

**AMENDED ORDER – General Wildlife Measures:
Wildlife Habitat Areas #5-086, 5-087, 5-118, 5-872 and 5-873**

This order is given under the authority of Section 9(2) and 10(1) of the *Government Actions Regulation* (BC Reg. 582/2004).

1. The Deputy Minister of Forests, Lands and Natural Resource Operations, being satisfied that

- i. the following area contains habitat that is necessary to meet the habitat requirements for Northern Caribou (*Rangifer tarandus caribou*);

orders that:

- a) the areas shown in the map set out in the attached Schedule A (5-086 AMENDED, 5-872 and 5-873) and contained in the wildlife habitat area (WHA) spatial layer stored in the Geographic Warehouse (WHSE_WILDLIFE_MANAGEMENT.WCP_WILDLIFE_HABITAT_AREA_POLY) are established as wildlife habitat areas 5-086, 5-872 and 5-873 for Northern Caribou. The centre point of the line on the attached Schedule A is what establishes the WHA boundary;
- b) the boundary for 5-086, as shown in the attached Schedule A (5-086 AMENDED, 5-872 and 5-873) replaces the boundary for WHA 5-086 established on December 13, 2004;
- c) the areas established for WHAs 5-087 and 5-118 on December 13, 2004 and contained in the wildlife habitat area (WHA) spatial layer stored in the Geographic Warehouse (WHSE_WILDLIFE_MANAGEMENT.WCP_WILDLIFE_HABITAT_AREA_POLY) remain; and
- d) if there is a discrepancy between the areas shown in the map set out in the attached Schedule As and the WHA spatial layer stored in the Geographic Warehouse (WHSE_WILDLIFE_MANAGEMENT.WCP_WILDLIFE_HABITAT_AREA_POLY), the areas as detailed in the WHA spatial layer will take precedent.

2. The Deputy Minister of Forests Lands and Natural Resource Operations, being satisfied that

- i. the general wildlife measures (GWMs) described below are necessary to protect and conserve habitat of Northern Caribou; and
- ii. GAR or another enactment does not otherwise provide for that protection or conservation;

orders that:

- a) this order cancels and replaces the order established on June 4, 2007, entitled "AMENDED ORDER – General Wildlife Measures: Wildlife Habitat Areas # 5-086, 5-087, 5-118";
- b) the GWMs outlined in Schedule 1 are established for WHAs 5-086, 5-087, 5-118, 5-872 and 5-873; and

- c) the general wildlife measures outlined in Schedule 1 do not apply for the purposes of exploration, development and production activities when these activities have been authorized for the purpose of subsurface resource exploration, development or production by the *Mineral Tenure Act*, the *Coal Act*, or the *Geothermal Resources Act*.

Schedule 1

Caribou No-Harvest – Wildlife Habitat Area 5-118

1. With the exception of cutblocks and the associated roads authorized at the time of the establishment of the Wildlife Habitat Areas, all forest cover within WHA 5-118 will be retained.
2. Primary forest activities designed to address forest health activities will not result in the construction of permanent access structures within WHA 5-118.

Caribou Modified Harvest – Wildlife Habitat Area 5-087 (SBPS) Natural Disturbance Seral Distribution Zone)

3. Primary forest activities within WHA 5-087 will result in retention of forest cover such that:
 - (i) Forest cover of the age set out in Column 1 of Table 1. is represented within the entire area of WHA 5-087 at no less than the proportion of the area set out in Column 2.
 - (ii) Forest cover within Old Growth Management Areas (OGMAs) will be considered to meet the old requirement (>140 years) regardless of actual age or level of attack by Mountain Pine Beetle (MPB).
 - (iii) If areas of living forest (<50% dead) outside of OGMAs are not available to meet the additional forest cover age requirement of (i), then and only then, forests outside of OGMAs that have higher mortality because of MPB (>50%) but are not harvested or salvaged can continue to contribute to the forest cover age requirement of (i) using the stand age at time of death (of >50% of the stand) for the following 10 years.

