11/4/03 DRAFT

Fire Regime Condition Class (FRCC) Interagency Handbook
Reference Conditions

Modeler: Kelly Pohl **Date:** 8/11/03 **PNVG Code:** CAME

Potential Natural Vegetation Group: California Mixed Evergreen.

Geographic Area: Northern California Coast Range and Klamath Mountains

Description: PNVG occurs on dry foothills, lower slopes, and canyons, and is most abundant on south and east-facing slopes, all aspects. Species composition is determined by steep environmental gradients, including site topography and complex geology. Codominants include Douglas-fir (*Pseudotsuga menziesii*), Pacific madrone (*Arbutus menziesii*), tanoak (*Lithocarpus densiflorus*), coast live oak (*Quercus agrifolia*), and California bay (*Umbellularia californica*).

Fire Regime Description: Fire Regime Group I, primarily frequent (e.g., <20 yr) mixed severity- and surface fires.

Vegetation Type and Structure

Class	Percent of Landscape	Description
A: post replacement	5	Openings within forest that have dense sproutings of madrone, tanoak, or other hardwoods. Minor shrub and understory components.
B: mid-development closed	30	Dense (>60%) cover of early-mature madrone or tanoak. Little shrub or understory.
C: mid- open	30	Mid-mature open (<60%) cover of madrone or tanoak with significant shrub component. Occasional Douglas-fir in canopy.
D: late- open	10	Late-mature madrone and/or tanoak in sub-canopy with open (<60%) canopy of mature Douglas-firs. Minor shrub component.
E: late- closed	25	Dense (>60%) caonpy of Douglas-fir with subcanopy of tanoak, madrone, and/or coast or canyon live oak. Little shrub or understory.
Total	100	

Fire Frequency and Severity

Fire Frequency-Severity	Modeled Probability	Pct, All Fires	Description
Replacement Fire	.01	17	Occasional replacement fires, mostly in B and E.
Non-Replacement Fire	.05	83	Frequent mosaic fires (85%) with some surface fires. Mosaic fires maintain madrone and tanoak stands.
All Fire Frequency*	.06	100	

*Sum of replacement fire and non-replacement fire probabilities.

References

Agee, James K. 1993. Fire Ecology of Pacific Northwest Forests. Washington, D.C.: Island Press.

Arno, Stephen F. 2000. Fire in western forest ecosystems. In: Brown, James K.; Smith, Jane Kapler, eds. 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: 97-120

Franklin, Jerry F., and Dyrness, C. T. 1988. Natural Vegetation of Oregon and Washington. Corvallis, OR: Oregon State University Press.

Greenlee, Jason M., and Langenheim, Jean H. 1990. Historic fire regimes and their relation to vegetation patterns in the Monterey Bay area of California. American Midland Naturalist 124: 239-253.

Jimerson, Thomas M., McGee, Elizabeth A., Jones, David W., Svilich, Richard J., Hotalen, Edward, DeNitto, Gregg, Laurent, Tom, Tenpas, Jeffrey D., Smith, Mark, Hefner-McClelland, Kathy, and Mattison, Jeffrey. 1996. A Field Guide to the Tanoak and the Douglas-fir Plant Associations in Northwestern California. USDA Forest Service, Pacific Southwest Region. R5-ECOL-TP-009.

McDonald, P.M., and Tappeiner, J. C. 1990. *Arbuts menziesii*—Pacific madrone. In: Burns, R. M., and Honkala, B. H., technical coordinators. Silvics of North America, Volume 2. Hardwoods. USDA Forest Service, Agriculture Handbook 654. Pp. 124-132.

Sawyer, John O., Thornburgh, Dale A., and Griffin, James R. 1988. Mixed evergreen forest. In: Barbour, Michael G., and Major, Jack, eds. Terrestrial Vegetation of California. California Native Plant Society, Special Publication Number 9. Davis: University of California Press. Pp. 360-381.

Schmidt, Kirsten M, Menakis, James P., Hardy, Colin C., Hann, Wendel J., Bunnell, David L. 2002. Development of coarse-scale spatial data for wildland fire

and fuel management. Gen. Tech. Rep. RMRS-GTR-87. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 41 p. + CD.

