Structural Stage Query Parameters for Blue Mountains Forest Plan Revision
(existing vegetation polygon data source)
6-7-2006

Old Forest**							
Structure	Cover type	Overstory Canopy closure	Overstory Trees per ac *	Over-story Size class	Over-Story DBH	Understory canopy	# layers
OFMS	LPP	>=20	60	>=77	12	>=10	>=2
OFSS	LPP	>=20	60	>=77	12	<=10	1
OFMS	AF, WBP	>=10	10	>=77	13	>=10	>=2
OFSS	AF, WBP	>=10	10	>=77	13	<=10	1
OFMS	ALL OTHERS*	>=10	>=10	>=9	>=21	>=10	>=2
OVSS	ALL OTHERS*	>=10	>=10	>=9	>=21	<=10	1

LPP = lodgepole pine, AF = alpine fir, WBP= whitebark pine
OFMS= old forest multi story
OFSS= old forest single story

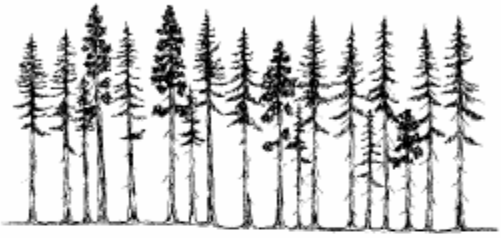
*For cool very moist, warm very moist, or warm moist PAGs use dbh>=21 and TPA>=20, or size class >=9 and canopy closure >=20. See detailed listing of FVS structural stage keyword parameters by plant association for large tree and TPA requirements.

** Old forest parameters derived from the 1992 Region 6 Green Book Old Growth Definitions.

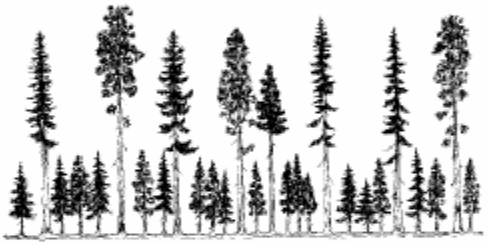
Non-Old Forest (dry, moist, cold forest)							
structure	Overstory Canopy closure	Total stand Canopy closure	Over-story Size class	Over-story DBH	Understory canopy	Under story size class	# layers
SI	>=10		<5	<5			
SI	<10		>=5	>=5	>=10	<5	
SI		<10	any	any			
SE	>=10		>=5	>=5	<10		1
SE	<10		>=5	>=5	>=10	>=5	1
UR	>=10		>=5	>=5	>=10		2
UR	<10		>=5	>=5	>=10		2
YFMS	>=10		>=5	>=5	>=10		3

SI= stand initiation, SE= stem exclusion, UR= understory reinitiation
YFMS= young forest multi-story

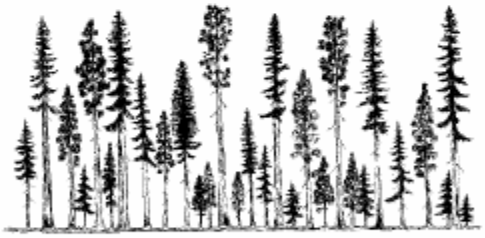
Stand Initiation (SI). Following a stand-replacing disturbance such as wildfire or timber harvest, growing space is occupied rapidly by vegetation that either survives the disturbance or colonizes the area. Survivors literally survive the disturbance above ground, or initiate growth from their underground roots or from seeds stored on-site. Colonizers disperse seed into disturbed areas, the seed germinates, and then new seedlings establish and develop. A single canopy stratum of tree seedlings and saplings is present in this class.



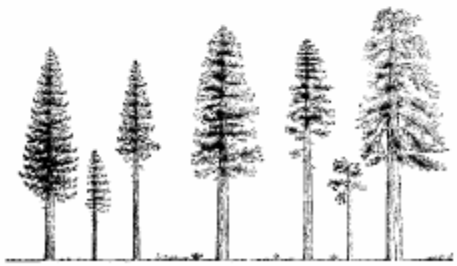
Stem Exclusion (SECC or SEOC). In this stage of development, vigorous, fast-growing trees that compete strongly for available light and moisture occupy the growing space. Because trees are tall and reduce sunlight, understory plants (including smaller trees) are shaded and grow more slowly. Species that need sunlight usually die; shrubs and herbs may become dormant. In this class, establishment of new trees is precluded by a lack of sunlight (**stem exclusion closed canopy**) or of moisture (**stem exclusion open canopy**).



Understory Reinitiation (UR). As a forest develops, new age classes of trees (cohorts) establish as the overstory trees die or are thinned and no longer fully occupy growing space. Regrowth of understory vegetation then occurs, and trees begin to develop in vertical layers (canopy stratification). This class consists of a sparse to moderately dense overstory with small trees underneath.



Young Forest Multi Strata (YFMS). In this stage of forest development, three or more tree layers are present as a result of canopy differentiation or because new cohorts of trees got established. This class consists of a broken or discontinuous overstory layer with a mix of tree sizes present (large trees are absent or scarce); it provides high vertical and horizontal diversity. This class is also referred to as "multi-stratum, without large trees" (USDA Forest Service 1995).



Old Forest (OFSS or OFMS). Many age classes and vegetation layers mark this structural class and it usually contains large, old trees. Decaying fallen trees may also be present that leave a discontinuous overstory canopy. The diagram shows a single-layer stand of ponderosa pine that evolved with high frequency, low-intensity fire (**old forest single stratum**). On cool moist sites without recurring underburns, multi-layer stands with large trees in the uppermost stratum may be present (**old forest multi strata**).

Sources/Notes: Based on Oliver and Larson (1996) and O'Hara and others (1996).