

ORDER – Wildlife Habitat Areas

9-032, 9-033, 9-034, 9-041, 9-042, 9-043, 9-044, 9-045, 9-046, 9-047, 9-048, 9-049, 9-050, 9-051, 9-052, 9-053, 9-054, 9-055, 9-056, 9-057, 9-058, 9-059, 9-060, 9-061, 9-062, 9-063, 9-064, 9-065, 9-066, 9-067, 9-068, 9-069, 9-070, 9-071, 9-072, 9-073, 9-104, 9-105, 9-106, 9-144 and 9-145

Northern Caribou – Peace Forest District

This order is given under the authority of sections 9(2) and 10(1) of the *Government Actions Regulation* (B.C. Reg. 582/04).

The Deputy Minister of Environment orders that:

1. the wildlife habitat areas (WHAs) shown in the map set out in the attached Schedule As (9-032, 9-033, 9-034, 9-041, 9-042, 9-043, 9-044, 9-045, 9-046, 9-047, 9-048, 9-049, 9-050, 9-051, 9-052, 9-053, 9-054, 9-055, 9-056, 9-057, 9-058, 9-059, 9-060, 9-061, 9-062, 9-063, 9-064, 9-065, 9-066, 9-067, 9-068, 9-069, 9-070, 9-071, 9-072, 9-073, 9-104, 9-105, 9-106, 9-144 and 9-145) and boundaries contained in the GIS file *twha_bc* are established for northern caribou (*Rangifer tarandus*);
2. the general wildlife measures outlined in Schedule 1 are established for the WHAs in the attached Schedule As and boundaries contained in the GIS file *twha_bc*;
3. where there is a discrepancy between the WHA boundaries as shown in the attached Schedule As and the GIS file *twha_bc*, the boundaries as detailed in the GIS file will take precedent. The centre point of the line on the map denoting the WHA is what establishes the boundary;
4. 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*, the *Mines Act*, the *Petroleum and Natural Gas Act*, the *Pipeline Act* or the *Geothermal Resources Act*; and
5. pursuant to section 7(3) of the *Forest Planning and Practices Regulation* the person(s) required to prepare a forest stewardship plan are hereby exempted from the obligation to prepare results or strategies in relation to the objective set out in section 7(1) of the *Forest Planning and Practices Regulation* for the Belcourt-Narraway, Graham, Kennedy-Siding, Moberly and Quintette northern caribou herds in the Peace Forest District.

Schedule 1 – General Wildlife Measures

Definitions

- **Coordinated planning of road development and deactivation:** coordinate planning, development and deactivation schedules with other users operating within the WHAs; use of existing linear corridors and shared access to minimize the creation of new access routes.
- **Key terrestrial lichens:** List of documented key lichen species utilized by northern caribou (species most commonly consumed are in bold) is as follows:

Terrestrial Lichens	Arboreal Lichens
<i>Cladonia spp.</i>	<i>Bryoria spp.</i>
<i>Cladina spp.</i>	<i>Usnea spp.</i>
<i>Peltigera spp.</i>	
<i>Stereocaulon spp.</i>	
<i>Cetraria spp.</i>	
<i>Cladina mitis</i>	
<i>Peltigera aphthosa</i>	
<i>Peltigera malacea</i>	
<i>Cladonia rangiferina</i>	
<i>Cladonia gracilis</i>	
<i>Cladonia uncialis</i>	
<i>Cetraria cuculatta</i>	
<i>Cetraria islandica</i>	
<i>Cetraria ericetorum</i>	
<i>Cetraria nivalis</i>	

- **Mainline road:** permanent, all-weather roads that serve as the main access into an operational area.
- **Material adverse:** in the context of disturbance or impacts, “material” means that the disturbance must be real, substantive, or significant. “Adverse” means the disturbance must have negative consequences for the affected species.
- **Pine-leading stands:** > 50% lodgepole pine.
- **Primary forest activity:** as defined in the *Forest Planning and Practices Regulation* of the *Forest and Range Practices Act*.
- **Primary silviculture activity:** defined as the following three steps:
 - a) initial planting in first planting season following harvest;

- b) regeneration survey in the second year following planting;
- c) fill planting (if necessary) in the third year.

- **Secondary access routes:** spur roads from mainlines (excluding in-block roads); may be seasonal or all season roads.

