



ORDER – UNGULATE WINTER RANGE #U7-007

This order is given under the authority of sections 9(2) and 12(1) of the *Government Actions Regulation* (B.C. Reg. 582/2004).

The Deputy Minister of Environment orders that:

1. the ungulate winter range shown in the map set out in the attached Schedule A (#U7-007) is established;
2. the ungulate winter range in the attached Schedule A is established for northern caribou (*Rangifer tarandus*), and
3. the general wildlife measures outlined in Schedule 1 are established for the ungulate winter range in the attached Schedule A:
4. where there is any discrepancy between the ungulate winter range boundaries as shown in the attached Schedules A and the GIS file *tuwra_bc*, the boundaries as detailed in the GIS file will take precedent. The centre point of the line on the map denoting the ungulate winter range is what establishes the boundary;
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 Northern Caribou in the Mackenzie Timber Supply Area.
6. ungulate winter range U-7-007 will be reviewed within 6 months of the acceptance by government of the Northern Caribou Recovery Implementation Group for North-Central BC Recovery Action Plan to ensure that the boundaries and general wildlife measures are consistent with the recommendations of the planning process.
7. 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.

Definitions:

Mainline road: is defined as permanent, all-weather roads including, but not limited to, Forest Service Roads (FSR). These roads serve as the main access into an operational area.

Secondary road: is defined as spur roads from mainlines; may be seasonal or all season roads.

Non main road: is defined as any other road that is not a main road or secondary road.

Terrestrial Lichen Habitat (TLH): is a delineated area in a northern caribou Ungulate Winter Range where forage lichens (*Cladina* and *Cladonia* species) grow.

Terrestrial Lichen Habitat Aggregate (TLH Aggregate): is defined as a grouping of Terrestrial Lichen Habitat (TLH) polygons. The 'total area' of each TLH Aggregate includes only the area within each TLH polygon and does not include the matrix of forest between the identified TLH polygons.

Large opening is an area of forest impacted by timber harvesting activities that is equivalent in unit area to 40 to 60% of the unit area of timber that is economically available for timber harvesting in each of the TLH Aggregates described in Table 1 of this order.

Schedule 1 – General Wildlife Measures:

GWM 1. Prevent displacement of caribou from suitable winter habitat.

- a) Within Terrestrial Lichen Habitat (TLH), road construction will not result in new mainline road construction. Secondary road layout and construction will utilize existing linear corridors wherever practicable.

GWM 2. Reduce predator effectiveness.

- a) Each Terrestrial Lichen Habitat Aggregate (TLH Aggregate) identified in Table 1 will be managed using a two pass harvest system over a 140 year rotation.
- b) Timber harvesting activities carried out during each pass in a TLH Aggregate will result in large openings on one side of the TLH Aggregate, with the forested leave area within the TLH Aggregate of a size equivalent to the harvested opening size, plus or minus 10%.
- c) Timber harvesting and road building activities that occur at the commencement of each pass within each TLH Aggregate will be completed within 20 years. All other primary forest activities pertaining to a pass will be completed within 40 years, excluding hauling through a TLH aggregate. For the purposes of this GWM the 20 year period is measured from the time the first block is harvested.

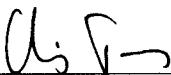
- d) Primary forest activities will result in unfavourable conditions for wolf and snowmobile travel on all non-main roads within each TLH Aggregate. An exemption is not required for timber hauling on a secondary road or where the secondary road is required to access otherwise isolated timber.

Table 1: Terrestrial Lichen Habitat Aggregate (TLH Aggregate) and associated Terrestrial Lichen Habitat (TLH) polygons

Terrestrial Lichen Habitat Aggregate (TLH Aggregate)	TLH Aggregate Name	Terrestrial Lichen Habitat (TLH) Polygon Number
1	Upper Finlay	1a-002, 1b-002, 1b-003, 1c-002, 1c-003, 1c-004, 1c-005, 1c-006, 1c-007, 1c-008
2	Finlay / Bluff Hill	2a-002, 2a-003, 2a-004, 2a-005, 2a-006, 2a-007, 2a-008, 2a-009, 2b-002, 2b-003, 2c-002, 2c-003, 2c-004, 2c-005, 2c-006, 2c-007, 2c-008, 2c-009, 2c-010, 2c-011
3	Tucha / Ingenika	3a-002, 3b-002, 3c-002, 3d-002
4	Swannell / Goldeneye	4a-002, 4b-002, 4c-002
5	Upper Mesilinka	5a-002, 5a-003, 5b-002, 5b-003, 5b-004, 5c-002
6	Mid Mesilinka	6a-002, 6b-002, 6b-003, 6b-004, 6b-005, 6b-006, 6b-007, 6b-007, 6b-009, 6b-010, 6b-011, 6c-002
7	Lower Osilinka	7a-002, 7a-003, 7a-004, 7b-002, 7b-003, 7b-004
8	Conglomerate	8a-002, 8a-003, 8a-004, 8a-005, 8b-002, 8b-003, 8b-004, 8c-002
11	Mid Omineca East	11-002, 11-003, 11-004, 11-005, 11-006
12	Germansen	12a-002, 12a-003, 12a-004, 12b-002, 12b-003, 12b-004, 12b-005, 12b-006, 12b-007, 12b-008, 12c-002
13	Eklund Creek	13a-002, 13a-003, 13a-004, 13a-005, 13a-006, 13a-007, 13b-002
14	15 Mile Swamp	14-002, 14-003, 14-004, 14-005, 14-006, 14-007, 14-008, 14-009

GWM 3. Maintain forage biomass.

