

## **Appendix A: Forest Stewardship Plan Mapping**

Forest Development Unit 1:

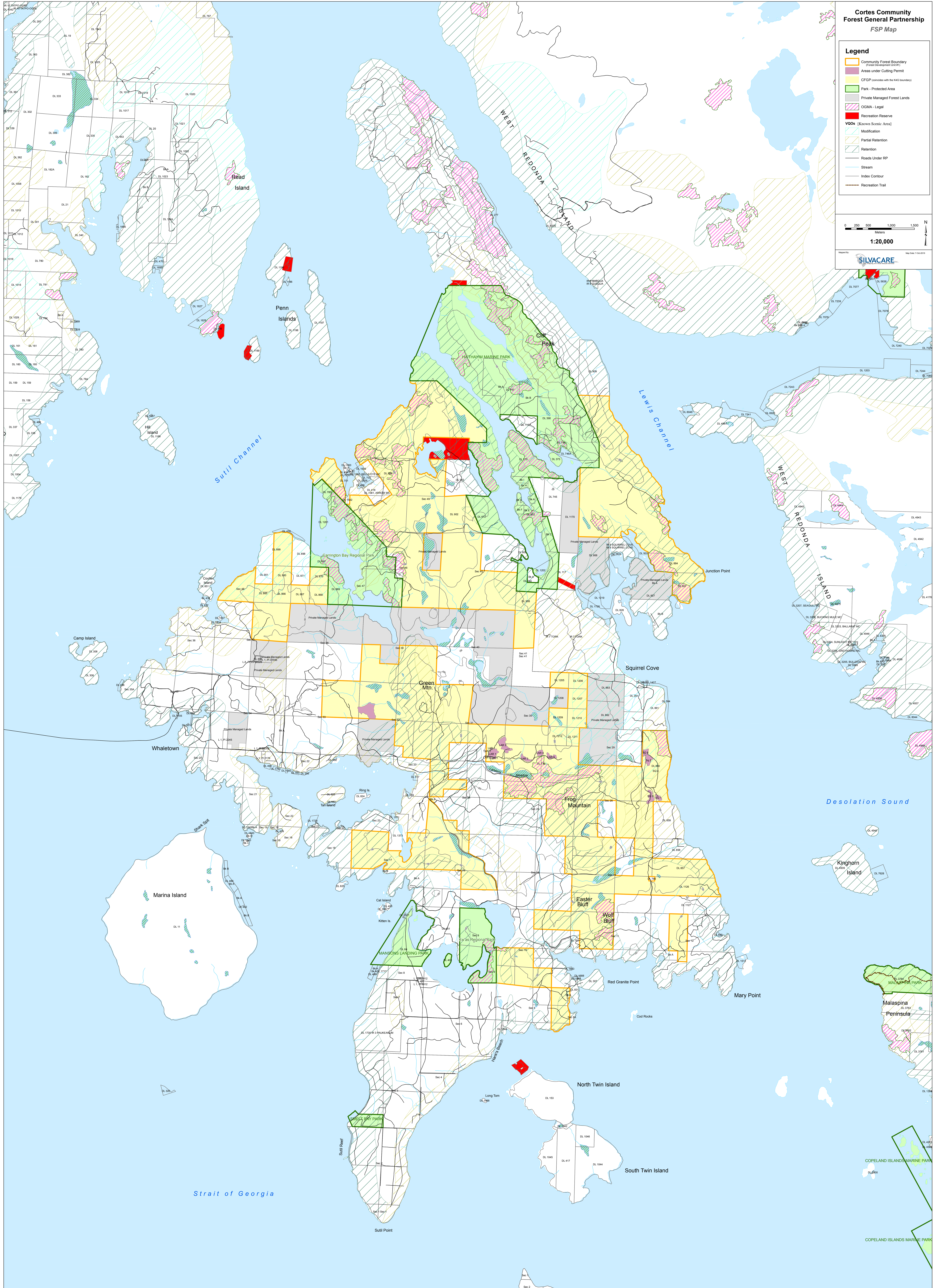
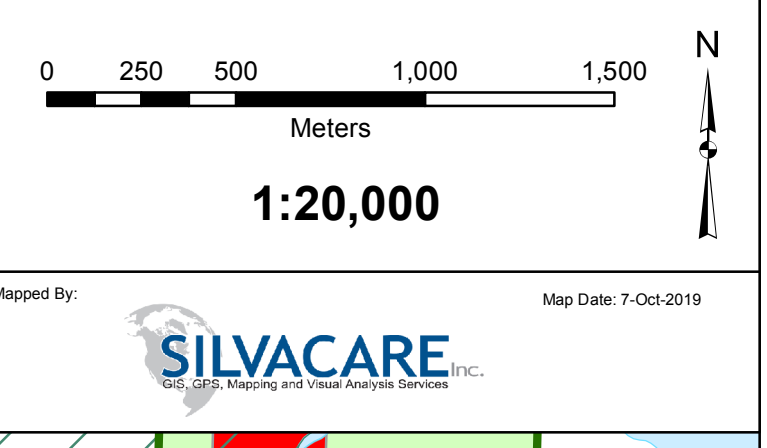
Cortes Forestry General Partnership Community Forest K4G

- FDU 1 covers a portion of the Cortes Landscape Unit

Map is attached following

Cortes Community Forest General Partnership  
FSP Map

- Legend**
- Community Forest Boundary (Forest Development Line #1)
  - Areas under Cutting Permit
  - CFGP (includes both #402 boundary)
  - Park - Protected Area
  - Private Managed Forest Lands
  - OGMA - Legal
  - Recreation Reserve
  - VQ04 (Kawee Scenic Area)
  - Modification
  - Partial Retention
  - Retention
  - Roads Under RP
  - Stream
  - Index Contour
  - Recreation Trail



## **Appendix B**

## **Stocking Standards**

## STOCKING STANDARDS

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### FPPR S. 16, S. 44

#### STOCKING STANDARDS– GENERAL

FPPR s. 44(1) applies in all situations and circumstances where a free growing stand is required to be established under FRPA S. 29, for all areas under the FSP.

The regeneration date, free growing heights and stocking standards and species as per FPPR s. 44(1)(a) & (b) are outlined in Tables 1, 2 & 3 following these pages.

#### EVEN-AGED MANAGEMENT

The FSP holder will utilize even-aged management broadly over the areas under the FSP, but on a small-scale basis (smaller openings). The primarily second-growth Douglas-fir dominated stands found in these areas are suited for regenerating fir in exposed areas on moderately productive sites. The prescribing Forester will ensure that openings are designed to also meet with the objectives set out for areas under the FSP, as per the Community Forest Management Objectives (as updated periodically by the CFGP).

#### PARTIAL HARVESTING

The FSP holder will also utilize a range of partial harvesting methods to ensure that forest management is being done to meet the objectives set out by the community for the areas under the FSP, to leave healthy, dominant trees in each area and that the Mean Annual Increment (M.A.I) of these stands is not being depleted over time (maximizing the long-term growth). The stocking standards for partial harvesting follow in Tables 1, 2 & 3. Methods include:

#### INTERMEDIATE CUT

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This harvest system removes individual trees or small pockets of trees that create  $\leq 0.1$  ha opening sizes and where the FSP holder is exempt from the requirements of FRPA sections 29(1). Healthy, dominant overstory trees will be left and the focus will be to remove merchantable, co-dominant trees or those trees with potential disease or defects, as prescribed on a site-specific basis. This practice aims to ensure a disease-free, genetically healthy, diverse stand remains to regenerate future generations of forest. Stands that have  $\geq 40\text{m}^2/\text{ha}$  basal area remaining postharvest are considered to have an Intermediate Cut harvest system.

#### SINGLE ENTRY DISPERSED RETENTION STOCKING STANDARDS (SEDRSS)

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The purpose and intent of utilizing this silviculture system is also described in Section 12, Stocking Standards, within the FSP. The FSP holder will apply SEDRSS in areas where second-growth Douglas-fir or Douglas-fir/hemlock mixed stands where the site index is generally between 24 and 36 (height at 50 years of age). Principles for utilizing these standards will be based on;

- a. ecologically suitable species,
- b. maintaining or minimizing impacts to forest health by following the leave tree criteria as set out in the CRIT SEDRSS Framework Implementation Guide (2014),
- c. maintaining or enhancing the commercially valuable timber supply, and

- d. monitoring and adapting to changing conditions due either to site specific circumstances or climate change.

Declaration of free growing (stocking obligations met) may not be earlier than two years after completion of harvest.

A well-spaced crop tree must be ecologically suitable, of good health, have good colour, form and vigour and be relatively free of significant pest infestation in order to be considered as free growing. Free Growing trees must also meet minimum free growing heights as listed in Table 1, according to the site series assigned to each particular Standards Unit, to demonstrate that the trees are adapted to the site, are growing well and can reasonably be expected to continue to do so.

Procedures for surveying in all situations described here will be according to the parameters set out in the CRIT 2014 SEDRSS framework and also follow the Free Growing damage criteria for SEDRSS Managed Stands in Coastal BC for Leave Trees (2014).

SEDRSS standards are set out in Tables 2 and 3, following, which will apply to cutblocks in second-growth stands within areas under this FSP and where a prescribing Forester has prescribed a Single Entry Dispersed Retention silvicultural system and the overstory (retention) trees are expected to contribute to the free growing obligation.

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## HARDWOOD MANAGEMENT

The FSP holder intends to manage for deciduous species on a small scale on ecologically suitable areas throughout the areas under this FSP. Free Growing Damage Criteria for deciduous management will follow the guidance from the Coastal Resource Information Team (CRIT) Hardwood Management in the Coast Forest Region Discussion Paper (pages 11, 12), as follows:

1. Unless otherwise stated in regulation or an approved FSP stocking standard, an acceptable broadleaf crop tree must:
  - Not have a tree pith that is laterally displaced more than 30 cm from the location of the root-crown pith.
  - Not originate from a cut stump.
  - Have one dominant live leader.
  - 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.<sup>11</sup>
  - Not have any fungal infections or insect infestations affecting tissues below the bark surface, visible without destructive sampling<sup>12</sup>.
  - Not be browsed so as to limit its ability to become a crop tree.

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## FREE GROWING CRITERIA

All coniferous free growing criteria for brush competition will be as per [Appendix 9; “Free from brush – free growing criteria”](#) in the *Establishment to Free Growing Guidebook* version 2.3 (May 2000 – revised October, 2007) for the Coast Region unless otherwise specified in a Site Plan or Forest Stewardship Plan.

**Cortes Forestry General Partnership Community Forest K4G Stocking Standards - Forest Stewardship Plan May 2020**

Table 1: Even- Aged Standards		Regeneration Guide										Free Growing		
Biogeoclimatic Zone/Subzone	Site Series	Standards ID	Preferred			Acceptable		Broadleaf	Stocking		Regen Delay (Max yrs)	Late (yrs)	Min. Height	
			Conifer						Target	Minimum			Species	Ht (m)
									(well-spaced/ha)					
CWHdm <sup>47</sup>	01	1066739	Fd	Cw	Hw <sup>24</sup>	Pw <sup>31</sup>			900	500	6	20	Fd, Hw	3.00
	Hardwood**	1066740						Dr <sup>7,42,a</sup>	1500	1000	3	20	Pw	2.50
		1066741	Pl	Fd					400	200	3	20	Cw	1.50
	02*	1066741											Dr	4.00
	03	1066742	Fd			Cw	Hw		800	400	6	20	Fd, Hw	2.00
													Cw	1.00
	04	1066743	Fd			Cw	Pw <sup>31</sup>		900	500	6	20	Fd	3.00
													Pw	2.50
													Cw	1.50
	05	1066744	Cw	Fd	Pw <sup>31</sup>	Bg <sup>67,47</sup> Hw			900	500	6	20	Fd, Hw	4.00
	Hardwood**	1066745						Act <sup>42,a</sup> Dr <sup>42,a</sup> Mb <sup>3</sup>	1500	1000	3	20	Bg	3.50
		1066746	Cw	Hw		Fd <sup>1</sup>			900	500	6	20	Pw	2.50
06	1066746							900	500	6	20	Cw	2.00	
Hardwood**	1066747						Dr <sup>7,41,a</sup>	1500	1000	3	20	Dr	4.00	
	1066748	Bg <sup>47</sup> Cw Fd				Hw		900	500	6	20	Fd, Hw	4.00	
												Bg	3.50	
												Cw	2.00	
07	1066748							900	500	6	20	Act, Dr, Mb	4.00	
Hardwood**	1066749	Bg <sup>47</sup>	Cw				Act <sup>41,a</sup> Dr <sup>41,a</sup> Mb <sup>41,a</sup>	1500	1000	3	20			
	1066750							900	500	3	20	Bg	3.50	
08	1066750							900	500	3	20	Cw	2.00	
09	1066751		Cw <sup>1</sup>		Bg <sup>1,47</sup>			900	500	3	20	Bg	3.50	
												Cw	2.00	
11	1066752		Pl <sup>1</sup>		Cw <sup>1</sup>			400	200	3	20	Pl	1.25	
												Cw	1.00	
12	1066753		Cw <sup>1</sup>		Hw <sup>1,2</sup> Pw <sup>31</sup> Ss <sup>35</sup>			800	400	3	20	Ss	3.00	
												Pw	2.50	
												Hw	2.00	
												Cw	1.00	
CWHxm <sup>47</sup>	01	1066754	Fd		Hw <sup>24</sup>		Cw Pw <sup>31</sup>	900	500	6	20	Fd	3.00	
	Hardwood**	1066755											Pw	2.50
		1066756	Pl	Fd				Dr <sup>7,42,a</sup>	1500	1000	3	20	Hw	2.00
	02*	1066756						400	200	3	20	Cw	1.50	
													Dr	4.00
03	1066757	Fd		Pl <sup>6</sup>		Cw Hw		800	400	6	20	Fd	2.00	
												Hw, Pl	1.25	
												Cw	1.00	
04	1066758	Fd				Cw Pw <sup>31</sup>		900	500	6	20	Fd	3.00	
												Pw	2.50	
												Cw	1.50	

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Table 1: Even- Aged Standards		Regeneration Guide									Free Growing			
Biogeoclimatic Zone/Subzone	Site Series	Standards ID	Preferred			Acceptable		Broadleaf	Stocking		Regen Delay (Max yrs)	Late (yrs)	Min. Height	
			Conifer			Target (well-spaced/ha)	Minimum		Species	Ht (m)				
Hardwood**	05	1066759	Cw Fd			Bg <sup>53</sup> Hw Pw <sup>31</sup>		900	500	6	20	Fd	4.00	
	1066760						Act <sup>42,a</sup> Dr <sup>42,a</sup> Mb <sup>a</sup>	1500	1000	3	20	Hw	1.75	
Hardwood**	06	1066761	Cw Hw		Fd <sup>18</sup>	Pw	Bg <sup>7</sup>	900	500	6	20	Bg, Fd	3.00	
	1066762						Dr <sup>7,41,a</sup>	1500	1000	3	20	Pw	2.50	
Hardwood**	07	1066763	Bg <sup>47</sup> Cw Fd				Hw	900	500	6	20	Hw	1.75	
	1066764						Act <sup>41,a</sup> Dr <sup>41,a</sup>	1500	1000	3	20	Act, Dr	4.00	
Hardwood**	08	1066765	Bg <sup>47</sup> Cw Ss <sup>35</sup>					900	500	3	20	Ss	4.00	
	1066766						Act <sup>41,a</sup> Dr <sup>41,a</sup> Mb <sup>41,a</sup>	1500	1000	3	20	Bg	3.50	
Hardwood**	09	1066767		Cw <sup>1</sup>		Bg <sup>1,47</sup>		900	500	3	20	Cw	2.00	
	1066766						Act <sup>41,a</sup> Dr <sup>41,a</sup> Mb <sup>41,a</sup>	1500	1000	3	20	Act, Dr, Mb	4.00	
Hardwood**	11	1066769	Pl <sup>1</sup>				Cw <sup>1</sup>	400	200	3	20	Pl	1.25	
	1066770											Cw	1.00	
Hardwood**	12	1066770	Cw <sup>1</sup>				Hw <sup>1</sup> Pw <sup>31</sup> Ss <sup>35</sup>	800	400	3	20	Pw	2.50	
												Ss	1.50	
												Hw	1.25	
												Cw	1.00	

**Footnotes:**

- \*marginally suited for timber production
- \*\*MSS reduced using approved variation to 800 sph on 20% of the area (ha) managed under the term of the FSP due to site limiting factors.
- Crop trees must meet or exceed the free growing damage criteria outlined in the Single Tree Dispersed Retention Stocking Standard Framework - Implementation Guide, 2014
- Footnotes from the Reference Guide for FDP Stocking Standards (incorporating edits March 2019) apply for the CWH dm and the CWH xm1 biogeoclimatic zones listed above and found at: <https://www2.gov.bc.ca/gov/content/industry/forestry/managing-our-forest-resources/silviculture/stocking-standards>
- Minimum inter-tree distance of 2.0 metres can be reduced to 1.6 metres for any given site where plantable spots are limited by site characteristics (e.g. Colluvial sites, wet sites, steep slopes, etc), where site conditions limit the ability of the FSP holder to meet target stocking standards.
- No changes are currently proposed under the above stocking standards for Climate Change as per the 2019 Update to the Forest Development Reference Guide for Stocking Standards: Climate Change.