9-032 to 9-034, 9-041 to 9-048, 9-050 to 9-072 and 9-106

Access

- 1) Primary forest activities will not result in the construction of roads or trails.

Harvesting and silviculture

- 2) Primary forest activities will not result in the removal of forest cover.
- 3) Primary forest activities will not result in the use of domestic sheep or goats.

Pesticides

- 4) Primary forest activities will not result in the use of pesticides.

Recreation

- 5) Primary forest activities will not result in the development of recreation sites or trails.

9-049, 9-104 and 9-105

Access:

- 6) Primary forest activities will not result in the construction of mainline roads.
- 7) Secondary and in-block road layout and construction will result in utilization of existing linear corridors, to the extent practicable.
- 8) Access corridors will provide adequate visual screening, to the extent practicable.
- 9) Roads and trails will not cross natural meadows and wetlands and will not be constructed within the riparian management area of wetlands, to the extent practicable.
- 10) Primary forest activities will result in coordinated planning of road development and deactivation to minimize disturbance to caribou.

Harvesting and silviculture:

- 11) Primary forest activities will result in a network of connected forest cover, which provides visual screening and snow interception, to facilitate caribou movement.
- 12) Primary forest activities will result in vegetation management that will reduce early seral forage species within harvested cutblocks.
- 13) Primary forest activities will not result in material adverse disturbance to the productivity of key terrestrial lichen communities.
- 14) Primary forest activities will result in pre-harvest pine-leading stands being re-established as pine-leading stands.
- 15) Primary forest activities will be completed in as short a timeframe as practicable, to a maximum of 5 years from initiation.

16) Primary forest activities will not result in the use of domestic sheep or goats.

Recreation

17) Primary forest activities will not result in the development of recreation sites or trails.

9-073, 9-144 and 9-145

Access:

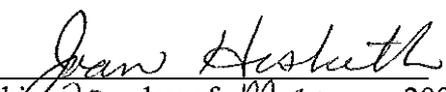
- 18) Primary forest activities will not result in the construction of mainline roads.
- 19) Primary forest activities will result in deactivation of roads upon completion of primary silviculture activities.
- 20) Primary forest activities will result in secondary access routes as low impact roads, to the extent practicable.
- 21) Secondary and in-block road layout and construction will result in utilization of existing linear corridors, to the extent practicable.
- 22) Access corridors will provide adequate visual screening, to the extent practicable.
- 23) Primary forest activities will result in coordinated planning of road development and deactivation to minimize disturbance to caribou.

Harvesting and silviculture:

- 24) Primary forest activities will not result in material adverse disturbance to the productivity of key terrestrial lichen communities.
- 25) Primary forest activities will result in a network of connected forest cover, which provides visual screening and snow interception, to facilitate caribou movement.
- 26) Primary forest activities will result in pre-harvest pine-leading stands to be re-established as pine-leading stands.
- 27) Primary forest activities will be completed in as short a time frame as practicable, to a maximum of 5 years from initiation.
- 28) Primary forest activities will not result in the use of domestic sheep or goats.

Recreation:

29) Primary forest activities will not result in the development of recreation sites or trails.


Signed this 20 day of May, 2008
Joan Hesketh, Deputy Minister
Ministry of Environment

The following information is intended to provide background information and support to the legal order establishing these WHAs. This appendix is not part of the legal order.

Appendix 1 – General Information:

1. Authority to consider an exemption from these general wildlife measures is provided in Section 92(1) of the *Forest Planning and Practices Regulation*. An exemption may be provided if the Minister's delegate is satisfied that the intent of the general wildlife measure will be achieved or that compliance with the provision is not practicable, given the circumstances or conditions applicable to a particular area.
2. An exemption application should be submitted to the Minister's delegate (Regional Manager – Ministry of Environment, for the Region that the WHA is located) with a rationale describing the nature of the problem and options to integrate WHA conservation with proposed forest 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. Upon receipt of a complete exemption application, a determination will normally be made within 30 days of arrival. Incomplete packages will be returned to the proponent for resubmission.

