



# Canadian National Vegetation Classification (CNVC) Classification nationale de la végétation du Canada (CNVC)

<http://cnvc-cnvc.ca>

Forest / Forêt

Association CNVC00088

***Populus tremuloides* / *Vaccinium myrtilloides* / *V. vitis-idaea***

**Trembling Aspen / Velvet-leaved Blueberry / Lingonberry**

**Peuplier faux-tremble / Bleuet fausse-myrtille / Airelle rouge**

**Subassociations:** 88a *Arctostaphylos uva-ursi*, 88b *Rhododendron groenlandicum*, 88c *Alnus viridis*

**CNVC Alliance:** CA00022 *Populus tremuloides* / *Vaccinium myrtilloides* / *V. vitis-idaea*

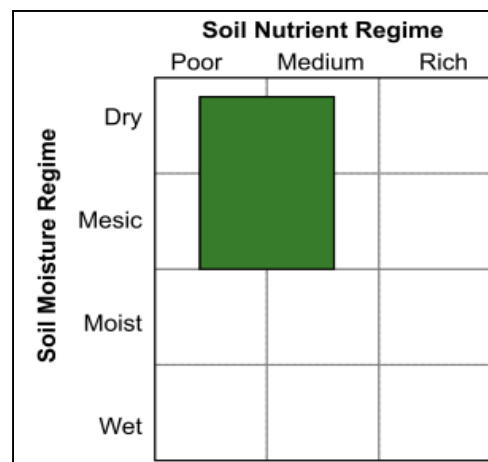
**CNVC Group:** CG0011 Central Boreal Mesic-Moist Trembling Aspen – White Spruce Forest

## Type Description

**Concept:** CNVC00088 is a boreal hardwood forest Association that ranges from Alberta to Manitoba. The canopy is primarily trembling aspen (*Populus tremuloides*), sometimes with paper birch (*Betula papyrifera*) as an associate. Canopy cover is usually moderately closed but can vary from open to closed. The moderately developed shrub layer is typically dominated by velvet-leaved blueberry (*Vaccinium myrtilloides*), although green alder (*Alnus viridis*) or common Labrador tea (*Rhododendron groenlandicum*) can be dominant where present. Trembling aspen saplings often occur in canopy openings. The dwarf shrub and herb layer is often moderately developed and typically includes twinflower (*Linnaea borealis*), bunchberry (*Cornus canadensis*), lingonberry (*Vaccinium vitis-idaea*), fireweed (*Chamerion angustifolium*) and wild lily-of-the-valley (*Maianthemum canadense*). Common bearberry (*Arctostaphylos uva-ursi*) is dominant on some sites. The forest floor cover is mainly broad-leaf litter, so the moss layer is sparse, with only minor cover of red-stemmed feathermoss (*Pleurozium schreberi*) and stairstep moss (*Hylocomium splendens*). CNVC00088 is an early seral condition that typically establishes after fire. It occurs in a region with a subhumid continental boreal climate, usually on dry to mesic, nutrient-poor to medium sites. Three subassociations are distinguished: *Arctostaphylos uva-ursi*, *Rhododendron groenlandicum* and *Alnus viridis*.

**Vegetation:** CNVC00088 is a hardwood forest Association that is typically dominated by *Populus tremuloides*, although occasionally *Betula papyrifera* can be codominant. The canopy is moderately closed on average but varies from open to closed depending on subassociation. *Vaccinium myrtilloides* is usually the dominant shrub in the moderately developed shrub layer, but *Alnus viridis* or *Rhododendron groenlandicum* can be abundant on some sites. Regenerating *P. tremuloides* can be present in canopy openings. The herb and dwarf shrub layer is usually moderately developed and typically includes *Linnaea borealis*, *Cornus canadensis*, *V. vitis-idaea*, *Chamerion angustifolium* and *Maianthemum canadense*. Because of abundant broad-leaf litter on the forest floor, the moss layer is poorly developed, with only *Pleurozium schreberi* and *Hylocomium splendens* common, mainly on fallen logs and at the base of trees.

The *Arctostaphylos uva-ursi* subassociation typically has a more open tree layer than the other subassociations and a well-developed herb and dwarf shrub layer, often with abundant *A. uva-ursi*. The *Rhododendron groenlandicum* subassociation usually has *R. groenlandicum* dominant in its shrub layer. The *Alnus viridis* subassociation usually has a more closed canopy overtopping abundant *A. viridis* in the tall shrub layer and a less-developed herb and dwarf shrub layer than the other subassociations.





***Populus tremuloides* / *Vaccinium myrtilloides* / *V. vitis-idaea* CNVC00088**

**Type Description (cont'd)**

**Environment:** CNVC00088 occurs in a subhumid continental boreal climate where regional fire cycles are short (<100 years) or intermediate (100-270 years). It is found most frequently on dry to mesic, nutrient-poor to medium sites. Stands are usually on level sites or gentle to moderate slopes on water-shedding, crest or upper to middle-slope topopositions. Soils are often deep and rapidly to well drained. Soil textures and parent materials are variable, although they are often coarse-textured and derived from glaciofluvial or morainal parent materials. Mor humus forms are typical.

Site conditions vary among subassociations. The *Arctostaphylos uva-ursi* subassociation is usually found on sandy, glaciofluvial and eolian parent materials. The *Rhododendron groenlandicum* subassociation is less common on dry sites and is more frequently found on clays or fine loams. It is also more common on cooler, north or east-facing aspects. The *Alnus viridis* subassociation occurs more frequently on morainal parent materials.