Table 1. Proportions of WHA 5-087 to be retained by age class

Column 1	Column 2
Age (year)	Landscape Proportion (%)
>80	45
>100	37
>120	30
>140	25

4. Primary forest activities within WHA 5-087 will result in more than 50% of the area required for retention of mature and old forest (>100 years) occurring in patches that are greater than 250 hectares with as much interior forest condition as possible.
5. Timber harvesting within WHA 5-087 will be concentrated by using large cutblocks and/or aggregating with existing cutblocks (those <20 years old) or young natural forest (those <20 years old).
6. To meet the proportions identified in the above Table 1, forest development will result in the recruitment of mature and old forest patches to replace areas harvested.
7. Primary forest activities within WHA 5-087 will result in retention of Wildlife Tree Patches in the areas of highest lichen abundance.

Caribou Modified Harvest – Wildlife Habitat Area 5-086

8. In WHA 5-086, 80% of the area of each Landscape Unit will be managed as terrestrial lichen sites, and 20% as arboreal lichen sites.

Definitions:

1. The 20% best arboreal lichen bearing areas are arboreal lichen sites.
2. Higher elevation sites of the MSxv are more commonly arboreal lichen sites.
3. The best arboreal sites are often adjacent to wetlands, creeks and other sources of humidity.
4. Sites in the SBPS are commonly terrestrial lichen sites.
9. Within WHA 5-086, on **terrestrial** lichen sites, timber harvesting will occur by way of irregular group shelterwood harvesting 50% of each stand by area (including all skid trails and in-block roads) on a 70 year cutting cycle, and, timber harvesting within WHA 5-086, on **terrestrial** lichen sites, will:
 - (i) Result in openings that are not more than 2 tree lengths wide by 3 to 4 tree lengths in length.

- (ii) Occur on a snowpack of at least 30 centimetres to avoid physical damage to terrestrial lichens.
 - (iii) Result in piling of slash along the edges of the openings to minimize the slash contact with terrestrial lichens.
 - (iv) Result in no damage or minimal damage to live residual trees. Minimal is defined as a maximum of 5% of post-harvest stems. Damage refers to both crown and bole damage and is defined as: 1) loss of $\frac{1}{4}$ or more of the crown, or 2) loss of bark (to or beyond the cambium) amounting to either 1000 cm² or from $\frac{1}{3}$ or more of the circumference of the tree.
 - (v) Result in a residual stand (and boundary) that can be considered windfirm.
10. Timber harvesting in WHA 5-086, on **arboreal** lichen sites, will occur by way of group selection harvesting of 33% of each standby area (including all skid trails, and in-block roads) on an 80 year cutting cycle, and timber harvesting in WHA 5-086, on **arboreal** lichen sites, will
- (i) Result in openings that are not more than 2 to 3 tree lengths wide by 3 to 4 tree lengths in length.
 - (ii) Result in distribution of the openings throughout the block so that subsequent entries can be well distributed.
 - (iii) Result in a residual stand (and boundary) that can be considered windfirm.
 - (iv) Result in no damage or minimal damage to live residual trees. Minimal is defined as a maximum of 5% of post-harvest stems. Damage refers to both crown and bole damage and is defined as: 1) loss of $\frac{1}{4}$ or more of the crown, or 2) loss of bark (to or beyond the cambium) amounting to either 1000 cm² or from $\frac{1}{3}$ or more of the circumference of the tree.
 - (v) Where significant terrestrial lichens are present, timber harvesting will result in opening sizes that are not more than 2 tree lengths wide by 3 to 4 tree lengths in length and will occur on a snowpack of at least 30 centimetres to avoid physical damage to terrestrial lichens.
11. Primary forest activities designed to address Mountain Pine Beetle infestations within WHA 5-086 will be limited to timber harvesting and road construction as required for forest health sanitation activities. Sanitation is defined as harvest of trees with live brood only.

