

**\*\*11/4/03 DRAFT\*\***

**Fire Regime Condition Class (FRCC) Interagency Handbook  
Reference Conditions**

**Modeler:** Doug Havlina

**Date:** 8/15/03

**PNVG Code:** RWCA

**Potential Natural Vegetation Group:** Redwood.

**Geographic Area:** California, southwestern Oregon.

**Description:** PNVG generally occurs on alluvial fans, plains, and forests in the northern half of coastal California and extreme southwestern Oregon. This type may extend from sea level to 3,000 feet, but is often separated from the ocean by a grassland belt. Climate is characterized as maritime Mediterranean, with a persistent fog belt much of the year. Common associates include Douglas-fir, Sitka spruce, Port Orford-cedar, Pacific madrone, tanoak, bigleaf maple, Pacific rhododendron, vine maple, and other mixed evergreen vegetation.

**Fire Regime Description:** Fire Regime I, primarily short-interval (e.g., <35 yr) surface fires.

**Vegetation Type and Structure**

Class	Percent of Landscape	Description
A: post replacement	10	Grass/forb/fern dominated community, with sprouting shrubs and redwood saplings
B: mid-development closed	20	Canopy cover >40%; pole and immature sized forest
C: mid- open	5	Canopy cover <40%; pole and immature sized forest
D: late- open	5	Uncommon developmental stage of mature, open redwood forests resulting from windthrow
E: late- closed	60	Late-seral, mature forest with well developed herbaceous and shrub understories
Total	100	

**Fire Frequency and Severity**

Fire Frequency-Severity	Modeled Probability	Pct, All Fires	Description
Replacement Fire	.005	16	Stand replacement crown fire in stages B, C, and D

Non-Replacement Fire	.026	84	Primarily surface fire and occasional mosaic fire in stages B, C, D, and E
All Fire Frequency*	.031	100	

---

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

## References

Abbott, L.L. 1987. The effect of fire on subsequent growth of surviving old trees in an old-growth redwood forest in Redwood National Park, California. M.S. Thesis, Humboldt State University, Arcata, CA. 90 p.

Agee, James K. 1990. The Historical Role of Fire In Pacific Northwest Forests. In: Walstad, J.K., Radosevich, S.R., and Sandberg, D.V. (editors). *Natural and Prescribed Fire in Pacific Northwest Forests*. Oregon State University Press, Corvallis, OR. P. 25-38.

Agee, James K. 1991. Fire History Along an Elevational Gradient in the Siskiyou Mountains, Oregon. *Northwest Science*, Vol. 65, No. 4, 1991. p. 188-199.

Agee, James K. 1993. *Fire Ecology of Pacific Northwest Forests*. Island Press, Washington D.C. 493 p.

Anderson, Hal E. 1982. Aids to Determining Fuel Models For Estimating Fire Behavior. Gen. Tech. Rep. INT-122. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station. 22 p.

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

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.

Brown, P.M. and Swetnam, T.W. 1994. A cross-dated fire history from coast redwood near Redwood National Park, California. *Can. J. For. Res.* 24:21-31.

Eyre, F. H., ed. 1980. *Forest cover types of the United States and Canada*. Washington, DC: Society of American Foresters. 148 p.

- Finney, M.A., and Martin, R.E. 1989. Fire History in a *Sequoia sempervirens* forest at Salt Point State Park, California. *Can. J. For. Res.* 19:1451-1457.
- Finney, M.A., and Martin, R.E. 1992. Short fire intervals recorded by redwoods at Annadel State Park, California. *Madr.* 39(4): 251-262.
- Franklin, J.F., and Dyrness, C.T. 1973. Vegetation of Oregon and Washington. Research Paper PNW-80. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station. 216 p.
- Greenlee, J.M., and Langenheim, J.H. 1990. Historic fire regimes and their relation to vegetation patterns in the Monterey Bay Area of California. *Am. Midl. Nat.* 124:239-253.
- Hardy, Colin C., Kirsten M. Schmidt, James P. Menakis, R. Neil Samson. 2001. Spatial data for national fire planning and fuel management. *Int. J. Wildland Fire.* 10(3&4): 353-372.
- Hessburg, P.F., Smith, B.G., Salter, R.B., Ottmar, R.D., and Alvarado, E. 2000. Recent changes (1930s-1990s) in spatial patterns of interior northwest forests, USA. *Forest Ecology and Management* 136 (2000) 53-83.
- Jacobs, D.F., Cole, D.W., and McBride, J.R. 1985. Fire history and perpetuation of natural coast redwood ecosystems. *J. For.* 83(8):494-497.
- Kilgore, B.M. 1981. Fire in ecosystem distribution and structure: western forests and scrublands. p. 58-89. In: H.A. Mooney et al. (Technical Coordinators). *Proceedings: Conference on Fire Regimes and Ecosystem Properties*, Honolulu, 1978. Gen. Tech. Rep. WO-GTR-26.
- Kuchler, A.W. 1964. Potential Natural Vegetation of the Conterminous United States. American Geographic Society Special Publication No. 36. 116 p.
- Long, Colin J. 1996. Fire History of the Central Coast Range, Oregon: A CA. 9000 Year Record from Little Lake. M.S. Thesis, Department of Geography, University of Oregon, Eugene, OR. 63 p.
- McKenzie, Donald, Peterson, David L., and Agee, James K. 2000. Fire Frequency in the Interior Columbia River Basin: Building Regional Models from Fire History Data. *Ecological Applications*, 10(5), 2000. p. 1497-1516.
- 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.

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: 1/31/03].

# VDDT RESULTS







