

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

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

Modeler: Wendel Hann

Date: 9/25/03

PNVG Code: PGRA4

Potential Natural Vegetation Group: Southern Plains Grassland (Without Trees or Shrubs)

Geographic Area: Occurs in the southern Great Plains from southeastern Colorado east through Kansas and south through Oklahoma, eastern New Mexico and west Texas.

Description: This type typically occurs on the rolling uplands of the Great Plains. Vegetation is mid and short grass dominated little bluestem, blue grama, buffalo grass, and needle-and-thread, with intermingled forbs and scattered half-shrubs. This type correlates with Kuchler's (1964) types 65, 66, 67, 68, and 69.

Fire Regime Description: Fire regime group II, frequent replacement. The mean fire interval is about 10 years with high variation due to year to year variation in grass production related to drought and moisture cycles. Grazing of the grassy fuels by large ungulates increases the variation of the fire interval.

Vegetation Type and Structure of Fire Regime Group II

| Class | Percent of Landscape | Description |
|---------------------------|----------------------|--|
| A: post replacement | 5 | Dominated by resprouts and seedlings of grasses and post-fire associated forbs. Low to medium height with variable canopy cover. This type typically occurs where fires burn relatively hot in classes B and C. |
| B: mid-development closed | 20 | Greater than 35 percent herb cover. Generally associated with more productive soils, but can be caused by cumulative high moisture seasons increasing the cover and productivity of class C. Low to medium height. |
| C: mid- open | 75 | Less than 35 percent herb cover. Generally associated with less productive cobbly and gravelly soils, but can also be caused by cumulative drought shifting class B to this class. Low to medium height. |
| D: late- open | | |
| E: late- closed | | |
| Total | 100 | |

Fire Frequency and Severity

| Fire Frequency-Severity | Modeled Probability | Percent, All Fires | Description |
|-------------------------|---------------------|--------------------|--|
| Replacement Fire | .087 | 90 | Replacement fires in A, B and C |
| Non-Replacement Fire | .013 | 10 | Mosaic fires in classes B and C |
| All Fire Frequency* | .100 | 100 | 10 year mean fire frequency with high variation due to complex interaction of drought cycles, herbivory, and Native American Burning |

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

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.

Kuchler, A. W. 1964. Manual to accompany the map of potential natural vegetation of the conterminous United States. American Geographical Society. Spec. Publ. No. 36. Lib. Congress Cat. Card Num. 64-15417. 156 p.

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/>.

MODELER FIELD REVIEWS:

Wendel Hann – Colorado 2003, New Mexico 2003, Texas 2001

VDDT Results



