LANDFIRE Biophysical Setting Model

Biophysical Setting 2811470 Western Great Plains Foothill and Piedmont Grassland

☐ *This BPS is lumped with:*
☐ *This BPS is split into multiple models:*

General Information

Contributors (also see the Comments field) **Date** 10/27/2004

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Vegetation Type
Upland Grassland/Herbaceous

Dominant Species
BOGR2
SCHIZ4
BUDA
NAVI4
MUMO
PASM
HECO26
SPCR

Map Zone
28

Model Zone
☐ Alaska
☐ California
☐
☐ Great Basin
☐ Great Lakes
☐ Hawaii
☐ Northeast
☐ Northern Plains
☐ N-Cent.Rockies
☐
☐ Pacific Northwest
☐ South Central
☐ Southeast
☐ S. Appalachians
☑ Southwest

General Model Sources
☑ Literature
☐ Local Data
☐ Expert Estimate

Geographic Range
Occurs in the southern Great Plains, in southern CO and eastern NM.

Biophysical Site Description
This type typically occurs on plains and draws, or on gently rolling uplands of the southern Great Plains. In NM and CO, elevations range from 1600-2200m. Precipitation ranges from 12-14in and occurs predominantly during the summer.

Vegetation 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 and 68.

Disturbance Description
Return interval for fire could be extended by ungulate grazing. Episodic disturbance caused by insect infestation (grasshoppers, range caterpillars and Mormon crickets).

Adjacency or Identification Concerns
Higher elevation sites of this type borders the juniper steppe type.

Native Uncharacteristic Conditions

Scale Description

Issues/Problems

**Fire Regime Groups are: I: 0-35 year frequency, surface severity; II: 0-35 year frequency, replacement severity; III: 35-100+ year frequency, mixed severity; IV: 35-100+ year frequency, replacement severity; V: 200+ year frequency, replacement severity.

Comments

This model is based on the Rapid Assessment model R3PGRs, which was reviewed by B Baker (bakerwl@wyo.edu). FRCC model PGRA4 was the original model. Review suggests one model for all plains grasslands. Because of species composition and class differences, 1147 and 1149 were not combined.

Final qa/qc of this model resulted in the elimination of a VDDT rule violation, and changed the resulting amount in classes B and C by five percent (Pohl, 8/17/2005).

Vegetation Classes

Class A 5 %

Early Development 1 All Structure

Upper Layer Lifeform

- [x] Herbaceous
- [ ] Shrub
- [ ] Tree

Fuel Model

1

Indicator Species and Canopy Position

BOGR2
All
BUDA
All

Structure Data (for upper layer lifeform)

	Min	Max
Cover	0 %	10 %
Height	Herb 0m	Herb 0.5m
Tree Size Class	None	

- [ ] Upper layer lifeform differs from dominant lifeform.

Description

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.

Class B 25 %

Mid Development 1 Closed

Upper Layer Lifeform

- [x] Herbaceous
- [ ] Shrub
- [ ] Tree

Fuel Model

1

Indicator Species and Canopy Position

BOGR2
Upper
BUDA
Upper
SCHIZ4
Upper

Structure Data (for upper layer lifeform)

	Min	Max
Cover	31 %	70 %
Height	Herb 0m	Herb 0.5m
Tree Size Class	None	

- [ ] Upper layer lifeform differs from dominant lifeform.

Description

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.

Class C 70 %

Mid Development 1 Open

Upper Layer Lifeform

- [x] Herbaceous
- [ ] Shrub
- [ ] Tree

Fuel Model

1

Indicator Species and Canopy Position

BOGR2
Upper
BUDA
Upper

Structure Data (for upper layer lifeform)

	Min	Max
Cover	11 %	30 %
Height	Herb 0m	Herb 0.5m
Tree Size Class	None	

- [ ] Upper layer lifeform differs from dominant lifeform.

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Description

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.

Class D **0 %**

[Not Used] [Not Used]

Upper Layer Lifeform

☐ Herbaceous
☐ Shrub
☐ Tree

Fuel Model

Indicator Species and Canopy Position

Structure Data (for upper layer lifeform)

	Min	Max
Cover	%	%
Height		
Tree Size Class		

☐ Upper layer lifeform differs from dominant lifeform.

Description

Class E **0 %**

[Not Used] [Not Used]

Upper Layer Lifeform

☐ Herbaceous
☐ Shrub
☐ Tree

Fuel Model

Indicator Species and Canopy Position

Structure Data (for upper layer lifeform)

	Min	Max
Cover	%	%
Height		
Tree Size Class		

☐ Upper layer lifeform differs from dominant lifeform.

Description

Disturbances

Fire Regime Group:** II

Historical Fire Size (acres)

Avg 0
Min 0
Max 0

Fire Intervals

	Avg FI	Min FI	Max FI	Probability	Percent of All Fires
Replacement	12	2	35	0.08333	87
Mixed	80			0.0125	13
Surface					
All Fires	10			0.09584	

Fire Intervals (FI):

Fire interval is expressed in years for each fire severity class and for all types of fire combined (All Fires). Average FI is central tendency modeled. Minimum and maximum show the relative range of fire intervals, if known. Probability is the inverse of fire interval in years and is used in reference condition modeling. Percent of all fires is the percent of all fires in that severity class.

Sources of Fire Regime Data

☑ Literature
☐ Local Data
☐ Expert Estimate

Additional Disturbances Modeled

☐ Insects/Disease
☑ Wind/Weather/Stress
☐ Native Grazing
☐ Competition
☐ Other (optional 1)
☐ Other (optional 2)

References

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