- (a) Timber harvesting and silviculture activities within each cutblock will result in protection of not less than 40% of pre-harvest preferred terrestrial lichen (*Cladina* and *Cladonia* sp) cover. For the purposes of GWM 3(a) the measure of 40% of pre-harvest preferred terrestrial lichen refers to the period immediately following harvesting and completion of silviculture activities.
- (b) Primary forest activities will not artificially increase site productivity through the use of fertilizer.
- (c) Primary forest activities will result in the re-establishment of a forested stand that is consistent with pre-harvest species composition.



Signed this 14th day of June, 2007
Chris Trumpy, Deputy Minister
Ministry of Environment

Ungulate Winter Range #U7-007

The following information is intended to provide background information and support to the legal order establishing UWR 7-007. These appendices are not part of the legal order for UWR 7-007.

Appendix 1

1. 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 requirements to comply with the applicable General Wildlife Measures.

An exemption application should be submitted to the Minister's delegate (Regional Manager – Ministry of Environment, for the Region that the Ungulate Winter Range is located) with a rationale describing the nature of the problem and options to integrate winter range 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.

Salvage of dead timber (non-infectious) resulting from severe natural disturbance will only consider an exemption if the proposal is a net benefit to Ungulate Winter Range species being managed for, as opposed to taking no action.

Appendix 2
Guidelines for Northern Caribou Ungulate Winter Range

Ministry of Environment
Environmental Stewardship Division - Omineca Region

These guidelines are intended to provide information to consider when implementing the General Wildlife Measures (GWM) for U-7-007. Professionals preparing operational plans and carrying out practices have site-specific discretion and flexibility in prescribing methods to achieve desired habitat condition. These guidelines should in no way be considered part of the legal GWMs for UWR 7-007.

Refer to the Ministry of Environment, Environmental Stewardship Division, Omineca Region webpage for the most up to date version of these guidelines, as they will be periodically updated: <http://wlapwww.gov.bc.ca/omr/esd/eco/>

Please note that research is currently ongoing around the best strategies to ensure maintenance and/or recruitment of terrestrial lichens. As such, forest practitioners should always seek out the most recent research to ensure they are aware of, considering, incorporating and applying the best information available.

Definition:

Terrestrial lichen habitat is defined as a habitat that has the site characteristics to grow terrestrial lichens. Generally, these habitats areas are found in pine-dominated forests (>90% PI) that have a site index of less than 14.5, are associated with dry-nutrient poor site series with aspect $\geq 45^\circ$ and $\leq 315^\circ$ (Sulyma, 2001). In turn terrestrial lichen sites tend to have coarse-textured (sand) soils with high coarse fragment content.

Prevent displacement of caribou from winter habitat

Further to GWM 1 a)

1. Whenever possible, within Terrestrial Lichen Habitat Aggregates¹ (TLH Aggregates) that are not at the end of a road system, consider scheduling such that harvesting could be planned to occur in some of the TLH Aggregates rather than having activities in all such units all the time.
2. In keeping with an adaptive management process, consider reviewing and updating Access Management Plans to consider and incorporate TLH Aggregates, so that

¹ Note that Terrestrial Lichen Habitat Aggregates are made up of specific individual terrestrial lichen habitat (TLH) polygons. Please refer to Table 1 for the grouping TLH's for each of the 12 TLH Aggregates (Numbers 1-8 and 11-14).

human use of high value winter caribou habitat is avoided. Access management points should consider access closure points by signage and physical structures (i.e. concrete barriers, deep road trenches, non-ploughed roads etc.), or other proven methods.

Reduce Predator Effectiveness

Further to GWM 2 a) and b)

The specific size and distribution of the TLH units, the current lichen habitat value², and the existing harvesting history within each TLH Aggregate are some of the key factors that will guide practitioners as to where the best placement will be identified for first and second pass harvesting of the 140 year rotation.

The management intent of TLHs identified to be part of the second pass harvest is that they are part of the functioning portion of the TLH Aggregate. The TLH's should currently have lichen mats with Class 3 or 4 value such that they provide adequate food for caribou right now and temporally through to the point in time when second pass harvesting begins. Said another way, these TLH's are part of the TLH Aggregate that will not have any new harvesting or silviculture activities until second pass harvesting is initiated.

NOTE: If there are existing silvicultural activities within the functioning portion of the TLH Aggregate, silviculture activities should be finished as quickly as possible.

The management intent of TLHs identified to be part of the first pass of harvest is that they are part of the non-functioning half or portion of the TLH Aggregate (for 70 years post harvest). Said another way, they are part of the portion of the TLH Aggregate that will have harvesting and silviculture activities.