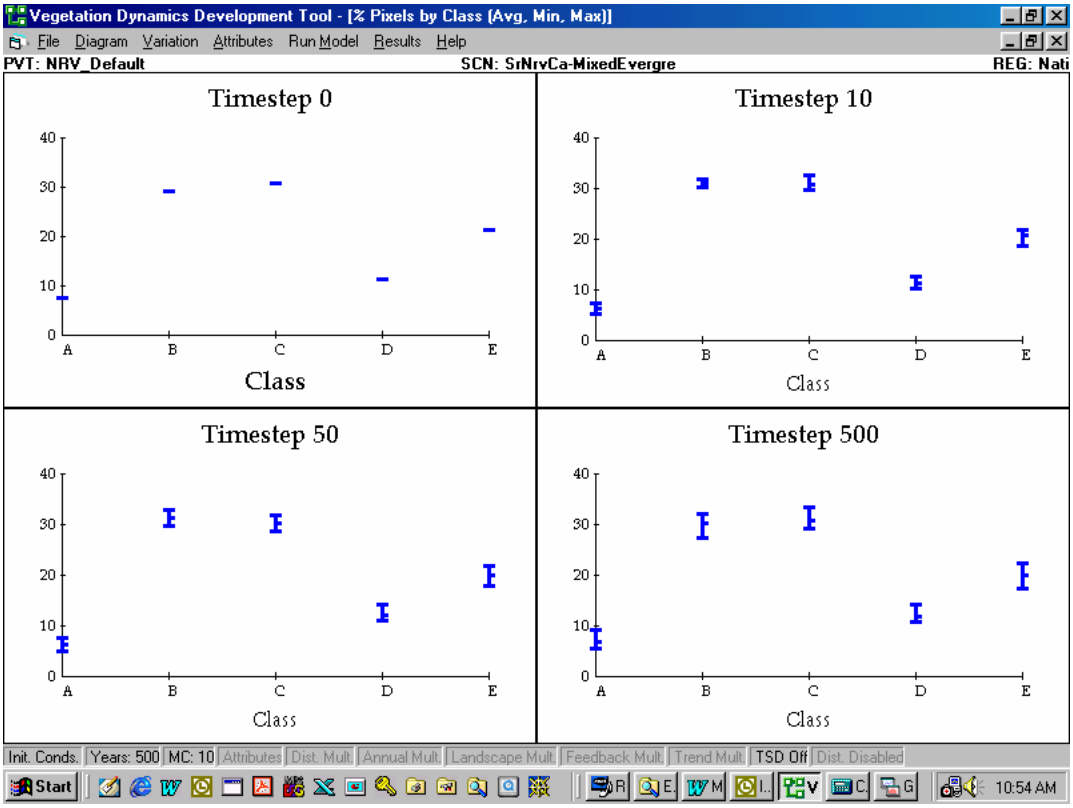
Taylor, Alan H., and Skinner, Carl N. 1998. Fire history and landscape dynamics in a late-successional reserve, Klamath Mountains, California, USA. Forest Ecology and Management 111: 285-301.

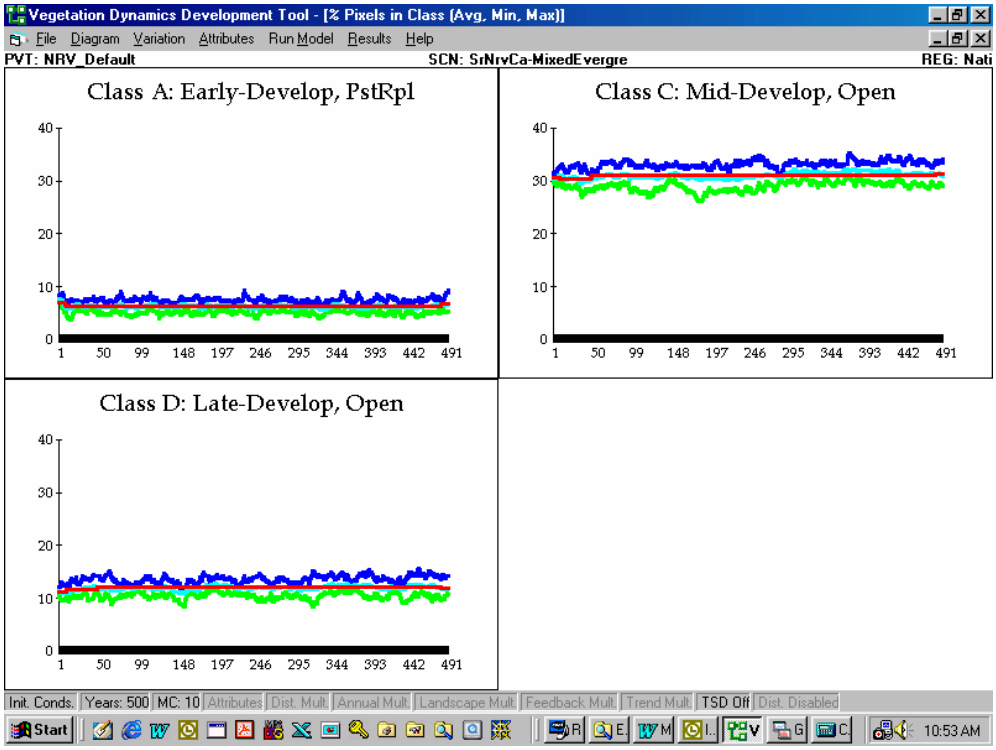
U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (2002, December). Fire Effects Information System, [Online]. Available: http://www.fs.fed.us/database/feis/ [Accessed 2/7/02].

