

## LANDFIRE Fire Behavior Fuel Model 13 Attribute Data Dictionary

Attribute	Description
<b>VALUE</b>	Thirteen typical surface fuel arrangements or "collections of fuel properties" (Anderson 1982) were described to serve as input for Rothermel's mathematical surface fire behavior and spread model (Rothermel 1972). These fire behavior fuel models represent distinct distributions of fuel loadings found among surface fuel components (live and dead), size classes and fuel types. The fuel models are described by the most common fire carrying fuel type (grass, brush, timber litter or slash), loading and surface area-to-volume ratio by size class and component, fuelbed depth and moisture of extinction.
-9999	Fill - NoData
1	FBFM1
2	FBFM2
3	FBFM3
4	FBFM4
5	FBFM5
6	FBFM6
7	FBFM7
8	FBFM8
9	FBFM9
10	FBFM10
11	FBFM11
12	FBFM12
13	FBFM13
91	Urban
92	Snow/Ice
93	Agriculture
98	Water
99	Barren
<b>Count</b>	number of pixels for the corresponding value
<b>FBFM13</b>	Display attribute, fire behavior 13 fuel model
FBFM1	Surface fires that burn fine herbaceous fuels, cured and curing fuels, little shrub or timber present, primarily grasslands and savanna
FBFM2	Burns fine, herbaceous fuels, stand is curing or dead, may produce fire brands on oak or pine stands
FBFM3	Most intense fire of grass group, spreads quickly with wind, one third of stand dead or cured, stands average 3 ft tall
FBFM4	Fast spreading fire, continuous overstory, flammable foliage and dead woody material, deep litter layer can inhibit suppression
FBFM5	Low intensity fires, young, green shrubs with little dead material, fuels consist of litter from understory
FBFM6	Broad range of shrubs, fire requires moderate winds to maintain flame at shrub height, or will drop to the ground with low winds

FBFM7	Foliage highly flammable, allowing fire to reach shrub strata levels, shrubs generally 2 to 6 feet high
FBFM8	Slow, ground burning fires, closed canopy stands with short needle conifers or hardwoods, litter consist mainly of needles and leaves, with little undergrowth, occasional flares with concentrated fuels
FBFM9	Longer flames, quicker surface fires, closed canopy stands of long-needles or hardwoods, rolling leaves in fall can cause spotting, dead-down material can cause occasional crowning
FBFM10	Surface and ground fire more intense, dead-down fuels more abundant, frequent crowning and spotting causing fire control to be more difficult
FBFM11	Fairly active fire, fuels consist of slash and herbaceous materials, slash originates from light partial cuts or thinning projects, fire is limited by spacing of fuel load and shade from overstory
FBFM12	Rapid spreading and high intensity fires, dominated by slash resulting from heavy thinning projects and clearcuts, slash is mostly 3 inches or less
FBFM13	Fire spreads quickly through smaller material and intensity builds slowly as large material ignites, continuous layer of slash larger than 3 inches in diameter predominates, resulting from clearcuts and heavy partial cuts, active flames sustained for long periods of time, fire is susceptible to spotting and weather conditions
Urban	Urban
Snow/Ice	Snow/Ice
Agriculture	Agriculture
Water	Water
Barren	Barren
<b>R</b>	Red color range/255
<b>G</b>	Green color range/255
<b>B</b>	Blue color range/255
<b>RED</b>	Red color value range 0 - 1
<b>GREEN</b>	Green color value range 0 - 1
<b>BLUE</b>	Blue color value range 0 - 1
<b>For more information, refer to: <a href="https://www.fs.fed.us/rm/pubs_int/int_gtr122.pdf">https://www.fs.fed.us/rm/pubs_int/int_gtr122.pdf</a></b>	