ICHg2: LOWER NASS BASIN VARIANT

/01 ZONAL HEMLOCK - (CEDAR) - MOSS ECOSYSTEM ASSOCIATION (219) 

ECOLOGICAL MOISTURE REGIME:
mesic - (subhygric)

ECOLOGICAL NUTRIENT REGIME:
mesotrophic - permesotrophic

DISTRIBUTION: common and widely distributed throughout the ICHg2, covering a significant portion of the landscape.

PHYSIOGRAPHIC FEATURES:
Slope position: upper, middle, and lower slopes; occasionally on benches, terraces, or valley floor.
Slope range: gentle to moderately sloping, rarely flat or very steep.
Surface shape: straight, irregular or smooth; occasionally slightly concave or convex.
Landforms: morainal and colluvial blankets (veneers); rarely lacustrine or fluvial deposits.

¹⁰Number in parentheses is the page number of appropriate silvicultural prescriptions.
ICHg2/01 ZONAL HEMLOCK - (CEDAR) - MOSS ECOSYSTEM ASSOCIATION

VEGETATION:

Trees: larger, wider spacing than in Dry hemlock - moss e.a.
- usually dominant cover
  western hemlock (Tsuga heterophylla)
  western redcedar (Thuja plicata)
  [lodgepole pine (Pinus contorta)] - seral remnants in or above main canopy
  [hybrid spruce (Picea glauca x sitchensis)]
  [subalpine fir (Abies lasiocarpa)] - tallest tree when present

Shrubs: very poorly developed layer, frequently absent; primarily coniferous regeneration.
- scattered individuals, low vigour
  black huckleberry (Vaccinium membranaceum)
  false azalea (Menziesia ferruginea)
  falsebox (Paxistima myrsinites)

Herbs: poorly to moderately well-developed layer.
- generally good vigour
  prince's pine (Chimaphila umbellata)
  bunchberry (Cornus canadensis)
  one-sided wintergreen (Orthilia secunda)
  queen's cup (Clintonia uniflora)
  rattlesnake plantain (Goodyera oblongifolia)
  [wild sarsaparilla (Aralia nudicaulis)] - important in some stands

Moss layer: well-developed moss cover except where there is a heavy cover of cedar.
- Hylocomium splendens
- Ptilium crista-castrensis
- Rhytidadelphus triquetrus
- Pleurozium schreberi

Remarks: Cedar is a component of the main tree canopy and dominates the cover in a few stands belonging to the Zonal hemlock - (cedar) - moss ecosystem association. Its growth, however, is still generally slower than that of hemlock. Pine seems to have faster initial growth than spruce, but spruce sustains its rate of growth and is the largest tree in mature stands.
SOILS: Soil profiles have characteristic fine textured subsurface horizons (Bt) showing evidence of downward clay movement in the form of clay skins on ped surfaces and/or in pores. Coarse textured soils are uncommon on these mid-slope morainal deposits. Clayey Bt horizons are overlain by loamy, light brown (Bm) or yellowish-brown (Bf) mineral horizons. Some temporary seepage and/or mottles may be present in lower mineral horizons. Surface organic horizons range in depth from 5 to 15 cm and are in a moderate stage of decomposition.

Soil Classification: Brunisolic and Podzolic Gray Luvisols (Kispiox, Suskwa Valleys) with a minor occurrence of Gleyed subgroups of Luvisols, Brunisols, and Podzols (Nass Valley).

Humus Form Classification: Orthihemihemors.

Schematic Profile:

<table>
<thead>
<tr>
<th>Horizon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>slightly to moderately decomposed; medium brown; plentiful medium, coarse roots; matted.</td>
</tr>
<tr>
<td>H</td>
<td>well-decomposed; dark brown; some incorporation of mineral grains.</td>
</tr>
<tr>
<td>Bf</td>
<td>yellowish-brown (Bf) to brown (Bm); sandy loam to silt loam; plentiful medium roots.</td>
</tr>
<tr>
<td>AB</td>
<td>olive brown to brownish-gray; few fine, medium roots; angular to massive structure; may contain mottles.</td>
</tr>
<tr>
<td>Bt</td>
<td>dark grayish brown; loam to clay loam; angular to massive; clay skins may occur on coarse fragments and/or in pores; few roots.</td>
</tr>
</tbody>
</table>