Whittaker, R. H. 1960. Vegetation of the Skskiyou Mountains, Oregon and California. Ecological Monographs 30: 279-338.

Wills, Robin D., and Stuart, John D. 1994. Fire history and stand development of a Douglas-fir/hardwood forest in northern California. Northwest Science 68(3): 205-212.

VDDT RESULTS

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REG: Nati
Class A: Early-Develop, PstRpl
Class C: Mid-Develop, Open
Class D: Late-Develop, Open
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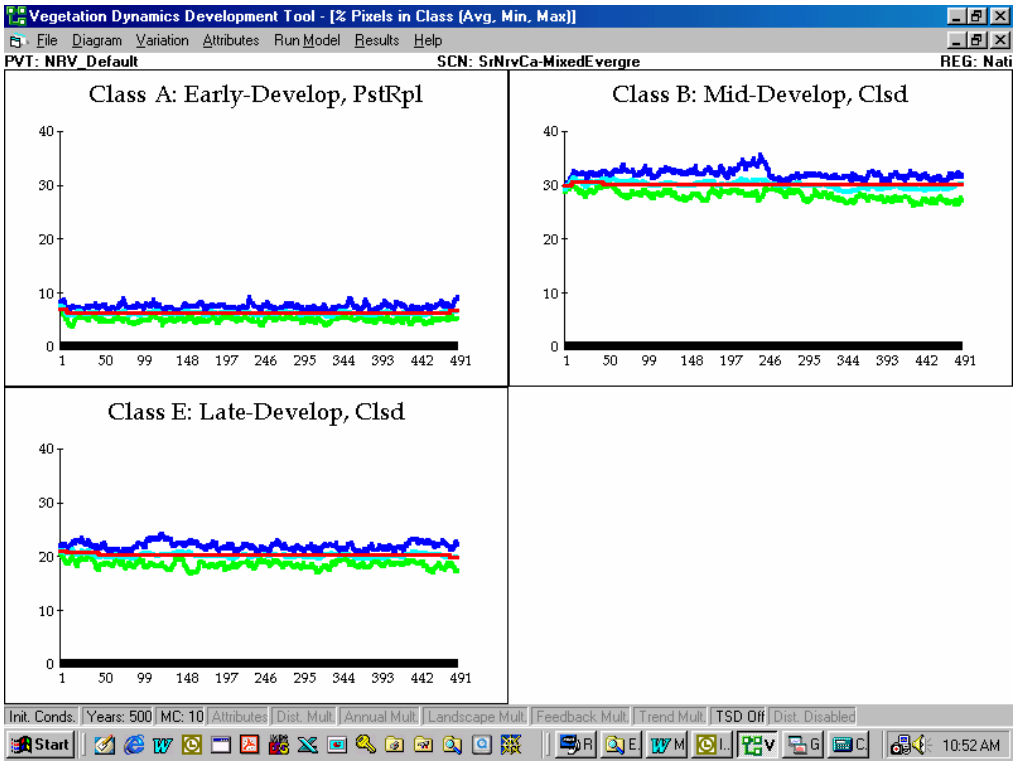
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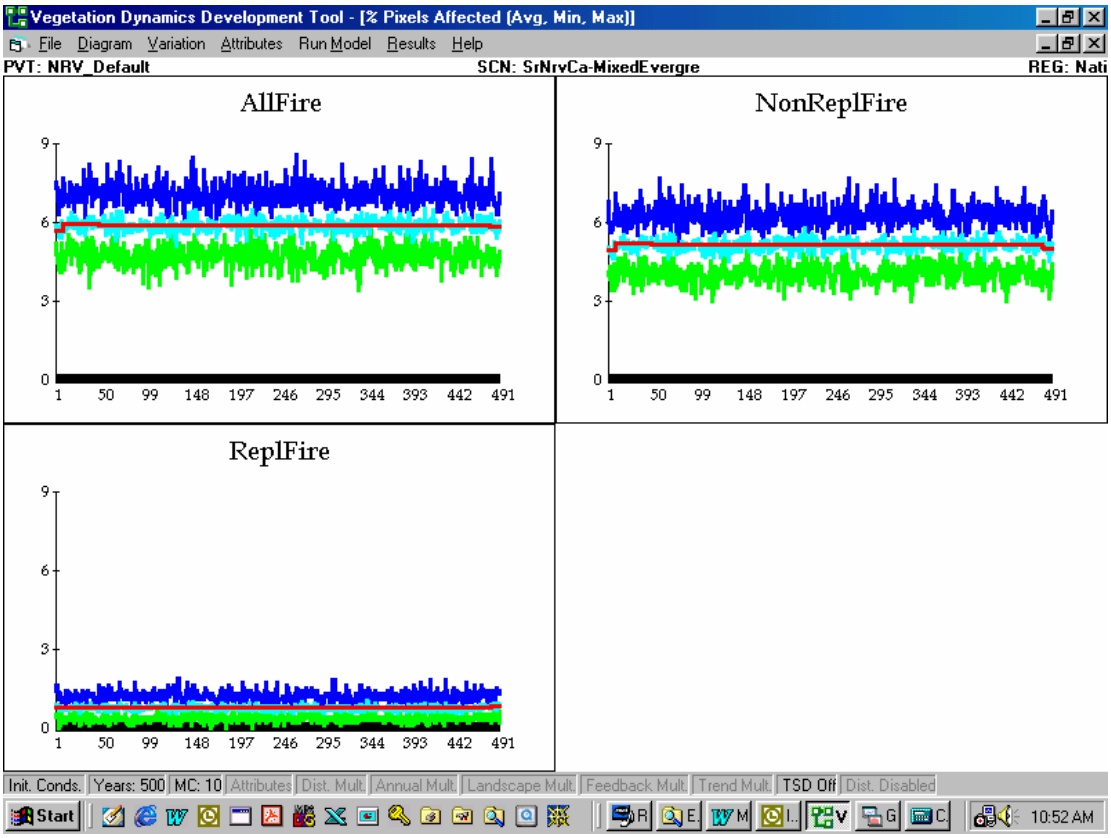
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AllFire
NonReplFire
ReplFire
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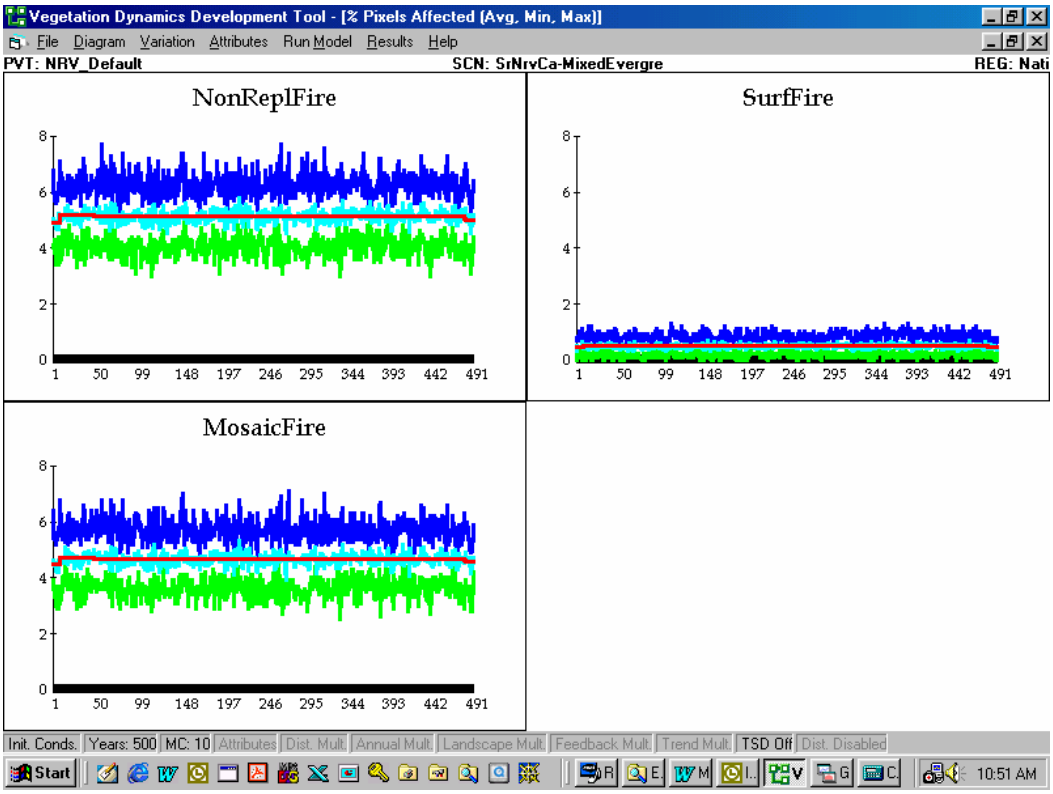
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REG: Nati
NonReplFire
