

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

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

Modeler: Ayn Shlisky

Date: 8/13/03 **PNVG Code:** OKCA1

Potential Natural Vegetation Group: Blue Oak Woodlands.

Geographic Area: California Sierra- and Coast Range Foothills.

Description: PNVG occurs on sites with soils that are characteristically shallow, skeletal, infertile, thermic, and moderately to excessively well drained. Climate is Mediterranean, with hot, dry summers and cool, wet winters. Elevations range from sea level to 5,900 feet.

Fire Regime Description: Fire Regime I, primarily short-interval (e.g., <10 yr) surface fires.

Vegetation Type and Structure

Class	Percent of Landscape	Description
A: post replacement	5	Grass and oak sprouts following stand replacement fire or oak mortality.
B: mid-development closed	10	> 30% canopy cover oak sapling and pole; poison oak, manzanita and buckthorn shrub cover.
C: mid- open	20	< 30% canopy cover sapling and pole oak savanna.
D: late- open	55	< 30% large oak savanna.
E: late- closed	10	>30% canopy cover; large oak, may include interior live oak and foothill pine.
Total	100	

Fire Frequency and Severity

Fire Frequency-Severity	Modeled Probability	Pct, All Fires	Description
Replacement Fire	.005	5	Primarily in classes B and E
Non-Replacement Fire	.10	95	
All Fire Frequency*	.105	100	

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

**NOTES ON MODEL SUCCESSIONAL PATHWAYS AND DISTURBANCE:

Optional pathway (OPTIONAL1) entered for the effect of native grazers/browsers on oak regeneration and growth.

References

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

Barbour, Michael G. 1988. Californian upland forests and woodlands. In: Barbour, Michael G.; Billings, William Dwight, eds. *North American terrestrial vegetation*. Cambridge; New York: Cambridge University Press: 131-164.

Biswell, H. H. 1956. Ecology of California grasslands. *Journal of Forestry*. 9: 19-24.

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.

Chang, Chi-Ru. 1996. Ecosystem responses to fire and variations in fire regimes. In: *Sierra Nevada Ecosystem Project: Final report to Congress, vol. II, Assessments and scientific basis for management options, Chapter 39*. Davis, University of California, Centers for Water and Wildland Resources. pp. 1071-1099.

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

Griffin, James R. 1977. Oak woodland. In: Barbour, Michael G.; Malor, Jack, eds. *Terrestrial Vegetation of California*. New York: John Wiley and Sons: 383-415.

Griffin, James R. 1980. Sprouting in fire-damaged valley oaks, Chews Ridge, California. In: Plumb, Timothy R., technical coordinator. *Proceedings of the symposium on the ecology, management, and utilization of California oaks; 1979 June 26-28; Claremont, CA*. Gen. Tech. Rep. PSW-44. Berkeley, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Forest and Range Experiment Station: 216-219.

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.

Hickman, J.C. (ed). 1993. *Jepson Manual: Higher plants of California*. Berkeley, CA; University of California Press. 1400 pp.

Kilgore, Bruce M. 1981. Fire in ecosystem distribution and structure: western forests and scrublands. In: Mooney, H. A.; Bonnicksen, T. M.; Christensen, N. L.; [and others], technical coordinators. Proceedings of the conference: Fire regimes and ecosystem properties; 1978 December 11-15; Honolulu, HI. Gen. Tech. Rep. WO-26. Washington, DC: U.S. Department of Agriculture, Forest Service: 58-89.

Kuchler, A. W. 1964. Manual to accompany the map of potential vegetation of the conterminous United States. Special Publication No. 36. New York: American Geographical Society. 77 p.

McClaran, Mitchel P. 1987. Yearly variation of blue oak seedling emergence in northern California. In: Plumb, Timothy R.; Pillsbury, Norman H., technical coordinators. Proceedings of the symposium on multiple-use management of California's hardwood resources; 1986 November 12-14; San Luis Obispo, CA. Berkeley, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Forest and Range Experiment Station: 76-78.

McClaran, Mitchel P.; Bartolome, James W. 1989. Fire-related recruitment in stagnant *Quercus douglasii* populations. Canadian Journal of Forest Research. 19: 580-585.

Muick, Pamela C.; Bartolome, James W. 1987. Factors associated with oak regeneration in California. In: Plumb, Timothy R.; Pillsbury, Norman H., technical coordinators. Proceedings of the symposium on multiple-use management of California's hardwood resources; 1986 November 12-14; San Luis Obispo, CA. Gen. Tech. Rep. PSW-100. Berkeley, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Forest and Range Experiment Station: 86-91.

Parsons, David J.; Stohlgren, Thomas J. 1989. Effects of varying fire regimes on annual grasslands in the southern Sierra Nevada of California. Madrono. 36(3): 154-168.

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.

Thorne, Robert F. 1976. The vascular plant communities of California. In: Latting, June, ed. Symposium proceedings: plant communities of southern California; 1974 May 4; Fullerton, CA. Special Publication No. 2. Berkeley, CA: California Native Plant Society: 1-31. [3289]

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/> [User, supply access date here].

Vogl, Richard J. 1977. Fire frequency and site degradation. In: Mooney, Harold A.; Conrad, C. Eugene, technical coordinators. Proc. of the symp. on the environmental consequences of fire and fuel management in Mediterranean ecosystems; 1977 August 1-5; Palo Alto, CA. Gen. Tech. Rep. WO-3. Washington, DC: U.S. Department of Agriculture, Forest Service: 193-201.

White, Keith L. 1966. Structure and composition of foothill woodland in central coastal California. *Ecology*. 47(2): 229-237.

Haggerty, Patricia K. 1991. Fire effects in blue oak woodland. In: Standiford, Richard B., technical coordinator. Proceedings of the symposium on oak woodlands and hardwood rangeland management; 1990 October 31 - November 2; Davis, CA. Gen. Tech. Rep. PSW-126. Berkeley, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station: 342-344.

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