

BEC-Tree Species Description: ICHmc2

Mature to old forests comprise about 46% of the ICHmc2 forested landscape. Immature stands resulting mainly from wildfire make up about 33% of the forested area and the bulk of these forests are age class 4 to 6. Timber harvesting has resulted in 21% of the landscape being in age class 1 to 3 managed stands. Mature forests contain a diversity of species but are usually western hemlock-dominated (41 to 53%¹). Other species include hybrid spruce (9 to 16%¹), subalpine fir (+/-8%), lodgepole pine (+/-7%), western redcedar (5 to 16%¹), and deciduous species (7 to 24%¹; cottonwood, aspen, and paper birch). Immature natural stands are often dominated by deciduous species (51%; mainly aspen and birch) but many have a coniferous component as well – dominantly western hemlock, lodgepole pine, and hybrid spruce. Some younger, dense, fire-regenerated stands are pure hemlock.

Age class distribution as a % of total forest area [Source: VRIMS 2008]

Stand age class	7-9 natural forest	7-9 harvested forest	4-6 natural forest	4-6 harvested forest	1-3 natural forest	1-3 harvested forest
% of total forest area	46	0	30	0	3	21

Tree species distribution in natural old/mature (age class 7-9) and natural immature (age class 4-6) as a % of the total natural old/mature and natural immature forest cover respectively [Source: VRIMS 2008]

Species	Hw	Sx	Bl	Pl	Cw	Deciduous
% of total natural old/mature (age class 7-9) forest cover	41	16	8	7	5	24
% of total natural immature (age class 4-6) forest cover	20	8	2	16	3	51

Immature stands resulting from timber harvesting are spruce and pine dominated (about 25% for each species) but often with a western hemlock (17 to 24%²) and deciduous (11 to 20%²) component. Western redcedar and subalpine fir tend to be minor species in the regenerated blocks (4 to 5%² and 4 to 7%² respectively).

¹ Range of values reflects differences between VRIMS and BEC data sources; see Mah et al 2012, A Landscape-level Species Strategy for Forest Management in British Columbia: Exploration of Development and Implementation Issues, Appendix 2 Landscape species selection Pilot Project in the Interior Cedar-Hemlock Zone, moist cold subzone, Hazelton variant (ICHmc2), Tech Report 067. There are some differences in the percentages presented here vs. the ICH pilot project due to slightly different methods of data analysis/summary.

² Range of values reflects differences between VRIMS and RESULTS data sources.

% species composition of post-harvested stands [Source: RESULTS 1988-2007]

Species	Sx	PI	Hw	Cw	B	Deciduous
% of harvested area	26	26	24	5	7	11

With 21% of the ICHmc2 landscape in managed second growth, landscape level species composition and diversity has been considerably impacted by regeneration management strategies. While tree species diversity is often higher in managed second growth stands, compared with the hemlock-dominated old stands, there has been an over-emphasis on spruce and pine and an under-emphasis on western redcedar and subalpine fir. Western hemlock has maintained considerable presence in managed stands due to its high natural regeneration capacity. Future management should consider greater use of western redcedar and subalpine fir and decreased use of lodgepole pine due to the demonstrated impact of *Dothistroma* needle blight on this species in the ICHmc2.

Author: A. Banner (March 2011)

Note: the above write-up does not account for TFL forest cover/regeneration information. This is not expected to impact significantly on the tree species and age class percentages stated above.