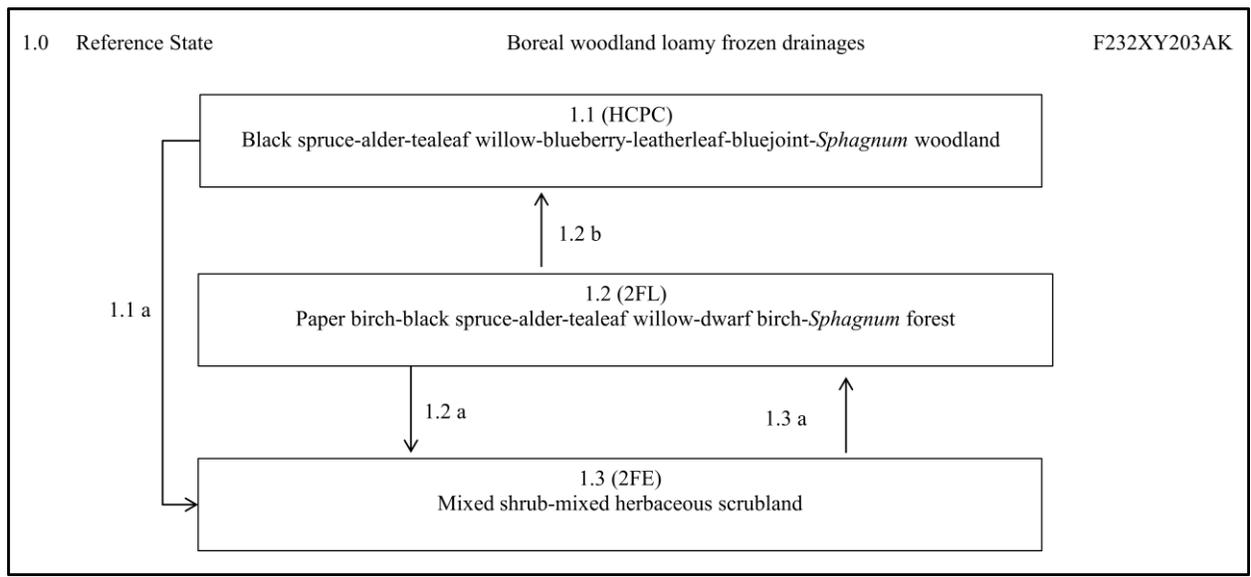


Ecological Site Description ID:	F232XY203AK
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Ecological Dynamics of the Site:

This boreal ecological site is associated with drainages that occur on loess plains. The gradient of these drainages was minimal (i.e. < 5% slopes) and communities based on disturbances from an intense flood regime were not observed. Differences in sampled plant communities within this ecological site were presumed to occur due to fire history. As sites progress from community phase 1.3 to 1.1, surface organic matter increases and permafrost rises in the soil profile. For community phase 1.1, soils were classified as aquorthels and were composed of organic matter over loamy alluvium.

State and Transition Diagram:



State ID Number:	1	State Name:	Reference
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State Narrative:

Phases within the reference state were grouped on the structure and dominance of deciduous and coniferous trees which was believed to directly relate to time since last fire event and severity of burn.

Tall trees are defined as trees growing >40' in height, medium trees are defined as growing 15-40' in height, while stunted and regenerative trees are defined as growing less than 15' in height. Tall shrubs are defined to grow greater than 10' in height, medium shrubs are defined to grow 3-10' in height, low shrubs are defined to grow 8" – 3' in height, and dwarf shrubs are defined to grow less than 8" in height.

Photo 1.1



Community Phase Number:

1.1

Community Phase Name:

Black spruce-alder-tealeaf willow-blueberry-leatherleaf-bluejoint-*Sphagnum* woodland

Community Phase Narrative:

Picea mariana was the dominant tree species, which primarily occurred in the medium and regenerative stratum (total mature tree cover ~10%). The majority of shrub cover occurred in the tall and low shrub stratum (total shrub cover ~170%). Commonly observed shrub species included *Alnus viridis* ssp. *fruticosa*, *Salix pulchra*, *Vaccinium uliginosum*, *Betula glandulosa*, *Chamaedaphne calyculata*, and *Ledum palustre* ssp. *decumbens*. Graminoids were occasionally abundant and the most common species observed was *Calamagrostis canadensis*. Forbs and lichen were minor vegetative components. *Sphagnum* moss formed an extensive ground cover (~40% cover). This phase had 2 observations.

Community Pathways

Pathway Number

Pathway Name & Description

1.1a	<p>Low-intensity fire. In general, field observations resemble plant communities that were likely associated with a low-intensity fire regime. Under a low-intensity fire regime, fire removes the tree canopy and reduces surface organic matter but does not remove enough organic matter to expose mineral soil. Permafrost often remained in the soil profile after the initial fire event.</p> <p>In a low-intensity fire regime, tussock forming grasses and scrubs quickly recolonize and dominate a site using below ground root reserves that were not consumed in the fire event. Due to their semi-serotinous cones, black spruce quickly establishes in this ecological site after fire events. Since mineral soils are not typically exposed, conditions would not be suitable for development of extensive stands of aspen or paper birch.</p> <p>For this ecological site, phase 1.1 has a longer fire return interval than phase 1.2. The fire return interval likely plays a large role in the structure of the black spruce forest. Longer fire return intervals result in greater amounts of mature black spruce, while shorter fire return intervals result in greater amounts of shrubs and paper birch.</p>
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Photo 1.2			
Community Phase Number:	1.2	Community Phase Name:	Paper birch-black spruce-alder-tealeaf willow-dwarf birch- <i>Sphagnum</i> forest
Community Phase Narrative:			
<p><i>Betula neolaskana</i> and <i>Picea mariana</i> were the dominant tree species, which primarily occurred in the medium and regenerative tree strata (total mature tree cover ~45%). <i>Picea glauca</i> was also</p>			

observed but at low densities. The majority of shrub cover occurred in the tall and low shrub strata (total shrub cover ~260%). Commonly observed shrub species included *Alnus viridis* ssp. *fruticosa*, *Salix pulchra*, *Vaccinium uliginosum*, *Betula glandulosa*, *Rubus chamaemorus*, and *Ledum groenlandicum*. Graminoids, forbs, and lichens were minor vegetative components but one commonly observed species was *Equisetum sylvaticum*. *Sphagnum* moss was the most abundant moss observed (~20% cover). This phase had 2 observations.

Community Pathways	
Pathway Number	Pathway Name & Description
1.2 a	Low-intensity fire. The fire return interval was presumed to be shorter than phase 1.1 but longer than 1.3.
1.2 b	Normal time and growth without fire. This pathway occurs from a low-intensity fire regime. Paper birch and overall shrub cover decreases while black spruce matures and <i>Sphagnum</i> moss ground cover increases.

Photo 1.3	n/a		
Community Phase Number:	1.3	Community Phase Name:	Mixed shrub-mixed herbaceous scrubland
Community Phase Narrative:			
No observations occurred for this particular community phase. This community phase is theoretical.			

Community Pathways	
Pathway Number	Pathway Name & Description
1.3 a	Black spruce and paper birch mature creating a mixed forest.