12. Silvicultural practices within WHA 5-086 will result in:

- (i) no use of mechanical site preparation techniques, except on subhygric or wetter ecosystems
- (ii) minimal use of grass seeding so to avoid displacement of lichens. Grass seeding on disturbed areas of road prisms is allowed but only as a site specific requirement.
- (iii) Use stocking standards consistent with Table 2 to achieve habitat objectives (for lower than typical stocking levels) while maintaining volume expectations.

Table 2. Stocking standards to be applied to WHAs 5-086, 5-872 and 5-873.

BEC		Conifer		Target	MIN pa	MIN p	Species	Ht	Post max density	
Zone/SZ	Series	Preferred (p)	Acceptable (a)	(well-spaced/ha)				(m)	spacing	
MSxv	01	PI Sx ^{3,4}	BI ^{2,3,4}	1000	800	600	PI	1.0	1000	
							Others	0.8		
	02	PI ⁴		1000	550	400	PI	0.8	1000	
	03	PI		1000	550	400	PI	0.8	1000	
	04	PI Sx ⁴	BI ^{2,3,4}	1000	800	600	PI	1.0	1000	
							Others	0.8		
	05	PI Sx ⁴	BI ⁴	1200	700	600	PI	1.0	1200	
							Others	0.8		
	06	PI Sx ⁴	BI ^{2,4}	1200	700	600	PI	1.0	1200	
							Others	0.8		
	07	PI Sx ⁴	BI ^{2,4}	1000	500	400	PI	0.8	1000	
							Others	0.6		
	08	Sx ^{1,4}	PI BI ^{1,2,4}	1000	500	400	PI	0.8	1000	
							Others	0.6		
	09	Sx ^{1,4}	BI ^{1,4} PI ¹	400	200	200	PI	0.8	400	
							Others	0.6		

¹ elevated microsites are preferred

² restricted to southern portion of biogeoclimatic unit in region

³ limited by moisture deficit

⁴ limited by growing-season frosts

(iv) A Minimum Inter-tree Distance of:

- a. 1.5 metres for site series 01, 02, 03 and 04.
- b. 2.0 metres for all other site series, except 1.6 metres where mechanical site preparation is employed on subhygric or wetter ecosystems.

13. Dwarf mistletoe management is not required in WHA 5-086.

14. Access management within WHA 5-086 will result in:

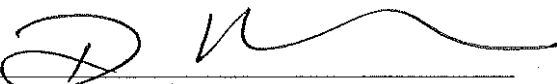
- (i) primary access roads (and main spur roads on large blocks) being located in a manner that facilitates access control structures and reduces line of sight.
- (ii) deactivation of main spur roads as soon as silviculture activities are complete.
- (iii) use of winter or temporary access structures where practicable, to minimize or avoid the construction of in-block access

- (iv) spur and single block access being constructed in winter conditions, with minimal use of fill and cut of soils, using snow as fill material to the extent practicable.
- (v) Identification of key points at which the primary access corridors can be controlled to limit non-industrial traffic.

Caribou Enhanced Conventional Harvest (CECH Zone) –Wildlife Habitat Area 5-872 and 5-873