**Dynamics:** CNVC00088 is an early seral condition that typically establishes after stand-replacing fire. *Populus tremuloides* and *Betula papyrifera* are pioneer species adapted to disturbance. Following any disturbance that does not kill their roots, they can reproduce vegetatively, *P. tremuloides* from root suckers and *B. papyrifera* from stump sprouts. These species also produce abundant, light, wind-dispersed seeds that can readily colonize mineral soil seedbeds exposed by fire. Both species grow rapidly in full-light conditions but are intolerant of shade so do not replace themselves in a stand without further disturbance. If seed sources are available, shade tolerant conifers (especially *Picea glauca*) can become established in these stands and may grow into the canopy as the pioneer species decline. After about 120 years, a mid-seral mixedwood Association could develop (e.g., CNVC00090 [*Populus tremuloides* – *Picea glauca* / *Vaccinium myrtilloides* / *V. vitis-idaea*]).

*Alnus viridis* can form dense thickets in canopy openings, sometimes significantly delaying conifer ingress. Its deep roots can survive even high-severity fires and it responds quickly after disturbance by suckering. Being semi-shade tolerant, it persists as the canopy closes, limiting the available light for plants beneath it.

Forest tent caterpillar (*Malacosoma disstria*) and *Armillaria* root disease (*Armillaria* spp.) can have significant impacts on *P. tremuloides*. Defoliation by the caterpillar can reduce growth, cause dieback and sometimes lead to mortality, particularly during drought years. *Armillaria* spp. can weaken or kill individual or small groups of trees. Canopy openings that result from insect or pathogen disturbance can promote forest succession by enhancing the growth of *Picea glauca* in the understory.

**Range:** CNVC00088 occurs in the boreal region of western Canada from Alberta to western Manitoba. In Alberta it is described from the Rocky Mountain foothills and boreal plains. In Saskatchewan it occurs on the Precambrian Shield. The *Alnus viridis* subassociation occurs throughout the range of CNVC00088, but the *Arctostaphylos uva-ursi* and *Rhododendron groenlandicum* subassociations are only described from Alberta.

**Conservation Status (NatureServe)**

**Global Conservation Rank:** no applicable rank

**National Conservation Rank:** not yet determined

**Subnational Conservation Rank:** not yet determined



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**Distribution**

**Countries:** Canada

**Provinces / Territories / States:** Alberta, Manitoba, Saskatchewan

**Terrestrial Ecozones and Ecoregions of Canada:** Boreal Plains: Boreal Transition, Clear Hills Upland, Mid-Boreal Uplands, Peace Lowland, Wabasca Lowland, Western Alberta Upland; Boreal Shield: Athabasca Plain, Churchill River Upland

**Rowe's Forest Regions and Sections of Canada:** Boreal: Athabasca South, Lower Foothills, Mixedwood, Northern Coniferous, Upper Mackenzie

**NAAEC CEC Ecoregions of North America (Levels I & II):** Northern Forests: Boreal Plains, Softwood Shield

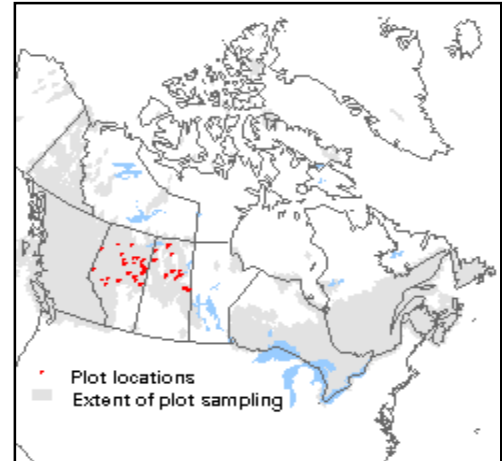
**Nature Conservancy of Canada Ecoregions:** Boreal Plains, Boreal Shield

**Natural Regions and Subregions of Alberta:** Boreal Forest: Central Mixedwood, Dry Mixedwood, Lower Boreal Highlands, Upper Boreal Highlands; Foothills: Lower Foothills

**Ecozones and Ecoregions of Saskatchewan:** Boreal Shield: Athabasca Plain, Churchill River Upland

**Ecozones and Ecoregions of Manitoba:** Boreal Shield

**Manitoba Protected Areas Initiative Natural Regions:** Precambrian Boreal Forest



**Corresponding Types and Associations**

|  |              |               |   |
|--|--------------|---------------|---|
| <b>88a <i>Arctostaphylos uva-ursi</i></b>    | Alberta      | NN/BM/B/02/01 | Aw (Bw) / blueberry - bearberry   |
|  |              | WC/LF/C/02/03 | Aw / blueberry / hairy wild rye   |
| <b>88b <i>Rhododendron groenlandicum</i></b> | Alberta      | NN/BH/B/02/01 | Aw / blueberry - Labrador tea   |
|  |              | NN/BM/B/02/03 | Aw (Bw) / blueberry - Labrador tea  |
| <b>88c <i>Alnus viridis</i></b>              | Alberta      | NN/BM/B/02/02 | Aw (Bw) / blueberry - green alder   |
|  |              | WC/LF/C/02/02 | Aw / green alder / hairy wild rye   |
|  | Saskatchewan | BS15          | Trembling aspen - white birch / green alder:<br>Moderately fresh loamy sand |



