Characteristic Rate of Spread

Characteristic Rate of Spread is the typical or representative rate of spread of a potential fire based on a weighted average of four percentile weather categories. Rate of spread is the speed with which a fire moves in a horizontal direction across the landscape, usually expressed in chains per hour (ch/hr) or feet per minute (ft/min). For purposes of the Southern Wildfire Risk Assessment, this measurement represents the maximum rate of spread of the fire front. Rate of Spread is the metric used to derive the Community Protection Zones.

Rate of spread is a fire behavior output, which is influenced by three environmental factors - fuels, weather, and topography. Weather is by far the most dynamic variable as it changes frequently. To account for this variability, four percentile weather categories were created from historical weather observations to represent low, moderate, high, and extreme weather days for each weather influence zone in the South. A weather influence zone is an area where, for analysis purposes, the weather on any given day is considered uniform.

For all Southern states, except Florida and Texas, this dataset was derived from updated fuels and canopy data as part of the 2010 SWRA Update Project recently completed in May 2014. For Texas, the 2010 Texas risk update data is portrayed. For Florida, the 2010 Florida risk assessment update data is shown.

Characteristic Rate of Spread – Acres

Rate of Spread	Acres	Percent
Non-Burnable	45,145	23.5%
0 - 5 (ch/hr)	44,749	23.3%
5 - 10 (ch/hr)	31,121	16.2%
10 – 15 (ch/hr)	18,585	9.7%
15 - 20 (ch/hr)	11,738	6.1%
20 - 30 (ch/hr)	13,711	7.1%
30 - 50 (ch/hr)	13,885	7.2%
50 - 150 (ch/hr)	13,035	6.8%
150 + (ch/hr)	61	0.0%
Total	**192,027**	**100.0%**