Fire Regime Condition Class (FRCC) Interagency Handbook
Reference Conditions

Modeler: Dave Cleland, J. Merzenich. W. Patterson **Date:** 12/20/04 **PNVG Code:** NHSP

Potential Natural Vegetation Group: Northern Hardwood – Spruce
Geographic Area: Northeast

Description: Grows on well drained mesic sites over a broad range of topographic conditions. Tall, broadleaf deciduous forest with early seral aspen, birch, and spruce. Dominated by sugar maple (*Acer saccharum*), beech (*Fagus grandifolia*), yellow birch (*Betula allegheniensis*), red spruce (*Picea rubrum*).

Fire Regime Description: Fire Regime Group V. Fire disturbances are severe and affect large patch sizes but are very rare, occurring only after extended drought. Fires are assumed to occur at an average interval of 1,000 years. Wind events are more frequent and occur largely as a result of periodic hurricanes. We estimated that 15% of stands would blow down every 100 years (pers comm. Bill Patterson), corresponding to an average 667-year return interval. Other disturbances, including windthrow, insect attack, and ice storms, usually occur on a single-tree-gap scale.

Vegetation Type and Structure

Class*	Percent of Landscape	Description
A: early-seral all	5	Young stand characterized by aspen and birch with a spruce understory; 0-30 yrs.
B: mid-seral closed	25	Intermediate stand characterized by red and white spruce, and red maple; 30-150 yrs old
E: late-seral closed	70	Mature stand dominated by sugar maple and beech > 150 years
Total	100	

*Formal codes for classes A-E are: AE1A, BM1C, CL1C, respectively.

Fire Frequency and Severity

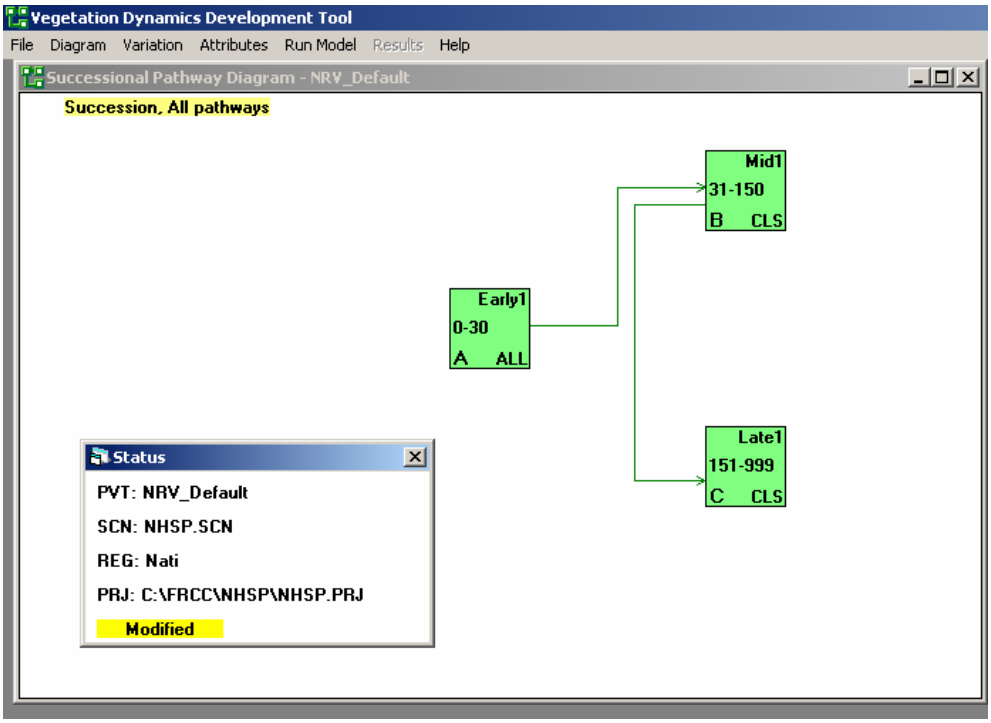
Fire Severity	Fire Frequency (yrs)	Probability	Percent All Fires	Description
Replacement Fire	1000	0.001	100	
Non-Replacement Fire	none	0	0	
All Fire Frequency	1000	0.001	100	

References

Brown, James K.; Smith, Jane Kapler, eds. 2000. Wildland fire in ecosystems: effects of fire on flora. Gen. Tech. Rep. RMRS-GTR-42-vol. 2. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 257 p.