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Vegetation Summary\*

| Species Name†  | Association<br>CNVC00088 |                | Subassociation<br>88a <i>Arctostaphylos uva-ursi</i> |                | Subassociation<br>88b <i>Rhododendron<br/>groenlandicum</i> |                |
|--|--------------------------|----------------|--|----------------|---|----------------|
|  | 71 plots                 |                | 14 plots   |                | 8 plots   |                |
|  | %<br>Cover‡              | %<br>Presence^ | %<br>Cover‡  | %<br>Presence^ | %<br>Cover‡   | %<br>Presence^ |
| <b>Overstory Trees</b>   |                          |                |  |                |   |                |
| <i>Populus tremuloides</i>   | 43                       | 99             | 28   | 100            | 44  | 100            |
| <i>Betula papyrifera</i>   | 13                       | 46             | 19   | 29             | 2   | 13             |
| <i>Picea glauca</i>  | 5                        | 37             | 3  | 57             | 5   | 63             |
| <i>Pinus banksiana</i>   | 6                        | 25             | 4  | 14             | 2   | 25             |
| <i>Picea mariana</i>   | 8                        | 23             | 1  | 7              | 1   | 13             |
| <b>Tree Stratum Cover (P<sub>10</sub> P<sub>25</sub> Mean P<sub>75</sub> P<sub>90</sub>)‡</b>  | <b>(25 36 54 71 81)</b>  |                | <b>(16 24 37 42 55)</b>                              |                | <b>(34 37 49 58 68)</b>                                     |                |
| <b>Understory Woody Shrubs and Regenerating Trees</b>  |                          |                |  |                |   |                |
| <i>Vaccinium myrtilloides</i>  | 11                       | 76             | 12   | 64             | 7   | 100            |
| <i>Populus tremuloides</i>   | 3                        | 63             | 5  | 86             | 5   | 50             |
| <i>Rosa acicularis</i>   | 3                        | 59             | 5  | 57             | 2   | 75             |
| <i>Alnus viridis</i>   | 17                       | 52             | 1  | 14             | -   | -              |
| <i>Viburnum edule</i>  | 3                        | 46             | 6  | 29             | 2   | 63             |
| <i>Rhododendron groenlandicum</i>  | 14                       | 44             | 5  | 36             | 18  | 88             |
| <i>Picea glauca</i>  | 3                        | 32             | 3  | 50             | 3   | 63             |
| <i>Salix</i> sp.   | 3                        | 27             | 1  | 7              | -   | -              |
| <i>Betula papyrifera</i>   | 2                        | 27             | 5  | 21             | 2   | 38             |
| <i>Shepherdia canadensis</i>   | 5                        | 24             | 3  | 50             | 2   | 75             |
| <i>Amelanchier alnifolia</i>   | 3                        | 23             | 5  | 36             | 2   | 13             |
| <i>Salix bebbiana</i>  | 3                        | 21             | 3  | 43             | 3   | 88             |
| <i>Picea mariana</i>   | 3                        | 20             | 3  | 21             | -   | -              |
| <i>Populus balsamifera</i>   | 2                        | 14             | 3  | 21             | -   | -              |
| <i>Rosa woodsii</i>  | 5                        | 13             | 8  | 36             | 1   | 25             |
| <i>Lonicera involucrata</i>  | 1                        | 8              | 1  | 21             | 1   | 13             |
| <i>Betula nana</i>   | 1                        | 3              | -  | -              | 1   | 25             |
| <b>Shrub Stratum Cover (P<sub>10</sub> P<sub>25</sub> Mean P<sub>75</sub> P<sub>90</sub>)‡</b> | <b>(11 18 35 50 63)</b>  |                | <b>(9 14 30 48 55)</b>                               |                | <b>(13 27 37 46 57)</b>                                     |                |
| <b>Understory Herbs and Dwarf Shrubs</b>   |                          |                |  |                |   |                |
| <i>Linnaea borealis</i>  | 4                        | 86             | 3  | 71             | 4   | 75             |
| <i>Cornus canadensis</i>   | 8                        | 77             | 10   | 64             | 14  | 100            |
| <i>Vaccinium vitis-idaea</i>   | 8                        | 75             | 5  | 71             | 5   | 100            |
| <i>Chamerion angustifolium</i>   | 2                        | 69             | 2  | 71             | 4   | 75             |
| <i>Maianthemum canadense</i>   | 1                        | 66             | 1  | 79             | 3   | 38             |
| <i>Aralia nudicaulis</i>   | 5                        | 49             | 3  | 43             | -   | -              |
| <i>Arctostaphylos uva-ursi</i>   | 14                       | 44             | 32   | 71             | 1   | 13             |
| <i>Orthilia secunda</i>  | 1                        | 42             | 1  | 36             | 1   | 25             |
| <i>Lathyrus ochroleucus</i>  | 1                        | 38             | 2  | 86             | 1   | 88             |
| <i>Lysimachia borealis</i>   | 3                        | 35             | 2  | 21             | 1   | 25             |



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**Vegetation Summary (cont'd)\***

