

TABLE 16. Vegetation table for zonal sites of submaritime CWH variants and the IDFww

Biogeoclimatic Unit		CWHds1	CWHds2	CWHms1	CWHms2	CWHws2	IDFww
TREE LAYER	<i>Thuja plicata</i>	■	■	■	■	■	■
	<i>Tsuga heterophylla</i>	■	■	■	■	■	■
	<i>Abies amabilis</i>	■	■	■	■	■	■
	<i>Pseudotsuga menziesii</i>	■	■	■	■	■	■
	<i>Betula papyrifera</i>		■				■
	<i>Picea sitchensis</i>		■				■
	<i>Pinus contorta</i>						■
	<i>Tsuga mertensiana</i>						■
							■
							■
SHRUB LAYER	<i>Vaccinium membranaceum</i>	■		■	■		■
	<i>Menziesia ferruginea</i>			■	■		■
	<i>Vaccinium parvifolium</i>	■		■	■		■
	<i>Vaccinium alaskaense</i>	■		■	■		■
	<i>Vaccinium ovalifolium</i>			■	■		■
	<i>Chimaphila umbellata</i>	■	■				■
	<i>Paxistima myrsinites</i>	■		■			■
	<i>Acer glabrum</i>		■				■
	<i>Acer circinatum</i>						■
	<i>Mahonia nervosa</i>	■		■			■
	<i>Rosa gymnocarpa</i>	■					■
	<i>Lonicera ciliosa</i>						■
	<i>Amelanchier alnifolia</i>						■
	<i>Spiraea betulifolia</i>						■
	<i>Symphoricarpos albus</i>						■
	<i>Corylus cornuta</i>						■
	<i>Holodiscus discolor</i>						■
	<i>Mahonia aquifolium</i>						■
	<i>Rosa acicularis</i>						■
	<i>Gaultheria shallon</i>	■					■
	HERB LAYER	<i>Clintonia uniflora</i>	■	■	■	■	
<i>Cornus canadensis</i>				■	■		■
<i>Goodyera oblongifolia</i>		■	■				■
<i>Orthilia secunda</i>		■	■	■	■		■
<i>Rubus pedatus</i>				■			■
<i>Streptopus roseus</i>						■	■
<i>Streptopus streptopoides</i>						■	■
<i>Linnaea borealis</i>		■	■	■	■		■
<i>Pyrola asarifolia</i>		■					■
<i>Trientalis latifolia</i>		■					■
							■

Biogeoclimatic Unit		CWHds1	CWHds2	CWHms1	CWHms2	CWHws2	IDFww
HERB LAYER	<i>Polystichum munitum</i>	■					sword fern
	<i>Disporum hookeri</i>						Hooker's fairybells
	<i>Calamagrostis rubescens</i>						pinegrass
	<i>Festuca</i> spp.						fescue
	<i>Disporum trachycarpum</i>						rough-fruited fairybells
	<i>Mycelis muralis</i>						wall-lettuce
MOSS LAYER	<i>Hylocomium splendens</i>	■	■	■	■	■	step moss
	<i>Pleurozium schreberi</i>	■	■	■	■	■	red-stemmed feathermoss
	<i>Rhytidiopsis robusta</i>	■	■	■	■	■	pipecleaner moss
	<i>Rhytidiadelphus loreus</i>	■	■	■	■	■	lanky moss
	<i>Dicranum fuscescens</i>		■	■	■	■	curly heron's-bill moss
	<i>Rhytidiadelphus triquetrus</i>	■	■	■	■	■	electrified cat's tail moss
	<i>Kindbergia oregana</i>	■	■	■	■	■	Oregon beaked moss
	<i>Dicranum pallidisetum</i>						pale-stalked broom moss

### 4.3 CWHds1 - Southern Dry Submaritime Coastal Western Hemlock Variant

**DISTRIBUTION:** The CWHds1 occurs at lower elevations in drainages of the upper Fraser River east and north of Chilliwack, and in the eastern portion of the Coast Mountains from upper Harrison Lake to the Homathko River. Elevational limits range from valley bottom to approximately 650 m.

**CLIMATE** (Table 20): The CWHds1 has a climate transitional between the coast and interior, characterized by warm, dry summers and moist, cool winters with moderate snowfall. Growing seasons feature water deficits on zonal sites. Compared to the CWHdm, the CWHds1 has less precipitation, more pronounced water deficits, cooler temperatures, and more snowfall.