PERSONAL COMMUNICATION (William Patterson III):

VDDT File Documentation: Model NHSP located in C:/FCCC/NHSP: VDDT text files must be loaded into C:/FCCC for project file to work. Diagram shows succession only.

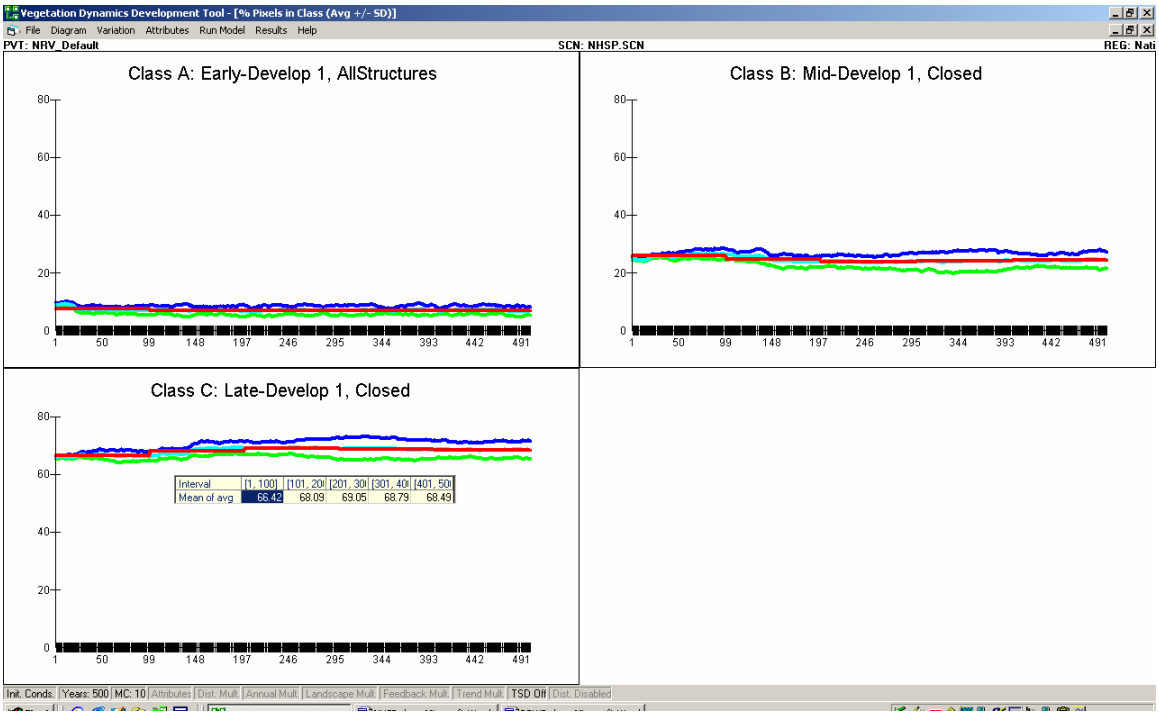


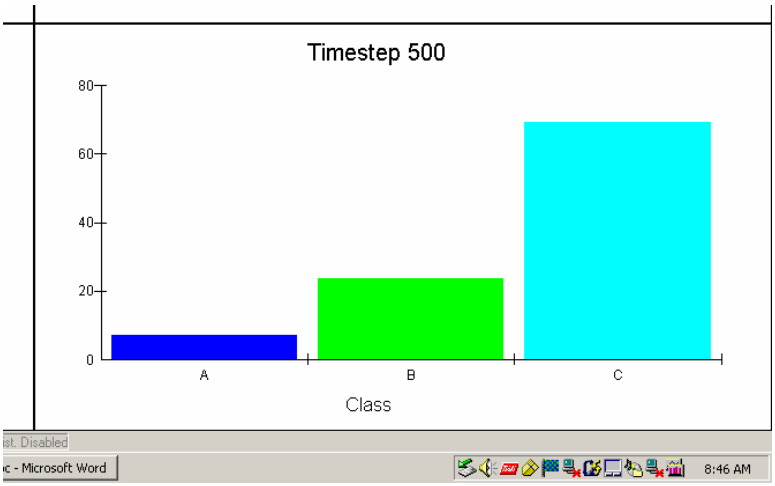
Disturbances by class: Model NPSP

Class	To	Agent	Prob	TSD	Freq/ FRI	Rel Age
A	A	Replacement fire	.001	0	1000	-30
B	A	Replacement fire	.001	0	1000	0
B	A	Wind/weather/stress	.0015	0	667	0
C	A	Replacement fire	.001	0	1000	0