| Species Name <sup>†</sup>  | Association<br>CNVC00088 |                            | Subassociation<br>88a <i>Arctostaphylos uva-ursi</i> |                            | Subassociation<br>88b <i>Rhododendron groenlandicum</i> |                            |
|--|--------------------------|----------------------------|--|----------------------------|---|----------------------------|
|  | %<br>Cover <sup>±</sup>  | %<br>Presence <sup>^</sup> | %<br>Cover <sup>±</sup>                              | %<br>Presence <sup>^</sup> | %<br>Cover <sup>±</sup>                                 | %<br>Presence <sup>^</sup> |
| <i>Leymus innovatus</i>  | 6                        | 32                         | 5  | 57                         | 9   | 88                         |
| <i>Calamagrostis canadensis</i>  | 6                        | 32                         | 5  | 29                         | 15  | 63                         |
| <i>Petasites frigidus</i>  | 2                        | 32                         | 1  | 29                         | 3   | 88                         |
| <i>Lycopodium annotinum</i>  | 3                        | 30                         | 1  | 7                          | 2   | 13                         |
| <i>Pyrola asarifolia</i>   | 1                        | 30                         | 2  | 14                         | 2   | 50                         |
| <i>Fragaria virginiana</i>   | 2                        | 28                         | 1  | 50                         | 4   | 38                         |
| <i>Rubus pubescens</i>   | 3                        | 27                         | 1  | 14                         | 3   | 50                         |
| <i>Diphysastrum complanatum</i>  | 2                        | 25                         | 2  | 21                         | 2   | 38                         |
| <i>Galium boreale</i>  | 1                        | 25                         | 1  | 57                         | 3   | 50                         |
| <i>Geocaulon lividum</i>   | 1                        | 24                         | 1  | 14                         | 1   | 13                         |
| <i>Vicia americana</i>   | 1                        | 17                         | 1  | 36                         | 1   | 38                         |
| <i>Goodyera repens</i>   | < 1                      | 17                         | -  | -                          | 1   | 13                         |
| Poaceae  | 1                        | 15                         | -  | -                          | -   | -                          |
| <i>Campanula</i> sp.   | 1                        | 15                         | 1  | 36                         | 1   | 25                         |
| <i>Carex</i> sp.   | 1                        | 15                         | 1  | 21                         | -   | -                          |
| <i>Equisetum sylvaticum</i>  | 1                        | 14                         | 1  | 7                          | 1   | 38                         |
| <i>Achillea millefolium</i>  | 1                        | 14                         | 1  | 29                         | 1   | 25                         |
| <i>Mertensia paniculata</i>  | 2                        | 11                         | 2  | 7                          | 2   | 25                         |
| <i>Mitella nuda</i>  | 1                        | 11                         | 1  | 21                         | 1   | 13                         |
| <i>Equisetum arvense</i>   | 1                        | 11                         | 1  | 14                         | 1   | 38                         |
| <i>Symphotrichum ciliolatum</i>  | 1                        | 10                         | 2  | 14                         | 1   | 38                         |
| <i>Pedicularis labradorica</i>   | 1                        | 8                          | 1  | 21                         | 1   | 38                         |
| <i>Vaccinium caespitosum</i>   | 2                        | 7                          | 1  | 7                          | 2   | 38                         |
| <i>Equisetum pratense</i>  | 1                        | 7                          | 1  | 21                         | 1   | 13                         |
| <i>Lycopodium clavatum</i>   | 2                        | 4                          | -  | -                          | 3   | 25                         |
| <b>Herb Stratum Cover (P<sub>10</sub> P<sub>25</sub> Mean P<sub>75</sub> P<sub>90</sub>)<sup>‡</sup></b> | <b>(8 19 39 52 82)</b>   |                            | <b>(12 18 51 71 93)</b>                              |                            | <b>(22 23 55 95 99)</b>                                 |                            |
| <b>Bryophytes and Lichens</b>  |                          |                            |  |                            |   |                            |
| <i>Pleurozium schreberi</i>  | 7                        | 75                         | 10   | 43                         | 15  | 88                         |
| <i>Hylocomium splendens</i>  | 7                        | 70                         | 4  | 57                         | 19  | 63                         |
| <i>Cladonia</i> sp.  | 2                        | 61                         | 2  | 36                         | 2   | 13                         |
| <i>Cladina mitis</i>   | 2                        | 49                         | 2  | 50                         | 1   | 38                         |
| <i>Dicranum polysetum</i>  | 1                        | 46                         | 2  | 7                          | 1   | 25                         |
| <i>Pylaisia polyantha</i>  | 1                        | 42                         | 5  | 21                         | 4   | 25                         |
| <i>Dicranum</i> sp.  | 1                        | 38                         | -  | -                          | -   | -                          |
| <i>Peltigera</i> sp.   | 1                        | 38                         | -  | -                          | -   | -                          |
| <i>Ptilium crista-castrensis</i>   | 3                        | 35                         | 1  | 29                         | 2   | 13                         |
| <i>Sanionia uncinata</i>   | 1                        | 34                         | -  | -                          | -   | -                          |
| <i>Brachythecium salebrosum</i>  | 1                        | 28                         | -  | -                          | 2   | 13                         |
| <i>Parmelia sulcata</i>  | 1                        | 28                         | -  | -                          | -   | -                          |
| <i>Polytrichum juniperinum</i>   | 1                        | 25                         | -  | -                          | 1   | 13                         |
| <i>Evernia mesomorpha</i>  | 1                        | 25                         | -  | -                          | -   | -                          |
| <i>Polytrichum</i> sp.   | < 1                      | 24                         | -  | -                          | -   | -                          |
| <i>Hypogymnia physodes</i>   | 1                        | 23                         | -  | -                          | -   | -                          |
| <i>Pohlia nutans</i>   | 1                        | 23                         | -  | -                          | -   | -                          |
| <i>Ptilidium ciliare</i>   | 1                        | 21                         | -  | -                          | -   | -                          |
| <i>Dicranum scoparium</i>  | 1                        | 20                         | 1  | 7                          | -   | -                          |



