

Douglas-fir -- Pinegrass

Description

Open to moderately dosed Douglas-fir forests with a pinegrass dominated understorey. Some bunchgrasses may occur: rough fescue and bluebunch wheat grass, in the south and trench; and bluebunch wheatgrass, Rocky Mountain fescue and big bluegrass in the Cariboo.

Location

This type occurs throughout the southern half of the province between 1100 m to 1400 m on zonal and warm slopes, except for those areas that are the transition to the interior wet belt (IDFmw).

Representative Reference Area

Will Lake Fir, Brussels Creek, Cain Creek, Cannel Mountain

BEC Correlation

ICHdm 03

ICHdw2 02,03

IDFdk1&2 01,03 04

IDFdk3 01,05,06,07

IDFdk4 01,05,07,08

IDFdm1 01, 03, 04 05

IDFdm2 01,03,04

IDFhx4 01,02,03

IDFxm 01,07

IDFwx 05

MSdc2 03

MSdk 01,03,04,05

MSdm1 02,04

PPdh1 04

Site Characteristics

Soils

Gray luvisols, eutric and dystric brunisols predominate on morainal blankets.

Elevation range

600 m – 1400 m

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Seral Stages

PNC Climax



PNC Douglas-fir -- pinegrass

Plant Community PNC	
Species	Canopy cover (%)
Douglas-fir	25-50
Pinegrass	50-70
Strawberry	5
Peavine, creamy or purple	5

Productivity

600 kg/ha

Range Management Considerations

Light yearly use would maintain this stage.

Properly Functioning Condition

Scores will be in the properly functioning range

Douglas-fir -- Pinegrass

Late-Seral



Late-seral Douglas-fir-- pinegrass

Plant Community Late Seral	
Species	Canopy cover (%)
Douglas-fir	25-50
Pinegrass	25-35
Heart- leaved arnica	5-10
Strawberry	5

Productivity

500 kg/ha

Range Management Considerations

Grazing reduces the volume of pinegrass without noticeable changes to the plant composition, other than a slight increase in forbs. Pinegrass is easily pulled up so often there is no noticeable stubble. Turn out criterion is usually given as 15 cm or nodding, but earlier turn out can be tolerated with sufficient rest. Getting distribution into this type when there are adjacent grasslands can be a challenge.

Properly Functioning Condition

Scores will be in the properly functioning range

Douglas-fir -- Pinegrass

Mid-Seral



Mid-seral Douglas-fir -- pinegrass

Plant Community Mid Seral	
Species	Canopy cover (%)
Douglas-fir	25-50
Pinegrass	10-20
Heart-leaved arnica	10-30
Strawberry	5-10

Productivity

400 kg/ha

Range Management Considerations

Level of use is difficult to judge because pinegrass plants are pulled up leaving no stubble. It is important to pay attention to the pinegrass cover changes during the grazing period, instead of using stubble heights as an indicator of use. Watch for signs of soil compaction.

Properly Functioning Condition

Douglas-fir -- Pinegrass

This stage will retain high scores due to the forest litter cover protecting the soil although soil compaction can be an insidious problem.

Early-Seral



Earl- seral Douglas-fir -- pinegrass.

Plant Community Early Seral	
Species	Canopy cover (%)
Douglas-fir	25-50
Pinegrass	0-10
Heart- leaved arnica	10-30
strawberry	5-10

Productivity

200 kg/ha

Range Management Considerations

Shorter grazing period resulting in less use and more growing season for recovery is needed.

Properly Functioning Condition

This stage will retain high scores due to the forest litter cover protecting the soil. Soil compaction and loss of animal habitat will lower the score.

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Altered States

Dense Douglas-fir

Low fire frequency can lead to a runaway forest canopy closure that increases to the point that very little light reaches the forest floor. Low light levels restrict herbage production. When these forest eventually burn, temperatures are so intense that all trees are killed. Reforestation occurs quickly if seed is maintained in cones on taller trees. A short herb dominated period gives way to dense tree seedling cover that grows back into a dense forest. Bringing these sites back to an open forest requires removal of much of the standing tree biomass and re-establishing the native understorey.

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Forest canopy closure altered state



Douglas-fir -- Pinegrass

Plant Community	
Species	Canopy cover (%)
Douglas -fir	100
Moss	70
Pinegrass	1-5

Productivity

20 kg/ha

Range Management Considerations

These areas produce no useable forage and are an impediment to distribution. Recovery to useful rangeland requires a reduction of the forest canopy to 30% and rest to allow recovery of grass plants if they have persisted on the site. If they have not persisted then re-establishment would be required.

Properly Functioning Condition

These sites will score properly functioning because of the forest litter protecting the soil. Lack of animal habitat will slightly reduce the score.

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Seral Stage Diagram

