

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

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

**Modeler:** Ayn Shlisky

**Date:** 8/11/03    **PNVG Code:** AGRA2

**Potential Natural Vegetation Group:** California Annual Grassland with Shrubs or Trees.

**Geographic Area:** California

**Description:** Valley grasslands and coastal prairies from sea level to 3000' elevation with the potential for shrub and/or tree cover, particularly in the absence of fire. Exotic annual grasses and forbs are considered naturalized and a part of reference conditions.

**Fire Regime Description:** Fire Regime Group II, primarily frequent (e.g., <5 yr) stand replacement fires.

**Vegetation Type and Structure**

Class	Percent of Landscape	Description
A: post replacement	35	Post-stand replacement dominated by annual grasses and forbs with sparse to rare native perennial grasses
B: mid-development closed	50	Dominated by exotic/naturalized annual grass and forb cover with sparse to rare native perennial grasses
C: mid- open	N/A	N/A
D: late- open	10	1-5% cover shrubs or 1-15% cover trees; understory dominated by annual grasses and forbs with sparse to rare native perennial grasses
E: late- closed	5	> 5% cover shrubs or >15% cover trees; understory dominated by annual grasses and forbs with sparse to rare native perennial grasses
Total	100	

**Fire Frequency and Severity**

Fire Frequency-Severity	Modeled Probability	Pct, All Fires	Description
Replacement Fire	.20	95	Occurs in all classes

Non-Replacement Fire	.01	5	Mosaic fire in encroached class occurs in E
All Fire Frequency*	.21	100	

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

\*\* Note: VDDT pathway "Optional1" refers to effects of native herbivores.

## References

Bartolome, J. W. 1987. California annual grassland and oak savannah. *Rangelands* 9(3): 122-125.

Bartolome, J. W. 1989. Local temporal and spatial structure. *Grassland Structure and Function: California Annual Grassland*. L. F. Huenneke and H. A. Mooney. Boston, Kluwer Academic Publishers: 221.

Biswell, H. H. 1956. Ecology of California Grasslands. *Journal of Range Management* 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.

George, M. R., J. R. Brown, et al. 1992. Application of nonequilibrium ecology to management of Mediterranean grasslands. *Journal of Range Management* 45: 436-440.

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.

Heady, H. F.. 1977. Valley Grassland. In: Barbour, Michael G.; Major, Jack, eds. *Terrestrial Vegetation of California*. New York: John Wiley and Sons: 491-514.

Huenneke, L. F. 1989. Distribution and regional patterns of California grasslands. *Grassland Structure and Function: California Annual Grassland*. L. F. Huenneke and H. A. Mooney. Boston, Kluwer Academic Publishers: 221.

Huenneke, L.F. and Mooney, H.A. (eds). 1989. Grassland structure and function. *Tasks for vegetation science* 20. Kluwer Academic Publishers, Dordrecht, The Netherlands. 221 pp.

McNaughton, S. J. 1968. Structure and function in California grasslands. *Ecology* 49(5): 962-972.

Parsons, D. J. and T. J. Stohlgren 1989. Effects of varying fire regimes on annual grasslands in the Southern Sierra Nevada of California. *Madrono* 36(3): 154-168.

Paysen, T.E., Ansley, R.J., Brown, J.K., Gottfried, G.J., Haase, S.M., Harrington, M.G., Narog, M.G., Sackett, S.S., Wilson, R.C. 2000. Fire in western shrubland, woodland and grassland 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: 121-160.

Pitt, M. D. and H. F. Heady 1978. Responses of annual vegetation to temperature and rainfall patterns in Northern California. *Ecology* 59(2): 336-350.

Rice, K. J. 1989. Competitive interactions in California annual grasslands. *Grassland Structure and Function: California Annual Grassland*. L. F. Huenneke and H. A. Mooney. Boston, Kluwer Academic Publishers: 221.

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 1/03].

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# VDDT Results:





