

Thompson Nicola Lower Grasslands

Description

This type is dominated by bluebunch wheatgrass, Sandberg's bluegrass, and sagebrush with low cover of mixed forbs and moderate cover of biological crusts. Production and total plant cover is low with well spaced plants. At PNC, vascular plant cover may be as low as 60% and bare ground as high as 30%.

Location

This range type occurs in the valley floor on gentle to steep slopes, with warm to hot aspects, on moraine blankets or veneers and Lacustrine silts along the Thompson River, the South Thompson River from Kamloops to Chase, the North Thompson River from Kamloops to Barrier, the Nicola River from Spence's Bridge to Merritt, the Fraser River from Lytton to Williams lake, and the Chilcotin River from its mouth to Farwell Canyon.

Representative Reference Area

Tranquille relic, Battle Creek relic, Juniper Beach Park, the unseeded portions of Rattlesnake Hills 2-13, 2-14 and 2-15, Cavanagh Creek Sheep, Canvanagh Creek Cow, Lower Sheep, Middle Sheep, Whaleback, Hartman Flats, McGhee Flats, Fraser North Eagle Tree, Meason Creek Cow, Meason Creek Sheep, Farwell Needlegrass, Farwell Big Sage

BEC Correlation

BGxh2	01, 02, 05, 06
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Site Characteristics

Soils

Soils are quite variable but the most common form is light brown chernozems on morainal blankets and veneers, often with a thin loess layer. Coarse soils that have insufficient Ah depth to be classified as chernozemic, will default to brunisols. These sites will have similar species composition with less vegetation cover and a higher percentage of bare ground.

Elevation range

Valley bottom to 600 m.

Precipitation

Annual total Average = 300 mm.

Growing season Average = 150 mm.

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Seral Stages

PNC Climax

Thompson Nicola Lower Grasslands PNC



Thompson Nicola Lower Grasslands PNC. Well spaced bluebunch wheatgrass, bare soil and low litter

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Plant Community PNC	
Species	Canopy cover (%)
Bluebunch wheatgrass	30-60
Sandberg's bluegrass	1-5
Wyoming big sage	5-10
Litter	5-30
Biological Soil Crusts	10-30
Bare soil	10-30

Productivity

Zonal sites on morainal blankets produce about 500 kg/ha. There is less production on steeper slopes or sites with thinner or coarser soils.

Range Management considerations

These sites are very fragile and will deteriorate to late-seral with even the lightest of grazing during the growing season. Bluebunch wheatgrass will decrease, while big sage and Sandberg's bluegrass will increase. Moderate winter grazing on frozen soil may allow use with maintenance of this community.

Properly Functioning condition

These sites are inherently slightly at risk even without disturbance. Lack of vegetation cover, low litter and a high of percent bare ground will result in low scores.

Late-Seral

Lower grasslands late-seral community



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Plant Community Late-Seral	
Species	Canopy cover (%)
Bluebunch wheatgrass	15-30
Sandberg's bluegrass	5-10
Needle- and-thread	5-10
Wyoming big sage	10-30
Litter	5-30
Biological Soil Crusts	10-30
Bare ground	10-30

Productivity

400 kg/ha on zonal sites. On warm steep slopes and thin soils, productivity could be as low as 200 kg/ha.

Range Management considerations

Late-seral is the targeted desired plant community.

Moderate use [35% use (stubble height 17 cm on a 50cm tall bluebunch wheatgrass)] spring grazing should be followed by at least 1 year of rest. Heavier use should be followed by longer rest. Early spring grazing is especially damaging and grazing should be delayed until plants reach the 4-leaf stage. This will result in a carrying capacity of 3 AUMs/ha every second year.

Fall use is less damaging, but sufficient litter needs to be left on the soil to protect the soil in the subsequent growing season. Stubble needs to be high enough to assist in the capture of snow and to impede runoff. These areas often get rain or rapid snow melt on frozen ground. If litter and live plant material cover is too low, there will be excessive loss of water as run off.

Regardless of grazing regime, big sage will increase through time, slowly lowering the seral stage. Burning at 50-year intervals will be needed to maintain the herbage layer and keep the sage from becoming decadent.

Properly Functioning condition

These sites are inherently slightly at risk even without disturbance. Lack of vegetation cover, low litter and a high of percent bare ground will result in low scores.

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Mid-Seral

Lower grassland mid-seral plant community



Plant Community Mid- Seral	
Species	Canopy cover (%)
Bluebunch wheatgrass	5-15
Needle-and-thread	5-30
Annual Bromes	5-10
Pussy toes and daisies	0-20
Wyoming big sage	10-50
Litter	5-30
Biological Soil Crusts	5-10

Productivity

250 kg/ha.

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Range Management considerations

Lower utilisation and longer rest than described for the late-seral stage will be needed for recovery. Some of the production will be annual bromes (cheatgrass, corn brome and Japanese brome) which will be available only in the spring.

Properly Functioning Condition

Scores will range from slightly at risk to highly at risk. Lack of biological crusts, low litter, low root volume and high percentage of bare ground contribute to a low score.

Early-Seral



Thompson Nicola Lower Grassland early-seral stage

Plant Community Early Seral	
Species	Canopy cover (%)
Bluebunch wheatgrass	0-5
Needle-and-thread	0-40
Annual Bromes	5-40
Pussy toes and daisies	0-40
Wyoming big sage	10-50
Litter	5-30
Biological Soil Crusts	0-10
Bare soil	10-30

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Productivity

150 kg/ha

Range Management considerations

Lower utilisation and longer rest than described for the late-seral stage will be needed for recovery. Some of the production will be annual bromes (cheatgrass, corn brome and Japanese brome) which will be available only in the spring. As these sites move to annual grasses, the opportunity to use as fall range is lost. Fire frequency and rate of spread will increase with an increase of annual brome cover.

High cover of big sage may stall recovery even with appropriate grazing. Treatment to reduce sage cover may be needed.

Properly Functioning Condition

Scores will be non-functional to functional at risk. Too much bare round, high soil compaction, lack of roots, low litter and biological crusts, the loss of habitat structure, and a high incidence of erosion will contribute to low scores.

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