

**Monitoring Report**  
**Fredericksburg and Spotsylvania National Military Park**  
**Spotsylvania Courthouse Unit**  
**Spotsy CH RX**  
**22 March 2005**

Introduction: The area consists of seven fields for a total of 130 acres. These areas are 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 March 22, 2005. A total of 25 personnel (see Table 1) were assembled at the Bloody Angle parking area at 0900. At 10:30am Burn Boss trainee Gregg Kneipp went through introductions and gave quick briefing. The spot weather forecast predicted partly cloudy skies with 0% chance of precipitation. A maximum temperature of 59°F was predicted with a 20 foot wind speed from the Southeast at 5 mph or less. Mixing height was predicted at 3000 feet with a Westerly transport wind of 20 mph. Expected minimum RH was 35%. The temperature taken at briefing was 47°F with a RH of 66 and calm winds. A test fire was lit and ignition began at 1100.

Table 1. Burn Day Personnel.

| <b>Name</b>       | <b>Position Qualification</b> | <b>Home Unit</b> |
|-------------------|-------------------------------|------------------|
| Gregg Kneipp      | Burn Boss trainee/RXB2(t)     | FRSP             |
| Tim Craig         | Burn Boss/RXB2                | FWS              |
| Keith Kelly+3     | Igniton Boss/CRWB             | FRSP             |
| Joe Temple+3      | Igniton Boss/CRWB             | RICH             |
| Bob Howard +6     | Holding Boss/CRWB             | FRSP             |
| Rocky Schroeder+5 | Holding Boss/CRWB             | PRWI             |
| Barb Stewart      | Information Officer/IOF2(t)   | SHEN             |
| Missy Forder      | Monitor/FEMO                  | SHEN             |

## **Burn Day Chronology March 22, 2005**

0930- Personnel gather at the Bloody Angle parking for briefing.

1030- Briefing

### **Upton Field**

1100- A test fire is lit and the decision is made to begin ignition.

1105- The burn is ignited along the road and the fire is then allowed to back off creating a black line.

1115- Once a black line has been established the fire is laid down in strips. Flame lengths on the backing fire are 1-2 feet with the flanking fire at 2-5 feet. Maximum flame lengths are observed as 6-8ft.

1120- Winds are variable but light.

1130- A few areas of the unit are quite wet.

1210- End ignition.

### **McCoull House Field**

1220- Begin ignition at McCoull house field.

1300- End ignition at McCoull house field.

1310- Resources are broken up into two groups.

1315- Ignition begins of the NE and SE small fields adjacent to the McCoull house field.

1330- End ignition of the two smaller fields.

### **Harrison House Field**

1430- Begin ignition of the Harrison House field.

1530- Wind shift from SW to East.

1535- Engine used to wetline edge of forest.

1540- End ignition at the Harrison house field.

### **Landrum House Field (North)**

1630- Begin ignition of the Bloody Angle field.

1720- Drip torch fuel is running low and the RH is rising. The decision is made to extinguish the fire. The field is  $\frac{3}{4}$  burnt.

1730- End ignition of the Bloody Angle field.

1800- Review and comments of the days events. We did not quite complete all 130 acres. 87 total acres were burned. Another day of burning is planned for the following week.

1815- Resources released.

Weather: The weather for the burn was partly cloudy skies. Temperatures ranged from 54-64 °F. Relative humidity's ranged from 45-54% with the lowest reading at 1530.

Mid flame winds were primarily out of the SW but variable at times in speed and direction.

Fire Behavior: Flame lengths on the backing fire were generally 1-2 feet with flanking fire of 3-7 feet. Some areas where there was an accumulation of light fluffy fuels flame lengths of 8ft + were observed. Rates of spread were generally 1-4 CH/HR. The mid-flame winds were variable in direction and ranged from calm to short gusts of 8.0 mph.

Table 2. Burn Prescription – March 22, 2005

| <b>Weather</b>                      | <b>Acceptable Range</b> | <b>Optimum</b> | <b>Observed*</b> |
|-------------------------------------|-------------------------|----------------|------------------|
| Temperature                         | 30-70 F                 | 50-60 F        | 54-64 F          |
| Relative Humidity                   | 20-70 %                 | 20-30 %        | 45-54 %          |
| Wind Direction                      | Any                     | N              | variable         |
| Wind Speed<br>(midflame)            | 1-6 mph                 | 1-4 mph        | 0 – 6 mph        |
| Transport Wind<br>Direction (range) | Any                     | N              | S                |
| Fuel Moisture<br>1 Hour             | 4-15%                   | 6-8%           | 8%               |
| 10 Hour                             | 5-25%                   | 5-12%          | X                |

Table 3. Weather Observations - March 22, 2005

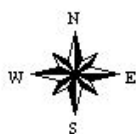
| <b>Time</b>  | <b>Dry Bulb<br/>Temp F</b> | <b>Wet Bulb</b> | <b>RH %</b> | <b>Wind<br/>Speed<br/>MPH</b> | <b>Wind<br/>Direction</b> | <b>Skies</b> |
|--------------|----------------------------|-----------------|-------------|-------------------------------|---------------------------|--------------|
| 0945         | 47                         | 42              | 66          | Calm                          | N/A                       | P. Sunny     |
| 1100         | 52                         | 45              | 58          | Var.                          | N/A                       | P. Sunny     |
| 1130         | 54                         | 46              | 54          | 2.0                           | SE                        | P. Sunny     |
| 1200         | 54                         | 46              | 54          | Var                           | N/A                       | P. Sunny     |
| 1230         | 56                         | 47              | 50          | 3-4                           | SE                        | P. Sunny     |
| 1300         | 56                         | 47              | 50          | Var                           | N/A                       | P. Sunny     |
| 1330         | 60                         | 49              | 49          | 3-4                           | SW                        | P. Sunny     |
| 1400         | 60                         | 50              | 49          | 2-6                           | S                         | P. Sunny     |
| 1430         | 60                         | 50              | 49          | 4-6                           | SW                        | P. Sunny     |
| 1500         | 64                         | 53              | 48          | 2-4                           | SW                        | P. Sunny     |
| *broke sling |                            |                 |             |                               |                           |              |
| 1530         | 61                         | 56              | 45          | 2-4                           | SW-E                      | P. Sunny     |
| 1630         | 56                         | 46              | 50          | 2-4                           | SW                        | P. Sunny     |
| 1700         | 56                         | 46              | 50          | 2-4                           | SW                        | P. Sunny     |
| 1730         | 56                         | 47              | 50          | 2-4                           | SW                        | P. Sunny     |
| 1800         | 55                         | 46              | 54          | Var                           | N/A                       | P. Sunny     |

Preparer: Missy Forder, FEMO, 29 March, 2005

# 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



