11/4/03 DRAFT

Fire Regime Condition Class (FRCC) Interagency Handbook Reference Conditions

Modeler: Wendel Hann **Date:** 10/24/03 **PNVG Code:** PGRA6

Potential Natural Vegetation Group: Southern Plains Grassland With 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 flats, in draws, or on the stony and gravelly 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 patches of shrubs, such as mesquite and sagebrush. This type correlates with Kuchler's (1964) types 65 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 variaton 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	70	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	5	5 to 15 percent shrub cover of medium height. Typically located on the ridges, rocky areas, or on the more cobbly or gravelly soils where patches may be missed by fire.
E: late- closed		
Total	100	

Fire Frequency and Severity

Fire Frequency-Severity	Modeled Probability	Percent, All Fires	Description
Replacement Fire	.086	90	Replacement fires in A, B and C
Non-Replacement Fire	.014	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.

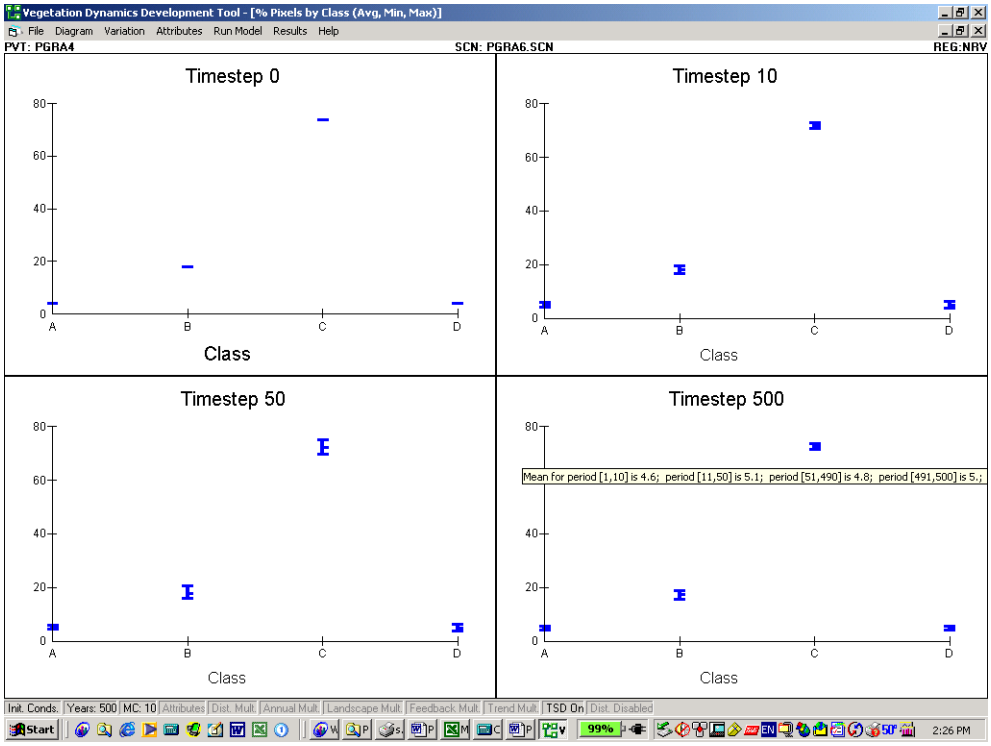
Kuchler, A. W. 1964. Manual to accompany the map of potential natural vegetation of the conterminous United States. American Geographical Society. Spec. Publ. No. 36. Lib. Congress Cat. Card Num. 64-15417. 156 p.

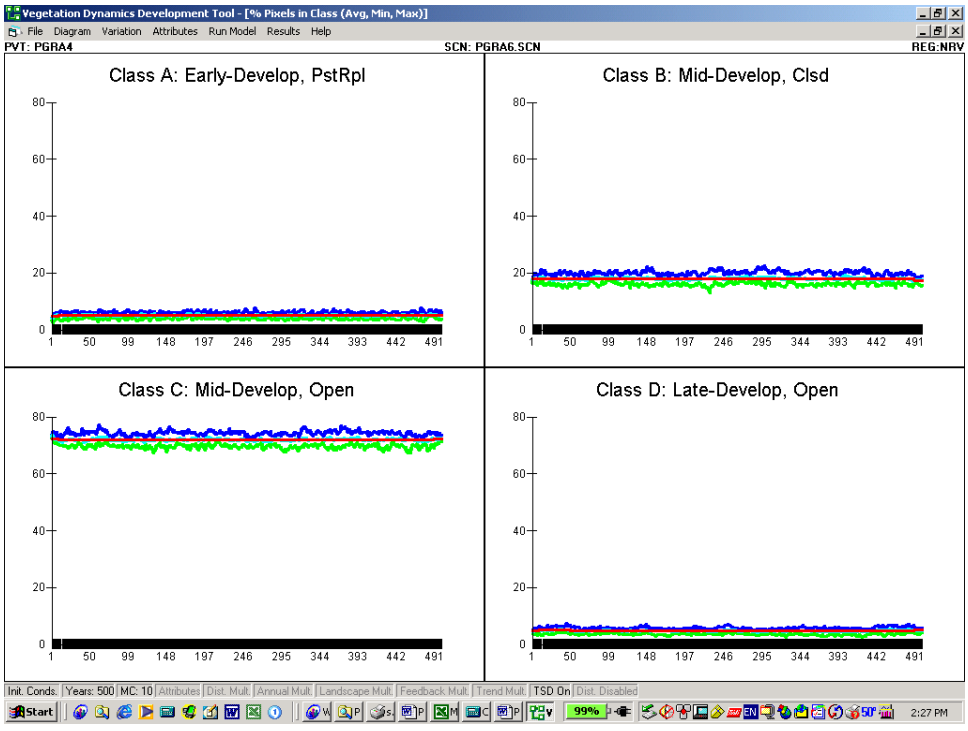
Schmidt, Kirsten M, Menakis, James P., Hardy, Colin C., Hann, Wendel J., Bunnell, David L. 2002. Development of coarse-scale spatial data for wildland fire and fuel management. Gen. Tech. Rep. RMRS-GTR-87. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 41 p. + CD.

