



ORDER – UNGULATE WINTER RANGE #U7-015

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 and table set out in the attached Schedule A (#U7-015) is established;
2. the ungulate winter range in the attached Schedule A is established for woodland 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* to the extent that ungulate winter ranges U-7-015 address the amount included for Northern Caribou in the Fort St James Forest District. Including consideration of this order and the order establishing U-7-015, the amount remaining for Northern Caribou in the Fort St. James Forest District is a maximum of 37,228 ha not exceeding an impact to the timber harvesting landbase of 34,212 ha.
6. 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:

Main road is defined as Forest Service Road (FSR) or licensee mainline.

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

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

Non-Terrestrial Lichen Habitat (NTLH) is the area within the Ungulate Winter Range that that is not defined as TLH.

Ungulate Winter Range Area (UWR Area) is defined as a grouping of Non-Terrestrial Lichen Habitat (NTLH) polygons and Terrestrial Lichen Habitat (TLH) polygons.

Schedule 1 – General Wildlife Measures:

GWM 1 - To minimize displacement:

- a) Within UWR Areas as defined in Table 1, new main road construction is not to occur unless there is no other practicable option, and an exemption is provided by the Minister of Environment or delegate. An exemption is not required for placement of a new main road that is consistent with the corridors identified in the Northern Long Term Road Corridor Plan – Fort St. James Forest District.
- b) Within a TLH unit, when caribou are present in winter, harvesting, road construction and maintenance is not to occur, unless an exemption is provided by the Minister of Environment or delegate. An exemption is not required for;
 - (i) any activities associated with main roads,
 - (ii) harvesting and any road building activities required to address sanitation forest health issues, or

Table 1: Ungulate Winter Range Area (UWR Area) and associated Terrestrial Lichen Habitat (TLH) polygons and Non-Terrestrial Lichen Habitat (NTLH) polygons

Ungulate Winter Range Area (UWR Area)	UWR Area Name	Non-Terrestrial Lichen Habitat (NTLH) Polygon Number	Terrestrial Lichen Habitat (TLH) Polygon Number
9	Upper Omineca	9a-001, 9b-001, 9c-001	9a-002, 9a-003, 9a-004, 9a-005, 9a-006, 9a-007, 9b-002, 9c-002, 9c-003
10	Mid Omineca West	10-001	10-002, 10-003, 10-004

GWM 2 - To minimize predation:

- a) Within each UWR Area, manage the defined TLH and Non Terrestrial Lichen Habitat (NTLH) through a two pass, 140 year rotation.
- b) Unless an exemption is provided by the Minister of Environment or delegate, within each pass of each UWR Area, harvest 50 % +/- 20% of the total area of economically viable timber within the UWR Area, such that;
 - (i) the ratio of TLH to NTLH in harvested areas is equal (+/- 10 %) to the ratio of TLH to NTLH in the entire UWR Area,

- (ii) the harvested area is clumped or grouped in one contiguous area of the UWR Area;
and
- (iii) the harvested patches do not fragment individual TLH polygons.
- c) Primary forest activities within each UWR Area initiated at the start of a rotation are to be completed within 20 years, unless an exemption is provided by the Minister of Environment or delegate. All resultant interstitial areas within an UWR Area not harvested during that 20 year period will be locked into the 140-year rotation. An exemption is not required for hauling on a main road or a non main road.
- d) Within each UWR Area, upon completion of primary forest activities, implement measures on all non main roads to create unfavourable future conditions for wolf and snowmobile travel, unless an exemption is provided by the Minister of Environment or delegate. An exemption is not required for hauling on a main road or a non main road. An exemption is not required when a non main road is required to access timber beyond.

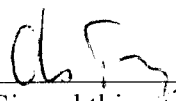
GWM 3 - To maintain food:

- a) Within TLH's;
 - i) in order to reduce disturbance to terrestrial lichens and soil disturbance or soil mixing, restrict harvest to winter periods when snow cover is sufficient, unless an exemption is provided by the Minister of Environment or delegate. An exemption is not required for soil types with pure sand and >30% coarse fragment content,
 - ii) in order to maximize lichen regrowth on the harvested area, process trees at the roadside to minimize debris on the cut over area, unless an exemption is provided by the Minister of Environment or delegate, and
 - iii) do not fertilize.
- b) Within existing and new range tenures that overlap with TLH's, range practices must not cause the conversion of terrestrial lichen habitats to forb and moss cover.
- c) Within existing and new range tenures that overlap with UWR Area's, do not develop range development features, such as, but not limited to, waterholes, fences, salt blocks, corrals, access roads and trails, unless an exemption is provided by the Minister of Environment or delegate.

GWM 4 - To minimize impacts to caribou health from livestock:

Within range tenures that overlap UWR Area's, do not introduce domestic animals such as, but not limited to, domestic sheep, without a full risk assessment, to avoid introducing health risks to caribou.

Note: The Deputy Minister of Environment wishes to acknowledge that ungulate winter range U-7-015 will be reviewed by MOE and affected parties within 6 months of the completion of the Action Plan for Northern Caribou to ensure that the boundaries and general wildlife measures are consistent with the recommendations of the Action Plan.


Signed this 13th day of Dec, 2005
Chris Trumpy, Deputy Minister

Ministry of Environment

Ungulate Winter Range #U-7-015

The following information is intended to provide background information and support to the legal order establishing UWR 7-015. These appendices are not part of the legal order for UWR 7-015.