Footnotes below apply to Table 1	Footnote #	Footnote	Footnote #	Footnote
<b><u>Conifer Tree Species</u></b>	1	suitable on elevated microsities	46	use resistant seedlot south of the Dean Channel
			47	risk of balsam woolly adelgid within quarantine area see <a href="http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/animals-and-crops/plant-health/insects-and-plant-diseases/nursery-and-ornamentals/balsam-woolly-adelgid">http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/animals-and-crops/plant-health/insects-and-plant-diseases/nursery-and-ornamentals/balsam-woolly-adelgid</a>
"Ba" means amabilis fir;	2	retired July 2017		
"Bg" means grand fir;	3	suitable on coarse-textured soils	48	risk of browsing by deer
"Bl" means subalpine fir;	4	suitable on medium-textured soils	49	retired November 2010
"Bp" means noble fir;	5	footnote retired	50	restricted to sites where the species occurs as a major species in a pre-harvest, natural stand
"Cw" means western red cedar;	6	suitable on nutrient-very-poor sites	51	retired July 2017
"Fd" means Douglas-fir;	7	suitable on nutrient-medium sites	52	suitable on sheltered microsities with deep soil
"Hm" means mountain hemlock;	8	suitable on steep slopes	53	minor component
"Hw" means western hemlock;	9	suitable on warm aspects	54	retired July 2017
"Lt" means tamarack;	10	suitable on cool aspects	55	retired July 2017
"Lw" means western larch;	11	suitable on crest slope positions		
"Pa" means whitebark pine;	12	suitable on cold air drainage sites	#	<b><u>Broadleaf Management Constraints</u></b>
"Pl" means lodgepole pine;	13	suitable at upper elevations	a	productive, reliable, and feasible regeneration option
"Pw" means white pine;	14	suitable at lower elevations	b	limited in productivity, reliability and/or feasibility
"Py" means ponderosa pine;	15	suitable in the northern portion of biogeoclimatic unit		
"Sb" means black spruce;	16	suitable in the southern portion of biogeoclimatic unit	#	<b><u>Localized Footnotes</u></b>
"Se" means Engelmann spruce;	17	suitable in the western portion of biogeoclimatic unit		
"Ss" means Sitka spruce;	18	suitable in the eastern portion of biogeoclimatic unit	56	retired July 2017
"Sw" means white spruce;	19	retired July 2017		
"Sx" means hybrid spruce or interior spruce;	20	retired July 2017	57	retired November 2010
"Sxs" means hybrid Sitka spruce;	21	retired July 2017	58	<b>South Area</b> - Fd limited to a max 50% of preferred and acceptable well-spaced stems in the IDFmw and all subzones of the ICH due to root rot. See Root Rot Handbook for management issues (FLNRORD 2018).
"Sxw" means hybrid white spruce;	22	suitable in the southern Gardner Canal-Kitlope area		
"Yc" means yellow cedar.	23	retired July 2017		
	24	suitable in wetter portion of biogeoclimatic unit		
<b><u>Broadleaf Tree Species</u></b>				
"Acb" means balsam poplar;	25	retired July 2017		
"Act" means black cottonwood;	26	suitable minor species on nutrient poor sites		
"At" means trembling aspen;	27	partial high-canopy shade required for successful establishment		
"Dr" means red alder;	28	limited by moisture deficit		
"Ep" means common paper birch;	29	risk of heavy browsing by moose		
"Mb" means bigleaf maple;	30	retired November 2010		
	31	must use of blister rust resistant stock. See BC Journal of Ecosystems and Management 10(1): 97-100 for supplementary information.		
"Qg" means garry oak;	32	limited by growing-season frosts		
"Ra" means arbutus;	33	footnote retired and replaced with footnote 'a'		
	34	risk of snow damage		
"Biogeoclimatic unit" or "BGC classification" means the zone, subzone, variant and site series described in the most recent field guide published by the Ministry of Forests for the identification and interpretation of ecosystems, as applicable to a harvested area.	35	use resistant stock to mitigate risk of spruce weevil damage - See Ss Weevil Decision Tool: <a href="http://pubs.cif-ffc.org/doi/abs/10.5558/ffc2013-042">http://pubs.cif-ffc.org/doi/abs/10.5558/ffc2013-042</a>		
	36	retired July 2017		
"MIN" or "Min" means minimum.	37	retired November 2010		
	38	footnote retired		
	39	retired July 2017		
	40	risk of redheart damage in areas subject to cold winter outflow winds		
	41	limited by poorly drained soils		
	42	suitable on sites with a fresh soil moisture regimes		
	43	retired July 2017		
	44	suitable in areas of the subzone variant with relatively strong maritime influence		
	45	suitable in areas of the subzone variant with relatively strong continental influence		



Table 2: Single Entry Dispersed Retention Stocking Standards (SEDRSS) CWH dm Biogeoclimatic Zone												
Biogeoclimatic Zone Classification	Layer*	Species (suitable)	Regeneration Guide Site Occupancy						Free Growing Criteria			
			Only used during plots (even-aged)	Moderate Retention (Basal Area)			High Retention (Basal Area)	Only used during plots	Regen Delay (max. Years)	MITD	Species	Height (m)
CWH dm 01, 04, 05, 06, 07	Residual Layer (L1) $\geq 12.5$ cm DBH (BA m <sup>2</sup> /ha)	Fdc*, Hw, Cw**	0 - 4 m <sup>2</sup> /ha	5 - 10 m <sup>2</sup> /ha	11 - 16 m <sup>2</sup> /ha	17 - 23 m <sup>2</sup> /ha	24 - 39 m <sup>2</sup> /ha	$\geq 40$ m <sup>2</sup> /ha	6 years	N/A	N/A	
	Regen Layers (L2, L3, L4) (WS/ha TSS - Target MSS - Minimum)	Fdc*, Hw, Cw**	900 TSS	800 TSS	700 TSS	600 TSS	500 TSS	0		All layers (L2-L4) outside of L1 dripline and 2.0 m	As per Table 1 for Site Series	As per Table 1 for Site Series
			500 MSS	400 MSS	350 MSS	300 MSS	250 MSS	0				
CWH dm 03	Residual Layer (L1) $\geq 12.5$ cm DBH (BA m <sup>2</sup> /ha)	Fdc*, Hw, Cw**	0 - 5 m <sup>2</sup> /ha	5 - 10 m <sup>2</sup> /ha	11 - 16 m <sup>2</sup> /ha	17 - 23 m <sup>2</sup> /ha	24 - 39 m <sup>2</sup> /ha	$\geq 40$ m <sup>2</sup> /ha	6 years	N/A	N/A	
	Regen Layers (L2, L3, L4) (WS/ha TSS - Target MSS - Minimum)	Fdc, Hw, Cw*	800 TSS	700 TSS	600 TSS	500 TSS	400 TSS	0		All layers (L2-L4) outside of L1 dripline and 2.0 m	As per Table 1 for Site Series	As per Table 1 for Site Series
			400 MSS	350 MSS	300 MSS	250 MSS	200 MSS	0				

- The standards above will be used on a site level basis following the 2014 SEDRSS Framework Implementation Guide (Coastal) and the Even-Aged Mgmt Stocking Standards in this FSP (Table 1).

\* In moderate retention levels with  $< 16$  m<sup>2</sup>/ha basal area retained, Fdc, Hw, Cw will all be considered an ecologically suitable species for regeneration in layer 4. In areas with  $> 16$  m<sup>2</sup>/ha, Fdc will not be considered ecologically suitable for acceptable crop species in layer 4.

**\* Fdc (Layers 2, 3 and 4)**

- Ecologically suitable only in areas with  $< 10$  m<sup>2</sup>/ha basal area,
- Restricted to a maximum of 200 WS/FG/ha (1 per 3.99 metre plot) with  $\geq 10$  m<sup>2</sup>/ha and  $\leq 16$  m<sup>2</sup>/ha basal area,
- Not suitable for areas with  $> 16$  m<sup>2</sup>/ha basal area
- Not suitable on north aspects unless no residual trees within 2 stand tree lengths

**\*\*Cw (see conditions outlined in FSP Document, Section 12) (Layers 2, 3 and 4)**

- Ecologically suitable only in areas with  $< 10$  m<sup>2</sup>/ha basal area,
- Restricted to a maximum of 200 WS/FG/ha (1 per 3.99 metre plot) with  $\geq 10$  m<sup>2</sup>/ha and  $\leq 23$  m<sup>2</sup>/ha basal area.
- Not suitable in areas with  $> 23$  m<sup>2</sup>/ha basal area.

- There may be situations where the minimum height has not been achieved, but the understory stems meet all other criteria. In this situation a forest professional can use FPPR Section 97.1 to indicate the obligation has been met and provide a rationale that indicates the crop trees are well established, free from vegetative competition and are not expected to be impacted by a forest health agent.

Table 3: Single Entry Dispersed Retention Stocking Standards (SEDRSS) - CWH xm1 Biogeoclimatic Zone												
		Regeneration Guide Site Occupancy							Free Growing Criteria			
Biogeoclimatic Zone Classification	Layer*	Species (suitable)	Only used during plots	One of these 4 BA combinations are applicable to final SU Regen/FG SEDRSS obligations				Only used during plots	Regen Delay (max. Years)	MITD	Species	Height (m)
CWH xm 01, 04, 05, 06, 07	Residual Layer (L1) $\geq 12.5$ cm DBH (BA m <sup>2</sup> /ha)	Fdc*, Cw**, Hw	0 - 4 m <sup>2</sup> /ha	5 - 10 m <sup>2</sup> /ha	11 - 16 m <sup>2</sup> /ha	17 - 23 m <sup>2</sup> /ha	24-39 m <sup>2</sup> /ha	$\geq 40$ m <sup>2</sup> /ha	6 years	N/A	N/A	
	Regen Layers (L2, L3, L4) (WS/ha TSS - Target MSS - Minimum)	Fdc*, Cw**, Hw	900 TSS	800 TSS	700 TSS	600 TSS	500 TSS	0		All layers (L2-L4) outside of L1 dripline and 2.0 m	As per Table 1 for Site Series	As per Table 1 for Site Series
			500 MSS	400 MSS	350 MSS	300 MSS	250 MSS	0				
CWH xm 03	Residual Layer (L1) $\geq 12.5$ cm DBH (BA m <sup>2</sup> /ha)	Fdc*, Cw**, Hw	0 - 4 m <sup>2</sup> /ha	5 - 10 m <sup>2</sup> /ha	11 - 16 m <sup>2</sup> /ha	17 - 23 m <sup>2</sup> /ha	24-39 m <sup>2</sup> /ha	$\geq 40$ m <sup>2</sup> /ha	6 years	N/A	N/A	
	Regen Layers (L2, L3, L4) (WS/ha TSS - Target MSS - Minimum)	Fdc*, Cw**, Hw	800 TSS	700 TSS	600 TSS	500 TSS	400 TSS	0		All layers (L2-L4) outside of L1 dripline and 2.0 m	As per Table 1 for Site Series	As per Table 1 for Site Series
			400 MSS	350 MSS	300 MSS	250 MSS	200 MSS	0				

- The standards above will be used on a site level basis following the 2014 SEDRSS Framework Implementation Guide (Coastal) and the Even-Aged Mgmt Stocking Standards in this FSP (Table 1).

\* In moderate retention levels with  $< 16$  m<sup>2</sup>/ha basal area retained, Fdc, Hw, Cw will all be considered an ecologically suitable species for regeneration in layer 4. In areas with  $> 16$  m<sup>2</sup>/ha, Fdc will not be considered ecologically suitable for acceptable crop species in layer 4.

**\* Fdc (Layers 2, 3 and 4)**

- Ecologically suitable only in areas with  $< 10$  m<sup>2</sup>/ha basal area,
- Restricted to a maximum of 200 WS/FG/ha (1 per 3.99 metre plot) with  $\geq 10$  m<sup>2</sup>/ha and  $\leq 16$  m<sup>2</sup>/ha basal area,
- Not suitable for areas with  $> 16$  m<sup>2</sup>/ha basal area
- Not suitable on north aspects unless no residual trees within 2 stand tree lengths

**\*\*Cw (see conditions outlined in FSP Document, Section 12) (Layers 2, 3 and 4)**

- Ecologically suitable only in areas with  $< 10$  m<sup>2</sup>/ha basal area,
- Restricted to a maximum of 200 WS/FG/ha (1 per 3.99 metre plot) with  $\geq 10$  m<sup>2</sup>/ha and  $\leq 23$  m<sup>2</sup>/ha basal area.
- Not suitable in areas with  $> 23$  m<sup>2</sup>/ha basal area.

- There may be situations where the minimum height has not been achieved, but the understory stems meet all other criteria. In this situation a forest professional can use FPPR Section 97.1 to indicate the obligation has been met and provide a rationale that indicates the crop trees are well established, free from vegetative competition and are not expected to be impacted by a forest health agent.

Table 4(a):	Cortes Forestry General Partnership K4G Intermediate Cut Stocking Standards								
		Overstory Guide						Stocked Stand Declaration Dates	
Biogeoclimatic Zone Classification		Ecologically Suitable Species				Stocking Basal Area		Earliest	Latest
Biogeoclimatic Zone/Subzone	Site Series	Layer 1* - 12.5 cm DBH				Minimum **	m2/ha	(years)	(years)
CWH dm	01, 05	Fd	Cw	Hw	Pw	>/=	40	1	2
	03, 04, 06	Fd	Cw	Hw		>/=	40	1	2
	07	Fd	Cw	Hw	Bg	>/=	40	1	2
	08, 09	Bg	Cw			>/=	40	1	2
	12	Cw	Hw	Pw	Ss	>/=	40	1	2

\*Layer 1 crop trees >12.5 cm dbh must meet the damage criteria outlined in the SEDRSS Framework Implementation Guide (2014)

Minimum\*\* is the average across a standard unit post harvest

Table 4(b):		Cortes Forestry General Partnership K4G Intermediate Cut Stocking Standards							
		Overstory Guide					Stocked Stand Declaration Dates		
Biogeoclimatic Zone Classification		Ecologically Suitable Species				Stocking Basal Area		Earliest	Latest
Biogeoclimatic Zone/Subzone	Site Series	Layer 1* - 12.5 cm DBH				Minimum **	m2/ha	(years)	(years)
CWH xm1	01, 05	Fd	Cw	Hw	Pw	>/=	40	1	2
	03, 04	Fd	Cw	Hw		>/=	40	1	2
	05	Fd	Cw	Hw	Bg	>/=	40	1	2
	06	Cw	Hw	Fd	Pw	>/=	40	1	2
	07	Bg	Cw	Fd		>/=	40	1	2
	08	Bg	Cw	Ss		>/=	40	1	2
	09	Cw	Bg			>/=	40	1	2
	12	Cw	Hw	Pw	Ss	>/=	40	1	2

\*Layer 1 crop trees >12.5 cm dbh must meet the damage criteria outlined in the SEDRSS Framework Implementation Guide (2014)

Minimum\*\* is the average across a standard unit post harvest

## **Appendix C          Vancouver Island Land Use Plan**

Higher Level Plan Order is attached following

# Vancouver Island Land Use Plan Higher Level Plan Order

## **Order Establishing Resource Management Zones and Resource Management Zone Objectives within the area covered by the Vancouver Island Land Use Plan, pursuant to sections 3(1) and 3(2), as well as section 9.1 of the Forest Practices Code of British Columbia Act (the Act)**

- I. Pursuant to section 3(1) of the Act, the following zones, as presented on Map 1 (attached), are Resource Management Zones (RMZ):**
- A. Special Management Zones (SMZ) 1 through 14 and 17 through 22;
  - B. Resource Management Zones 4, 5, 6, 8, 10, 11, 15, 18, 19, 21, 23, 24, 27, 28, 30, 36, 38, 40, 42, 43, 44, and 47; these RMZ are also referred to as Enhanced Forestry Zones (EFZ);
  - C. Resource Management Zones 7 and 14; these two RMZ are also referred to as General Management Zones (GMZ).
- II. Pursuant to section 3(2) of the Act, the following provisions are Resource Management Zone objectives:**
- A. for Special Management Zones 1 through 14 and 17 through 22:**
- 1. Sustain forest ecosystem structure and function in SMZs, by:
    - (a) creating or maintaining stand structures and forest attributes associated with mature<sup>1</sup> and old<sup>2</sup> forests, subject to the following:
      - i. the target for mature seral forest should range between one quarter to one third of the forested area of each SMZ<sup>3</sup>; and
      - ii. in SMZs where the area of mature forest is currently less than the mature target range referred to in (i) above, the target amount of mature forest must be in place within 50 years;
    - (b) retaining, within cutblocks<sup>4</sup>, structural forest attributes and elements with important biodiversity functions<sup>5</sup>; and
    - (c) applying a variety of silvicultural systems, patch sizes and patch shapes across the zone, subject to a maximum cutblock size of 5 ha if clearcut, clearcut with reserves or seed tree silvicultural systems are applied, and 40 ha if shelterwood, selection or retention silvicultural systems are applied<sup>6</sup>.

