11470

Western Great Plains Foothill and Piedmont Grassland

BpS Model/Description Version: Aug. 2020

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| --- | --- | --- | --- |
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| None | None | None | None |

Vegetation Type

Herbaceous

Map Zone

28

Geographic Range

Occurs in the southern Great Plains, in southern Colorado, and in eastern New Mexico.

Biophysical Site Description

This type typically occurs on plains and draws or on gently rolling uplands of the southern Great Plains. In New Mexico and Colorado, elevations range from 1,600-2,200m. 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 shortgrass dominated by 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.

BpS Dominant and Indicator Species

|  |  |  |
| --- | --- | --- |
| **Symbol** | **Scientific Name** | **Common Name** |
| BOGR2 | *Bouteloua gracilis* | Blue grama |
| SCHIZ4 | *Schizachyrium* | Little bluestem |
| BUDA | *Buchloe dactyloides* | Buffalograss |
| NAVI4 | *Nassella viridula* | Green needlegrass |
| MUMO | *Muhlenbergia montana* | Mountain muhly |
| PASM | *Pascopyrum smithii* | Western wheatgrass |
| HECO26 | *Hesperostipa comata* | Needle and thread |
| SPCR | *Sporobolus cryptandrus* | Sand dropseed |

Species names are from the NRCS PLANTS database. Check species codes at http://plants.usda.gov.

Disturbance Description

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

Fire Frequency

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Severity** | **Avg FI** | **Percent of All Fires** | **Min FI** | **Max FI** |
| Replacement | 12 | 87 | 2 | 35 |
| Moderate (Mixed) | 79 | 13 |  |  |
| Low (Surface) |  |  |  |  |
| All Fires | 10 | 100 |  |  |

Fire interval is expressed in years for each fire severity class and for all types of fire combined (All Fires). Average FI is the central tendency modeled. Percent of all fires is the percent of all fires modeled in that severity class. Minimum and Maximum FIs show the relative range of fire intervals as estimated by model contributors, if known.

Scale Description

None

Adjacency or Identification Concerns

Higher-elevation sites of this type border the juniper steppe type.

Issues or Problems

Native Uncharacteristic Conditions

Comments

LANDFIRE National review suggested one model for all plains grasslands. Because of species composition and class differences, 1147 and 1149 were not combined.

Succession Classes

**Mapping Rules**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Upper Layer Lifeform** | **Height (m)** | **Canopy Cover (%)** | | | | | | | | | |
| **0-10** | **11-20** | **21-30** | **31-40** | **41 - 50** | **51-60** | **61-70** | **71-80** | **81-90** | **91-100** |
| Herb | 0-0.5 | A | A | C | B | B | B | B | B | UN | UN |
| Herb | 0.5-1.0 | A | A | C | B | B | B | B | B | UN | UN |
| Herb | >1.0 | UN | UN | UN | UN | UN | UN | UN | UN | UN | UN |
| Shrub | 0-0.5 | UN | UN | UN | UN | UN | UN | UN | UN | UN | UN |
| Shrub | 0.5-1.0 | UN | UN | UN | UN | UN | UN | UN | UN | UN | UN |
| Shrub | 1.0-3.0 | UN | UN | UN | UN | UN | UN | UN | UN | UN | UN |
| Shrub | >3.0 | UN | UN | UN | UN | UN | UN | UN | UN | UN | UN |
| Tree | 0-5 | UN | UN | UN | UN | UN | UN | UN | UN | UN | UN |
| Tree | 5-10 | UN | UN | UN | UN | UN | UN | UN | UN | UN | UN |
| Tree | 10-25 | UN | UN | UN | UN | UN | UN | UN | UN | UN | UN |
| Tree | 25-50 | UN | UN | UN | UN | UN | UN | UN | UN | UN | UN |
| Tree | >50 | UN | UN | UN | UN | UN | UN | UN | UN | UN | UN |

Succession class letters A-E are described in the Succession Class Description section. Some classes use a leafform distinction where a qualifier is added to the class letter: Brdl (broadleaf), Con (conifer), or Mix (mixed conifer and broadleaf). UN refers to uncharacteristic native or a combination of height and cover that would not be expected under the reference condition. NP refers to not possible or a combination of height and cover which is not physiologically possible for the species in the BpS.

**Description**

Class A 4 Early Development 1 - All Structures

Indicator Species

|  |  |  |  |
| --- | --- | --- | --- |
| **Symbol** | **Scientific Name** | **Common Name** | **Canopy Position** |
| BOGR2 | Bouteloua gracilis | Blue grama | All |
| BUDA | Buchloe dactyloides | Buffalograss | All |

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.

*Maximum Tree Size Class*  
None

Class B 23 Mid Development 1 - Closed

Indicator Species

|  |  |  |  |
| --- | --- | --- | --- |
| **Symbol** | **Scientific Name** | **Common Name** | **Canopy Position** |
| BOGR2 | Bouteloua gracilis | Blue grama | Upper |
| BUDA | Buchloe dactyloides | Buffalograss | Upper |
| SCHIZ4 | Schizachyrium | Little bluestem | Upper |

Description

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.

*Maximum Tree Size Class*  
None

Class C 73 Mid Development 1 - Open

Indicator Species

|  |  |  |  |
| --- | --- | --- | --- |
| **Symbol** | **Scientific Name** | **Common Name** | **Canopy Position** |
| BOGR2 | Bouteloua gracilis | Blue grama | Upper |
| BUDA | Buchloe dactyloides | Buffalograss | Upper |

Description

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.

*Maximum Tree Size Class*  
None

Model Parameters

Deterministic Transitions

|  |  |  |  |
| --- | --- | --- | --- |
| **From Class** | **Begins at (yr)** | **Succeeds to** | **After (years)** |
| Early1:ALL | 0 | Mid1:OPN | 4 |
| Mid1:CLS | 3 | Mid1:CLS | 999 |
| Mid1:OPN | 5 | Mid1:OPN | 999 |

Probabilistic Transitions

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Disturbance Type** | **Disturbance occurs In** | **Moves vegetation to** | **Disturbance Probability** | **Return Interval (yrs)** | **Reset Age to New Class Start Age After Disturbance?** | **Years Since Last Disturbance** |
| Alternative Succession | Early1:ALL | Mid1:CLS | 0.01 | 100 | Yes | 0 |
| Mixed Fire | Early1:ALL | Early1:ALL | 0.02 | 50 | No | 0 |
| Replacement Fire | Early1:ALL | Early1:ALL | 0.06 | 17 | Yes | 0 |
| Alternative Succession | Mid1:OPN | Mid1:CLS | 1 | 1 | Yes | 20 |
| Mixed Fire | Mid1:OPN | Mid1:OPN | 0.01 | 100 | No | 0 |
| Replacement Fire | Mid1:OPN | Early1:ALL | 0.01 | 100 | Yes | 0 |
| Replacement Fire | Mid1:OPN | Mid1:OPN | 0.08 | 13 | No | 0 |
| Replacement Fire | Mid1:CLS | Mid1:OPN | 0.01 | 100 | Yes | 0 |
| Replacement Fire | Mid1:CLS | Early1:ALL | 0.01 | 100 | Yes | 0 |
| Mixed Fire | Mid1:CLS | Mid1:CLS | 0.02 | 50 | No | 0 |
| Replacement Fire | Mid1:CLS | Mid1:CLS | 0.06 | 17 | No | 0 |
| Wind or Weather or Stress | Mid1:CLS | Mid1:OPN | 0.075 | 13 | Yes | 0 |

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