C	A	Wind/weather/stress	.0015	0	667	0

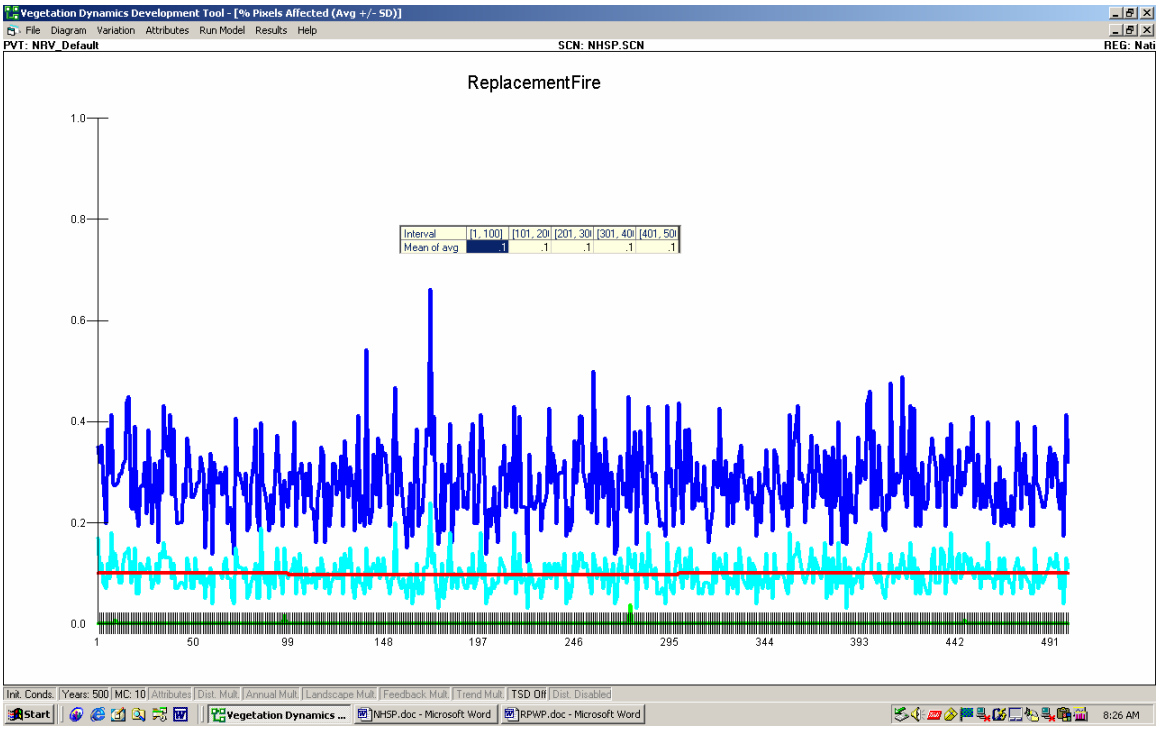
All classes burn at an average rate of 0.1% per year. Stand replacing wind events affect 15% of the landscape every 100 years.

Results graphs: These graphs show the average per cent of area in each class projected for 500 years.





Replacement fire frequency: 0.1% of the area burns/year for a FRI of 1000 years. All fires are replacement.



Wind Event (hurricane) frequency: 0.14% of the area is affected per year (715 year rotation).