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<sup>1</sup> The mature seral forest is defined as generally 80 to 120 years old or older, depending on species and site conditions. The structure of mature seral forests generally includes canopies that vary vertically or horizontally, or both. The age and structure of the mature seral stage will vary significantly by forest type and from one biogeoclimatic zone to another.

<sup>2</sup> The old seral forest is defined as generally greater than 250 years old, containing live and dead (downed and standing) trees of various sizes, including large diameter trees, and of various tree species, including broad-leaved trees. The structure of old seral forest varies significantly by forest type and from one biogeoclimatic zone to another.

<sup>3</sup> Mature seral targets will be established through landscape unit planning. See transition provisions under III.

<sup>4</sup> Within cutblocks: generally means non-contiguous with cutblock boundaries.

<sup>5</sup> This includes, but is not limited to snags, wildlife trees, downed logs.

<sup>6</sup> Maximum cutblock sizes refer to net area to be reforested.

## Vancouver Island Land Use Plan Higher Level Plan Order

2. Despite subsection 1(c) above, cutblocks larger than 5 or 40 ha, as the case may be, may be approved if harvesting is being carried out to recover timber that was damaged by fire, insects, wind or other similar events and wherever possible, the cutblock incorporates structural characteristics of natural disturbances.
3. Pursuant to section 2(1) of the Operational Planning Regulation (OPR)<sup>7</sup>, the approval of both the district manager, Ministry of Forests and the designated environment official, Ministry of Environment, Lands and Parks is required for all forest development plans, or parts of forest development plans that relate to areas within the following SMZs: 1, 3, 4, 6, 8, 9, 10, 11, 13, 17, 19, 20 and 21.

**B. for Special Management Zones 8, and 13, and parts of Special Management Zones 1, 3 and 11, which are located within landscape units with higher biodiversity emphasis, as shown on Map 2:**

4. Maintain late-successional habitat elements and attributes of biodiversity<sup>8</sup> in forested ecosystems with emphasis on regionally rare and underrepresented ecosystems, by retaining old seral forest at the site series/surrogate level of representation<sup>9</sup>.
5. Retain late-successional habitat elements and attributes of biodiversity in patches of variable size.

**C. for the following Special Management Zones with primary visual resource values: 1, 2, 3, 5, 6, 7, 10, 11, 12, 13, 14, 18, 19 and 22, as shown on Map 3:**

6. Maintain the visual quality of known scenic areas in accordance with the recommended visual quality classes in the visual landscape inventory, until the district manager establishes visual quality objectives for the areas.

**D. for all Enhanced Forestry Zones, as shown on Map 1, save and except the parts of those zones which are designated as community watersheds as defined in section 41(8) of the Act:**

7. To increase the short-term availability of timber,
  - (a) a cutblock may be larger than 40 ha pursuant to section 11(2)(a) of the OPR; and
  - (b) pursuant to section 68(4) of the OPR, a cutblock is greened-up if it is adequately stocked and the average height of those trees that are
    - (i) the tallest tree in each 0.01 ha plot included in a representative sample, and
    - (ii) a commercially valuable species or other species acceptable to the district manageris at least 1.3 meters;

---

<sup>7</sup> BC Reg. 107/98

O.C. 426/98 -

Effective: June 15, 1998.

<sup>8</sup> This includes, but is not limited to: large diameter (> 60 cm) live, decaying and dead standing trees (providing nest and cavity sites); downed wood, including large diameter pieces (50 to 150 cm); deciduous broad-leaved trees, both in riparian and upland areas.

<sup>9</sup> The level of representation of old seral forest will be applied through landscape unit planning.

## Vancouver Island Land Use Plan Higher Level Plan Order

unless the district manager determines that a cutblock referred to under (a) or (b) would significantly impact specific hydrological, wildlife, biodiversity, scenic or recreation values.

8. Avoid or mitigate adverse hydrological impacts, which may result from the practices referred to in objective 7, in watersheds with significant watershed sensitivity and significant fisheries values, as determined by the district manager and designated environment official.
9. When proposing the species composition for the purposes of OPR section 39 (3) (o), a person may, pursuant to OPR section 41, select a single species that is ecologically suited to the area, if a mix of species was present on the area before the timber was harvested.
- 9.1 The area that may be subject to selection of a single species pursuant to objective 9 is limited to no more than 20 per cent of the forested area of any variant within a given EFZ.

### **E. for Resource Management Zones 7 and 11:**

10. To avoid severe social and economic consequences, as determined by the district manager and the designated environment official, the full target of 13 per cent for old growth retention in CWHvm1 may be reduced by up to one third provided that ecologically suitable second growth forest is identified to recruit the shortfall<sup>10</sup>.

### **F. for Resource Management Zone 42:**

11. Retain old seral forest in CWHvm1 in accordance with the full old seral target of 13 per cent for the variant.
- 11.1 Despite objective 11, up to one third of the old seral target may be recruited from second growth provided that
  - (a) such recruitment is necessary to avoid severe social and economic consequences;
  - (b) such recruitment will not impact the ability to conserve suitable habitat of identified wildlife in accordance with the Identified Wildlife Management Strategy<sup>11</sup>; and
  - (c) ecologically suitable second growth forest is identified to recruit the shortfall.<sup>12</sup>

### **G. for Special Management Zone 10:**

12. Retain or recruit old growth forest in CWHxm2 in accordance with the full old seral target of 9 per cent for the variant.

### **H. for Resource Management Zone 10**

13. Retain old seral forest in CWHxm2 in accordance with the full old seral target of 9 per cent for the variant.

---

<sup>10</sup> The targets for retention or recruitment of old growth forests will be achieved through the establishment of old growth management areas as part of landscape unit planning.

<sup>11</sup> See "Managing Identified Wildlife: Procedures and Measures", Volume 1, February 1999.

<sup>12</sup> The targets for retention or recruitment of old growth forests will be achieved through the establishment of old growth management areas as part of landscape unit planning.



## Vancouver Island Land Use Plan Higher Level Plan Order

- 13.1 Despite objective 13, up to one third of the old seral target may be recruited from second growth provided that
- such recruitment is necessary to avoid severe social and economic consequences;
  - such recruitment will not impact the ability to conserve suitable habitat of identified wildlife in accordance with the Identified Wildlife Management Strategy<sup>13</sup>; and
  - ecologically suitable second growth forest is identified to recruit the shortfall.<sup>14</sup>

### **I. for Resource Management Zone 30:**

14. Retain all remaining old growth forest in CWHxm2 until landscape unit objectives for old growth retention or recruitment have been established in accordance with the full old seral target of 9 per cent for the variant.

### **J. for Resource Management Zones 8, 14, 28 and 43:**

15. Retain old growth forests to meet old seral targets<sup>15</sup> and marbled murrelet habitat requirements<sup>16</sup> in the non-contributing<sup>17</sup> land base to the fullest extent possible.
16. Beyond retention in the non-contributing land base, retain old forests in the timber harvesting land base, up to the full target amount, if the district manager and the designated environment official determine that such retention is required to maintain critical marbled murrelet habitat<sup>18</sup>.

### **III. Transition**

17. Pursuant to section 9.1 of the Act, the following objectives will not be implemented in an area until landscape units and objectives have been established for the area, in accordance with section 4 of the Act:  
Objectives 1(a); 4; 5; 10; 11; 11.1; 12; 13; 13.1; 15; and 16.
18. In the event that landscape units and objectives are not established in an area within 2 years of the date that this order takes effect, the objectives referred to in paragraph 17 will be implemented in the area.

### **IV. Filing the Order**

This order will be filed with the regional manager of the Vancouver Forest Region and will take effect on December 1, 2000.

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<sup>13</sup> See "Managing Identified Wildlife: Procedures and Measures", Volume 1, February 1999.

<sup>14</sup> The targets for retention or recruitment of old growth forests will be achieved through the establishment of old growth management areas as part of landscape unit planning.


<sup>15</sup> See "Landscape Unit Planning Guide", March 1999.

<sup>16</sup> See "Managing Identified Wildlife: Procedures and Measures", Volume 1, February 1999.

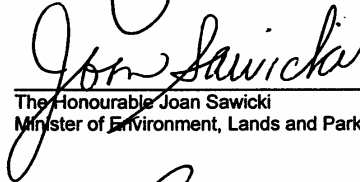
<sup>17</sup> Non-contributing: the crown forested land base that does not contribute to the annual allowable cut, but does contribute to biodiversity objectives and targets.

<sup>18</sup> Retention or recruitment of old growth forests will be achieved through the establishment of old growth management areas as part of landscape unit planning.

# Vancouver Island Land Use Plan Higher Level Plan Order

  
The Honourable Jim Doyle  
Minister of Forests

24/OCT/00  
Date

  
The Honourable Joan Sawicki  
Minister of Environment, Lands and Parks

19/10/00  
Date

  
The Honourable Dan Miller  
Minister of Energy and Mines

19/10/00  
Date

**Appendix D**

**Cortes Landscape Unit Plan**

# Cortes Landscape Unit

## Sustainable Resource Management Plan



Ministry of Forests, Lands and  
Natural Resource Operations

South Coast Region

2012

**APPROVED**

**July 10, 2012**

# Sustainable Resource Management Plan: Cortes Landscape Unit

## **Acknowledgements**

The Ministry of Forests, Lands and Natural Resource Operations recognises the following participants and contributors, without which the completion of this Sustainable Resource Management Plan would not have been possible:

International Forest Products Ltd: Bob Craven, RPF; Mike Landers, RPF; Ian Emery, RFT; Michelle Mico, RPBio; Wayne Wall, RPBio; Laszlo Kardos, RPF, PEng; Melinda White

Mosaic Forest Management Ltd.: Dave Gill, RPF

Terminal Forest Products Ltd.: Dave Marquis, RPF

Pollock Forest Management Ltd.: Tania Pollock, RPF

BC Timber Sales: Rob Martin, RPF

Province of British Columbia: Greg George, RPBio; Chuck Anderson, RPF; Peter Verschoor, RPF; Frank DeGagne, RPF; Lew Greentree; Blake Fougere, RPF

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# 1. Introduction

This Sustainable Resource Management Plan identifies protection measures for landscape level biodiversity and old growth forests in the Cortes Landscape Unit (LU). A description of the landscape unit, discussion on significant resource values, and an Old Growth Management Area (OGMA) summary and rationale are provided. See Appendix 1 for the OGMA summary and Appendix 2 for a list of acronyms used.

Biological diversity or biodiversity is defined as: *‘the diversity of plants, animals and other living organisms in all their forms and levels of organisation, and includes the diversity of genes, species and ecosystems as well as the evolutionary and functional processes that link them’*<sup>1</sup>. British Columbia is the most biologically diverse province in Canada. In British Columbia, 124 species or subspecies of known vertebrates and 309 vascular plants are listed for legal designation as threatened or endangered<sup>2</sup>. The continuing loss of biological diversity will have a major impact on the health and functions of ecosystems and the quality of life in the province (Resources Inventory Committee, 1998).

Planning for OGMA and Wildlife Tree Patch (WTP) biodiversity values is recognized as a high priority for the province. LU Planning through Section 93.4 of the *Land Act* for the purposes of the *Forest and Range Practices Act* (FRPA) allows for the legal establishment of objectives to address landscape level biodiversity values. Managing for biodiversity through retention of old growth forests is important not only for wildlife, but can also provide important benefits to ecosystem management, protection of water quality and preservation of other natural resources. Although not all elements of biodiversity can be, or need be, maintained on every hectare, a broad geographic distribution of old growth ecosystems is intended to help sustain the genetic and functional diversity of native species across their historic ranges.

The Sunshine Coast Forest District completed LU boundaries and assigned Biodiversity Emphasis Options (BEO) in accordance with the direction provided by government. There are 26 LU’s in this district. Through a ranking process the Cortes LU was rated as an intermediate BEO.

Substantial work was completed in 2004-2005 by the Ministry of Agriculture and Lands (MAL), Bill Lasuta and Associates Ltd., and Mosaic Forest Management Ltd. with input provided by BC Timber Sales (BCTS) and Ministry of Environment (MOE) as well as from forest licensees. Funding was provided through the Forest Investment Account (FIA).

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<sup>1</sup> Definition of Biodiversity from page 2 of the Forest Practices Code *Biodiversity Guidebook* (September 1995)

<sup>2</sup> BC Conservation Data Centre 2010. BC Species and Ecosystems Explorer. BC Minist. Of Environ. Victoria, British Columbia. Available: <http://www.env.gov.bc.ca/atrisk/toolintro.html>

Subsequent work was completed in 2010 by Ministry of Forests, Lands and Natural Resource Operations in cooperation with forest licensees.

Public review and comment and First Nations consultation was completed through July and August of 2010 on the proposed OGMA. A summary of comments from the 60 day public review and comment period is included in Appendix III

Supporting documentation regarding government policy, planning processes and biodiversity concepts are provided in the 1995 *Biodiversity Guidebook*, the 1999 *Landscape Planning Guide* (LUPG), the *Vancouver Forest Region Landscape Unit Planning Strategy* (1999), and the *Sustainable Resource Management Planning Framework: A Landscape-level Strategy for Resource Development*.