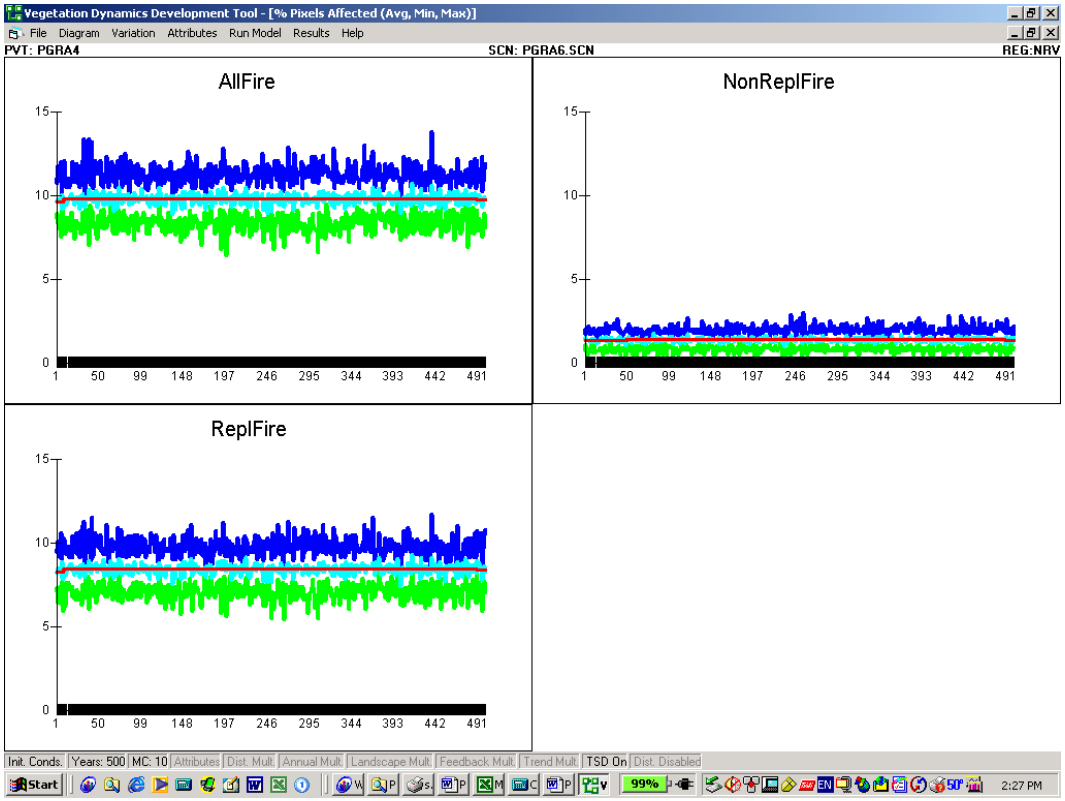
U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (2002, December). Fire Effects Information System, [Online]. Available: http://www.fs.fed.us/database/feis/.

MODELER FIELD REVIEWS (if applicable):
Wendel Hann – Colorado 2003, New Mexico 2003, Texas 2001

VDDT Results






Vegetation Dynamics Development Tool - [% Pixels Affected (Avg, Min, Max)]
File Diagram Variation Attributes Run Model Results Help
PVT: PGRA4
SCN: PGRA6.SCN
REG:NRV
AllFire
NonReplFire
ReplFire
15
10
5
0
1 50 99 148 197 246 295 344 393 442 491
Init. Conds. | Years: 500 | MC: 10 | Attributes | Dist. Mult. | Annual Mult. | Landscape Mult. | Feedback Mult. | Trend Mult. | TSD On | Dist. Disabled
Start
99%
2:27 PM