**VEGETATION** (Table 16): Forests on zonal sites are dominated by Fd, Hw, and, to a lesser extent, Cw. The understorey is characterized by relatively poorly developed shrub and herb layers featuring some falsebox and minor amounts of prince's pine, dull Oregon-grape, and queen's cup, with a well-developed moss layer dominated by *Hylocomium splendens*, *Rhytidiopsis robusta*, *Pleurozium schreberi*, and some *Rhytidiadelphus triquetrus* and *R. loreus*.

**DISTINGUISHING ADJACENT UNITS FROM THE CWHds1** (using zonal sites)

**CWHdm** - occurs to the west; it has:

- common salal, red huckleberry, and *Plagiothecium undulatum*
- rare falsebox, *Pleurozium schreberi*, *Rhytidiopsis robusta*, and *Rhytidiadelphus triquetrus*
- rare Douglas maple on drier sites

**CWHms1** - occurs above; it has:

- common Ba and Alaskan blueberry

## 5.2 Site Classification Grids and Vegetation Summary Tables

TABLE 21. Index of site classification grids

<b>Grid no.</b>	<b>Site category</b>	<b>Biogeoclimatic unit</b>
1	General	CDFmm
2	General	CWHdm
3	General	CWHds1
4	General	CWHds2
5	General	CWHmm1
6	General	CWHmm2
7	General	CWHms1
8	General	CWHms2
9	General	CWHvh1
10	General	CWHvh2
11	General	CWHvm1
12	General	CWHvm2
13	General	CWHwh1
14	General	CWHwh2
15	General	CWHws2
16	General	CWHxm
17	General	ESSFmw
18	General	IDFww
19	General	MHmm1
20	General	MHmm2
21	General	MHwh
22	Special - Floodplains	CDFmm
23	Special - Floodplains	CWHdm,CWHds1,CWHxm
24	Special - Floodplains	CWHds2
25	Special - Floodplains	CWHmm1
26	Special - Floodplains	CWHms1,CWHms2
27	Special - Floodplains	CWHwh1
28	Special - Floodplains	CWHvh1,CWHvh2
29	Special - Floodplains	CWHvm1
30	Special - Floodplains	CWHws2
31	Special - Fluctuat water table	CDFmm
32	Special - Fluctuat. water table	CWHdm, CWHxm
33	Special - Shoreline/ocean spray	CWHwh,CWHvh

## FLOODPLAINS

### Grids No: 22-24

#### Grid No. 22

#### CDFmm

High Bench

**07** Cw - Snowberry

Medium Bench

**08** Act - Red-osier dogwood

Low Bench

**09** Act - Willow

Medium to very rich soil nutrient regime

#### Grid No. 23

#### CWHdm, CWHds1, CWHxm

High Bench

**08** Ss - Salmonberry

Medium Bench

**09** Act - Red-osier dogwood

Low Bench

**10** Act - Willow

Medium to very rich soil nutrient regime

#### Grid No. 24

#### CWHds2

High Bench

**08** Ss - Salmonberry

Medium Bench

**09** Act - Red-osier dogwood

Low Bench

**10** Act - Willow

Medium to very rich soil nutrient regime

### 6.1.6 Recommended tree species grids

TABLE 24. Index of recommended tree species grids

<b>Grid no.</b>	<b>Site category</b>	<b>Biogeoclimatic unit</b>
1	General	CDFmm
2	General	CWHdm
3	General	CWHds1
4	General	CWHds2
5	General	CWHmm1
6	General	CWHmm2
7	General	CWHms1
8	General	CWHms2
9	General	CWHvh1
10	General	CWHvh2
11	General	CWHvm1
12	General	CWHvm2
13	General	CWHwh1
14	General	CWHwh2
15	General	CWHws2
16	General	CWHxm
17	General	ESSFmw
18	General	IDFww
19	General	MHmm1
20	General	MHmm2
21	General	MHwh
22	Special - Floodplains	CDFmm
23	Special - Floodplains	CWHdm,CWHds1,CWHxm
24	Special - Floodplains	CWHds2
25	Special - Floodplains	CWHmm1
26	Special - Floodplains	CWHms1,CWHms2
27	Special - Floodplains	CWHwh1
28	Special - Floodplains	CWHvh1,CWHvh2
29	Special - Floodplains	CWHvm1
30	Special - Floodplains	CWHws2
31	Special - Fluctuat water table	CDFmm
32	Special - Fluctuat. water table	CWHdm, CWHxm
33	Special - Shoreline/ocean spray	CWHwh,CWHvh