## 2. Landscape Unit Description

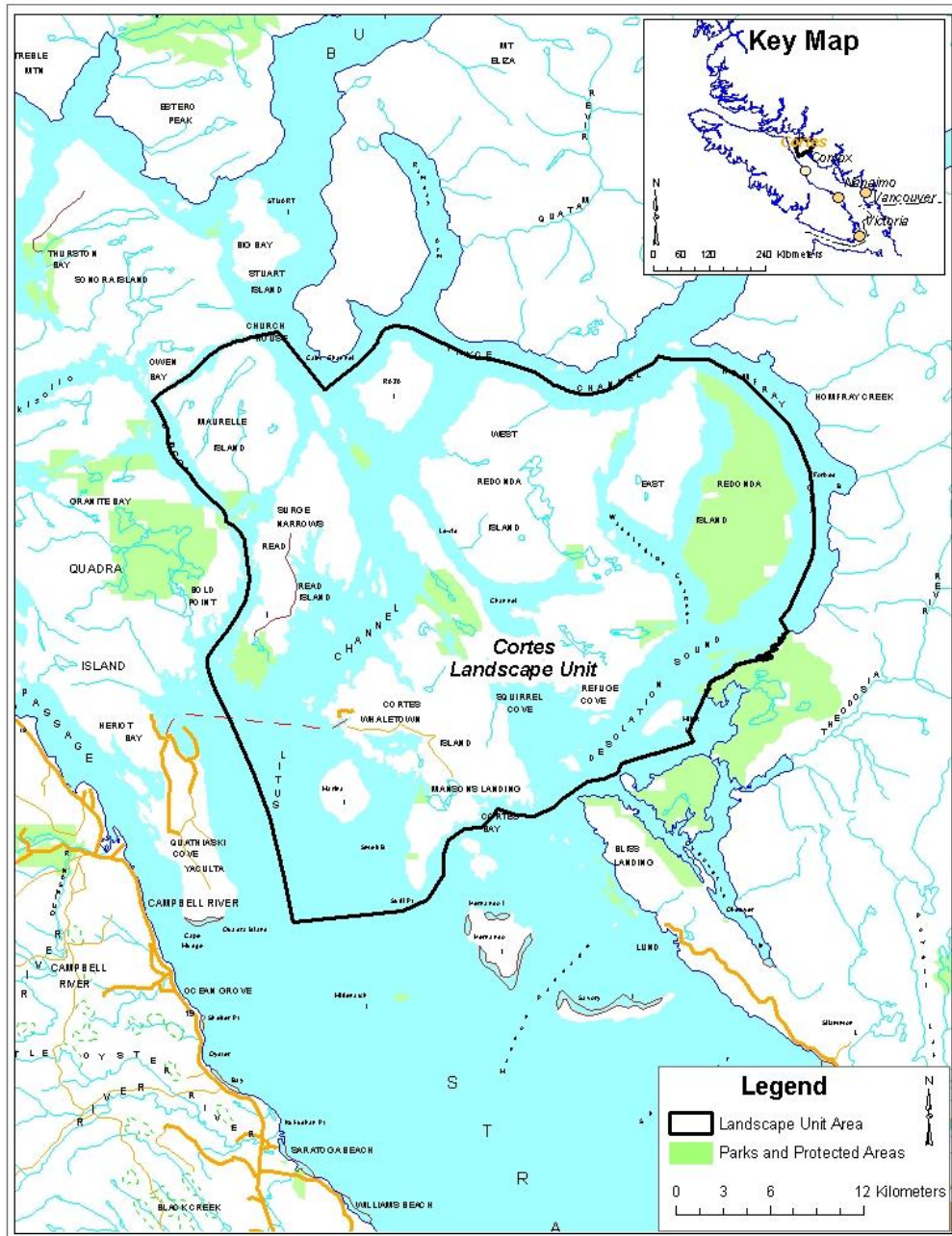
### **2.2 Biophysical Description**

The Cortes LU covers a total area of 55,659 ha, encompassing the main islands of Maurelle, Read, Raza, Cortes, West Redonda, and East Redonda. Several smaller islands, and groups of islands, such as Marina Island, the Rendezvous Islands, and the Penn Islands, to name a few, lie between the larger ones to make up the landscape unit. Desolation Sound lies to the south of the LU and Pryce Channel to the north (Figure 1).

Of the total LU area, 39,726 ha (72%) is within the Crown forest land base, with 25,125 ha of Crown forest included within the THLB. The remaining 15,933 ha (28%) is non-forested (rock, alpine forests, water) or non-Crown (private land, Indian Reserves) and have been excluded from any OGMA contributions and calculations.

The Cortes LU lies within the Georgia Basin and Southern Pacific Ranges Ecosections. Its climate is best described as warm and dry in the summer, and cool and moist in the winter. The higher elevations of West and East Redonda Islands are cooler and moister with moderate snowfall in the winter months





**Figure 1: Cortes Landscape Unit Boundary**

The LU is comprised of the following seven BEC subzones/variants: Coastal Western Hemlock, southern dry maritime (CWHdm); Coast Western Hemlock, submontane moist maritime (CWHmm1); Coastal Western Hemlock, submontane very wet maritime (CWHvm1), Coastal Western Hemlock, montane very wet maritime (CWHvm2); Coastal Western Hemlock, very dry maritime, eastern variant (CWHxm1); Coastal Western Hemlock, very dry maritime, western variant (CWHxm2); and Mountain Hemlock,

windward moist maritime (MHmm1). These seven BEC subzones/variants represent two different Natural Disturbance Types (NDT), with CWHvm1, CWHvm2, and MHmm1 in NDT1 (rare stand initiating events), and CWHdm, CWHmm1, CWHxm1, and CWHxm2 in NDT 2 (infrequent stand-initiating events).

Forests in NDT 1 are influenced by rare stand-initiating events and historically were generally uneven-aged or multi-storied uneven aged, with regeneration occurring in gaps created by the death of individual trees or small patches of trees. Approximately 21% of the productive forest area of the Cortes LU is within NDT 1. The remaining productive forest is within NDT 2. These forest ecosystems are influenced by infrequent stand-initiating events and historically were usually even-aged, but extended post-fire regeneration periods produced some stands with uneven-aged characteristics.

Low relief islands (such as Cortes Island) and accessible areas of the remaining islands in the CWHxm1, CWHxm2, CWHmm1, CWHdm and CWHvm1 have sustained substantial levels of harvesting over the years. Many of these areas now support thrifty second growth, and remnant patches of old growth forests are scattered throughout. Old growth representation targets in the CWH vm1, CWH vm2, and MH mm1 BEC variants can be met predominantly from the non-contributing (NC) land base. However, in the lower elevation BEC's, such as the CWH xm1, CWH xm2, and CWH mm1, more of the old seral target is derived from the partially contributing and contributing land base.

### ***2.3 Summary of Land Status***

Land status within the Cortes landscape unit is summarised in Table 1. There are various ownership classes that are excluded from the Crown Forest land base and therefore excluded from the OGMA selection process. This includes 9112 hectares of private land, 482 ha of woodlots, and 393 hectares of Indian Reserve. Although suitable forested stands within the parks and ecological reserves in the landscape unit cannot be legally established as OGMAs, 7,436 ha contributes to the Crown Forest Land Base. A portion of that area has been identified as OGMAs and will contribute to the old growth targets.

Of the total area, 39,726.1 hectares (71%) are within the Crown Forested Land Base (CFLB). The remaining 15,932.7 hectares (29%) of the landscape unit are classified as non-forested or non-Crown (rock, alpine tundra, water, private land, etc.) and have been excluded from OGMA contributions and calculations.

Table 1 Land Status of the Cortes Landscape Unit

Ownership Class	Crown Forest Land Base (ha)	Excluded Land Base (ha)	Total Area (ha)	Total of LU %
Private	0.0	9,111.9	9,111.9	16.4
Federal Reserve	0.5	8.0	8.5	0.0
Indian Reserve	0.0	393.0	393.0	0.7
Crown Ecological Reserve	5,261.8	922.1	6,183.9	11.1
Crown UREP	212.3	11.7	224.0	0.4
TSA or PSYU	30,968.2	4,553.2	35,521.3	63.9
Provincial Park	2,112.8	445.4	2,558.2	4.6
Provincial Park or Reserve	17.9	2.6	20.5	0.0
Misc Reserve	0.0	1.2	1.2	0.0
Misc Reserve	43.0	0.5	43.4	0.1
Woodlot License	1,109.6	481.5	1,591.1	2.9
Crown Misc. Reserves	0.0	1.8	1.8	0.0
<b>Total</b>	<b>39,726.1</b>	<b>15,932.7</b>	<b>55,659.4</b>	<b>100.0</b>

Table 2 provides a breakdown of the landbase based on biogeoclimatic ecosystem classification (BEC) variants or subzones, and lists the OGMA target. Old seral representation targets are determined and applied based on the Crown forest area in each BEC variant. Landbase classification information is used in landscape unit planning to minimize timber supply impacts, however, operationally the harvestable area and the Timber Harvesting Land Base (THLB) are not consistent because inventories and assumptions used to identify the THLB area are not always an accurate representation of what timber will be harvested. There is usually some harvesting of forest that did not contribute to timber supply forecast used in the last Allowable Annual Cut (AAC) determination.

Old growth targets are not set for the CMAunp ecotype as it is predominantly non-forest and does not make up part of the productive forest land base. However, it is possible that small forested areas may be captured in the alpine, and where analysis determines that they are suitable for biodiversity conservation may be selected as OGMAs.

Table 2. Current Level of Old Growth Forest and Old Growth Targets by Biogeoclimatic Ecosystem Classification Unit

BEC label	Crown Forested Land Base			Excluded Land Base (ha)	Crown Forested Land Base (ha) (C + P + N)	Total Area (ha)	OGMA Target %	
	Contributing	Partial Contributing	Non Contributing	X			%	Ha
CMAunp			1.6	71.2	1.6	72.9	0.00	0.0
CWHdm	8905.4	1871.6	6139.5	2503.1	16916.5	19419.6	0.09	1522.5
CWHmm1	285.3	53.0	41.0	30.2	379.2	409.5	0.09	34.1
CWHvm1	1535.6	828.4	2864.0	359.3	5227.9	5587.2	0.13	679.6
CWHvm2	741.0	403.9	1620.2	307.9	2765.1	3073.0	0.13	359.5
CWHxm1	4209.5	308.8	1886.6	8225.2	6404.9	14630.1	0.09	576.4
CWHxm2	4846.3	1059.6	1053.5	3908.3	6959.4	10867.6	0.09	626.3
MHmm1	41.2	35.0	995.2	527.5	1071.4	1598.9	0.19	203.6
	<b>20564.3</b>	<b>4560.3</b>	<b>14601.5</b>	<b>15932.7</b>	<b>39726.1</b>	<b>55658.8</b>		<b>4002.1</b>

**CWHdm:** Coastal Western Hemlock biogeoclimatic zone, dry maritime subzone.

**CWHmm1:** Coastal Western Hemlock, submontane moist maritime variant

**CWHvm1:** Coastal Western Hemlock biogeoclimatic zone, submontane very wet maritime variant.

**CWHvm2:** Coastal Western Hemlock biogeoclimatic zone, montane very wet maritime variant.

**CWHxm1:** Coastal Western Hemlock biogeoclimatic zone, windward very dry maritime variant

**CWHxm2:** Coastal Western Hemlock biogeoclimatic zone, western very dry maritime variant

**MHmm1:** Mountain Hemlock biogeoclimatic zone, windward moist maritime variant.

Table 3 outlines the total amount of OGMA required and established in each variant/subzone and from which forest category (e.g. non-contributing or contributing). The OGMAs delineated as part of the Cortes Landscape Unit Plan meet the old growth targets consistent with those targets specified in the Order Establishing Provincial Non-spatial Old Growth Objectives. A rationale for OGMA designations within the Cortes landscape unit is provided in Appendix 1. The location of proposed OGMAs is identified in the map that is part of the landscape unit plan.

Table 3. Non-contributing, Constrained THLB and Unconstrained THLB

BEC label	OGMA Target %		Established OGMA (ha)	OGMA in Non-Contributing (N)		OGMA in Partial Contributing (P)		OGMA in Contributing (C)		OGMA in Excluded (X)		Difference (Established - Target)
	%	Ha		%	ha	%	ha	%	ha	%	ha	
CWHdm	0.09	1522.5	1536.4	62.2	956.1	14.9	228.3	21.2	325.4	1.7	26.6	13.9
CWHmm1	0.09	34.1	40.4	51.3	20.7	11.3	4.6	37.4	15.1	0.0	0.0	6.3
CWHvm1	0.13	679.6	688.0	79.7	548.5	7.1	49.2	12.3	84.8	0.8	5.6	8.4
CWHvm2	0.13	359.5	371.3	88.4	328.2	4.7	17.5	0.2	0.8	6.7	24.8	11.8
CWHxm1	0.09	576.4	599.9	41.0	246.0	4.4	26.6	53.4	320.2	1.2	7.0	23.4
CWHxm2	0.09	626.3	643.8	46.7	300.4	29.7	191.5	19.2	123.5	4.4	28.4	17.5
MHmm1	0.19	203.6	215.4	100	215.3	0.0	0.0	0.0	0.0	0.0	0.0	11.8
		<b>4002.1</b>	<b>4095.2</b>	<b>63.9</b>	<b>2615.2</b>	<b>12.6</b>	<b>517.6</b>	<b>21.2</b>	<b>869.9</b>	<b>2.3</b>	<b>92.4</b>	<b>93.1</b>

### 3. Key Resource Tenure Holders

The process to select OGMAs included the identification of tenures that are administered by the Ministry of Forests, Lands and Natural Resource Operations, and the Ministry of Energy and Mines. The selection of OGMAs generally avoided placement within existing tenures where permanent forest disturbance could occur (mineral claims, power projects).

#### 3.1 Forest Tenure Holders

The Cortes LU is within the Sunshine Coast Timber Supply Area (TSA). Three forest licensees, three woodlot licensees, and BC Timber Sales operate in the landscape unit. A&A Trading holds a chart area on the northern portion of West Redonda Island, International Forest Products Ltd. hold chart areas over Raza and East Redonda Islands, and BC Timber Sales operates on the southern portion of West Redonda and Maurelle, Islands. Northwest Hardwoods holds an overlapping deciduous licence throughout the

LU. Woodlot Licences 46 and 2062 are located on Read Island. Woodlot Licence 90 is located on Cortes Island.

### **3.2 Mineral Tenure Holders**

At the time of writing, there are twenty one mineral tenures located in the Cortes Landscape Unit, including: 549970, 549376, 549603, 549382, 549597, 549590, 549389, 555987, 555792, 555852, 555854, 804823, 804842, 804862, 804982, 805003, 805042, 631723, 645323, 661943, 661944. The selection of OGMA's followed the intent of avoiding placement over existing tenure holders, where possible.

The establishment of OGMA's will not have an impact on the status of existing aggregate, mineral and gas permits or tenures. Exploration and development activities are permitted in OGMA's but the preference is to proceed with exploration and development in a way that is sensitive to the old growth values of the OGMA. If exploration and development proceeds to the point of significantly impacting old growth values, then the OGMA will be replaced.

## **4. Significant Resource Values**

The Cortes LU supports a range of natural resource values and features, and a diversity of social and cultural values and influences.

### **4.1 Fish, Wildlife and Biodiversity**

Eighteen wildlife species of management concern are known or suspected to be present in the Cortes LU (BC Conservation Data Centre). These include RED-listed, BLUE-listed and regionally important species. Special habitats, which can be protected under FRPA, for species like mountain goats and grizzly bears are not present in the Cortes LU. Conversely, marbled murrelet nesting habitat has been identified and although used for OGMA's, to date none has been proposed for protection within Wildlife Habitat Areas.

The intent of defining OGMA's is not to address the individual needs of all these species, but rather to provide a strong foundation for landscape level biodiversity management. In the Cortes LU, the species of specific concern when identifying OGMA's was Marbled Murrelet. To that end, a total of 28 Good or Superior Marbled Murrelet polygons were identified and OGMA's overlap each one of these.

## ***4.2 Provincial Parks & Protected Areas***

There are several small and medium sized parks in the Cortes LU, including: Teakerne Arm Provincial Park (128 ha), Walsh Cove Provincial Park (85 ha), and Roscoe Bay Provincial Park (247 ha) on West Redonda Island, Surge Narrows Provincial Park (488 ha) on Maurelle Island, Ha'thayim Marine Provincial Park (1277 ha), Smelt Bay (16 ha) and Mansons Landing (100 ha) Provincial Park on Cortes Island, Read Island Provincial Park (639 ha), and Rendezvous Island South Provincial Park (163 ha). Covering the entire east half of East Redonda Island is the East Redonda Island Ecological Reserve (6212 ha). Some of the park and ecological reserve area reported above is water.

In combination, the parks offer a variety of activities including: hiking trails, canoeing, sea kayaking, scuba diving, swimming, marine fishing, wildlife viewing, campsite & wilderness camping and picnic areas. The primary role of the ecological reserve is to conserve representative coastal ecosystems in the CWH and MH biogeoclimatic zones.

## ***4.3 Water Quality***

There are no established community watersheds within the Cortes LU. However, potable water from ground and surface sources (streams and lakes) is required to support the population living on Cortes, and to a much lesser extent, Maurelle and Read Islands as well.

## ***4.4 Private Land***

Most of the private land in the Cortes LU is located on Cortes, Read, Maurelle, Marina, and other small islands. Cortes Island is home to approximately 950 residents, located primarily in the communities of Whaletown, Squirrel Cove, and Manson's Landing. Only small parcels of private land are located on portions of East and West Redonda Islands. Much of the private land has been altered from its natural state for settlement, timber harvesting, agriculture or recreational purposes.

## ***4.5 Forest Resources***

Several of the islands within this LU support a substantial timber harvesting land base. Continued access to commercially valuable timber, including future second growth, is a significant concern to forest licensees.

