at 1300. Mid flame winds were generally 3-5 mph out of the SW and rotated to the SE later in the day.

Fire Behavior: Fire behavior mainly consisted of a backing and flanking fire. Backing rates of spread were less than a 1 foot per minute. Flame lengths were 6 inches to 1.5 feet with a 3 to 6 inch flame zone depth. Flanking fire rates of spread were 2 feet a minute with flame lengths of 1 to 2 feet with the occasional jackpot pile. Smoke dispersion was excellent.

Table 5. Burn Prescription – August 25, 2004

Weather	Acceptable Range	Optimum	Observed*
Temperature	40-90 F	70-80 F	71-83 ° F
Relative Humidity	20-65 %	20-30 %	62-95 %
Wind Direction	Any	N	SW-SE
Wind Speed	2-8 Mph	3-5 mph	
(midflame)			1-8 mph
Transport Wind	Any	NE	
Direction (range)			SE
Fuel Moisture	4-15%	6-8%	9-16%
1 Hour			
10 Hour	6-29%	5-12%	14%

Table 6. Weather Observations - August 25, 2004

Time	Dry Bulb Temp F	Wet Bulb	RH %	Wind Speed MPH	Wind Direction
0930	71	70	95	1.0-3.9	SSW
1000	72	70	91	3-9	SSW
1030	76	71	78	1-3	SSW
1100	79	72	71	1-3	SSW shifty
1130	78	71	71	2.5-4	SSE
1200	83	75	69	3-5	SE
1300	82	72	62	1-4	ESE
1400	79	71	68	2.5-4.5	South
1500	78	73	79	4-8	SE

Preparer: Missy Forder, FEMO, 31 August, 2004