Appendix 2 - Considerations for Selection of Practices:

When implementing the GWMs above, consider the following:

1. When considering access development under GWM 6, GWM 7, GWM 18 and GWM 21 low impact, low maintenance winter roads are considered appropriate and preferred. Licensees should utilize existing linear corridors such as seismic lines, pipeline right-of-ways and access routes developed by/for other industries such as oil and gas to the extent practicable and minimize the construction of new access. Further, minimal ploughing of access routes within and adjacent to caribou habitat is preferred to reduce predator use.
2. When considering access development under GWM 8 and GWM 22, adequate visual screening along access corridors is preferred to aid in reducing the line of sight of predators as well as to mitigate harassment or disturbance of caribou by humans. In general, an adequate visual screen is comprised of vegetative cover capable of hiding 90% of a standing adult caribou from view at a distance of 200 ft (60 m). Topographical features may minimize the amount of vegetative visual screening required along access routes.
3. Further to GWM 9, caribou may make use of natural clearings and meadows as secondary feeding sites. Natural meadows provide a large grass and sedge component, which likely supplements a lichen-based diet. A 250 m buffer around natural meadows and openings is likely adequate to minimize disturbance to caribou foraging within and near these openings.

4. When considering access development under GWM 10 and GWM 23, licensees should coordinate access planning and development with other users operating within the WHA areas. Consideration should be given to employing techniques that reduce line of sight and reduce the efficiency and speed of predators such as wolves on access corridors (e.g. minimizing snow plowing). Further, licensees should consider reclamation techniques on access corridors beyond stream crossing deactivation that can help limit or inhibit predator and human (recreational) movement.
5. When considering harvesting or silvicultural practices under GWM 11 and GWM 25, excessive slash, slash piles or slash in the form of windrows, especially along linear corridors, can prevent the movement of caribou between or through habitats. Harvesting and silvicultural practices that maintain natural levels of coarse woody debris along linear corridors and in cutblocks is adequate to facilitate movement of caribou. Using large openings/patches or block clusters approximately 100 hectares (or larger) and at least equal sized leave areas are recommended. Where practicable, planners should arrange patches or clusters in a manner that does not fragment the WHA (e.g. harvesting activities may progress sequentially across the landscape allowing for areas of intensive management and large leave areas in an unmanaged state). Large patches or block clusters within a patch should accommodate connectivity for movement of caribou between the openings. Restricting access and the creation of new roads for all industries through large leave areas is also recommended. Following these principles of cluster harvest is an important component of caribou habitat management, and results in fewer new linear corridors, more confined early seral habitats over space and time, and the maintenance of connected patches of mature forest cover.
6. When implementing timber harvesting/silviculture requirements under GWM 13 and GWM 24, conducting harvest under frozen ground conditions with sufficient snow cover will improve terrestrial lichen survival and regeneration. In addition, licensees should employ appropriate silvicultural techniques (e.g. reducing slash build-up, strategically placing Wildlife Tree Patches to maintain/enhance existing key lichen communities and serve as dispersal sources for lichen propagules, thinning the stand, and employing appropriate vegetation management treatments, where required) to expedite the regeneration of lichen-bearing forest stands within cutblocks. Timing harvesting activities for early winter (November 1 to January 30) is preferred to reduce sensory disturbance and potential displacement of caribou from critical habitats during the physiologically stressful late winter period.

Terrestrial lichen communities generally include the following site characteristics:

- a) pine-leading forests;
- b) 25 – 55% crown closure;
- c) 50 – 110 years of age;
- d) pine 7 – 17 m in height;
- e) a site index < 14.5;
- f) slope ~ 5%;
- g) 45° < aspect < 315°;

- h) dry nutrient poor site series;
- i) coarse-textured (sandy) soils with a high coarse fragment content; and
- j) a duff layer < 5 cm.

Note: These attributes are based on literature sources not site specific to the Belcourt-Narraway, Graham, Kennedy-Siding, Moberly, and Quintette herds, and are provided for guidance only. There are exceptions to the above noted attributes and a thorough walk-through of pine-leading stands will determine whether key lichen communities are present¹. Single stands may not possess all of these attributes; however, the potential to support key lichens generally increases if one or more of these criteria are met.

7. When implementing timber harvesting/silviculture requirements under GWM 15 and GWM 27, licensees should complete activities in the shortest timeframe that is reasonable to minimize impacts to wildlife and other values.

¹ Current lichen habitat value can be assessed as per "A Guide to Evaluating Forest Stands as Terrestrial Lichen Forage Habitat for Caribou" – Ministry of Environment – Omineca Region, 2000.