Podzolic Gray Luvisol

Average pH: mineral horizons - 5.1
organic horizons - 3.8

Key Characteristics:
- fine textured subsurface horizons are common.
- subsurface horizons may become compact and impenetrable to roots, particularly when dry or wet.
- effective rooting generally shallow with majority of roots in the upper 25 cm of mineral soil.
- mottling may occur in lower horizons (AB, Bt).
Comments: Because of the relatively fine soil textures and lower to middle slope positions, nutrient cations should be readily available to vegetation, particularly in the surface mineral horizons.
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/02 PINE - LICHEN ECOSYSTEM ASSOCIATION (220)

Remarks: This ecosystem association has a limited distribution in the ICHg2 variant, and is unimportant for forest management. It includes ecosystems on the very driest and nutrient-poor rock outcrops, ridges, and outwash terraces where lodgepole pine is maintained as a result of repeated fire. Most dry pine stands in the ICHg2 do not belong to this seral ecosystem association, but merely represent seral variations of the Dry hemlock-moss ecosystem association (ICHg2/03).

For a complete description and management interpretations of the Pine-lichen e.a. refer to the corresponding ecosystem unit in the g3 (Hazelton) variant (ICHg3/02).
ECOLOGICAL MOISTURE REGIME:  
(subxeric) - submesic

ECOLOGICAL NUTRIENT REGIME:  
submesotrophic - (mesotrophic)

DISTRIBUTION: very common and widely distributed throughout the ICHg2; covering a major portion of the landscape.

PHYSIOGRAPHIC FEATURES:  
Slope position: upper slopes and ridge crests, extending to mid-slope, benches, terraces; often moisture-sheding positions.  
Slope range: level to very steep (0 - 75%).  
Surface shape: straight or convex, flat; very rarely concave.  
Landforms: morainal and colluvial veneers and blankets; coarse textured glaciofluvial (kame) deposits.
ICHg2/03 DRY HEMLOCK - MOSS ECOSYSTEM ASSOCIATION

VEGETATION:

Trees: typically small, dense stocking.
western hemlock (Tsuga heterophylla) - dominant cover
lodgepole pine (Pinus contorta) - scattered in and above main canopy

[subalpine fir (Abies lasiocarpa)] - poor growth, generally restricted to subcanopy layers
[western redcedar (Thuja plicata)]

[hybrid spruce (Picea glauca x sitchensis ? x engelmannii)] - scattered, poor vigour but still taller than hemlock

Shrubs: a very poorly developed layer, frequently absent; little advance regeneration.
black huckleberry (Vaccinium membranaceum) - scattered, low vigour
false azalea (Menziesia ferruginea)
[Saskatoon (Amelanchier alnifolia)] - seral remnants, dying out

Douglas maple (Acer glabrum)

Herbs: a very poorly developed layer, occasionally absent; may include one or more of:
bunchberry (Cornus canadensis) - scattered individuals or small patches
[prince's pine (Chimaphila umbellata)]
[one-sided wintergreen (Orthilia secunda)] - patches of low vigour
[green wintergreen (Pyrola chlorantha)]
twinflower (Linnaea borealis)
rattlesnake plantain (Goodyera oblongifolia)
[round-leaved rein-orchid (Platanthera orbiculata)]

Moss layer: generally a well-developed, solid carpet of feather mosses.
Hylocomium splendens
Pleurozium schreberi
Ptilium crista-castrensis
Rhytidiadelphus triquetrus

Remarks: Dry hemlock - moss ecosystem association represents submesic-to-mesic and drier ecosystems with a relatively poor nutrient status. The dominant visual features of this e.a. are the rather poor tree growth in stands that are often dense, and a very bare understory containing little more than a carpet of feather moss. Hemlock dominates climax stands. Pine is its most frequent associate and tends to be the dominant cover in seral stands belonging to this e.a. Pine also appears to be the fastest growing tree in this unit. Small, suppressed cedar are quite common below the main canopy but they rarely reach a co-dominant position in the stand. Spruce are infrequent and have low vigour.