Commercially valuable tree species in the Cortes LU are most easily described by elevation. Low elevation forests are dominated by Douglas-fir, Western Hemlock, and

Western red cedar. Western and Mountain Hemlock, Amabilis Fir, and Yellow cedar are the most common species at mid to high elevations.

#### **4.6 Mineral Resources**

Subsurface resources (minerals, coal, oil, and gas) and aggregate resources are valuable to the province, but are difficult to characterise due to their hidden nature.

Ministry of Energy and Mines (MEM) has rated the industrial and metallic mineral potential of this LU as High. This ranking is based on a qualitative analysis which takes into account the values of known resources, past exploration and production as well as the number of known mineral occurrences and a subjective probability estimate of value by industry experts.

#### **4.7 Recreation**

The Cortes LU is easily accessible by boat from various population centres on the Sunshine Coast and Vancouver Island. Scheduled ferry service exists between Herriot Bay on Quadra Island and Whaletown on Cortes Island.

Recreational boating and commercial tourism use is heavy during the summer months, especially in and around Cortes Island. The number of people living in this LU likely doubles in the summer. Winter recreational activity is limited due to the remoteness of most of the Landscape Unit to motorized access and poorer weather conditions.

The Cortes LU does not experience the same hunting pressure as areas in closer proximity to larger populations. Any recreational hunting that does occur in this LU would likely be on populated islands with minor incursions onto those islands with road systems in place that can handle ATV's or 4-wheel drive vehicles.

Stream angling and lake fishing opportunities exist but are limited. Trail hiking, berry and mushroom picking and wildlife viewing/sightseeing also occur, but predominantly during the summer months. Overall, recreation use in the Cortes LU would be rated as moderate to high.



## 5. First Nations

The Cortes LU is located within the claimed traditional territories of the Klahoose, Xwémalkwu (Homalco), Sliammon, We Wai Kai (Cape Mudge) and Wei Wai Kum (Campbell River) First Nations. The Nanwakolas Strategic Engagement Agreement is referenced with respect to consultation (using their consultation process for consultation with the Kwiakah and Wei Wai Kum (Campbell River) FN).

Between 1997 and 1999, an Archaeological Overview Assessment model was developed by Millennia Research to indicate where archaeological sites are most likely located. This was done to minimize potential impacts by forestry operations on culturally important areas.

It is not the province's intention to limit the ability of any parties at the treaty negotiation table to discuss issues of interest in these areas, nor to take administrative or operational action that has the potential to infringe the existing Aboriginal or treaty rights of the First Nations in these areas. These OGMA's do not affect First Nations Aboriginal rights and title, nor do they affect traditional and cultural activities.

## 6. OGMA Methodology

### ***6.1 Existing Planning Processes***

An important part of OGMA planning is to ensure that separate planning processes complement each other. For example, OGMA's are often situated within or adjacent to MAMU habitat in order to overlap constraints and to increase patch size. These larger patches then allow greater opportunity to improve connectivity between adjacent patches.

Efforts are also made to include suitable forested stands adjacent to high value wildlife and recreational features such as wetland, lakes and streams wherever possible to enhance conservation measures for these values. Areas previously identified as Environmentally Sensitive Areas (ESA) are included in OGMA's where they provide mature or old forest representation or are in under-represented types of ecosystem. In addition, some forest stands not classified as "old growth" are included in OGMA's to reflect operational constraints related to management and to increase patch size. The intent is to maintain a series of old forest habitat patches across probable movement corridors to allow wildlife dispersal and gene flow. The use of this approach at the landscape level and conservation of biodiversity at the stand level (e.g. Wildlife Tree

Patches) will increase the likelihood of sustaining ecosystems and wildlife populations well distributed across their natural range.

## **6.2 *Assessment and Review***

Efforts were made during preparation of this LU plan to ensure OGMA's were generally distributed spatially and not concentrated in a particular area or mapsheet. This is in keeping with the "coarse filter" approach of biodiversity management at the landscape scale, whereby representative "old growth" stands are protected in order to maintain ecosystem processes and specific wildlife habitat requirements that may be poorly understood.

In all cases, a detailed air photo review was performed to confirm the forest cover attributes and suitability of a given stand for OGMA inclusion; as follow up, satellite imagery was used to help locate OGMA boundaries and verify suitability. Numerous stands have also been field checked to verify the presence of desirable old seral characteristics.

OGMA's were selected based on a review of stand attributes in an effort to maximize their value from a biodiversity standpoint while minimizing timber supply impact. In general, opportunities to recruit larger patches to provide for forest interior habitat conditions were favoured over smaller patches. In this search, an effort was extended to minimize the impact on the timber supply by combining areas in the non-contributing (parks, ecological reserves) with areas within the timber harvesting land base. In addition, a significant number of smaller remnant patches containing age class 9 were delineated in conformance with the Landscape Unit Planning Guidebook (LUPG).

## **6.3 *Boundary Mapping***

OGMA boundaries used natural features (e.g. streams) or man-made features (e.g. roads, cutblock edges) wherever possible to ensure they could be located on the ground. OGMA's were also delineated to include complete forest stands (forest cover polygons) wherever possible to reduce operational uncertainty and increase ease of OGMA mapping. OGMA's were mapped using a 1:20,000 scale TRIM base map which forms the legal standard for measurement. Procedures for operating within OGMA's are discussed in the OGMA Amendment policy.

## **6.4 Amendment Policy**

A MFLNRO Coast Region policy provides direction to forest tenure agreement holders when applying for amendments to OGMA legal objectives. Amendment procedures cover such things as minor or major amendments for resource development (e.g. roads, bridges, boundary issues, rock quarries and gravel pits), or relocation of OGMAs. The policy also discusses acceptable management activities and review procedures. The amendment policy forms an integral part of this plan.

In general, most OGMA boundaries are not 'permanently fixed', they can be moved over time so long as biodiversity objectives are maintained. Replacement OGMAs are required to be equivalent or better than the original. As stand succession proceeds, some currently unsuitable forests may become good OGMA candidates and as such periodic assessment or revision to the OGMAs may occur.

## **6.5 Mitigation of Timber Supply Impacts**

During delineation of OGMAs for priority biodiversity provisions, an attempt was made to mitigate short and long-term impacts on timber supply. For example, OGMAs were delineated first in the non-contributing forest land base, however, since representation is at the subzone/variant level, the non-contributing land base could not always satisfy old forest requirements. Where this occurred, portions of the timber harvesting land base from most constrained to least constrained were assessed and included as OGMAs. Occasionally, a younger aged forest stand from the non-contributing land base was used for OGMA, particularly where patch size of an existing OGMA could be increased. Generally, more THLB was required in lower elevation BEC units due to a longer disturbance history and lower amounts of non-contributing forest land.

OGMAs were not established in forest stands that were in approved Category A blocks in Forest Stewardship Plans (FSP) unless agreed to by the licensee. This follows the direction outlined in the *Landscape Unit Planning Guide*.

# **7. Landscape Unit Plan Objectives**

Landscape Unit Objectives will be legally established within the framework of FRPA and as such will become Higher Level Plan objectives. Other Operational Plans must be consistent with these objectives.

## Appendix I: OGMA Summary and Rationale

OGMA Number	OGMA BEC	Total Area (ha)	Comments
1	CWHxm2	29.0	Old forest representation, shoreline, May Lake
2	CWHdm	15.4	Old forest representation, Homfray Channel shoreline, East Redonda Ecological Reserve
3	CWHxm2	4.5	Recruitment
4	CWHmm1	34.9	Old forest representation
4	CWHxm2	17.6	
6	CWHdm	7.9	Old forest representation, adjacent to Pryce Channel
6	CWHvm1	21.8	
6	CWHvm2	8.8	
7	CWHxm2	20.0	Old forest representation, shoreline, Caroline Lake
8	CWHdm	19.5	Old forest representation, Pendrell Sound shoreline, East Redonda Ecological Reserve
11	CWHdm	0.3	Recruitment, adjacent to Pryce Channel
11	CWHvm1	7.1	
11	CWHvm2	11.2	
13	CWHdm	10.6	Old forest representation, Waddington Channel shoreline
14	CWHdm	23.0	Recruitment, East Redonda Ecological Reserve
14	CWHvm1	1.3	
15	CWHdm	2.6	Old forest representation, adjacent to Pryce Channel
15	CWHvm1	17.8	
15	CWHvm2	12.9	
16	CWHvm1	4.9	Old forest representation
17	CWHdm	11.1	Old forest representation
17	CWHvm1	20.4	
17	CWHvm2	12.9	
18	CWHdm	24.0	Old forest representation, adjacent to Pryce Channel
18	CWHvm1	64.2	
18	CWHvm2	33.5	
19	CWHdm	14.5	Old forest representation, Pryce Channel shoreline
20	CWHdm	49.7	Old forest representation, recruitment, shoreline Waddington Channel
21	CWHdm	8.3	Old forest representation, shoreline, Calm Channel
21	CWHvm1	1.7	
22	CWHdm	18.1	Old forest representation, East Redonda Ecological Reserve
22	CWHvm1	12.1	
23	CWHxm2	64.6	Old forest representation, recruitment, shoreline, White Rock Passage
24	CWHdm	25.0	Old forest representation, shoreline, Deer Passage
26	CWHdm	21.5	Adjacent to Pryce Channel
27	CWHdm	42.5	Old forest representation
28	CWHdm	22.2	Old forest representation, adjacent to Walsh Cove Park
29	CWHdm	3.0	Old forest representation, East Redonda Ecological Reserve
29	CWHvm1	12.3	
32	CWHdm	3.8	Old forest representation, adjacent to Waddington Channel
32	CWHvm1	3.5	
33	CWHdm	8.3	Old forest representation
33	CWHvm1	15.3	

OGMA Number	OGMA BEC	Total Area (ha)	Comments
33	CWHvm2	28.7	
33	MHmm1	14.4	
34	CWHxm2	36.5	Old forest representation, recruitment, Elephant Mountain
36	CWHdm	13.9	Recruitment, Walsh Cove Park
38	CWHdm	5.9	Old forest representation, East Redonda Ecological Reserve
41	CWHvm1	6.5	Old forest representation, East Redonda Ecological Reserve
42	CWHdm	19.6	Recruitment, Adjacent to Walsh Cove Park
44	CWHdm	34.8	Old forest representation, Waddington Channel shoreline
44	CWHvm1	8.1	
46	CWHvm1	12.8	Old forest representation, East Redonda Ecological Reserve
46	CWHvm2	3.5	
47	CWHxm2	36.9	Recruitment, shoreline, White Rock Passage
48	CWHdm	35.0	Old forest representation, recruitment, East Redonda Ecological Reserve
48	CWHvm1	53.4	
48	CWHvm2	61.8	
48	MHmm1	34.7	
51	CWHxm2	42.7	Old forest representation, Drew Passage shoreline
55	CWHdm	14.0	Recruitment
57	CWHxm2	4.7	Old forest representation
58	CWHxm2	56.6	Old forest representation
61	CWHvm1	25.9	Old forest representation, Cloud Lake shoreline
62	CWHvm1	19.8	Old forest representation
64	CWHdm	4.5	Old forest representation
65	CWHdm	3.2	Old forest representation
65	CWHvm1	29.3	
66	CWHdm	6.3	Old forest representation, recruitment
66	CWHvm1	5.1	
67	CWHdm	10.4	Old forest representation
68	CWHvm1	2.8	Old forest representation, East Redonda Ecological Reserve
68	CWHvm2	9.3	
68	MHmm1	2.8	
70	CWHvm2	8.6	Old forest representation, East Redonda Ecological Reserve
71	CWHdm	164.2	Old forest representation, East Redonda Ecological Reserve
71	CWHvm1	73.0	
71	CWHvm2	80.5	
71	MHmm1	75.1	
72	CWHdm	38.6	Old forest representation, adjacent to Waddington Channel
73	CWHdm	30.5	Old forest representation
75	CWHdm	3.0	Old forest representation, recruitment
75	CWHvm1	18.8	
79	CWHdm	2.9	Old forest representation
81	CWHdm	15.7	Old forest representation
83	CWHdm	21.2	Old forest representation
84	CWHdm	4.7	Old forest representation, East Redonda Ecological Reserve
84	CWHvm1	88.6	
84	CWHvm2	89.9	
84	MHmm1	53.8	

OGMA Number	OGMA BEC	Total Area (ha)	Comments
86	CWHdm	63.2	Old forest representation, recruitment, Lewis Channel shoreline
89	CWHdm	104.4	Old forest representation, Lewis Channel shoreline
90	CWHdm	3.0	recruitment
91	CWHxm2	7.0	Old forest representation
92	CWHxm2	5.8	Old forest representation, shoreline, Evans Bay
93	CWHvm1	8.4	Old forest representation, lakeshore
94	CWHdm	4.8	Old forest representation
96	CWHvm1	11.9	Old forest representation
97	MHmm1	28.1	Old forest representation, East Redonda Ecological Reserve
98	CWHdm	18.3	Old forest representation
99	CWHdm	28.9	Old forest representation, recruitment, Teakerne Arm park, Cassel Lake shoreline
100	CWHvm1	29.1	Old forest representation
101	CWHdm	26.0	Old forest representation, East Redonda Ecological Reserve
101	CWHvm1	14.8	
101	CWHvm2	0.6	
102	CWHvm1	5.4	Old forest representation, East Redonda Ecological Reserve
104	CWHdm	4.2	Old forest representation, Teakerne Arm park
105	CWHdm	51.3	Old forest representation, recruitment, Robertson Lake shoreline, Hathayim Marine Park
106	CWHdm	20.8	Old forest representation
107	CWHdm	17.8	Old forest representation, lakeshore
108	CWHdm	13.5	Old forest representation, Teakerne Arm park, shoreline
111	CWHdm	84.8	Old forest representation, East Redonda Ecological Reserve, Homfray Channel shoreline
112	CWHxm2	4.7	Old forest representation, shoreline, Evans Bay
113	CWHdm	0.2	Old forest representation, East Redonda Ecological Reserve
113	CWHvm1	9.7	
113	CWHvm2	7.6	
115	CWHdm	28.9	Old forest representation, East Redonda Ecological Reserve
115	CWHvm1	31.3	
115	CWHvm2	1.6	
117	CWHxm2	6.1	Old forest representation, shoreline, Evans Bay
118	CWHvm1	9.0	Old forest representation
119	CWHdm	15.0	Old forest representation, Hathayim Marine Park
121	CWHxm1	10.4	Old forest representation, shoreline Von Donop Inlet, Hathayim Marine Park
122	CWHdm	3.2	Recruitment, Willey Lake shoreline, Hathayim Marine Park
122	CWHxm1	5.3	
123	CWHxm1	12.4	Old forest representation, Sutil Channel shoreline
124	CWHdm	61.1	Old forest representation
125	CWHdm	9.3	Old forest representation, Von Donop Inlet, Hathayim Marine Park shoreline
125	CWHxm1	14.3	
126	CWHxm1	30.3	Old forest representation, Von Donop Inlet, Hathayim Marine Park shoreline
128	CWHdm	135.7	Old forest representation, recruitment, Black Lake shore line, Roscoe Bay park
129	CWHxm1	33.7	Recruitment, Von Donop Inlet, Hathayim Marine Park shoreline
130	CWHxm1	20.7	Old forest representation
131	CWHxm1	13.5	Old forest representation, recruitment, Sutil Channel shoreline
132	CWHxm2	12.3	Old forest representation, Read Island Park
133	CWHxm2	37.5	Old forest representation, recruitment, Read Island Park, shoreline Hoskyn Channel
134	CWHdm	12.7	Old forest representation, Thompson Lake shoreline