***Populus tremuloides* / *Vaccinium myrtilloides* / *V. vitis-idaea* CNVC00088**

**Vegetation Summary (cont'd)\***

| Species Name <sup>†</sup>   | Association<br>CNVC00088 |                            | Subassociation<br>88a <i>Arctostaphylos uva-ursi</i> |                            | Subassociation<br>88b <i>Rhododendron<br/>groenlandicum</i> |                            |
|---|--------------------------|----------------------------|--|----------------------------|---|----------------------------|
|   | %<br>Cover <sup>‡</sup>  | %<br>Presence <sup>^</sup> | %<br>Cover <sup>‡</sup>                              | %<br>Presence <sup>^</sup> | %<br>Cover <sup>‡</sup>                                     | %<br>Presence <sup>^</sup> |
| <i>Peltigera aphthosa</i>   | 1                        | 18                         | 1  | 36                         | 2   | 38                         |
| <i>Amblystegium serpens</i>   | 1                        | 18                         | -  | -                          | -   | -                          |
| <i>Ptilidium pulcherrimum</i>   | 1                        | 18                         | -  | -                          | -   | -                          |
| <i>Vulpicida pinastri</i>   | 1                        | 18                         | -  | -                          | -   | -                          |
| <i>Bellemeria cinereorufescens</i>  | 1                        | 15                         | -  | -                          | -   | -                          |
| <i>Eurhynchium pulchellum</i>   | 1                        | 15                         | -  | -                          | -   | -                          |
| <i>Stereocaulon tomentosum</i>  | 1                        | 15                         | 1  | 7                          | -   | -                          |
| <i>Usnea hirta</i>  | 1                        | 15                         | -  | -                          | -   | -                          |
| <b>Bryo-Lichen Stratum Cover</b>  |                          |                            |  |                            |   |                            |
| <b>(P<sub>10</sub> P<sub>25</sub> Mean P<sub>75</sub> P<sub>90</sub>)<sup>‡</sup></b> | <b>(3 6 20 25 42)</b>    |                            | <b>(2 3 11 14 29)</b>                                |                            | <b>(2 4 29 45 76)</b>                                       |                            |

\* species present in > 20% of sample plots are listed

<sup>†</sup> see **Botanical Nomenclature** link at <http://cnvc-cnvc.ca> for botanical sources, synonyms and common names

<sup>‡</sup> average percent cover of a species within the plots in which it occurs (i.e., characteristic cover)

<sup>^</sup> percent frequency occurrence for a species within the total plots

<sup>‡</sup> P<sub>x</sub> = X<sup>th</sup> percentile (e.g., P<sub>10</sub> = 10<sup>th</sup> percentile)



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Trembling Aspen / Velvet-leaved Blueberry / Lingonberry

Peuplier faux-tremble / Bleuet fausse-myrtille / Airelle rouge

Vegetation Summary (cont'd)\*

Subassociation  
 88c *Alnus viridis*

49 plots

| Species Name†  | % Cover‡                | % Presence^ |
|--|-------------------------|-------------|
| <b>Overstory Trees</b>   |                         |             |
| <i>Populus tremuloides</i>   | 47                      | 98          |
| <i>Betula papyrifera</i>   | 12                      | 57          |
| <i>Picea glauca</i>  | 5                       | 27          |
| <i>Pinus banksiana</i>   | 7                       | 29          |
| <i>Picea mariana</i>   | 9                       | 29          |
| <b>Tree Stratum Cover (P<sub>10</sub> P<sub>25</sub> Mean P<sub>75</sub> P<sub>90</sub>)‡</b>  | <b>(33 42 60 75 83)</b> |             |
| <b>Understory Woody Shrubs and Regenerating Trees</b>  |                         |             |
| <i>Vaccinium myrtilloides</i>  | 11                      | 76          |
| <i>Populus tremuloides</i>   | 2                       | 59          |
| <i>Rosa acicularis</i>   | 2                       | 57          |
| <i>Alnus viridis</i>   | 18                      | 71          |
| <i>Viburnum edule</i>  | 2                       | 49          |
| <i>Rhododendron groenlandicum</i>  | 15                      | 39          |
| <i>Picea glauca</i>  | 2                       | 22          |
| <i>Salix</i> sp.   | 3                       | 37          |
| <i>Betula papyrifera</i>   | 1                       | 27          |
| <i>Shepherdia canadensis</i>   | 14                      | 8           |
| <i>Amelanchier alnifolia</i>   | 2                       | 20          |
| <i>Salix bebbiana</i>  | 1                       | 4           |
| <i>Picea mariana</i>   | 3                       | 22          |
| <i>Populus balsamifera</i>   | 1                       | 14          |
| <i>Rosa woodsii</i>  | 2                       | 4           |
| <i>Lonicera involucrata</i>  | 2                       | 4           |
| <i>Betula nana</i>   | -                       | -           |
| <b>Shrub Stratum Cover (P<sub>10</sub> P<sub>25</sub> Mean P<sub>75</sub> P<sub>90</sub>)‡</b> | <b>(12 18 36 50 73)</b> |             |
| <b>Understory Herbs and Dwarf Shrubs</b>   |                         |             |
| <i>Linnaea borealis</i>  | 4                       | 92          |
| <i>Cornus canadensis</i>   | 6                       | 78          |
| <i>Vaccinium vitis-idaea</i>   | 9                       | 71          |
| <i>Chamerion angustifolium</i>   | 2                       | 67          |
| <i>Maianthemum canadense</i>   | 1                       | 67          |
| <i>Aralia nudicaulis</i>   | 6                       | 59          |
| <i>Arctostaphylos uva-ursi</i>   | 7                       | 41          |
| <i>Orthilia secunda</i>  | 1                       | 47          |
| <i>Lathyrus ochroleucus</i>  | 2                       | 16          |
| <i>Lysimachia borealis</i>   | 3                       | 41          |