## Comments: Grid No. 3 CWHds1

### GENERAL COMMENTS:

- **Hw** is, in general, a less desirable species
- **Bp**, **Lw** and **Py** are recommended on a trial basis in the eastern portion of the variant
- **Bg** should only be applied south of 50°N latitude
- high hazard for white pine blister rust; moderate hazard for laminated root rot and Armillaria root rot

### SPECIFIC COMMENTS:

- 01 **Lw** and **Pw** are suitable minor species
- 02 marginal sites for timber production; **Fd** is an alternative to **Pl**
- 03 **Pl** and **Py** are alternatives to **Fd** on nutrient very poor and medium sites, respectively; **Cw** can function as a non-crop (nurse) species
- 04 **Lw**, **Py**, and **Pw** are suitable minor species
- 05 **Se** is an alternative to **Fd** in the upper, eastern portion of the variant; **Bp** or **Pw** are alternatives to **Cw** in the upper portion of the variant
- 06 **Fd** is an alternative to **Hw** except on very moist / nutrient very poor to poor sites
- 07 **Bp** is an alternative to **Bg** in the upper portion of the variant; **Fd** should be restricted to elevated microsites on strongly gleyed soils
- 11 marginal sites for timber production; elevated microsites are preferred
- 12 elevated microsites are preferred

## Grid No. 3

<b>CWHdsl</b>	Southern Dry Submaritime CWH Variant
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## Soil nutrient regime

		Actual	Relative	Very Poor	Poor	Medium	Rich	Very Rich
				A	B	C	D	E
Soil moisture regime	VD	0	02	Pl Fd				
	MD	1	03	Fd(Cw)			04 Fd(Cw)	
	MD	2		Pl			(Pw)	
	SD	3	01	Fd(Cw)			05 Fd(Cw)	
	F	4		(Pw)			Se(Pw)	
	M	5	06	Hw(Cw)			07* FdBgCw	
	VM	6		Fd				
	W	7	11	Pl(Cw)		12		Cw

See comments on facing page

\* See grid # 23 for site series 08 - 10

## Site series

- |                                  |                                |
|----------------------------------|--------------------------------|
| <b>01</b> HwFd - Cat's-tail moss | <b>06</b> Hw - Queen's cup     |
| <b>02</b> FdPl - Kinnikinnick    | <b>07</b> Cw - Devil's club    |
| <b>03</b> FdHw - Falsebox        | <b>11</b> Pl - Sphagnum        |
| <b>04</b> Fd - Fairybells        | <b>12</b> CwSs - Skunk cabbage |
| <b>05</b> Cw - Solomon's-seal    |                                |



## Comments: Floodplain sites Grids No. 22 and 23

### GENERAL COMMENTS:

Floodplain sites have high fisheries, wildlife, water, and aesthetic values - refer to the appropriate guidelines for riparian ecosystem management.

- high bench sites are suited to the following options:
  1. conifer management
  2. hardwood management
  3. mixed hardwood / conifer management
- medium bench sites are best suited to hardwood management because of the high frequency of flooding, severe competition from deciduous trees and shrubs, and the restriction of conifers to elevated microsites. It may be possible to manage for conifers if elevated microsites occupy a sufficiently large portion of the area.
- low bench sites should generally not be disturbed

### SPECIFIC COMMENTS:

**Grids No.22-23:** high hazard for Ss weevil; **Bg** should only be applied south of 50° N latitude in the CWHds1; hardwood management not recommended on high bench sites with very coarse textured soils (>70% coarse fragment content)

**FLOODPLAINS**  
**Grid No. 22 - 23**

**Grid No. 22**

**CDFmm**

High Bench	07	<b>FdBgCw</b>	<b>Act</b>
Medium Bench	08	<b>BgCw</b>	<b>Act or Dr</b>
Low Bench	09		<b>Act</b>

Medium to very rich soil nutrient regime  
See comments on facing page

**Grid No. 23**

**CWHdm,CWHds1,CWHxm**

High Bench	08	<b>BgCw</b>	<b>Act or Dr</b>
Medium Bench	09	<b>BgCw</b>	<b>Act or [Dr]</b>
Low Bench	10		<b>Act</b>

Medium to very rich soil nutrient regime  
See comments on facing page

Site series

**CDFmm**

**07** Cw - Snowberry

**08** Act - Red-osier dogwood

**09** Act - Willow

**CWHxm, CWHdm, CWHds1**

**08** Ss - Salmonberry

**09** Act - Red-osier dogwood

**10** Act - Willow

Grid No. 3: CWHds1

		Soil Nutrient Regime				
		Very Poor A	Poor B	Medium C	Rich D	Rich E
Actual	Relative					
VD 0	02	IV L				
MD 1	03	III L		04		
MD 2				III	M/7	
SD 3	01	III L		05	II	
F 4				M-H/3,2		
M 5	06	II L		07	I	
VM 6				VH/3,2		
W 7	11	IV L		12	III VH/3	