OGMA Number	OGMA BEC	Total Area (ha)	Comments
135	CWHdm	16.2	Old forest representation, Black Lake shoreline, Roscoe Bay Park
137	CWHdm	2.0	Recruitment, Lewis Channel shoreline
137	CWHxm1	8.8	
138	CWHxm1	33.5	Old forest representation, Carrington Bay shoreline
139	CWHxm1	9.9	Old forest representation, Hathayim Marine Park shoreline
140	CHWxm2	5.7	Old forest representation, Rosen Lake shoreline, Read Island Park
141	CWHxm1	6.9	Old forest representation
143	CWHxm1	18.8	Old forest representation
145	CWHxm1	3.7	Old forest representation, Read Island Park
146	CWHxm1	12.4	Old forest representation, Sutil Channel, Read Island Park
147	CWHxm1	16.7	Old forest representation, Squirrel Cove shoreline
148	CWHxm1	16.1	Old forest representation
150	CWHxm1	15.4	Old forest representation, Carrington Bay shoreline
151	CWHxm1	70.1	Old forest representation, shoreline, Hoskyn Channel, Read Island Park
153	CWHxm1	12.6	Old forest representation, Desolation Sound shoreline
155	CWHxm1	8.3	Old forest representation, Carrington Lagoon shoreline
157	CWHxm1	7.4	Old forest representation, Lewis Channel shoreline
160	CWHxm1	10.1	Old forest representation, shoreline , Desolation Sound
162	CWHxm1	29.1	Recruitment, Martin Island
163	CWHxm1	65.1	Old forest representation
166	CWHxm1	18.9	Old forest representation
167	CWHxm1	25.5	Old forest representation
168	CWHxm1	19.5	Old forest representation, shoreline, Hague and Gunflint Lakes
170	CWHxm1	19.9	Recruitment
176	CWHxm1	4.4	Old forest representation, adjacent to Refuge Lagoon
177	CWHxm2	11.9	Old forest representation
178	MHmm1	6.5	Old forest representation, East Redonda Ecological Reserve
179	CWHvm1	8.6	Old forest representation
180	CWHdm	10.9	Old forest representation, Lewis channel shoreline
181	CWHxm1	3.7	Recruitment, Lewis Channel shoreline
182	CWHxm1	13.6	Recruitment, shoreline, Desolation Sound
183	CWHxm2	13.1	Recruitment, Evans Bay shoreline
186	CWHdm	4.7	Old forest representation, Desolation Sound shoreline
186	CWHxm1	9.1	
187	CWHdm	14.5	Old forest representation, Teakerne Arm shoreline
188	CWHdm	18.4	Old forest representation
188	CWHvm1	10.5	
189	CWHxm2	114.3	Recruitment, Surge Narrows Park, shoreline
190	CWHxm2	112.4	Recruitment, small island, Rendezvous Island South Park
192	CWHvm1	18.5	Old forest representation
193	CWHmm1	5.5	Old forest representation
193	CWHxm2	0.1	
194	CWHvm1	4.4	Recruitment
195	CWHdm	3.5	Old forest representation, recruitment

## Appendix II: List of Acronyms

AAC	Allowable Annual Cut
BEC	Biogeoclimatic Ecosystem Classification
BEO	Biodiversity Emphasis Option
CFLB	Crown Forest Land Base
FIA	Forest Investment Account
FPC	Forest Practices Code of British Columbia Act
FRPA	Forest and Range Practices Act
ILMB	Integrated Land Management Bureau
LU	Landscape Unit
LUPG	Landscape Unit Planning Guide
MAL	Ministry of Agriculture and Lands
MEM	Ministry of Energy and Mines
MFLNRO	Ministry of Forests, Lands, and Natural Resource Operations
MOE	Ministry of Environment
MFR	Ministry of Forests and Range
NC	Non-Contributing
NDT	Natural Disturbance Type, see Biodiversity Guidebook
OGMA	Old Growth Management Area
THLB	Timber Harvesting Land Base
WTP	Wildlife Tree Patch
WTR	Wildlife Tree Retention



## Appendix III Consultation Summary

A notification letter was sent to all First Nations with traditional territory within the Cortes Landscape Unit on October 9, 2009 to inform that the project was being initiated.

Advertising was placed in the following publications: BC Gazette (July 7, 2011), Campbell River Mirror (July 8, 2011), Powell River Peak (July 6, 2011), Sunshine Coast Reporter (July 8, 2011).

The public and First Nations consultation period was set for July 15, 2011 to September 15, 2011.

No comments were received from First Nations on the proposed OGMAs and legal order during the concurrent 60 day public review and comment and First Nation consultation period.

No objections or comments requiring revisions to the plan were received from the public.

**Appendix E**

**Old-Growth Management Areas Order**

## **Preamble**

This order establishes objectives for Old Growth Management Areas within five Landscape Units located in the Sunshine Coast District.

The goal of these objectives is to contribute to biological diversity at the landscape level.

This preamble is intended to provide context and background; it does not, however, form part of the order.

# PROVINCE OF BRITISH COLUMBIA

## Ministry of Forests, Lands and Natural Resource Operations

### Ministerial Order

Land Use Objectives for Old Growth Management Areas (OGMAs) within the Bute West, Bute East, Cortes, Brittain, and Howe Landscape Units (LUs) situated within the Sunshine Coast District.

#### Part 1 - Interpretation

1. Pursuant to Section 93.4 of the *Land Act*, the following objectives are established as land use objectives for the purposes of the *Forest and Range Practices Act* and apply to OGMAs within the Bute West, Bute East, Cortes, Brittain, and Howe LUs, as shown in the maps set out in Schedule A and contained in the OGMA spatial layer stored in the Geographic Warehouse  
(WHSE\_LAND\_USE\_PLANNING.RMP\_OGMA\_LEGAL\_CURRENT\_SVW)
2. If there is a discrepancy between the areas shown in the maps set out in the attached Schedule A and the OGMA spatial layer stored in the Geographic Warehouse  
(WHSE\_LAND\_USE\_PLANNING.RMP\_OGMA\_LEGAL\_CURRENT\_SVW), the areas as detailed in the OGMA spatial layer will take precedent.
3. Nothing in, under or arising out of this order either abrogates or derogates from any aboriginal rights, aboriginal title or treaty rights of any applicable First Nation, nor relieves the Province of any obligation to consult with any applicable First Nation.

## Part 2 - Objectives

### 4. Objectives for Old Growth Management Areas

- (1) Retain forests in OGMA to the amounts set out in Table A as shown in the maps set out in Schedule A and as contained in the OGMA spatial layer stored in the Geographic Warehouse, except where necessary for the following:
  - a) Topping or pruning of trees along boundaries necessary to improve wind firmness.
  - b) Sanitation to prevent the spread of insect infestations or diseases that pose significant threat to forested areas.
  - c) Removal of danger trees, or brushing and clearing on existing roads under active tenure within the right-of-way necessary for safety purposes.
  - d) Recreation trail and site maintenance or development to address public safety.
  - e) Felling trees for guyline clearance or tailholds. Any trees felled for tailhold or guyline purposes are to be left on site to function as coarse woody debris, unless the felled trees poses a significant risk to forest health.
- (2) In addition to 4(1) (a) to (e), harvesting within any OGMA is permitted, provided that the following apply:
  - (a) Harvesting is required to provide for:
    - i. a logical harvesting boundary, or
    - ii. road or bridge construction to access resource values beyond or adjacent to the OGMA and no other practicable option for road or bridge location exists;
  - (b) The area harvested does not exceed the greater of:
    - i. two hectares, or
    - ii. 5 % of the area of the OGMA; and
  - (c) The integrity of the OGMA is maintained.
- (3) Replacement forest is required if the total area of an OGMA that is subject to the activities pursuant to 4(1) and 4(2) exceeds 0.5 ha. Replacement forest must be of an equivalent or greater area of forest, with equivalent or greater attributes, in order of priority:
  - (a) Contiguous to the OGMA in the same BEC subzone or variant; or,
  - (b) Contiguous to another OGMA in the same BEC subzone or variant.
- (4) Digital spatial data that show the area harvested and the area replacing the area harvested made in accordance with 4(3) must be documented and submitted to the delegated decision maker at the end of each calendar year.

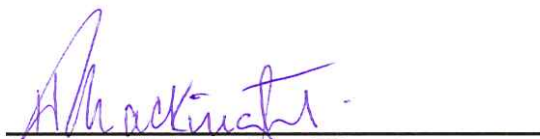
**Table A. Minimum requirement of BEC Variant to be retained by Landscape Unit**

Landscape Unit	BEC Variant	Minimum requirement of BEC Variant to be retained as OGMA (%)
<b>Brittain</b>	CWHdm	9
	CWHvm1	13
	CWHvm2	13
	MHmm1	19
	MHmm2	19
<b>Bute East</b>	CWHdm	9
	CWHds1	9
	CWHms1	9
	CWHvm1	13
	CWHvm2	13
	MHmm1	19
	MHmm2	19
<b>Bute West</b>	CWHdm	9
	CWHds1	9
	CWHms1	9
	CWHvm1	13
	CWHvm2	13
	MHmm1	19
	MHmm2	19
<b>Cortes</b>	CWHdm	9
	CWHmm1	9
	CWHvm1	13
	CWHvm2	13
	CWHxm1	9
	CWHxm2	9
	MHmm1	19
<b>Howe</b>	CWHdm	9
	CWHvm1	13
	CWHvm2	13
	CWHxm1	9
	MHmm1	19

**Part 3 - Effective Date and Transition**

5. Application of this order

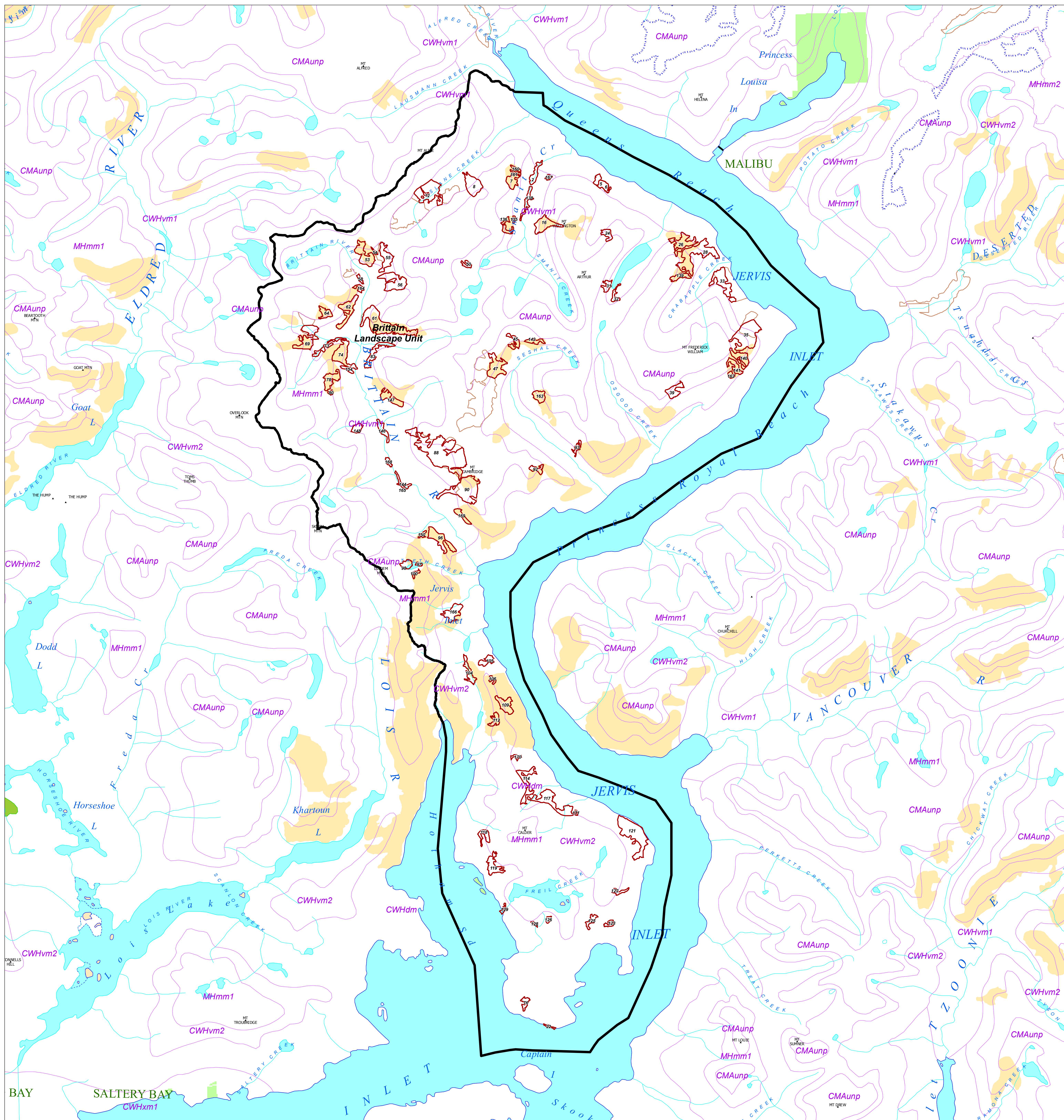
This order and the land use objectives in this order take effect on the date that notice of this order is published in the Gazette.



**Regional Executive Director**  
 Ministry of Forests, Lands and  
 Natural Resource Operations, South Coast Region

*July 10, 2012*  
**Date**

# OGMAs in Britain Landscape Unit



**Data Sources and Notes**

Layer Name (Source):

Scale: 1:60,000

Produced for:  
South Coast Region

Produced by:  
**BRITISH COLUMBIA**  
Ministry of Forests, Lands and Natural Resource Operations

File Name: May 17, 2012  
Projection: Datum: Albers NAD83  
Date: May 17, 2012  
Prepared by: LG

**Legend**

OGMAs	Wildlife Habitat Areas - Approved
Biogeoclimatic Zones	Grizzly Bear Winter Range
Landscape Unit Area	Ungulate Winter Range - Approved
Ferry Route	Goat Winter Range
Road	Ocean or Lake
River or Stream	Parks and Protected Areas

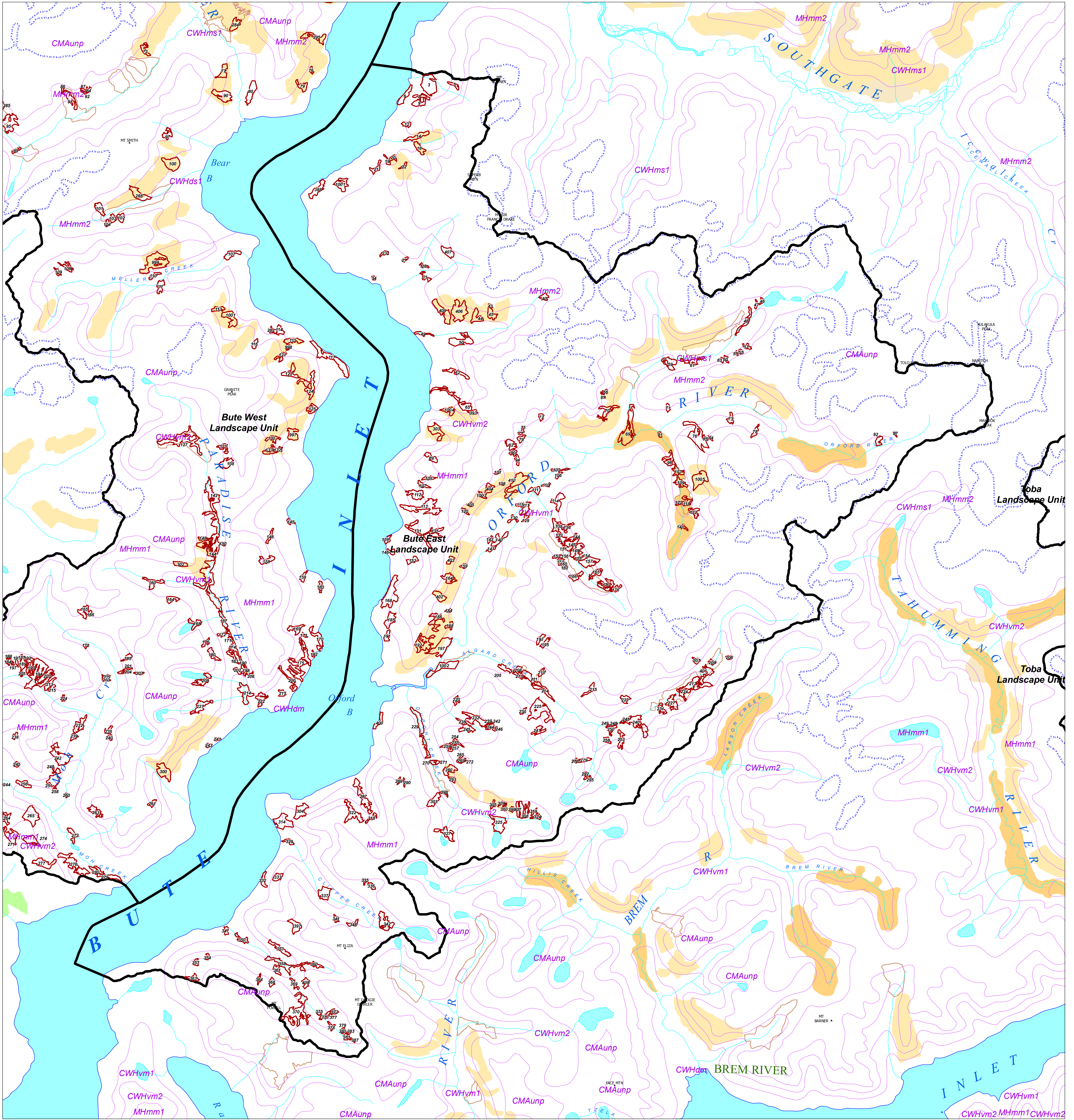
**Key Map**

**APPROVED**

Heather MacKnight  
Regional Executive Director  
South Coast Region

Date: July 10, 2012

# OGMAs in Bute East Landscape Unit



**Data Sources and Notes**

Layer Name (Source):

Scale: 1:60,000

Produced for:  
South Coast Region

Produced by:  
**BRITISH COLUMBIA**  
Ministry of Forests, Lands and Natural Resource Operations

File Name: May 17, 2012  
Projection: Datum: Albers NAD83  
Date: May 17, 2012  
Prepared by: L.G.