15. Primary forest activities within WHA 5-872 and 5-873 will result in retention of forest cover such that:
 - (i) 25% of the total productive forest area is left unlogged in each WHA.
 - (ii) Of the 25% to be left unlogged, over half is identified and mapped at the landscape level (see Retention Maps and shapefiles (<http://www.env.gov.bc.ca/esd/distdata/ecosystems/frpa/wha/r5/>)).
 - (iii) The remaining amount, up to the 25% level, will be identified and mapped to include the best available caribou habitat at the stand level. This will be done by the forest licensee(s).
 - (iv) The best available caribou habitat will usually be mature or older forest (>100 years) with the highest levels of lichen (terrestrial or arboreal) in the area.
 - (v) Retention areas can be any size greater than 2 hectares but should be distributed in ways to facilitate movement of caribou and build on the existing retention.
 - (vi) Small changes to mapped retention areas will be allowed to effectively translate mapped lines to ground features. These changes will be limited to moving the line a maximum of 30m and will not change the net area left unlogged. Any changes must be located by GPS, documented on maps and supplied to the Ministry of Forests Lands and Natural Resource Operations, Ecosystems Biologist.
16. Primary forest activities within WHA 5-872 and 5-873 will be concentrated by using large cutblocks and/or aggregating with existing cutblocks (those <20 years old) or young natural forest (those < 20 years old) so that the majority (>50%) of the cutblocks or aggregate patches will be over 250 hectares in size.
17. Timber harvesting within WHA 5-872 and 5-873 will occur on a snowpack of at least 30 cm to minimize site disturbance and avoid physical disturbance of terrestrial lichens.
18. Silvicultural practices within WHA 5-872 and 5-873 will result in:
 - (i) no use of mechanical site preparation techniques, except on subhygric or wetter ecosystems.

- (ii) minimal use of grass seeding so to avoid displacement of lichens. Grass seeding on disturbed areas of road prisms is allowed but only as a site specific requirement.
 - (iii) Stocking standards within WHA 5-872 and 5-873 will be consistent with Table 2.
 - (iv) A Minimum Inter-tree Distance of:
 - a. 1.5 metres for site series 01, 02, 03 and 04.
 - b. 2.0 metres for all other site series, except 1.6 metres where mechanical site preparation is employed on subhygric or wetter ecosystems.
 - (v) Stump heights not more than 40 cm being left to create micro-site planting areas for reducing summer frost damage and improve planted seedling growth.
19. Access management for and within WHA 5-872 and 5-873 will result in:
- (i) primary access roads (and main spur roads on large blocks) being located in a manner that facilitates access control structures and reduces line of sight.
 - (ii) deactivation of main spur roads as soon as silviculture activities are complete.
 - (iii) use of winter or temporary access structures where practicable, to minimize or avoid the construction of in-block access
 - (iv) spur and single block access being constructed in winter conditions, with minimal use of fill and cut of soils, using snow as fill material to the extent practicable.
 - (v) Identification of key points at which the primary access corridors can be controlled to limit non-industrial traffic.



Signed this 12 day of May, 2011
Doug Konkin, Deputy Minister

Ministry of Forest, Lands and Natural Resource Operations

Appendix 1

1. Further guidance on management practices in Northern Caribou habitat can be obtained from the *Northern Caribou Strategy* dated March 2002 prepared under the Cariboo-Chilcotin Land Use Plan, and approved by the Inter-Agency Management Committee and Regional Resource Committee.
2. Authority to consider an exemption from these general wildlife measures is provided in Section 92(1) of the *Forest Planning and Practices Regulation*. In instances where it is not practicable to comply with these measures, a person proposing to conduct forestry activities should consider seeking an exemption from the requirement to comply with the applicable General Wildlife Measures – this applies to the modified harvest, no harvest and enhanced conventional areas.

An exemption application should be submitted to the Minister's delegate with a rationale describing the nature of the problem and options to integrate caribou habitat conservation with proposed forestry practices. This submission will assist in timely consideration of the matter, and will inform the conditions, if any, of the exemption that may be granted prior to commencement of activities.

Salvage of dead timber (non-infectious) resulting from severe natural disturbance may be proposed as an exemption if the proposal is a net benefit to caribou as opposed to taking no action.

When the Minister's delegate considers an exemption, they will respect that caribou habitat conservation is the overriding priority for these Wildlife Habitat Areas. Where an exemption is granted, then notification of the exemption and the conditions will be provided to the Regional Management Team (RMT) of the Ministry of Forest, Lands and Natural Resource Operations.

In reference to GWM 12 and 18, any use of grass seeding should have a documented justification by a RPF.