

Peace Aspen/Shrub/Forb

Description

Aspen stands occur with or without white spruce as a co- or sub- dominant tree species. The understorey is comprised of a vigorous shrub layer (rose, cranberry, snowberry are common and aspen suckers and young white spruce may also be present). The herbaceous layer is moderate (30-60% cover) and includes hairy wildrye, bluejoint, aster spp., American vetch, wild sarsaparilla, sweet cicely, creamy peavine and fireweed. A moss layer (step-moss dominated) is common.

Location

This range type occurs west of the Alberta border, extending to the Halfway River drainage. It generally occurs north of the Peace River up to the point where it grades into the BWBSmw2 at elevations between 700-1000 m.

Representative Reference Area

Beaton-Doig, Beaton-Doig Aspen, Donis, Deitz and Hanson

BEC Correlation

BWBSwm1 01, 03, 06

Site Characteristics

Soils

Soils have highly variable texture and parent material which is usually glaciofluvial or morainal and occasionally lacustrine.

Elevation range

700 – 1000 m

Peace Aspen/Shrub/Forb

Seral Stages

PNC Climax



Peace Aspen/Shrub/Forb PNC

Plant Community PNC	
Species	Canopy cover (%)
Trembling aspen	35-65
Rose	10-30
Cranberry	3-12
Hairy wild rye	10-40
Bluejoint	5-25
Aster spp.	5-12
American vetch	3-12
Creamy peavine	3-12
Fireweed	3-10

Productivity

600 - 1300 kg/ha. There is considerable variation in productivity both among sites and years. Production is less on drier, well-drained sites and on coarse textured soils. Understorey productivity is

Peace Aspen/Shrub/Forb

also reduced by canopy closure and the corresponding decrease in light infiltration.

Range Management consideration

This seral stage is common on areas that experience light grazing coupled with rest and on areas that are not grazed. It is also found on some range reference areas (RRAs) in the Peace District. Though fairly resistant to abuse, this type can be overused and degraded. The forest canopy moderates plant phenology, resulting in forage plants maturing later than those found on adjacent unforested sites. Grazing mid-season is often recommended.

Regardless of calendar date, grazing should not occur before the recommended range readiness criterion is met. Grazing should be light with stubble heights not below 12 cm on hairy wild rye and bluejoint and 10 cm on pumpelly brome. Any grazing should be followed by sufficient rest, allowing plants to recover fully.

Properly Functioning Condition

PNC will score as properly functioning.

Late-Seral



Peace Aspen/Shrub/Forb Late-Seral

Peace Aspen/Shrub/Forb

Plant Community Late-Seral	
Species	Canopy cover (%)
Trembling aspen	35-65
Rose	8-25
Cranberry	2-10
Hairy wildrye	5-30
Bluejoint	5-20
Aster spp.	3-10
Bunchberry	5-15
Creamy peavine	3-10
Fireweed	3-10

Productivity

550 – 1250 kg/ha

Range Management consideration

Late-seral is the targeted/desired plant community. It can tolerate light to moderate grazing pressure. Moderate (35% use with a stubble height of 12cm on both hairy wildrye and bluejoint and 10cm on pumpelly brome) grazing should be followed by a period of rest. Grazing should be delayed until plants reach suggested range readiness leaf stages (3.0, 3.0 and 4.0 for brome, bluejoint and hairy wild rye, respectively). Because the forest canopy moderates phenology, some managers suggest use during mid- to late- summer is prudent. Early spring grazing should be limited, as this is the period where plant are just initiating growth and are therefore most vulnerable to damage.

Grazing should be followed by rest, allowing sufficient standing material (stubble) and litter to be left on site to protect the soil in subsequent growing seasons. Adhering to suggested stubble heights ensures sufficient standing material is left on site to capture precipitation and moderate runoff.

Properly Functioning Condition

Late seral sites normally score as properly functioning.

Peace Aspen/Shrub/Forb

Mid-Seral



*Aspen/Shrub/Forb
Mid-Seral*

Plant Community Mid-Seral	
Species	Canopy cover (%)
Trembling Aspen	35-65
Rose	5-15
Cranberry	0-5
Hairy wildrye	5-15
Bluejoint	5-15
Aster spp.	0-5
Bunchberry	5-20
Creamy peavine	1-6
Fireweed	1-12

Peace Aspen/Shrub/Forb

Productivity

400-1000kg/ha

Range Management consideration

Mid-seral range sites exhibit changes in composition and structure that affect overall stability and productivity. In particular, a reduction in legumes (e.g., peavine, vetch) and an alteration of browse form is common. Furthermore, mid-seral sites may exhibit signs of soil compaction, which adversely affect hydrological and biogeochemical cycling. Sites that are characterized as mid-seral should be managed conservatively.

With sustained use, particularly if rest and recovery is overlooked, there is risk for further deterioration. Forage production is less than late-seral sites. Because of the reduction in productivity and more importantly, because of the potential for decline without appropriate management, conservative (max. 25% use, with 12 cm stubble height on hairy wildrye and bluejoint) is suggested.

Properly Functioning Condition

Mid-seral range sites will score properly functioning to at risk. Loss of habitat, reduction of root biomass and compacted soils will lower scores.

Early-Seral

*Peace
Aspen/Shrub/Forb
Early-Seral.*



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Plant Community Early-Seral	
Species	Canopy cover (%)
Trembling Aspen	35-65
Rose	0-5
Cranberry	0-5
Hairy wildrye	2-10
Bluejoint	2-10
Kentucky bluegrass	5-35
Bunchberry	5-30
Creamy peavine	0-5
Fireweed	0-5
Strawberry	5-30
Dandelion	5-30

Productivity

250-800 kg/ha

Range Management consideration

Early-seral condition sites have reduced productivity, loss of taller structural stages, reduced litter/ and increased bare soils. They are vulnerable to wind and water erosion and. Sites in early-seral stage are at risk for further degradation including establishment of undesirable and/or invasive plants.

Early-seral sites should be rested until they have recovered to mid-seral. If they are grazed, use should be light (15% use) to protect the site from further deterioration. Use should be followed by ample rest and recovery.

Properly Functioning Condition

Early-seral stage of this range type will score non-functioning or high risk.

Peace Aspen/Shrub/Forb

Seral Stage Diagram

