

## **Appendix C: Even Aged Stocking Standards**



**CWHwh1 – even aged**

Site Series	Species and Min. FG height (m)	Target Stocking Standard (sph)	Min Stocking Standard (sph)	Min Inter-tree Distance (m)	Regen Date (years)	FTG (years)
01	Hw/2.0	900	500	2.00 (Dr/1.5)	6	20
	Ss/3.0					
	Cw/1.2					
	Dr/4.0					
01s	Hw/2.0	900	500	2.00	6	20
	Cw/1.2					
	Ss/3.0					
	Plc/2.0					
02	Cw/1.2	900	500	2.00	6	20
	Hw/1.3					
	Plc/1.3					
	Ss/2.0					
03	Ss/3.0	900	500	2.00 (Dr/1.5)	6	20
	Cw/2.0					
	Hw/2.8					
	Yc/1.2					
	Dr/4.0					
04	Cw/1.2	900	500	2.00 (Dr/1.5)	6	20
	Hw/1.3					
	Yc/1.2					
	Plc/1.3					
	Ss/2.0					
	Dr/4.0					
05	Hw/2.8	900	500	2.00 (Dr/1.5)	6	20
	Cw/1.2					
	Ss/3.0					
	Dr/4.0					
06	Hw/2.8	800	400	1.50	6	20
	Cw1.2					
	Yc/1.2					
	Ss/3.0					
	Hm/2.8					
	Dr/4.0					
07	Ss/3.0	900	500	2.00 (Dr/1.5)	6	20
	Cw/2.0					
	Hw/2.8					
	Dr4.0					
08	Ss/3.0	900	500	2.00 (Dr/1.5)	6	20
	Cw/2.0					
	Dr/4.0					

Site Series	Species and Min. FG height (m)	Target Stocking Standard (sph)	Min Stocking Standard (sph)	Min Inter-tree Distance (m)	Regen Date (years)	FTG (years)
10	Cw/1.2	800	400	1.50	6	20
	Yc/1.2					
	Hw/1.3					
	Plc/1.3					
	Ss/2.0					
	Hm/0.8					
11	Plc/1.3	400	200	1.50	6	20
	Cw/1.2					
	Yc/1.2					
12	Cw/1.2	800	400	1.50	6	20
	Hw/1.3					
	Yc/1.2					
	Plc/1.3					
	Ss/1.3					
13	Cw/1.2	400	200	1.50	6	20
	Hw/1.3					
	Plc/1.3					
	Ss/2.0					
14	Ss/3.0	900	500	2.00	6	20
	Hw/2.0					
	Cw/1.5					
15	Ss/3.0	400	200	1.50	6	20
	Cw/1.5					
	Plc/2.0					
	Hw/2.0					
16	Ss/3.0	900	500	2.00	6	20
	Hw/2.0					
	Cw/1.5					
17	Ss2.0	400	200	1.50	6	20
	Cw/1.2					
	Hw/1.3					
18	Ss/2.0	400	200	1.50	6	20

\*Mixedwood strategy on the CWHwh1 site series' 03, 05, 06, 07, and 08: where red alder is being managed as a leading species it will comprise ≥ 80% of the Free Growing stand; the target density will be 800-1200 sph; estimated rotation age of 50-70 years, with a target of 30cm dbh at rotation age.

**CWHwh2 – even aged**

Site Series	Species and Min. FG height (m)	Target Stocking Standard (sph)	Min Stocking Standard (sph)	Min Inter-tree Distance (m)	Regen Date (years)	FTG (years)
01	Hw/2.0	900	500	2.00	6	20
	Cw/1.2					
	Ss/1.5					
	Yc/1.5					
	Hm/1.0					
02	Hw/2.0	900	500	2.00	6	20
	Cw/1.2					
	Yc/1.5					
	Ss/1.5					
	Hm/1.0					
03	Hw/2.0	900	500	2.00	6	20
	Cw/1.2					
	Yc/1.5					
	Ss/1.5					
04	Hw/2.0	800	200	1.50	6	20
	Cw/1.2					
	Yc/1.5					
	Ss/1.5					
05	Yc/1.2	400	200	1.50	6	20
	Cw/1.2					
	Hw/1.3					
	Hm/0.8					
	Ss/1.0					
06	Yc/1.2	800	400	1.50	6	20
	Cw/1.2					
	Hw/1.3					
	Hm/0.8					
	Ss/1.0					

