

Fuels and Fire Behavior Digital Dictionary

The Fire Behavior Assessment Team

Clover Fire
Plot 3

6/19/2008
Region5/Sequoia NF



Plot 3, Origin Pre



Plot 3, Origin, Post

Fuels, Topography, Weather

Site Info	
Veg Type	Jeffery pine, Pondorosa, white fir, patchy shrub understory, large CWD component
Slope (%)	14
Aspect (deg)	100
Elev (ft)	8220
Climatic Variables	
Fire Arrival (Date, Time)	6/19/08, ~13:00?
Burn End (Date, Time)	6/19/08, 15:00?
20ft Wind (mph), 10min avg./gusts	5/19
Onsite wind(mph), eyelevel (10min avg.)	n/a
Wind direction (azimuth)	30
RH (%)	6
Temp (F)	79
ERC/BI	51/40
Drought Index	n/a
Live FM% (Herb/Woody)	66/91
Dead FM% (1/10/100/1000hr)	4/9/10/12

Fuel Model (low/high)	
181/183	
Surface Fuels - Pre	Tons/ac
1-hour	0.3
10-hour	0.2
100-hour	1.3
1000-hour	81.3
Litter	4.6
Duff	18.1
Total Fuels	105.8

Understory Veg.	Tons/ac
Live/Dead Shrub	0.12/<0.01
Live/Dead Herbaceous	0

Canopy & Stand	
Canopy Bulk Density (kg/m ³)	0.027
Canopy Base Height (ft)	11
Basal Area (ft ² /ac)	50
Overstory Trees/ac	11

Climatic Variable Details

Weather and fuel moistures taken from the Blackrock RAWS using NFDRS2016. ERC and BI are scores, not percentiles.

Site History:

Fire Behavior

Fire Behavior	
Primary Fire Type	Surface, low intensity
Secondary Fire Type	No Data
ROS - sensor source (ch/hr) (min/max/avg.)	2.8 - 2.9
ROS - video interp. (ch/hr) (min/max/avg.)	.07/ 0.7/ 0.7
Flame Length (ft) (min/max/avg)	0.5/ 6/ 1
Direction fire spread is going. (azimuth)	5

Fire Video	Description

Fire management actions affecting plot:
The Clover Fire was a Wildland Fire Use Fire (Resource Benefit Fire).



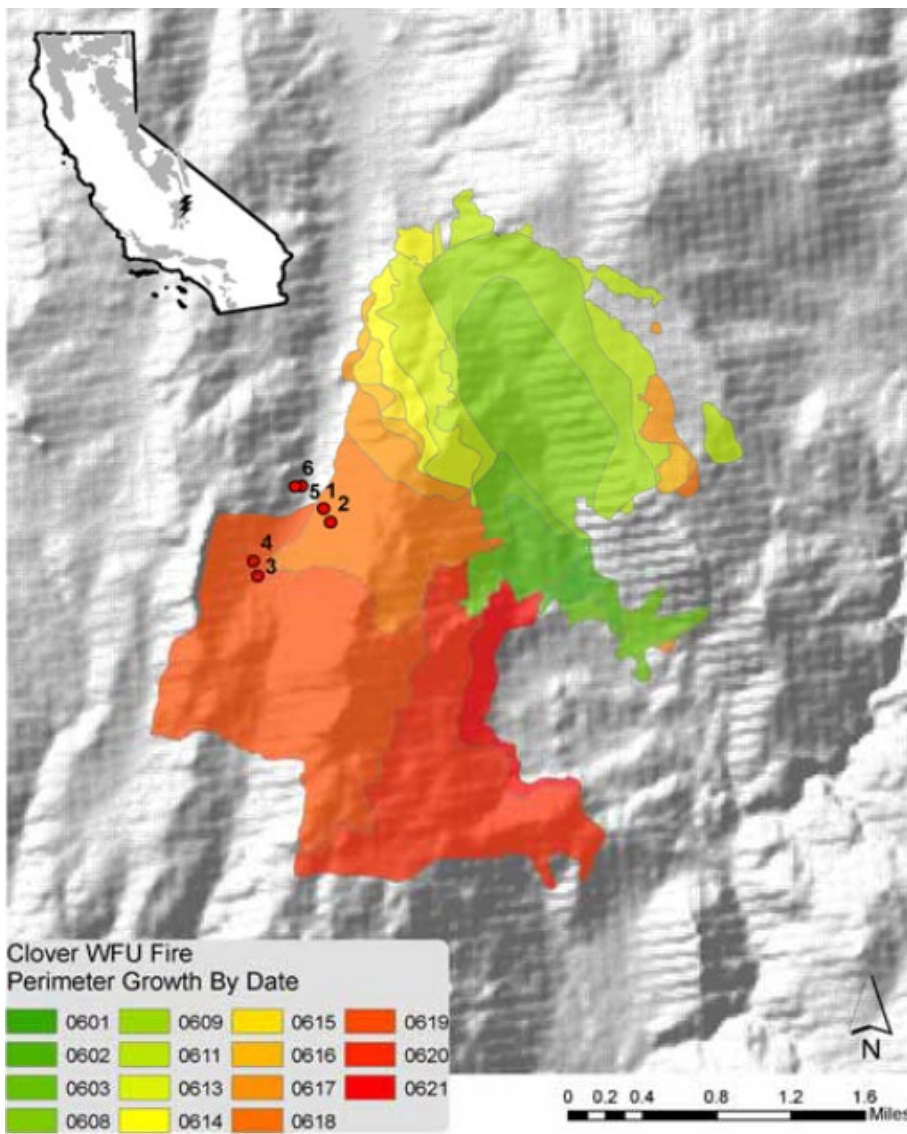
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Fire Effects

Fire Severity	
Substrate Score (1-5)	5
Understory Veg Score (1-5)	No data
Avg. % tree canopy scorch	74
Avg. % tree canopy torch	26
Avg. tree bole char (ft)	Not reported

Fuel Consumption	%
1-hour	100
10-hour	100
100-hour	100
1000-hour	100
Litter	100
Duff	100

Severity category definitions: 1= unburned, 2=low, 3=moderate, 4=high, 5=very high



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About the Fire Behavior Assessment Team (FBAT)

Abstract

Despite the scope of the US wildfire problem, capabilities for monitoring active wildfires to answer pressing questions about fire behavior and personnel safety are severely limited. The **Fire Behavior Assessment Team (FBAT)** is the only team currently collecting [applied science data on active wildfires](#). FBAT functions in collaboration with land managers and interested research groups. In coordination with incident management, sites are placed opportunistically ahead of the fire accounting for current and expected fire behavior, safe access, and fire management tactics.

FBAT can collect standard weather, fire behavior and fire severity observations as well as set up dataloggers which store wind speed, direction, temperature and RH. FBAT can also take plot data which includes:

- Heat resistant fire behavior equipment left on-site (video camera, 5-foot anemometer, sensor array for rate of spread/temperature profile through time, heat flux sensor).
- Fuels data collected on canopy, surface and ground fuels before and after the fire, and fire severity assessment post-fire. Fuel moisture data is often collected prior to the fire.

More information about methods and data can be found on the FBAT website:

<https://www.frames.gov/fbat/home>

The report for this fire which includes field methods and other background can be found at:

https://www.fs.fed.us/adaptivemanagement/reports/fbat/Antelope_detail.pdf