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.

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 compliment the legislated northern caribou UWR General Wildlife Measures (GWM), and give further recommendations on how to implement them. These guidelines are important practices while planning and operating within and around UWRs. Professionals preparing operational plans have site-specific discretion and flexibility in prescribing methods to achieve desired habitat condition

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.

To Minimize Displacement

Further to GWM 1 a)

1. Whenever possible, within Ungulate Winter Range Areas¹ (UWR Areas) that are not at the end of a road system, scheduling could be done such that harvesting could be planned to occur in some of the UWR Areas rather than having activities in all such UWR Areas all the time.
2. In keeping with an adaptive management process, review and update Access Management Plans to consider and incorporate UWR Areas, so that human use of high value winter caribou habitat is avoided. Access management points should include

¹ Note that the UWR Area is made up of various NTLH and TLH polygons. Please refer to Table 1 for the grouping of NTLH's and TLH's for each of the 2 UWR Areas (Upper Omineca and Mid Omineca West).

access closure points by signage and physical structures (i.e. concrete barriers, deep road trenches, non-ploughed roads etc.), or other proven methods.

Further to GWM 1 b)

NOTE 1:

GWM 1b) and 3a) i) do not conflict, but rather are to be met simultaneously such that harvesting activities that occur in the winter (with the exception of hauling):

1. minimize mechanical damage to terrestrial lichens, and
2. in a particular year in a particular place, do not displace caribou

Said another way, GWM 1b) is a further refinement of GWM 3a) i). If on-ground or aerial surveys confirm that caribou are not occupying the TLH in which winter activities are desired to commence, then forest operations may proceed. If caribou are present in the TLH in which winter activities are desired to commence, operations can be adjusted (e.g. logging can occur later, even that same winter if the caribou move out of the area, or logging can occur during another winter).

NOTE 2:

If a company is operating in a TLH and after operations have started up, caribou move into the area, it is not expected that operations are to be shut down. The company must be able to provide evidence and rationale that this set of circumstances had occurred.

1. Road construction and maintenance, harvesting and silviculture activities within any UWR Area that are at the end of a road system could be incorporated, planned and scheduled as start up wood or summer harvest.
2. Constraints could be put on individual timber sales of BC Timber Sales or blocks of other licensees that pertain to timing to address minimizing displacement impacts to caribou. This would require co-ordinated planning between licensees.
3. Forestry operations (road construction/maintenance and/or harvesting) are not to occur within any TLH when caribou are present. Forestry operations may proceed only when caribou are not utilizing the TLH where supported by monitoring information completed to professional standards (i.e. on-ground assessments, aerial surveys, etc.) that confirms caribou are not occupying the TLH.

To Minimize Predation

Further to GWM 2 a) and b)

1. The specific size and distribution of the TLH units, the current lichen habitat value (MOE, 2005), and the existing harvesting history within each UWR Area 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 NTLH's and TLH's identified to be part of the second pass harvest is that they are part of the functioning portion of the UWR Area. 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 NTLH's and TLH's are part of the UWR Area that will not have any new harvesting or silviculture activities until second pass harvesting is initiated.

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

2. When considering which 'half' or 'portion' of the UWR Area will be apportioned to first pass and second pass of the 140 year rotation:
 - identify 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 ²“Classification Guide for Terrestrial Lichen Habitat – MOE – Omineca Region” (MOE, 2005).
 - identify 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 an UWR Area.
 - Interstitial areas are to 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 will not be available for harvest until the first pass of the next rotation (140 year rotation).
3. Within the Landscape Unit in which an UWR Area 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

² 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.

concentrate first pass harvesting (early seral stage forests) in ‘one half’ or portion of the UWR Area.

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 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
 - where access roads are needed for multiple-year harvest within UWRs, take steps to avoid non-industrial use between harvest entries.

To Maintain Food

Further to GWM 3 a)

NOTE:

Please see Note 1 and Note 2 under GWM 1b) regarding the relationship between GWM 1b) and GWM 3a) i).

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 ³“Classification Guide for Terrestrial Lichen Habitat – MOE – Omineca Region” (MOE, 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”. Please use the most up to date version.

2. Within TLH's that are identified for first pass harvest (the non functioning half or portion of an UWR Area), all harvesting and silviculture activities for these THL need to be prescribed such that they ensure these sites will, 70 years post harvest, provide terrestrial lichen mats with medium (Class 3) or high (Class 4) forage lichen value. These TLH's then must then 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 UWR Area.
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 UWR Area, 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 GWM 3 b)

Range practices that have the potential to cause the conversion of terrestrial lichen mats to forbe and moss cover include:

- Mechanical damage to lichen mats from trampling
- Mixing and fertilization resulting from the presence of livestock which could result in changes to the soil nutrient regime

Depending on site specific conditions, strategies to consider include, but are not limited to:

- Timing grazing use for a period when terrestrial lichen mats are not susceptible to trampling and/or soil are not susceptible to mixing
- Minimize duration of grazing
- Fencing cattle out of areas where there are terrestrial lichen mats

Further to all GWMs:

1. Within all UWR units, reflect UWR general wildlife measures in appropriate Fire Management Plans.
 2. Conduct fire suppression activities that are required in a manner that does not result in a material adverse impact on the UWR habitat.
 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).
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4. Target UWR Areas 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 UWR Areas, 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.