SurfFire
MosaicFire
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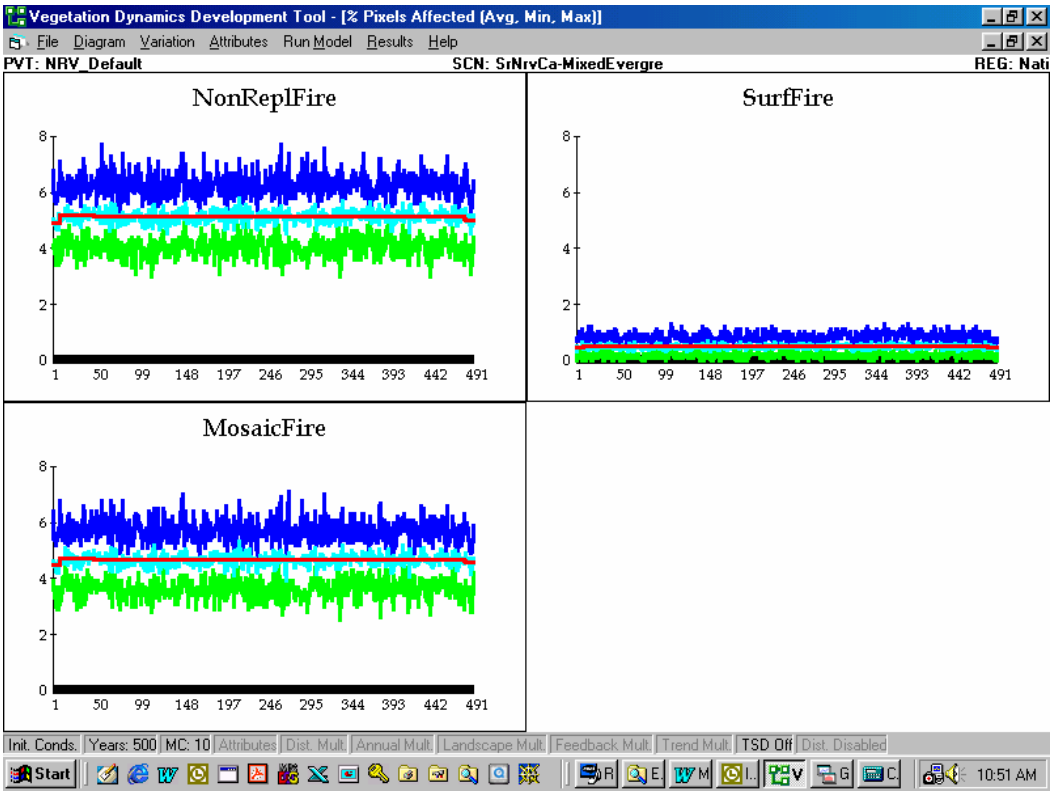
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REG: Nati
NonReplFire
SurfFire
MosaicFire
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Init. Conds. Years: 500 MC: 10 Attributes Dist. Mult. Annual Mult. Landscape Mult. Feedback Mult. Trend Mult. TSD Off Dist. Disabled
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