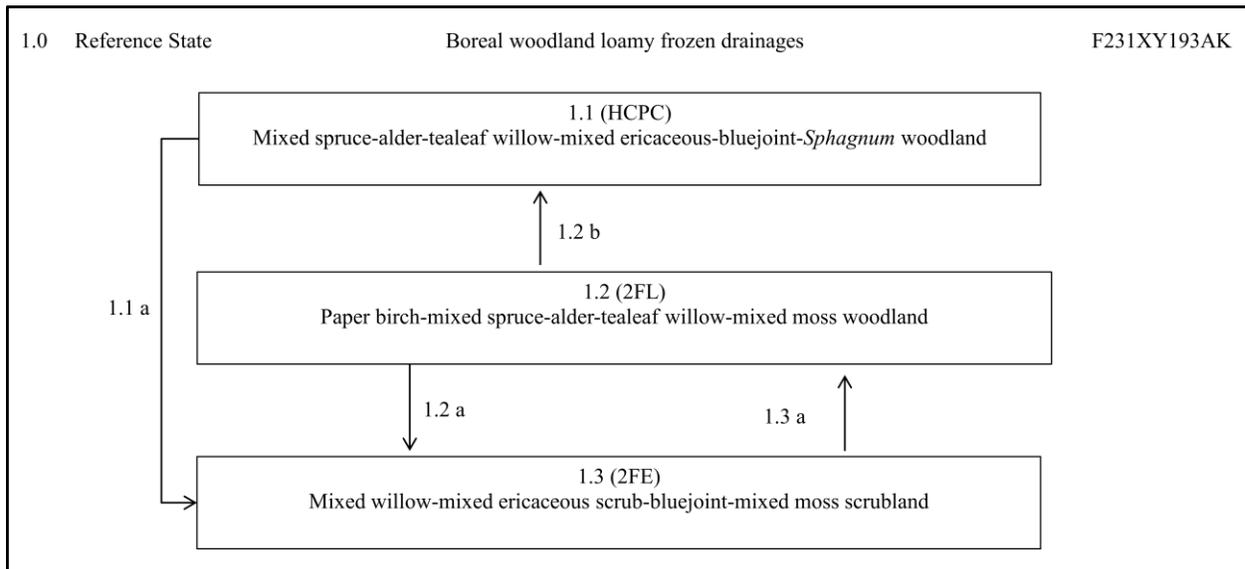


Ecological Site Description ID: F231XY193AK

Ecological Dynamics of the Site:

This boreal ecological site is associated with low-gradient drainages that occur on hills (i.e. average slope 6%, ranging from 2-13%). 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 a mixed spruce woodland develops. Permafrost was observed to remain in soil profile after fire disturbances. 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:

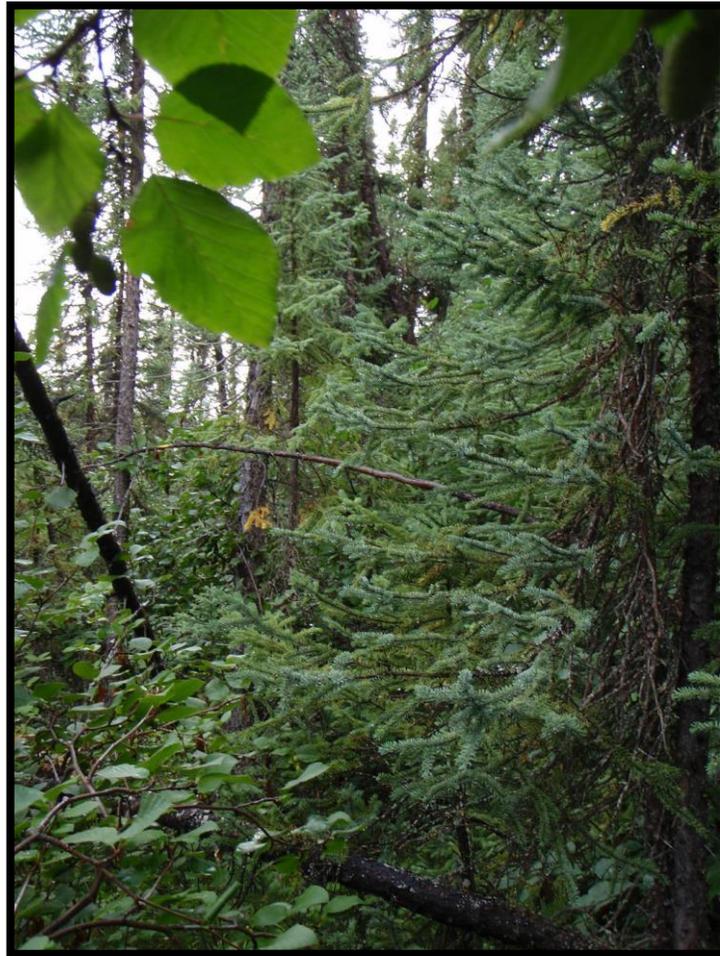
Phases within the reference state were grouped on the structure and dominance of deciduous and coniferous trees which was believed to directly relate to time since last fire event and severity of burn.