***Populus tremuloides* / *Vaccinium myrtilloides* / *V. vitis-idaea* CNVC00088**

**Vegetation Summary (cont'd)\***

| Species Name <sup>†</sup>  | Subassociation<br>88c <i>Alnus viridis</i> |                            |
|--|--|----------------------------|
|  | %<br>Cover <sup>‡</sup>                    | %<br>Presence <sup>^</sup> |
| <i>Leymus innovatus</i>  | 4  | 16                         |
| <i>Calamagrostis canadensis</i>  | 3  | 29                         |
| <i>Petasites frigidus</i>  | 3  | 24                         |
| <i>Lycopodium annotinum</i>  | 3  | 39                         |
| <i>Pyrola asarifolia</i>   | 1  | 31                         |
| <i>Fragaria virginiana</i>   | 1  | 20                         |
| <i>Rubus pubescens</i>   | 3  | 27                         |
| <i>Diphasiastrum complanatum</i>   | 2  | 24                         |
| <i>Galium boreale</i>  | 1  | 12                         |
| <i>Geocaulon lividum</i>   | 1  | 29                         |
| <i>Vicia americana</i>   | 1  | 8                          |
| <i>Goodyera repens</i>   | < 1  | 22                         |
| Poaceae  | 1  | 22                         |
| <i>Campanula</i> sp.   | < 1  | 8                          |
| <i>Carex</i> sp.   | 1  | 16                         |
| <i>Equisetum sylvaticum</i>  | 2  | 12                         |
| <i>Achillea millefolium</i>  | 1  | 8                          |
| <i>Mertensia paniculata</i>  | 2  | 10                         |
| <i>Mitella nuda</i>  | 1  | 8                          |
| <i>Equisetum arvense</i>   | < 1  | 6                          |
| <i>Symphyotrichum ciliolatum</i>   | 1  | 4                          |
| <i>Pedicularis labradorica</i>   | -  | -                          |
| <i>Vaccinium caespitosum</i>   | 2  | 2                          |
| <i>Equisetum pratense</i>  | 1  | 2                          |
| <i>Lycopodium clavatum</i>   | 1  | 2                          |
| <b>Herb Stratum Cover (P<sub>10</sub> P<sub>25</sub> Mean P<sub>75</sub> P<sub>90</sub>)<sup>‡</sup></b> | <b>(7 17 33 42 60)</b>                     |                            |
| <b>Bryophytes and Lichens</b>  |  |                            |
| <i>Pleurozium schreberi</i>  | 5  | 82                         |
| <i>Hylocomium splendens</i>  | 5  | 76                         |
| <i>Cladonia</i> sp.  | 2  | 76                         |
| <i>Cladina mitis</i>   | 2  | 51                         |
| <i>Dicranum polysetum</i>  | 1  | 61                         |
| <i>Pylaisia polyantha</i>  | 1  | 51                         |
| <i>Dicranum</i> sp.  | 1  | 55                         |
| <i>Peltigera</i> sp.   | 1  | 55                         |
| <i>Ptilium crista-castrensis</i>   | 3  | 41                         |
| <i>Sanionia uncinata</i>   | 1  | 49                         |
| <i>Brachythecium salebrosum</i>  | 1  | 39                         |
| <i>Parmelia sulcata</i>  | 1  | 41                         |
| <i>Polytrichum juniperinum</i>   | 1  | 35                         |
| <i>Evernia mesomorpha</i>  | 1  | 37                         |
| <i>Polytrichum</i> sp.   | < 1  | 35                         |
| <i>Hypogymnia physodes</i>   | 1  | 33                         |
| <i>Pohlia nutans</i>   | 1  | 33                         |
| <i>Ptilidium ciliare</i>   | 1  | 31                         |
| <i>Dicranum scoparium</i>  | 1  | 27                         |





***Populus tremuloides* / *Vaccinium myrtilloides* / *V. vitis-idaea* CNVC00088**

**Vegetation Summary (cont'd)\***

| Species Name <sup>†</sup>  | Subassociation<br>88c <i>Alnus viridis</i> |                            |
|--|--|----------------------------|
|  | %<br>Cover <sup>‡</sup>                    | %<br>Presence <sup>^</sup> |
| <i>Peltigera aphthosa</i>  | 1  | 10                         |
| <i>Amblystegium serpens</i>  | 1  | 27                         |
| <i>Ptilidium pulcherrimum</i>  | 1  | 27                         |
| <i>Vulpicida pinastri</i>  | 1  | 27                         |
| <i>Bellemeria cinereorufescens</i>   | 1  | 22                         |
| <i>Eurhynchium pulchellum</i>  | 1  | 22                         |
| <i>Stereocaulon tomentosum</i>   | < 1  | 20                         |
| <i>Usnea hirta</i>   | 1  | 22                         |
| <b>Bryo-Lichen Stratum Cover</b><br>(P <sub>10</sub> P <sub>25</sub> Mean P <sub>75</sub> P <sub>90</sub> ) <sup>‡</sup> | <b>(4 9 21 25 42)</b>                      |                            |

\* species present in > 20% of sample plots are listed

<sup>†</sup> see **Botanical Nomenclature** link at <http://cnvc-cnvc.ca> for botanical sources, synonyms and common names

<sup>‡</sup> average percent cover of a species within the plots in which it occurs (i.e., characteristic cover)

<sup>^</sup> percent frequency occurrence for a species within the total plots

<sup>‡</sup> P<sub>x</sub> = X<sup>th</sup> percentile (e.g., P<sub>10</sub> = 10<sup>th</sup> percentile)