Grid No. 4: CWHds2

		Soil Nutrient Regime				
		Very Poor A	Poor B	Medium C	Rich D	Very Rich E
Actual	Relative					
VD 0	02	IV L				
MD 1	03	III L		04		
MD 2				III	M/7	
SD 3	01	III L		05	II	
F 4				II M-H/3		
M 5	06	II L		07	I	
VM 6				I VH/3		
W 7	11	IV L		12	III VH/3	

## FLOODPLAINS

### Grid No. 22

#### CDFmm

High Bench  
Medium Bench  
Low Bench

07	Ⓜ	Ⓜ	VH/1
08	-	Ⓜ	VH/1
09	-	Ⓜ	VH/1

\* SI class for Act in square.

### Grid No. 23

#### CWHdm, CWHds1, CWHxm

High Bench  
Medium Bench  
Low Bench

08	Ⓜ	Ⓜ	VH/1
09	-	Ⓜ	VH/1
10	-	Ⓜ	VH/1

### Grid No. 24

#### CWHds2

High Bench  
Medium Bench  
Low Bench

08	Ⓜ	Ⓜ	VH/1
09	-	Ⓜ	VH/1
10	-	Ⓜ	VH/1

### Grid No. 25

#### CWHmm1

High Bench  
Medium Bench  
Low Bench

08	Ⓜ	Ⓜ	VH/1
09	-	Ⓜ	VH/1
10	-	Ⓜ	VH/1

## APPENDIX 8. Correlation of old and new biogeoclimatic and site units.

TABLE A-1. Biogeoclimatic units

<b>New symbol</b>	<b>New name</b>	<b>Old symbol <sup>a</sup></b>
CDFmm	Moist Maritime CDF	CDFa
CWHdm	Dry Maritime CWH	CWHa2
<b>CWHds1</b>	Southern Dry Submaritime CWH	CWHc1
CWHds2	Central Dry Submaritime CWH	CWHc2, h1, h2
CWHmm1	Submontane Moist Maritime CWH	CWHb3
CWHmm2	Montane Moist Maritime CWH	CWHb4
CWHms1	Southern Moist Submaritime CWH	CWHb5
CWHms2	Central Moist Submaritime CWH	CWHb6, h3
CWHvh1	Southern Very Wet Hypermaritime CWH	CWHd1
CWHvh2	Central Very Wet Hypermaritime CWH	CWHd2, CCPH
CWHvm1	Submontane Very Wet Maritime CWH	CWHb1, i1
CWHvm2	Montane Very Wet Maritime CWH	CWHb2, i2
CWHwh1	Submontane Wet Hypermaritime CWH	CWHe1, g1
CWHwh2	Montane Wet Hypermaritime CWH	CWHe2, g2
CWHws2	Montane Wet Submaritime CWH	CWHb7, f2, i3
CWHxm1 <sup>b</sup>	Eastern Very Dry Maritime CWH	CDFb
CWHxm2 <sup>b</sup>	Western Very Dry Maritime CWH	CWHa1
ESSFmw	Moist Warm ESSF	ESSFf
IDFww	Wet Warm IDF	IDFe
MHmm1	Windward Moist Maritime MH	MHa, d
MHmm2	Leeward Moist Maritime MH	MHb, e
MHwh	Wet Hypermaritime MH	MHc, f

<sup>a</sup> From Yole *et al.* (1982), Banner, *et al.* 1983, Green, *et al.* (1984), Pojar *et al.* (1988).

<sup>b</sup> Combined into CWHxm in this guide because of floristic and management similarities.