**CWHvh2 – even aged**

Site Series	Species and Min. FG height (m)	Target Stocking Standard (sph)	Min Stocking Standard (sph)	Min Inter-tree Distance (m)	Regen Date (years)	FTG (years)
01	Cw/1.2	900	500	2.00 (Dr/1.5)	6	20
	Hw/2.0					
	Yc/1.5					
	Dr/4.0					
	Ss/3.0					
	Plc/1.3					
02	Plc/1.3	400	200	1.50	6	20
	Cw/1.2					
	Yc/1.2					
	Hw/1.3					
03	Cw/1.2	800	400	1.50 (Dr/1.5)	6	20
	Hw/1.3					
	Plc/1.3					
	Yc/1.2					
	Ss/2.0					
	Dr/4.0					
04	Hw/1.8	900	500	2.00 (Dr/1.5)	6	20
	Ss/3.0					
	Cw//1.2					
	Dr/4.0					
	Yc2.0					
05/06	Cw/1.5	900	500	2.00 (Dr/1.5)	6	20
	Ss/3.0					
	Hw/1.8					
	Yc/1.5					
	Dr/4.0					
07	Cw/1.5	900	500	2.00 (Dr/1.5)	6	20
	Ss/3.0					
	Hw/1.8					
	Yc/1.5					
	Dr/4.0					
08	Ss/3.0	900	500	2.00 (Dr/1.5)	6	20
	Cw/1.5					
	Hw/1.8					
	Dr/4.0					
09	Ss/4.0	900	500	2.00	6	20
	Hw/1.8					
	Cw/1.5					

Site Series	Species and Min. FG height (m)	Target Stocking Standard (sph)	Min Stocking Standard (sph)	Min Inter-tree Distance (m)	Regen Date (years)	FTG (years)
11	Cw/1.2	800	400	1.50	6	20
	Yc/1.2					
	Hw/1.3					
	Plc/1.3					
12	Cw/1.2	400	200	1.50	6	20
	Yc/1.2					
	Plc/1.3					
13	Cw/1.2	800	400	1.50	6	20
	Yc/1.2					
	Ss/2.0					
	Hw/1.3					
	Plc/1.3					
14	Ss/2.0	400	200	2.00	6	20
	Cw/1.2					
	Hw/1.3					
	Plc/1.3					
15	Ss/3.0	900	500	2.00	6	20
	Cw/1.5					
	Hw/2.0					
16	Ss/3.0	400	200	2.00	6	20
	Cw/1.5					
	Hw/2.0					
	Plc/1.5					
17	Ss/2.0	900	500	2.00	6	20
	Cw/1.2					
	Hw/1.3					
18	Ss/2.0	400	200	2.00	6	20
	Cw/1.2					

\*Mixedwood strategy on the CWHvh2 site series' 03, 04, 05/06, 07 and 08: where red alder is being managed as a leading species it will comprise  $\geq 80\%$  of the Free Growing stand; the target density will be 800-1200 sph; estimated rotation age of 50-70 years, with a target of 30cm dbh at rotation age.

**MHwh – even aged**

Site Series	Species and Min. FG height (m)	Target Stocking Standard (sph)	Min Stocking Standard (sph)	Min Inter-tree Distance (m)	Regen Date (years)	FTG (years)
01	Hw/1.0	900	500	2	6	20
	Yc/1.2					
	Hm/1.0					
	Cw/1.2					
	Ss/1.5					
02	Hm/1.0	400	200	1.5	6	20
	Yc/1.2					
	Cw/1.2					
	Hw/1.0					
	Ss/1.0					
03	Hw/1.0	900	500	2	6	20
	Ss/1.5					
	Cw/1.2					
	Yc/1.2					
	Hm/1.0					
04	Cw/1.2	900	500	2	6	20
	Yc/1.2					
	Hw/2.0					
	Hm/1.0					
	Ss/2.0					
05	Cw/1.2	900	500	2	6	20
	Yc/1.2					
	Hw/2.0					
	Hm/1.0					
	Ss/1.5					
	Plc/2.0					
06	Cw/1.2	800	400	1.5	6	20
	Yc/1.2					
	Hw/0.8					
	Hm/0.8					
	Ss/1.5					
07	Cw/1.2	900	500	1.5	6	20
	Yc/1.2					
	Hw/0.8					
	Hm/0.8					
	Ss/1.0					
08	Cw/1.2	400	200	1.5	6	20
	Yc/1.2					
	Hw/0.8					
	Hm/0.8					

Site Series	Species and Min. FG height (m)	Target Stocking Standard (sph)	Min Stocking Standard (sph)	Min Inter-tree Distance (m)	Regen Date (years)	FTG (years)
09	Cw/1.2	800	400	1.5	6	20
	Yc/1.2					
	Hw/0.8					
	Hm/0.8					
	Ss/1.0					

## Species Acceptability

Ecologically suitable species are provided in the stocking standards in the tables above. The suitability/acceptability of regeneration will be determined in the field by a Qualified Professional based on site-specific soil moisture, nutrient, aspect and elevation characteristics and tree performance in response to the site. Tree species that are ecologically suitable and commercially valuable are listed in the standards provided in Appendix C.