Forest / Forêt

Association CNVC00088

*Populus tremuloides* / *Vaccinium myrtilloides* / *V. vitis-idaea*

Trembling Aspen / Velvet-leaved Blueberry / Lingonberry

Peuplier faux-tremble / Bleuet fausse-myrtille / Airelle rouge

Site / Soil Characteristics

|  | Association<br>CNVC00088  | Subassociation<br>88a <i>Arctostaphylos uva-ursi</i>  | Subassociation<br>88b <i>Rhododendron groenlandicum</i>                                     |
|--|---|---|---|
|  | 71 plots  | 14 plots  | 8 plots   |
| <b>Elevation Range (min–mean–max meters)</b> | 225–498–1100<br>missing data (6)  | 260–622–1015<br>missing data (7)  | 332–606–800<br>missing data (0)   |
| <b>Slope Gradient (% frequency)</b>          | steep (6)<br>moderately steep (6)<br>moderate (10)<br>gentle (13)<br><b>level (66)</b>      | steep (0)<br>moderately steep (7)<br>moderate (0)<br>gentle (14)<br><b>level (79)</b>       | steep (0)<br>moderately steep (0)<br>moderate (0)<br>gentle (13)<br><b>level (88)</b>       |
| <b>Aspect (% frequency)</b>                  | north (18)<br><b>east (23)</b><br>south (17)<br>west (20)<br>level (21)<br>missing data (1) | <b>north (29)</b><br>east (14)<br>south (21)<br>west (21)<br>level (14)<br>missing data (0) | north (25)<br>east (25)<br>south (0)<br>west (13)<br>level (25)<br>missing data (13)        |
| <b>Meso Topoposition (% frequency)</b>       | <b>crest / upper (34)</b><br>mid (25)<br>lower / toe (8)<br>level (21)<br>missing data (11) | <b>crest / upper (36)</b><br>mid (7)<br>lower / toe (7)<br>level (14)<br>missing data (36)  | crest / upper (13)<br>mid (25)<br>lower / toe (0)<br><b>level (50)</b><br>missing data (13) |
| <b>Moisture Regime (% frequency)</b>         | very dry (1)<br><b>dry (52)</b><br>mesic (42)<br>moist (4)                                  | very dry (0)<br><b>dry (57)</b><br>mesic (43)<br>moist (0)                                  | very dry (0)<br>dry (13)<br><b>mesic (88)</b><br>moist (0)                                  |
| <b>Nutrient Regime (% frequency)</b>         | poor (24)<br>medium (18)<br>rich (4)<br>missing data (54)                                   | <b>poor (50)</b><br>medium (43)<br>rich (7)<br>missing data (0)                             | poor (50)<br>medium (50)<br>rich (0)<br>missing data (0)                                    |



***Populus tremuloides* / *Vaccinium myrtilloides* / *V. vitis-idaea* CNVC00088**

**Site / Soil Characteristics (cont'd)**

|  | Association<br>CNVC00088   | Subassociation<br>88a <i>Arctostaphylos uva-ursi</i>   | Subassociation<br>88b <i>Rhododendron groenlandicum</i>   |
|--|--|--|---|
| <b>Soil Parent Material (% frequency)</b>        | colluvium (1)<br>eolian (4)<br>moraine / till (38)<br>fluvial (10)<br>glaciofluvial (38)<br>lacustrine (4)<br>glaciolacustrine (4) | colluvium (0)<br>eolian (21)<br>moraine / till (0)<br>fluvial (7)<br><b>glaciofluvial (64)</b><br>lacustrine (0)<br>glaciolacustrine (7) | colluvium (0)<br>eolian (0)<br>moraine / till (25)<br>fluvial (25)<br><b>glaciofluvial (50)</b><br>lacustrine (0)<br>glaciolacustrine (0) |
| <b>Soil Rooting Zone Substrate (% frequency)</b> | non-soil (1)<br>sandy (13)<br>coarse loamy (4)<br>fine loamy (6)<br>silty (3)<br>clayey (4)<br>missing data (69)                   | non-soil (0)<br>sandy (36)<br>coarse loamy (7)<br>fine loamy (0)<br>silty (7)<br>clayey (0)<br>missing data (50)                         | non-soil (0)<br>sandy (13)<br>coarse loamy (13)<br><b>fine loamy (38)</b><br>silty (0)<br>clayey (13)<br>missing data (25)                |
| <b>Root Restricting Depth (% frequency)</b>      | 0 – 20 cm (1)<br>21 – 99 cm (13)<br>≥ 100 cm (39)<br>missing data (46)   | 0 – 20 cm (0)<br>21 – 99 cm (0)<br>≥ 100 cm (0)<br>missing data (100)  | 0 – 20 cm (0)<br>21 – 99 cm (0)<br>≥ 100 cm (0)<br>missing data (100)   |
| <b>Humus Form (% frequency)</b>                  | <b>mor (76)</b><br>missing data (24)   | mor (50)<br>missing data (50)  | <b>mor (63)</b><br>missing data (38)  |



Forest / Forêt

Association CNVC00088

*Populus tremuloides* / *Vaccinium myrtilloides* / *V. vitis-idaea*

Trembling Aspen / Velvet-leaved Blueberry / Lingonberry

Peuplier faux-tremble / Bleuets fausse-myrtille / Airelle rouge

### Site / Soil Characteristics (cont'd)

Subassociation  
88c *Alnus viridis*

49 plots

#### Elevation Range (min–mean–max meters)

225–444–1100  
missing data (6)

#### Slope Gradient (% frequency)

steep (8)  
moderately steep (6)  
moderate (14)  
gentle (12)  
**level (59)**

#### Aspect (% frequency)

north (14)  
**east (24)**  
south (18)  
west (20)  
level (22)  
missing data (0)