2. When considering which 'half' or 'portion' of the TLH Aggregate will be apportioned to first pass and second pass of the 140 year rotation:
 - consider for second pass, the areas that will, for the duration of time through the first pass timeframe, have the highest probability of providing medium (Class 3) or high (Class 4) forage lichen value, as defined in the most recent version of Ministry of Environment's "Classification Guide for Terrestrial Lichen Habitat – MOE – Omineca Region"³.

² Current lichen habitat value as per "Classification Guide for Terrestrial Lichen Habitat" – MOE – Omineca Region, 2005

³ This document is located on the MOE Omineca Region website, <http://wlapwww.gov.bc.ca/omr/esd/eco/> under the tab called "Ecosystem Reports and Supporting Documents". Ensure the most up to date version is used.

- consider for first pass, the spatial cluster of TLHs that capture the most decadent THL, and/or the areas least resilient to forest health issues. Deal with forest health issues proactively. Become familiar with current plans, constraints and objectives of all licensees operating in a TLH Aggregate.
 - Any resultant non-harvested interstitial areas within a TLH should be managed on the same pass and rotation as the harvested clumps of TLH, regardless of their development status (age, operability, etc.). Therefore, what is not harvested in the first pass should not be available for harvest until the first pass of the next rotation (140 year rotation).
3. Within the Landscape Unit in which a TLH Aggregate lies, maintenance of large contiguous patches of mature forest balanced with large contiguous patches of regenerating forest will allow for easier implementation of GWM 2 a) – d). The intent is to concentrate first pass harvesting (early seral stage forests) in ‘one half’ or portion of the TLH Aggregate.
 4. The following are the current documents that give guidance on patch size and distribution:
 - Biodiversity Guidebook
 - Landscape Unit Planning Guidebook
 - Natural Disturbance Regimes. More information on natural disturbance dynamics is now available. Craig Delong’s 2002 work on natural disturbance units of the Prince George Forest Region provides guidance for sustainable forest management emphasizing Natural Range of Variability (NRV).

Further to GWM 2 d)

1. Strategies to consider that would create conditions to make unfavourable future conditions for wolf and snowmobile travel may include:
 - no ploughing of roads in the winter,
 - minimize the number of packed trails
 - reclaiming or rehabilitating the road surface such that trees will grow on it again, and
 - planting the road surfaces with suitable, fast growing species (such as aspen), that will inhibit movement in future years
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Maintain Forage Biomass

Further to GWM 3 a)

1. In implementing GWM 3, it is the intent that on terrestrial lichen habitats, harvesting and silviculture activities should maintain or enhance pre-harvest lichen cover such that these sites will provide moderate (Class 3) or high (Class 4) lichen value, as defined in the most recent version of Ministry of Environment's "Classification Guide for Terrestrial Lichen Habitat – MOE – Omineca Region".
2. Within TLH's that are identified for first pass harvest (the non functioning half or portion of an TLH Aggregate), the intent is that all harvesting and silviculture activities within these TLH will, 70 years post harvest, provide terrestrial lichen mats with medium (Class 3) or high (Class 4) forage lichen value. These TLH's are then intended to continue to support terrestrial lichen mats (Class 3 and 4) for the subsequent 70 years (70 to 140 years post harvest of the 140 year rotation), when temporally, the previously 'non-functioning' half flips to become the 'functioning' half of the TLH Aggregate.
3. Simultaneously, terrestrial lichen mats on terrestrial lichen habitats within TLH's that are identified as part of the 'functioning' half or portion of an TLH Aggregate, should currently be and continue to be (until second pass harvest begins), in a successional stage that provides medium (Class 3) or high (Class 4) forage lichen value.

Further to all GWMs:

1. Consider reflecting UWR general wildlife measures in appropriate Fire Management Plans.
2. When conducting fire suppression consideration should be given to ensure that that UWR management is included in the appropriate Fire Management Plan.
3. Actions taken to put out fires in an UWR should minimize the impacts of fire to the UWR and its current state of management. Fire planners should be aware of which half of portion of each UWR is the 'functioning' half (half left undisturbed to maintain caribou food availability) and the 'non-functioning' half (half in which timber harvesting activities is occurring).
4. Consider Targeting TLH Aggregates for high fire suppression priority, as a strategy to maintain terrestrial lichen availability in the short term. Suppressing fires is a short term strategy to maintain terrestrial lichen availability. However, to manage the maintenance of lichen across the landscape for the long-term, Ministry of

Environment may change the objective to direction that allows fire to burn where there is not a significant risk to adjacent forest lands.

5. Within TLH Aggregates, where forest development is currently not viable or operational, consider the use of prescribed fire to achieve a sustainable supply of terrestrial lichen habitats. Use of prescribed fire must be done in a manner that simultaneously meets the guidance provided in the general wildlife measures related to access and forest harvesting, and should be consistent with approved fire management plans that incorporate measures to minimize impacts to caribou related to displacement, reduction of predation risks, and maintenance of food.