## APPENDIX 8. ( Continued )

TABLE A-2. Site units

New grid # and BGC unit	Old grid # and BGC unit	New sites series #																	
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18
1 CDFmm	6 CDF	3	1	2	4	5	6	7	*	*	8	9	*	*	*				
2 CWHdm	8 CWHa2	4	1	2	3	5	6	7	8	*	*	9	10	*	*	*			
3 CWHds1	18 CWHc1	3	1	1/3	2/4 <sup>2</sup>	4	5	6	7	*	*	8	9						
4 CWHds2	17 CWHc2	3	1	1/3	2/4 <sup>2</sup>	4	5	6	7	*	*	8	9						
5 CWHmm1	11 CWHb3	4	1	2	3	5	6	7	8	*	*	9	10						
6 CWHmm2	12 CWHb4	4	1	2	3	5	6	*	7	8	9								
7 CWHms1 <sup>3</sup>	13 CWHb5	4	1	2	5	6	7	8	*	*	9	10							
8 CWHms2 <sup>3</sup>	14 CWHb6	4	1	2	5	6	7	8	*	*	9	10							
9,10 CWHvh	18 CWHd	3	1	2	*	*	4	6	*	*	*	5	7	8	*	*	*	*	
11 CWHvm1	9 CWHb1	3	1	2	*	4	5	6	6	7	*	*	*	8	9				
12 CWHvm2	10 CWHb2	3	1	2	*	4	5	6	6	*	7	8							
13,14 CWHwh	*																		
15 CWHws2 <sup>3</sup>	15 CWHb7	4	1	2	5	6	7	8	*	*	9	10							
16 CWHxm <sup>4</sup>	7 CWHa1	4	1	2	3	5	6	7	8	*	*	9	10	*	*	*			
17 ESSFmw <sup>5</sup>	3 ESSFf	4	1	2	*	6	7	7	9										
18 IDFww <sup>6</sup>	4,5 IDFe	3	1	1	4	6	6	9											
19 MHmm1	1 MHa	3	1,2 <sup>7</sup>	4	5	6	5	6	7	8									
20 MHmm2	2 MHb	3	1,2 <sup>7</sup>	4	5	6	5	6	7	8									
21 MHwh	*																		

\* No equivalent in Green *et al.* (1984)

<sup>1</sup> New site series includes portions of old site units 1 and 3

<sup>2</sup> New site series includes portions of old site units 2 and 4

<sup>3</sup> No new equivalent for old site unit 3

<sup>4</sup> CWHxm most closely represents the old CWHa1

<sup>5</sup> No new equivalent for old site units 3, 5, and 8

<sup>6</sup> No new equivalent for old site units 2, 5, 7, and 8

<sup>7</sup> New site series includes old site units 1 and 2

TABLE A1.1. Site units (shaded) in the Cariboo Forest Region and their precorrelation equivalents (unshaded).

Current (correlated) BEC unit code												
BEC Unit		Site unit										
		/01	/02	/03	/04	/05	/06	/07	/08	/09	/10	/11
Equivalent precorrelation code												
BEC Unit		Ecosystem unit										
AT	AT	(site units not yet described)										
BGxh3	PPBGg	(see Iverson and Coupé 1996a)										
BGxw2	PPBGe	(see Iverson and Coupé 1996b)										
CWHds1	CWHc	see Guide for Vancouver Region (Green and Klinka 1994)										
ESSFdc2	ESSFe1	see Guide for Kamloops Forest Region (Lloyd et al. 1990)										
ESSFwc3	ESSFh2	/01	/02	/03								
ESSFwk1	ESSFh1	/01	/02	/03	/05	/04	/07 in part	/07 in part				
ESSFxc	ESSFd	see Guide for Kamloops Forest Region (Lloyd et al. 1990)										
ESSF xv1	ESSFg, ESSF undif	npe	npe	npe	npe	npe	npe	npe	npe	npe		
ESSF xv2	ESSFg, ESSF undif	npe	npe	npe	npe	npe	npe	npe	npe			
ICHdk	ICHe3	/01	/02	/03	/04	/05	/06	/07	/08	/09		
ICHmk3	ICHe2	/01,/04	/02	/03	/05	/06	/07	/08				
ICHmw3	ICHm1	see Guide for Kamloops Forest Region (Lloyd et al. 1990)										
ICHwk2	ICHh1	/01,/05	/02	/03	/04	/06 in part	/06 in part	/07	/08			
ICHwk4	ICHh2	/01,/06	/02	/03	/04	/05	/07	/08	/09			
IDFdk3	IDFb2	/01	/03	/02	/05	/04	/06	/07	/08	/09, /10		
IDFdk4	IDFb5	/01	/02	/03	/04	/05	/06	/07	/08	/09	/10	
IDFdw	IDFundiff.	npe	npe	npe	npe	npe	npe	npe	npe			
IDFmw2	IDFj1	see Guide for Kamloops Forest Region (Lloyd et al. 1990)										
IDFxm	IDFa4	/01	/02	/03	/04	/05	/06	/07	/08	/09		
IDF xw	IDFa2	/01,/05,/07	/02	/03	/04	/06	/08	/09				

<sup>a</sup>No previous equivalent (npe)