Although the linkage between a vegetation description and fuel attributes for use in today's fire behavior models is challenging, LANDFIRE (LF) has used an approach that takes into account the most robust (from current remote sensing techniques) and quantifiable descriptors within each vegetation assemblage. The mainstay of the LF fuel rulesets are the triplet of existing vegetation type (EVT), existing vegetation cover (EVC), and existing vegetation height (EVH). Given the vegetation description and their most dominant traits (EVT), combinations of percent cover (EVC) and height (EVH) are used to distribute areas into fire behavior fuel attributes such as surface fuel models (FBFM40; FBFM13) and canopy characteristics (canopy base height; canopy bulk density; canopy cover and height). Below is an example of the process used by LF and local area experts to assign fuel attributes, particularly surface fuel model (FBFM40) to EVT 2028 Mediterranean California Mesic Mixed Conifer Forest and Woodland. This EVT is located in southwest Oregon and throughout California.

Note that the range of cover was used primarily to determine the fuel model assignment, but height of the trees also indicated a specific assignment for trees less than 5 meters. The LF data is set up in cover classes of 10% for each lifeform (trees, shrub, herbaceous) and 5 height classes for trees; 4height classes for shrubs; 3 height classes for herbaceous Cover-Height-classes.doc. Multiple combinations of ranges in cover and height can be used to describe or separate distinct portions of the vegetation into fuel rulesets. For the fire behavior processors the mid-point of each cover and height class is used to define the value used for canopy cover (CC) and canopy height (CH) for areas with tree lifeform.

To further subdivide the surface fuel model assignment Biographical Settings (BpS) within the EVT can be designated different fuel models than areas within the EVT but outside of that BpS. In the example below EVT 2480 which is located, in this case, in southern Georgia and northern Florida, was assigned an SH7 shrub model in all cases except where it occurs in 4 specific BpS's. When EVT 2480 occurs in BpS 1312 (Gulf and Atlantic Coastal Plain Swamp Systems), for example it is to be assigned a TL2

Fuel Rules for MU z55_se_130_v2

Display Rules for: ● Fuel ○ SClass

Order EVT by: ○ Name ● Number

Filter EVT by: All by Type

ected Existing Vegetation Type (EVT) is not disturbedSel

2480[0] Tr Gulf and Atlantic Coastal Plain Swamp Systems

| Ruleset | Compare FM | Distribution Graph | EVT Description |

Session Name

New Session

Add Rule Ctrl + A
Edit Rule Ctrl + E
Delete Rule Ctrl + D
Copy Rule Ctrl + C
Auto Rule Ctrl + U

No pixels are left behind.

Range of Cover		Range of Height		BPS	Wild	FM13	FM40	CG	CC	CH		On/Off	Acres	% EVT
10%- 100%	T...	0(m)- 50(m)	Tr...	any	any	5	SH7...	2	9...	9...		On	3653.06	0.33%
10%- 100%	T...	0(m)- 50(m)	Tr...	1312	any	8	TL2 ...	2	9...	9...		On	836308.53	75.35%
10%- 100%	T...	0(m)- 50(m)	Tr...	1311	any	8	TL2 ...	2	9...	9...		On	87986.5	7.93%
10%- 100%	T...	0(m)- 50(m)	Tr...	1310	any	8	TL2 ...	2	9...	9...		On	171814.66	15.48%
10%- 100%	T...	0(m)- 50(m)	Tr...	1309	any	8	TL2 ...	2	9...	9...		On	10203.25	0.92%