

Wind Cave National Park Campground Prescribed Fire

May 30, 2007

Prepared by Andrea Holmquist

Burn Unit Summary

The Campground prescribed fire was completed in one operational period on May 30, 2007. It is a 35 acre subunit included in the Headquarter West prescribed fire unit. The unit ranged in elevation from 4100 feet to 4400 feet, slope of 0-30 percent and aspects included north, east and west. The unit is located in Elk Mountain Campground. The vegetation within the campground unit consists of open ponderosa pine and a large population of pine regeneration. Due to a number of years of fire suppression a large population of pine regeneration has been able to thrive. Goals for the campground burn include provide for fire fighter and public safety while restoring the natural ecosystem of fire intervals to prairie and ponderosa pine forest.

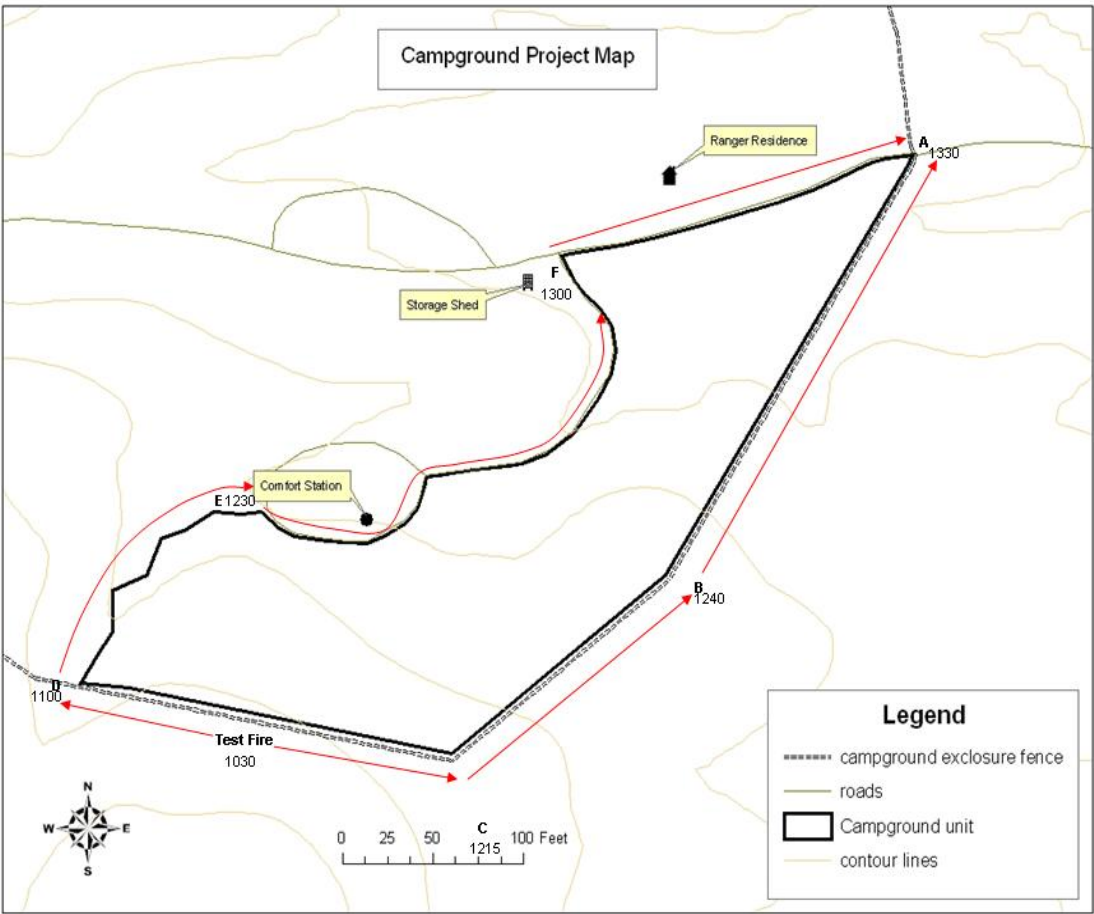


Personnel:

Burn Boss: Dan Morford
Firing Boss: Eric Allen, Andy Thorstenson FIRB(t)
Holding Specialist: Jim McMahill
Fire Monitor: Keith Mitchell
2 Type 6 Engines
1 1800 gallon Water Tender
2 ATV's

Objectives:

1. Achieve 70-90% mortality in ponderosa pine seedlings.
2. Achieve 40-60% mortality in pole sized (1"-6" dbh) ponderosa pine.
3. Achieve 10-30% mortality in ponderosa pine greater than 8" dbh.



Fire Progression

The project boundary is loop A, the north line is a paved road, the south line consists of a 6' mow line along the enclosed fence and a mow line with ladder fuels cleared for the east and west line. The red arrows illustrate the progression of the firing operation. The test fire was ignited at 1030 located at the southwest edge of the unit. The test area was conducted in fuels that represented the entire unit. The fire progression has a predominately northeast direction. The progression is labeled with map points A through F and the time that the area was completed. The unit was completed at 1330 hours, at point A.

Table 1. Fire Behavior Observations

Time	Location	Spread Dir.	Rate of Spread	Flame Length	Flame Depth	Fuel Model	% Shade	Slope
1030	W Test Fire	Backing	<0.5 c/h	4-6"	6"	9	50	20
1045	Test Fire	Flanking	2 c/h	4-6"	6"	9	50	20
1240	B	Head	5-6 c/h	1-2'	8"	1	0	0-2

Weather Observations

A spot weather forecast was requested from the National Weather Service in Rapid City. Weather observation were collected prior to the burn operation, to obtain the spot forecast. The spot forecasted temperatures at 80 degree at the time of ignition and a high of 82. A relative humidity forecast of 20 percent at ignition and a minimum at 16 percent. Observations were continued through the ignition operations and into the mop of phase. See table below.

Table 2. Weather Observations

Date	Time	Temp	Dew Point	RH	Wind	
					Speed	Direction
30 Apr	0730	74	41	31	1-3	VAR
30 Apr	0800	78	40	26	1-3	VAR
30 Apr	0900	76	39	27	5-9, g-9	W
30 Apr	1000	72	47	42	3-4	W
30 Apr	1030	73	49	41	Light	NE
30 Apr	1100	75	49	41	3-4, g-5	E
30 Apr	1130	75	49	41	6-7, g-9	E
30 Apr	1200	77	50	39	6-7, g-12	NE
30 Apr	1230	77	48	36	6-7	E-SE
30 Apr	1300	77	48	36	7-8, g-12	S-SE
30 Apr	1330	76	47	35	6-7, g-12	NE
30 Apr	1400	74	50	43	9-10, g-13	NE
30 Apr	1500	69	45	43	6-9, g-11	NE

Fire Effects Monitoring

There were no plots located within the boundaries of the Campground prescribed fire.