**Legend**

- OGMAs
- Biogeoclimatic Zones
- Landscape Unit Area
- Ferry Route
- Road
- River or Stream
- Wildlife Habitat Areas - Approved
- Grizzly Bear Winter Range
- Ungulate Winter Range - Approved
- Goat Winter Range
- Ocean or Lake
- Parks and Protected Areas

**Key Map**

**APPROVED**

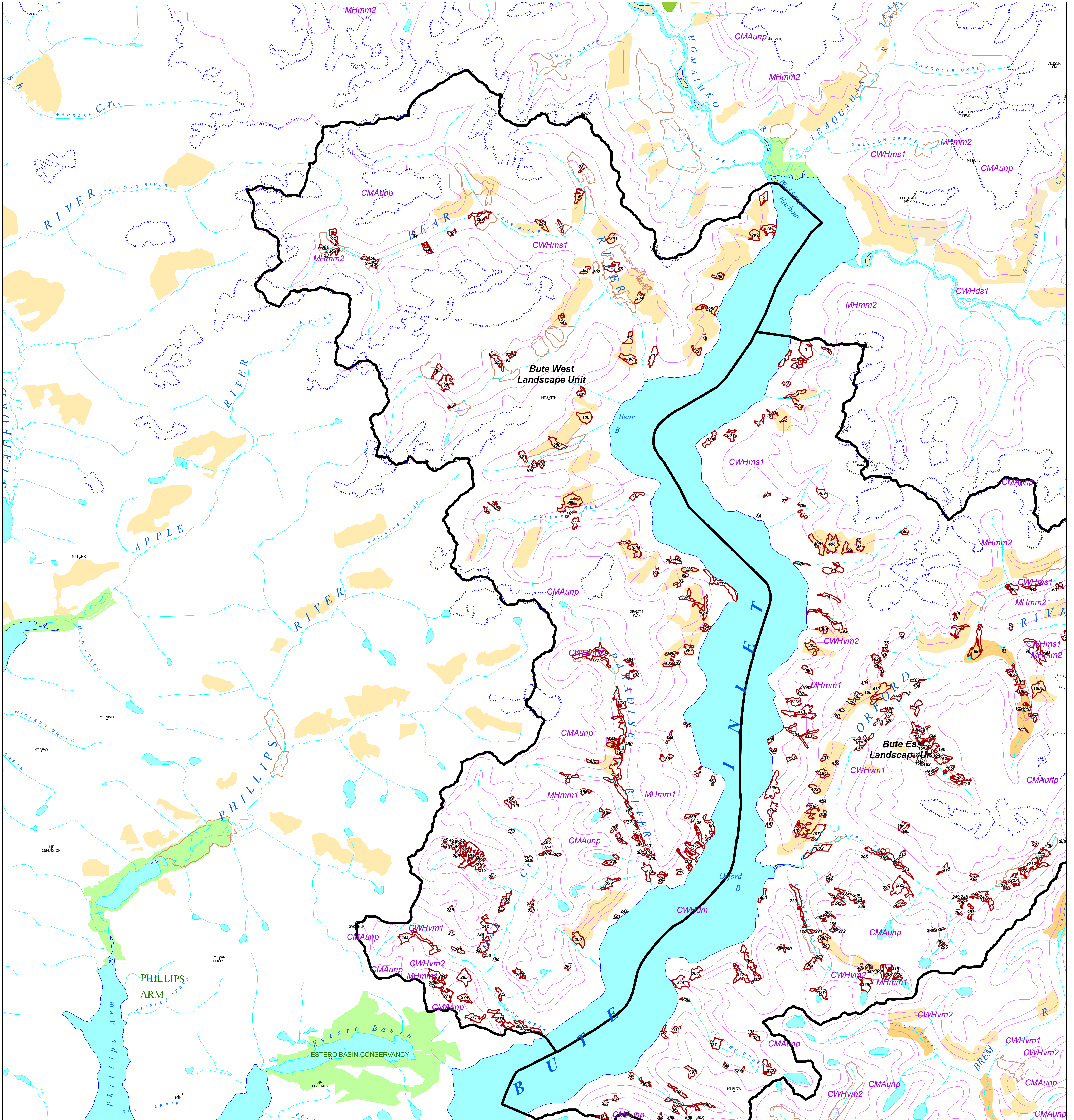
Heather MacKnight  
Regional Executive Director  
South Coast Region

**July 10, 2012**

Date:



# OGMAs in Bute West Landscape Unit



**Data Sources and Notes**

Layer Name (Source):

Scale: 1:70,000

Produced for:  
South Coast Region

Produced by:  
**BRITISH COLUMBIA**  
Ministry of Forests, Lands and Natural Resource Operations

File Name: May 17, 2012  
Project/Datum: Albers NAD83  
Date: May 17, 2012  
Prepared by: L.G.

**Legend**

OGMAs	Wildlife Habitat Areas - Approved
Biogeoclimatic Zones	Grizzly Bear Winter Range
Landscape Unit Area	Ungulate Winter Range - Approved
Ferry Route	Goat Winter Range
Road	Ocean or Lake
River or Stream	Parks and Protected Areas

**Key Map**

**APPROVED**

Heather MacKnight  
Regional Executive Director  
South Coast Region

Date: July 10, 2012

# OGMAs in Cortes Landscape Unit



**Data Sources and Notes**

Layer Name (Source):

Scale: 1:60,000

Produced for:  
South Coast Region

Produced by:  
**BRITISH COLUMBIA**  
Ministry of Forests, Lands and  
Natural Resource Operations

File Name: May 17, 2012  
Project/Datum: Albers NAD83  
Date: May 17, 2012  
Prepared by: LG

**Legend**

OGMAs	Wildlife Habitat Areas - Approved
Biogeoclimatic Zones	Grizzly Bear Winter Range
Landscape Unit Area	Ungulate Winter Range - Approved
Ferry Route	Goat Winter Range
Road	Ocean or Lake
River or Stream	Parks and Protected Areas

**Key Map**

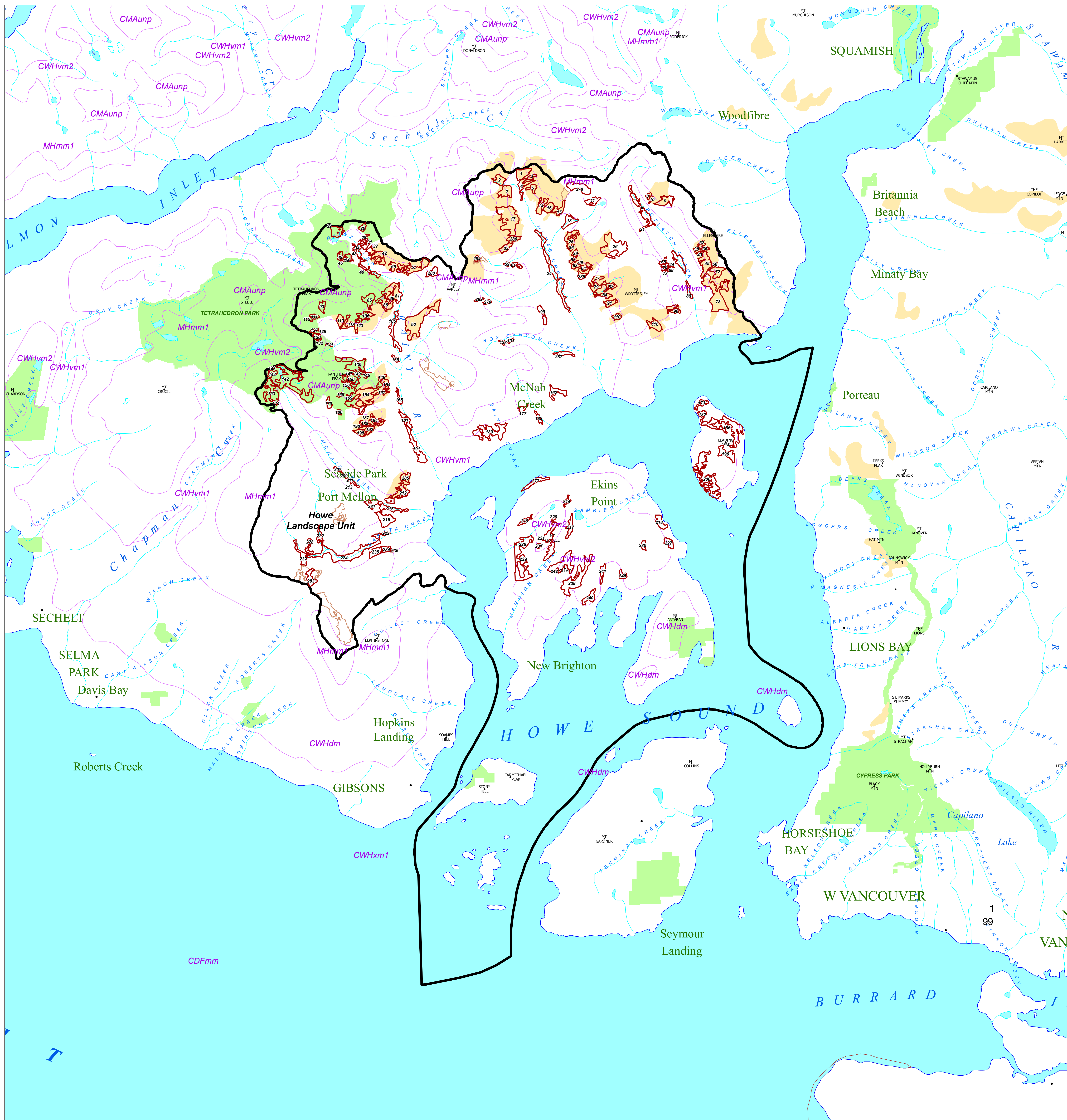
**APPROVED**

Heather MacKnight  
Regional Executive Director  
South Coast Region

July 10, 2012

Date:

# OGMAs in Howe Landscape Unit



**Data Sources and Notes**

Layer Name (Source):

Scale: 1:60,000

Produced for:  
South Coast Region

Produced by:  
**BRITISH COLUMBIA**  
Ministry of Forests, Lands and Natural Resource Operations

File Name: May 17, 2012  
Project/Datum: Albers NAD83  
Date: May 17, 2012  
Prepared by: L.G.

**Legend**

- OGMAs
- Biogeoclimatic Zones
- Landscape Unit Area
- Ferry Route
- Road
- River or Stream
- Wildlife Habitat Areas - Approved
- Grizzly Bear Winter Range
- Ungulate Winter Range - Approved
- Goat Winter Range
- Ocean or Lake
- Parks and Protected Areas

**Key Map**

**APPROVED**

Heather MacKnight  
Regional Executive Director  
South Coast Region

**July 10, 2012**

Date:

**Appendix F**

**Wildlife Notices and Orders**



**NOTICE – INDICATORS OF THE AMOUNT, DISTRIBUTION AND ATTRIBUTES OF  
WILDLIFE HABITAT REQUIRED FOR THE SURVIVAL OF SPECIES AT RISK IN  
THE SUNSHINE COAST FOREST DISTRICT**

This Notice is given under the authority of section 7(2) of the *Forest Planning and Practices Regulation* (B.C. Reg. 14/04) and 9(3) of the *Woodlot Licence Planning and Practices Regulation* (B.C. Reg. 21/04).

The following Notice includes indicators of the amount, distribution and attributes of wildlife habitat required for the survival of the species at risk outlined in Schedule 1.

Approved Wildlife Habitat Areas are not included in the indicators of amount, distribution and attributes for each of the species outlined in Schedule 1. As per section 7(3) of the *Forest Planning and Practices Regulation*, forest tenure holders are exempt from the obligation to specify a result or strategy in relation to the objective set out in section 7(1) of the *Forest Planning and Practices Regulation*, for approved Wildlife Habitat Areas.

This Notice applies to the Sunshine Coast Forest District.

Schedule 1

**1) Marbled Murrelet (*Brachyramphus marmoratus*)**

***Amount:***

1. An amount equal to the total amount of currently suitable nesting habitat in the non-contributing landbase. Government policy for determining the amount of suitable nesting habitat is provided in the species account for Marbled Murrelet in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004);
2. An amount of suitable Marbled Murrelet nesting habitat within Old Growth Management Areas consistent with the direction from landscape unit planning; and
3. An amount of suitable nesting habitat to a maximum net mature timber harvesting landbase impact of 495 ha.

***Distribution:***

1. The amount of habitat referenced above must be distributed to provide:
  - areas of suitable nesting habitat of the size and spatial distribution identified in the species account for Marbled Murrelet in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).

- The areas described above are located within the biogeoclimatic units and preferred elevations identified in the species account for Marbled Murrelet in the *Accounts and Measures for Managing Identified Wildlife* in the Identified Wildlife Management Strategy Version 2004.

**Attributes:**

**Species:  
Marbled  
murrelet**

<b>Attribute</b>	<b>Characteristics</b>
Size	Maintain a balanced range of patch sizes including a mix of large (>200 ha), medium (50-200 ha) and small (<50 ha) patches within managed forests. The area should include vertical canopy complexity,
Tree Features	Large branches or branches with deformities, and presence of mossy platforms
Tree Species	It is unlikely that Marbled murrelets select particular tree species, however certain species are more likely to provide large horizontal platforms suitable for nesting. This includes yellow cedar, western hemlock, Sitka spruce, Douglas-fir and western red cedar. Less likely species include mountain hemlock and amabilis fir.
Nesting Habitat Features	Suitable nesting habitat includes old seral stage coniferous forests, providing large trees with platforms (limbs or deformities >15cm diameter) with variable canopy structure and small gaps in the canopy. Readily nest on steep slopes but is not essential if forest canopies are non-uniform.
Tree Size	Most nesting trees in BC are >200 yr. Nest trees are typically >40 m tall and nest heights are typically >30 m. Nest limbs range in size from 15-74 cm diameter.
Structural Stage	7: old forest (>250 yr - age class 9, but 8 is acceptable if older forest is not present and the age class 8 provides platform limbs and other nest attributes).
Additional information	Table 3 of the IWMS Version 2004 species account for Marbled Murrelet provides detailed information about the habitat features that are associated with most likely, moderately likely and least likely habitat within each of the Marbled Murrelet Conservation regions.

## **2) Grizzly Bear (*Ursus arctos*)**

**Amount:**

- 4953 ha, not exceeding an impact to the mature timber harvesting landbase of 320 ha.

**Distribution:**

- The amount of habitat referenced above must be distributed in the Sunshine Timber Supply Area to provide:
  - areas of suitable foraging and security habitat of the size and spatial distribution identified in the species account for Grizzly Bear in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).

- The areas described above are located within the biogeoclimatic units and preferred elevations identified in the species account for Grizzly Bear in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).