#### Meso Toposition (% frequency)

**crest / upper (37)**  
mid (31)  
lower / toe (10)  
level (18)  
missing data (4)

#### Moisture Regime (% frequency)

very dry (2)  
**dry (57)**  
mesic (35)  
moist (6)

#### Nutrient Regime (% frequency)

poor (12)  
medium (6)  
rich (4)  
missing data (78)



***Populus tremuloides* / *Vaccinium myrtilloides* / *V. vitis-idaea* CNVC00088**

**Site / Soil Characteristics (cont'd)**

Subassociation  
88c *Alnus viridis*

**Soil Parent Material (% frequency)**

colluvium (2)  
eolian (0)  
**moraine / till (51)**  
fluvial (8)  
glaciofluvial (29)  
lacustrine (6)  
glaciolacustrine (4)

**Soil Rooting Zone Substrate (% frequency)**

non-soil (2)  
sandy (6)  
coarse loamy (2)  
fine loamy (2)  
silty (2)  
clayey (4)  
missing data (82)

**Root Restricting Depth (% frequency)**

0 – 20 cm (2)  
21 – 99 cm (18)  
**≥ 100 cm (57)**  
missing data (22)

**Humus Form (% frequency)**

**mor (86)**  
missing data (14)



**Forest / Forêt**

**Association CNVC00088**

***Populus tremuloides* / *Vaccinium myrtilloides* / *V. vitis-idaea***

**Trembling Aspen / Velvet-leaved Blueberry / Lingonberry**

**Peuplier faux-tremble / Bleuet fausse-myrtille / Airelle rouge**

**Additional Characteristics**

**Species of High Conservation Concern:**

**Non-native Species:**

**Management Issues:**

**Type Statistics**

**Internal Similarity:**

**Confidence:**

**Strength:**

**Related Concepts**

**Similar CNVC Associations:**

CNVC00125 [*Populus tremuloides* – *Pinus banksiana* / *Vaccinium myrtilloides* / *V. vitis-idaea*] is a similar mixedwood Association that occurs on comparable sites in the same range.

CNVC00265 [*Populus tremuloides* / *Amelanchier alnifolia* / *Poaceae*] occurs on the boreal plains of Saskatchewan, south of the range of CNVC00088, on comparable sites and has *Amelanchier alnifolia* dominant in the shrub layer.

CNVC00268 [*Populus tremuloides* / *Rhododendron groenlandicum* / *Vaccinium vitis-idaea*] occurs in British Columbia on mesic to moist boreal sites. It has a more open canopy, more *Viburnum edule* and *Shepherdia canadensis* in the shrub layer and more *Hylocomium splendens* relative to *Pleurozium schreberi* in the moss layer.

CNVC00305 [*Populus tremuloides* / *Alnus viridis* (*Rosa acicularis*)] occurs in southeastern Manitoba and northwestern Ontario on mesic (not dry) sites and has more *Picea mariana* regeneration, often a dense tall shrub layer and little to no *Vaccinium vitis-idaea*.

**Related United States National Vegetation Classification Associations:**

**Relationships with Other Classifications:**

**Comments**

**Source Information**

**Number of source plots for CNVC00088:** 71

**Number of source plots for 88a *Arctostaphylos uva-ursi*:** 14

**Number of source plots for 88b *Rhododendron groenlandicum*:** 8

**Number of source plots for 88c *Alnus viridis*:** 49

**Information Sources:**

Alberta Environment and Parks. 2014. Ecological Site Information System (ESIS). Govt. AB, Edmonton, AB.

McLaughlan, M.S.; Wright, R.A.; Jiricka, R.D. 2010. Saskatchewan forest ecosystem classification [data set]. Sask. Min. Environ. For. Serv., Prince Albert, SK.

**Concept Authors:** L. Allen, K. Baldwin, K. Chapman, M. McLaughlan

**Description Authors:** K. Chapman and K. Baldwin

**Date of Concept:** November, 2011

**Date of Description:** February, 2016



# Canadian National Vegetation Classification (CNVC) Classification nationale de la végétation du Canada (CNVC)

<http://cnvc-cnvc.ca>

## *Populus tremuloides* / *Vaccinium myrtilloides* / *V. vitis-idaea* CNVC00088

### Classification References:

Beckingham, J.D.; Archibald, J.H. 1996. Field guide to ecosites of northern Alberta. Nat. Resour. Can., Can. For. Serv., North. For. Cent., Edmonton, AB. Spec. Rep. 5.

Beckingham, J.D.; Corns, I.G.W.; Archibald, J.H. 1996. Field guide to ecosites of west-central Alberta. Nat. Resour. Can., Can. For. Serv., North. For. Cent., Edmonton, AB. Spec. Rep. 9.

McLaughlan, M.S.; Wright, R.A.; Jiricka, R.D. 2010. Field guide to the ecosites of Saskatchewan's provincial forests. Sask. Min. Environ., For. Serv., Prince Albert, SK.

### Characterization References:

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Stockdale, C. 2014. Fire regimes of western boreal Canada and the foothills of Alberta. A discussion document and literature review for the LANDWEB Project.

Zoladeski, C.A.; Wickware, G.M.; Delorme, R.J.; Sims, R.A.; Corns, I.G.W. 1995. Forest ecosystem classification for Manitoba: field guide. Nat. Res. Can., Can. For. Serv., North. For. Centre, Edmonton, AB. Special Rep. 2.

The information contained in this factsheet is based on data and expert knowledge that is current to the date of description. As new information becomes available, the factsheet will be updated.

For more information about the contents of this factsheet and definitions of attribute names and data classes, see the **Understanding the Factsheet** link at <http://cnvc-cnvc.ca>.

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