Fires that occur in this ecological site were thought to typically be low-severity fire events. In a low-severity fire (phase 1.3), minimal proportions of the organic mat are consumed and mineral soils will typically not be exposed. Permafrost typically remains in the soil profile, which often perches water. Graminoids 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 reestablishes after fire events. With the absence of fire, early fire sere communities associated with this disturbance regime are thought to progress to community phase 1.2.

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:

Mixed spruce-alder-tealeaf willow-mixed ericaceous-bluejoint-*Sphagnum* woodland

Community Phase Narrative:

Picea glauca and *Picea mariana* were the dominant tree species, which primarily occurred in the medium and tall tree strata. *Betula neolaskana* was observed but at lesser densities (total mature tree cover ~10%) Shrub cover was split across all shrub strata (total shrub cover ~75%) and the most commonly observed shrub species were *Alnus viridis* ssp. *fruticosa*, *Salix pulchra*, *Vaccinium uliginosum*, *Ledum groenlandicum*, *Rubus chamaemorus*, and *Vaccinium vitis-idaea*. Neither graminoids (~10% cover) nor forbs (~5% cover) were abundant but *Calamagrostis canadensis* was commonly observed. Moss (~50% cover) and leaf litter (~20% cover) were the most extensive ground cover and moss mat was primarily composed of species of *Sphagnum*. This phase had 5 observations.

Community Pathways

Pathway Number	Pathway Name & Description
1.1 a	Fire. For this ecological site, this phase had the longest fire return interval.

Photo 1.2			
Community Phase Number:	1.2	Community Phase Name:	Paper birch-mixed spruce-alder-tealeaf willow-mixed moss woodland
Community Phase Narrative:			
<p><i>Betula neolaskana</i> was the dominant tree species, which primarily occurred in the medium and regenerative tree strata. <i>Picea glauca</i> and <i>Picea mariana</i> were observed but at lesser densities (total mature tree cover ~10%). Shrub cover primarily occurs in the tall, medium, and low shrub strata (total shrub cover ~65%) and the most commonly observed shrub species were <i>Alnus viridis</i> ssp. <i>fruticosa</i>, <i>Salix pulchra</i>, and <i>Vaccinium uliginosum</i>. Graminoids (30%) were abundant and the most commonly observed species was <i>Calamagrostis canadensis</i>. Leaf litter (~55% cover) and moss (~20% cover) were the most extensive ground covers. Moss was a mixture of various species including <i>Sphagnum</i> sp., <i>Hylocomium splendens</i>, and <i>Pleurozium schreberi</i>. This phase had 7 observations.</p>			

Community Pathways	
Pathway Number	Pathway Name & Description
1.2 a	Fire.

1.2 b	Normal time and growth without fire. Paper birch is replaced by a maturing mixture of black and/or white spruce. The fire return interval was presumed to be shorter than phase 1.1 but longer than phase 1.3.
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Community Phase Number:	1.3	Community Phase Name:	Mixed willow-mixed ericaceous scrub-bluejoint-mixed moss scrubland
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Community Phase Narrative:

While *Picea mariana* and *Betula neoalaskana* are commonly observed as saplings, neither occurs at high densities (~10% total cover). Shrubs cover is split between the tall, medium, and low shrub stratum (total shrub cover ~60%) and commonly observed species include an assortment of *Salix sp.*, *Vaccinium uliginosum*, and *Ledum groenlandicum*. Graminoids (~55% cover) and forbs (~20% cover) are abundant the most commonly observed species being *Calamagrostis canadensis*, *Chamerion angustifolium*, *Petasites frigidus*, and various *Equisetum sp.* Leaf litter (~70% cover) and moss (~30% cover) were the most extensive ground covers. Moss was a mixture of various species including *Sphagnum sp.*, *Polytrichum sp.*, and *Bryum sp.* This phase had two observations.

Community Pathways	
Pathway Number	Pathway Name & Description
1.3 a	Normal time and growth without fire. Mixed spruce and/or paper birch develop into woodland.