### Sitka Spruce (Ss)

On marginal sites: CHWwh1 (01s, 04, 10, 12); CWHwh2 (02, 05, 06); CWHvh2 (01, 13); MHwh (02, 03, 04, 06, 07, 09) where Ss is accepted, it will only be accepted to a maximum of 50% of the minimum stocking density. Furthermore, on these sites, Ss will be limited in terms of its acceptance at regen and Free-Growing to microsites that are medium or better, in terms of productivity (Soil Nutrient Regimes C-E). Sitka spruce will be targeted on elevated and productive microsites. In terms of elevation, Ss will be focused on lower elevation sites (especially in the MH subzone) and planted within the applicable elevation range for the stock.

### Lodgepole Pine (Plc)

On marginal sites: CHWwh1 (01s, 02, 04, 10, 13, 14); CWHwh2 (02, 05, 06); CWHvh2 (11, 13, 14, 16); and MHwh (05) where Plc is accepted, it will only be accepted to a maximum of 50% of the minimum stocking density. Furthermore, on these sites, Plc will be limited in terms of its acceptance at regen and Free-Growing to microsites that are medium or poorer, in terms of productivity (Soil Nutrient Regimes A-C). Lodgepole pine will be targeted on depressional, folisolic and other poor productivity microsites.

### Red Alder (Dr)

Natural red alder ingress will be defaulted to a preferred species on all sites within 3 metres of any stream banks where harvesting is permissible.

## Free Growing Criteria

### Conifers

An acceptable conifer crop tree must:

- a) Be free from brush competition (consistent with the crop tree to brush height ratio for the BEC applicable BEC unit).
- b) Be of good health, form and vigour and meet the Free Growing damage criteria for conifers, as provided in Appendix B, above.

### Red Alder

An acceptable red alder crop tree must:

- a) Be free from brush competition (consistent with the crop tree to brush height ratio for the BEC applicable BEC unit).
- b) Not have a tree pith that is laterally displaced more than 30 cm from the location of the root-crown pith.
- c) Not originate from a cut stump.
- d) Have one dominant live leader.
- e) Not have a wound that is greater than 10% of the stem circumference nor is greater than 10% of the total length of the stem.
- f) Not have any fungal infections or insect infestations affecting tissues below the bark surface, visible without destructive sampling.
- g) Not be browsed so as to limit its ability to become a crop tree.

## **Minimum Inter-tree Distance**

The Minimum Inter-tree Distances have been specified in the stocking standards tables above, however, for all sites, the minimum inter-tree distance may be reduced to 1.5m, in the following circumstances:

- a) within 20.0m of the road centre-line; or
- b) immediately adjacent to stream or riparian areas, naturally Non-Productive Areas, or areas (50m<sup>2</sup>) covered with unplantable slash; or
- c) on helicopter logged areas, where slash treatment is not practicable; or
- d) on any talus site; or
- e) immediately adjacent to retained single trees.

## **Brush Competition at Free-Growing**

The crop tree to brush height ratio at Free Growing is as follows:

- a) For CWHwh1, CWHwh2 and CWHvh2 BEC units, the ratio is 150%.
- b) For MHwh BEC Units, the ratio is 125%.

## **Free Growing Window**

The Free Growing window is to be 5-years after the regen obligation has been met, and no later than 20-years after the commencement of harvesting for the development area.

## **Mixed Conifer – Hardwood Management**

Red alder may be the leading species in mixed-hardwood/ conifer (i.e., micro-patch mixed wood)) management situations. Where red alder is the leading species ( $\geq 80\%$ ) the hardwood stocking standard may be applied. Where red alder is not the leading species, it will not be accepted as a crop tree.

On an annual basis, the total Plan area managed to hardwood stocking standards will be a maximum of 200ha, for all Plan Holders combined. The 200ha is to be allocated between Plan Holders, proportional to their AAC for the Plan Area.

Where red alder is included as a suitable species, the strategy will to pre-stratify the development area, and assign conifer or red alder stocking standards, as appropriate, consistent with the Site Plan. The minimum patch size for identifying and assigning the alder stocking standard will be 0.25ha.