**Attributes:**

**Species:  
Grizzly Bear**

Attribute	Characteristics
Size	1-500 ha, depending on the area of use, extent of seasonal habitat and buffer size required.
Critical patch habitats	Critical patch habitats include beaches and beach margins, estuaries, rich non-forested fens, the edges of forested and non-forested bogs, herb-dominated patches on avalanche chutes with adjacent forest (particularly south-facing ones), herb-dominated subalpine parkland meadows, skunk cabbage swamps, floodplain ecosystems, and areas where bears fish for spawning salmon. Den cavities and surrounding stands are also considered critical. Non-forested critical habitats include a core area and buffer of forested cover. Forested critical habitats are not buffered.
Denning Habitat Features	Hibernating habitats tend to be high elevation areas that are sloped with dry, stable soil conditions that remain frozen throughout the winter. Dens are typically located on steep north-facing slopes, areas where vegetation will stabilize the den roof and where snow will accumulate for insulation. Dens are rarely re-used but Grizzly bears will often return to the same vicinity to dig new dens.
Foraging Habitat Features	Habitat selection is strongly influenced by meeting nutritional requirements, access to mates, thermal cover (i.e., dens), social interactions and the presence and activities of people. Habitat requirements vary greatly as some bears are more transient while others are more resident. Both residents and transients select patches or complexes of habitats within landscapes.
Structural Stage	Generally, foraging is more abundant in non-forested sites, sites with partial forest or sites with many tree gaps in older forest. Closed forest sites near quality habitat may be used for security and day bedding areas. Many or all structural stages can be used seasonally or for specific needs and as such, forage type is not necessarily tied to one particular structural stage.
Elevation	All elevations from sea level estuaries to high alpine meadows and talus slopes.

**3) Vananda Creek Sticklebacks (*Gasterosteus* species 16 and 17)**

**Amount:**

- 678 ha, not exceeding an impact to the mature timber harvesting landbase of 237 ha.

**Distribution:**

- The amount of habitat referenced above must be distributed to provide:
  - areas of suitable habitat of the size and spatial distribution identified in the species account for Vananda Creek Sticklebacks in the *Accounts and Measures for*

*Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).

- The areas described above are located within the biogeoclimatic units and preferred elevations identified in the species account for Vananda Creek Sticklebacks in the *Accounts and Measures for Managing Identified Wildlife* in the Identified Wildlife Management Strategy Version 2004.

**Attributes:**

**Species:  
Vananda Creek  
Sticklebacks**

Attribute	Characteristics
<b>This description is specific to Priest, Spectacle and Emily Lakes on Texada Island.</b>	
Size	The area should include a core area and a management zone. The size of the core area may be between 30-90m and include both sides of the stream. The size may vary depending on the risk of sedimentation derived from erosion events on land within the watershed to the lakes. The management zone should include crown forest lands that drain into the lakes up to the height of the land.
Foraging Habitat Features	Limnetic species feed in the open water, limnetic portions of the lake near the surface. Benthic species feed along the shallow margins of the lake.
Breeding Habitat Features	Both species move from the open or deep water portions of the lake to the more shallow, vegetated littoral zones where males construct nests and breeding occurs. Limnetic males build nests on gravel or rock substrates, on submerged logs and at water depths no more than 1 m. Bethic males choose sites with aquatic vegetation in slightly deeper waters but rarely more than 2 m deep.
Elevation	Of the 3 known locations (Emily, Priest and Spectacle Lakes), the surface elevation of one site is ~40 m while the surface elevation of the other two sites are ~80 m.

**4) “Queen Charlotte” Goshawk (*Accipiter gentilis laingi*)**

**Amount:**

- 1000 ha not exceeding an impact to the mature timber harvesting landbase of 213 ha.

**Distribution:**

- The amount of habitat referenced above must be distributed to provide:
  - areas of suitable habitat of the size, spatial distribution and connectivity identified in the species account for “Queen Charlotte” Goshawk in the *Accounts and Measures for Managing Identified Wildlife* (Identified Wildlife Management Strategy Version 2004).
  - areas of suitable breeding habitat to minimize overlap between goshawk home ranges (approximately 5-8 km separation).
- The areas described above are located within the biogeoclimatic units and preferred elevations identified in the species account for “Queen Charlotte” Goshawk in the



*Accounts and Measures for Managing Identified Wildlife (Identified Wildlife Management Strategy Version 2004).*

**Attributes:**

**Species: Queen  
Charlotte  
Goshawk**

<b>Attribute</b>	<b>Characteristics</b>
Nesting and PFA Area	Approximately 200 ha in size.
Stand Features (Nesting and PFA)	Structural stage 5-7 (>45yrs), multi-layered canopies, structurally diverse, canopy closure (greater than 50%), large diameter trees (for the locale), snags and coarse woody debris (CWD), typically not along forest/non-forest edges. Not near urban areas and generally on the lower 2/3 of slopes where slope gradient is <40%.
Tree Species (Nesting and PFA)	Western hemlock, Douglas fir, Sitka spruce, Western red cedar, amabilis fir and red alder.
Structural Stage	5 (young forest - is used but is generally not preferred), 6 (mature forest) and 7 (old forest).
Elevation (Nesting and PFA)	Areas managed for nesting must generally be below 900 m.

**5) Coastal Tailed Frog (*Ascaphus truei*)**

**Amount:**

1. 30 ha not exceeding an impact to the mature timber harvesting landbase of 20 ha.

**Distribution:**

1. The amount of habitat referenced above must be distributed to provide:
  - areas of suitable habitat of the size and spatial distribution identified in the species account for Coastal Tailed Frog in the *Accounts and Measures for Managing Identified Wildlife (Identified Wildlife Management Strategy Version 2004)*.
2. The areas described above are located within the biogeoclimatic units and preferred elevations identified in the species account for Coastal Tailed Frog in the *Accounts and Measures for Managing Identified Wildlife (Identified Wildlife Management Strategy Version 2004)*.

***Attributes:***

**Species:  
Coastal Tailed  
Frog**

<b>Attribute</b>	<b>Characteristics</b>
Size	Approximately 20 ha (depending on number and length of suitable stream reaches). Larger areas may be appropriate in watersheds with unstable terrain (class 4-5). Areas should include at least two streams or stream reaches (i.e., S4 to S6) with previous detections of tailed frogs. The area should include a 30 m core area buffered by a 20m management zone on both sides of occupied stream reaches.
Habitat Attributes	Tailed frog aquatic habitats are generally characterised by year round flow, non fish bearing (S4-S6), intermediate gradient (>2.5%), coarse substrates (>6.4 cm), stable channel beds and forest cover (generally associated with structural stage S6 or S7). Retain 100% of forest cover within the core area. Within the management zone maintain 70% basal area with appropriate structure to maintain riparian forest, important structural elements (e.g., coarse wood debris,) water quality and temperature (5 to 18 degrees), and naturally dispersed water flows.
Elevation	From sea level to 2140 m.

## **Appendix G**

## **Invasive Plants**

FOR PURPOSES OF FRPA, THE PRESCRIBED SPECIES OF INVASIVE PLANTS ARE AS FOLLOWS (S.2 INVASIVE PLANTS REGULATION, 2004):

Weed Species	Scientific name	Weed Species	Scientific name
Anchusa	Anchusa officinalis	Oxeye daisy	Chrysanthemum leucanthemem
Baby's breath	Gypsophila paniculata	Perennial pepperweed	Lepidium latifolium
Black knapweed	Centaurea nigra	Plumeless thistle	Carduus acanthoides
Blueweed	Echium vulgare	Puncture vine	Tribulus terrestris
Brown knapweed	Centaurea jacea	Purple loosestrife	Lythrum salicaria
Bull thistle	Cirsium vulgare	Rush skeletonweed	Chondrilla juncea
Canada thistle	Cirsium arvense	Russian knapweed	Acroptilon repens
Common burdock	Arctium minus	Scentless chamomile	Matricaria maritima
Common tansy	Tanacetum vulgare	Scotch broom	Cytisus scoparius
Dalmatian toadflax	Linaria dalmatica	Scotch thistle	Onopordum acanthium
Diffuse knapweed	Centaurea diffusa	Spotted knapweed	Centaurea maculosa
Field scabious	Knautia arvensis	St. John's wort	Hypericum perforatum
Giant knotweed	Polygonum sachalinense	Sulphur cinquefoil	Potentilla recta
Gorse	Ulex europaeus	Tansy ragwort	Senecio jacobaea
Hoary alyssum	Berteroa incana	Teasel	Dipsacus fullonum
Hoary cress	Cardaria draba	Yellow Iris	Iris pseudacorus
Hound's-tongue	Cynoglossum officinale	Yellow starthistle	Centaurea solstitialis
Japanese knotweed	Polygonum cuspidatum	Yellow toadflax	Linaria vulgaris
Leafy spurge	Euphorbia esula		
Marsh thistle	Cirsium palustre		
Meadow hawkweed	Hieracium pilosella.		
Meadow knapweed	Centaurea pratensis		
Nodding thistle	Carduus nutans		
Orange hawkweed	Hieracium aurantiacum		

Of concern within the CFGP K4G in particular are Himalayan blackberry (*Rubus discolor*) which is not indicated in the list above, but is also an introduced species that can aggressively spread, Scotch Broom (*Cytisus scoparius*). Measures are found under Section 10 within the FSP.

## PREVENT

These species are not known to occur in the region, but are likely to establish if introduced.

**Eradicate if found. REPORT ALL SIGHTINGS**

Plant Species	Status	Report To
Common Crupina <i>Crupina vulgaris</i> **	Provincial EDRR	Report A Weed BC
Cordgrass, Smooth <i>Spartina alterniflora</i> **	Provincial EDRR	Report A Weed BC
Hawkweed, Whiplash <i>Hieracium flagellare</i>	Regional EDRR	<a href="mailto:Info@coastalisc.com">Info@coastalisc.com</a>
Knapweed, Russian <i>Acroptilon repens</i>	Regional EDRR	<a href="mailto:Info@coastalisc.com">Info@coastalisc.com</a>
Kudzu <i>Pueraria Montana</i> **	Provincial EDRR	Report A Weed BC
Rush Skeleton weed <i>Chondrilla juncea</i>	Regional EDRR	<a href="mailto:Info@coastalisc.com">Info@coastalisc.com</a>
Yellow Starthistle <i>Centaurea solstitialis</i> **	Provincial EDRR	Report A Weed BC

## ERADICATE

These species are known to occur in limited distribution and low density.

**Eradicate if found. REPORT ALL SIGHTINGS**

Plant Species	Status	Report To
Blueweed, <i>Echium vulgare</i>	Regional EDRR	<a href="mailto:Info@coastalisc.com">Info@coastalisc.com</a>
Buffalo Burr, <i>Solanum rostratum</i>	Regional EDRR	<a href="mailto:Info@coastalisc.com">Info@coastalisc.com</a>
Common Reed, <i>Phragmites australis</i> **	Provincial EDRR	Report A Weed BC
Cordgrass, Dense-flowered <i>Spartina densiflora</i> **	Provincial EDRR	Report A Weed BC
Cordgrass, English <i>Spartina anglica</i> **	Provincial EDRR	Report A Weed BC
Cordgrass, Salt meadow <i>Spartina patens</i> **	Provincial EDRR	Report A Weed BC
Garlic Mustard <i>Alliaria petiolata</i>	Regional EDRR	<a href="mailto:Info@coastalisc.com">Info@coastalisc.com</a>
Giant Hogweed <i>Heracleum mantegazzianum</i> (T) (N)	Regional EDRR	<a href="mailto:Info@coastalisc.com">Info@coastalisc.com</a>
Giant Reed <i>Arundo donax</i> **	Provincial EDRR	Report A Weed BC
Hoary Alyssum <i>Berteroa incana</i>	Regional EDRR	<a href="mailto:Info@coastalisc.com">Info@coastalisc.com</a>
Hoary Cress, Heart-pod <i>Lepidium draba subsp. Draba</i>	Regional EDRR	<a href="mailto:Info@coastalisc.com">Info@coastalisc.com</a>
Lesser Celendine, <i>Ficaria verna</i>	Regional EDRR	<a href="mailto:Info@coastalisc.com">Info@coastalisc.com</a>
Loosestrife, Garden (Yellow) <i>Lysimachia vulgaris</i>	Regional EDRR	<a href="mailto:Info@coastalisc.com">Info@coastalisc.com</a>
Milk Thistle <i>Silybum marianum</i> (N)	Regional EDRR	<a href="mailto:Info@coastalisc.com">Info@coastalisc.com</a>
Shiney Geranium, <i>Geranium lucidum</i> **	Provincial EDRR	Report A Weed BC
Slender False Brome, <i>Brachypodium sylvaticum</i> **	Provincial EDRR	Report A Weed BC
Sulfur cinquefoil <i>Potentilla recta</i>	Regional EDRR	<a href="mailto:Info@coastalisc.com">Info@coastalisc.com</a>
Sweet Fennel <i>Foeniculum vulgare</i>	Regional EDRR	<a href="mailto:Info@coastalisc.com">Info@coastalisc.com</a>
Wild Chervil <i>Anthriscus sylvestris</i>	Regional EDRR	<a href="mailto:Info@coastalisc.com">Info@coastalisc.com</a>

## CONTAIN

These species have established infestation in portions of the region.  
Contain existing infestation and prevent spread to un-infested areas.

### Plant Species

Carpet Burweed *Soliva sessilis*  
Hawkweed, Orange *Hieracium aurantiacum*  
Knapweed, Black *Centaurea nigra*  
Knapweed, Diffuse *Centaurea diffusa* (N)  
Knapweed, Meadow *Centaurea pratensis*  
Knapweed, Spotted *Centaurea maculosa* (B) (N)  
Knotweed, Bohemian *Fallopia x bohemica* (N)  
Knotweed, Giant *Fallopia sachalinensis* (N)  
Knotweed, Himalayan *Polygonum polystachum* (N)  
Knotweed, Japanese *Fallopia japonica* (N)  
Poison Hemlock *Conium maculatum* (T)  
Policemans Helmet/Himalayan Balsam *Impatiens glandulifera*  
Scotch Thistle *Onopordum acanthium*  
Yellow Flag Iris *Iris pseudacorus* (N)

## CONTROL

Established infestations common and widespread throughout the Coastal ISC region.  
Focus control in high value conservation areas.  
Use biological control, if available, on a landscape scale.

### Plant Species

Bur Chervil *Anthriscus caucalis* (N)  
Burdock Species *Arctium spp.*  
Canada Thistle *Cirsium arvense* (B) (N)  
Tansy, Common *Tanacetum vulgare*  
Teasel, Fuller's *Dipsacus fullonum*  
Dalmatian Toadflax *Linaria dalmaticab* (B) (N)  
English Holly *Ilex aquifolium*  
English Ivy *Hedera helix*  
Giant Mannagrass *Glyceria maxima*  
Hairy Cat's Ear *Hypochaeris radicata*  
Himalayan Blackberry *Rubus armeniacus* (discolor)  
Jimsonweed/Devil's Apple *Datura stramonium* (T)  
Periwinkle Species *Vinca spp.*  
Loosestrife, Purple *Lythrum salicaria* (B) (N)  
Scotch Broom *Cytisus scoparius*  
St. John's Wort *Hypericum perforatum* (B)  
Tansy Ragwort *Senecio jacobaea* (B) (N)

## CONTROL

Established infestations common and widespread throughout the Coastal ISC region.  
Focus control in high value conservation areas.  
Use biological control, if available, on a landscape scale.

### Plant Species

Tansy Ragwort *Senecio jacobaea* (B) (N)

Butterfly Bush *Buddleja davidii*

Daphne/Spurge-Laurel *Daphne laureola* (T)

Gorse *Ulex europaeus*

Eurasian Water-milfoil *Myriophyllum spicatum*

Yellow Archangel *Lamium galiiobdolon*

Hawkweed, Yellow *Hieracium caespitosum*

### Supplemental Notes:

- The above lists has been approved by the Coastal ISC Board and developed in consultation with key land managers in the Coastal ISC service area a the annual operational planning meeting (February 2016).
- The above lists reflect the entire Coastal ISC area. The placement of a species into a category at the landscape level is very likely to be different from a placement of a species into a category at the local level.
- Provincial EDRR - provincially significant and are to be reported immediately to the province through Report-A-Weed.
- Regional EDRR - regionally significant species and to be reported to the Coastal ISC.

[\\*\\* BC Proposed Prohibited Weeds \(PDF, February 2015\)](#)

(B) = Invasive plants with biological control agents available

(T) = Invasive plants which pose potential human health and safety hazards

[\(N\) = BC Weed Control Act, Regulated Noxious Weed in BC](#)

## **Appendix H      Correspondence & Referral Information**

Due to the privacy concerns, this section will be kept on file and not shared as part of the public information.