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, Cavanagh 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

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.
Thompson Nicola Lower Grasslands

Seral Stages

PNC Climax

*Thompson Nicola Lower Grasslands PNC*

*Thompson Nicola Lower Grasslands PNC. Well spaced bluebunch wheatgrass, bare soil and low litter*
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*
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-serial 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.
**Plant Community Mid-Seral**

<table>
<thead>
<tr>
<th>Species</th>
<th>Canopy cover (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bluebunch wheatgrass</td>
<td>5-15</td>
</tr>
<tr>
<td>Needle-and-thread</td>
<td>5-30</td>
</tr>
<tr>
<td>Annual Bromes</td>
<td>5-10</td>
</tr>
<tr>
<td>Pussy toes and daisies</td>
<td>0-20</td>
</tr>
<tr>
<td>Wyoming big sage</td>
<td>10-50</td>
</tr>
<tr>
<td>Litter</td>
<td>5-30</td>
</tr>
<tr>
<td>Biological Soil Crusts</td>
<td>5-10</td>
</tr>
</tbody>
</table>

**Productivity**

250 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 bромes (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

<table>
<thead>
<tr>
<th>Species</th>
<th>Canopy cover (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bluebunch wheatgrass</td>
<td>0-5</td>
</tr>
<tr>
<td>Needle-and-thread</td>
<td>0-40</td>
</tr>
<tr>
<td>Annual Bromes</td>
<td>5-40</td>
</tr>
<tr>
<td>Pussy toes and daisies</td>
<td>0-40</td>
</tr>
<tr>
<td>Wyoming big sage</td>
<td>10-50</td>
</tr>
<tr>
<td>Litter</td>
<td>5-30</td>
</tr>
<tr>
<td>Biological Soil Crusts</td>
<td>0-10</td>
</tr>
<tr>
<td>Bare soil</td>
<td>10-30</td>
</tr>
</tbody>
</table>
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.