



## **ORDER – UNGULATE WINTER RANGE #U-7-012**

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 (#U-7-012) is established;
2. the Ungulate Winter Range in the attached Schedule A is established for Northern Caribou (*Rangifer tarandus caribou*);
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 the winter survival of ungulates in the Vanderhoof Forest District; and
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.

**High Elevation (HE) Winter Range** is defined as habitat for wintering ungulates generally above 1300m; comprised entirely of NTLH.

**Low Elevation (LE) Winter Range** is defined as ungulate winter range generally below 1300m; comprised of TLH and/or NTLH.

**Low Elevation (LE) Winter Range Aggregate** is defined as a grouping of low elevation TLH and NTLH polygons. Low elevation winter range aggregates are defined in Table 1.

## **Schedule 1 – General Wildlife Measures:**

These UWRs are organized in 3 sections: those that apply to all UWR units, those that apply to only High Elevation UWRs, and those that apply to only the Low Elevation UWRs.

- 1. All Ungulate Winter Ranges (HE-1-001, HE-3-001, HE-4-001, LE-1-001, LE-1-002, LE-1-003, LE-1-004, LE-1-005, LE-1-006, LE-1-007, LE-1-008, LE-1-009, LE-2-001, LE-2-011, LE-2-012, LE-2-013, LE-2-014, LE-2-015, LE-2-017, LE-2-018 and LE-4-001):**

### **To Minimize Displacement:**

- 1.1** Within all UWRs, 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.

### **To Minimize Predation:**

- 1.2** Within all UWRs, 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.

### **To Minimize Predation and Displacement, and to Maintain Food:**

- 1.3** Within existing and new range tenures that overlap UWR units, do not develop new range features, such as, but not limited to, waterholes, fences, salt blocks/sites, corrals, access roads, and trails, unless an exemption is provided by the Minister of Environment or delegate.
- 2. High Elevation Winter Ranges (HE-1-001, HE-3-001 and HE-4-001).**

### **To Minimize Predation and Displacement:**

- 2.1** There shall be no forest harvesting within all High Elevation UWRs, with the exception of cutblocks and associated roads approved in a Forest Development Plan at the time of this UWR designation, or unless an exemption is provided by the Minister of Environment or delegate. An exemption would be considered for the purpose of enhancing the quality of winter range. An exemption is not required for harvesting within these UWRs when it is required to address worker safety: felling danger trees within these UWRs along adjacent cutblock boundaries.
- 2.2** No salvage harvesting within all High Elevation UWRs, unless an exemption is provided by the Minister of Environment or delegate. An exemption would be considered for the purpose of enhancing the quality of the winter range. An exemption is not required for single tree sanitation activities to address forest health issues if harvesting is conducted in a manner that does not result in a material adverse impact on the caribou winter habitat within the designated UWR.

**2.3** Within all High Elevation UWRs, no new main road or non-main road building, and no addition of other access routes (i.e. trails and landings), unless an exemption is provided by the Minister of Environment or delegate.

**2.4** Within all High Elevation UWRs, regarding maintenance of existing roads, time activities to occur when caribou are not present unless an exemption is provided by the Minister of Environment or delegate. An exemption is not required for;

- (i) Road maintenance activities associated with main roads,
- (ii) road maintenance activities required to address sanitation forest health issues, or

### **3. Low Elevation Winter Ranges Aggregates as Identified in Table 1**

#### **To Minimize Predation:**

**3.1** Unless an exemption is provided by the Minister of Environment or delegate, spatially and temporally plan/implement harvesting (and associated silviculture activities) so that as close to half as possible, of the TLH in each Low Elevation Winter Range Aggregate is at a successional stage that will provide moderate/class 3 or high/class 4 lichen value as defined in the most recent version of the Ministry of Environment's "Classification Guide for Terrestrial Lichen Habitat in the Omineca Region" (MOE,2005).

**3.2** Within each Low Elevation Winter Range Aggregate, manage the defined NTLH and TLH through a two pass, 140 year rotation.

**3.3** Unless an exemption is provided by the Minister of Environment or delegate, within each pass of each Low Elevation Winter Range Aggregate, harvest 50 % +/- 20% of the total area of economically viable timber within the aggregate 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 Low Elevation Winter Range Aggregate;
- (ii) the harvested area is clumped or grouped in one contiguous area of the Low Elevation Winter Range Aggregate; and
- (iii) the harvested patches do not fragment individual TLH polygons.

**3.4** Primary forest activities within each Low Elevation Winter Range Aggregate 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 a Low Elevation Winter Range Aggregate 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.

#### **To Maintain Food:**

**3.5** Within TLHs:

- 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.

**3.6** Within existing and new range tenures that overlap with TLHs range practices must not cause conversion of terrestrial lichen habitat to forbe and/or moss cover.

**Table 1:** Low Elevation Winter Range Aggregates applicable to General Wildlife Measure 3.

<b>Low Elevation Winter Range Aggregate Name</b>	<b>UNIT_NO</b>	<b>Type (TLH or NTLH)</b>	<b>Total Area (ha)</b>
<b>Williamson Lake</b>	LE-1-001	Non-Terrestrial Lichen Habitat	10,955.41
	LE-1-002	Terrestrial Lichen Habitat	52.77
	LE-1-003	Terrestrial Lichen Habitat	108.03
	LE-1-004	Terrestrial Lichen Habitat	25.25
	LE-1-005	Terrestrial Lichen Habitat	78.65
	LE-1-006	Terrestrial Lichen Habitat	20.79
	LE-1-007	Terrestrial Lichen Habitat	25.27
	LE-1-008	Terrestrial Lichen Habitat	123.13
	LE-1-009	Terrestrial Lichen Habitat	2,691.46
<b>Johnny Lake</b>	LE-2-001	Non-Terrestrial Lichen Habitat	9,330.61
	LE-2-011	Terrestrial Lichen Habitat	46.70
	LE-2-012	Terrestrial Lichen Habitat	30.40
	LE-2-013	Terrestrial Lichen Habitat	461.87
	LE-2-014	Terrestrial Lichen Habitat	20.79
	LE-2-015	Terrestrial Lichen Habitat	771.02
	LE-2-017	Terrestrial Lichen Habitat	164.76
	LE-2-018	Terrestrial Lichen Habitat	281.67

**To Minimize Displacement:**

**3.7** Within a TLH unit when caribou are present in winter, harvesting, road construction and maintenance are not to occur unless an exemption is provided by the Minister of Environment or delegate. An exemption is not required for:

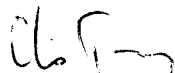
(i) any activities associated with main roads,

(ii) harvesting and any road building activities required to address sanitation forest health issues, or

4. **Low Elevation Ungulate Winter Ranges (LE-1-001, LE-1-002, LE-1-003, LE-1-004, LE-1-005, LE-1-006, LE-1-007, LE-1-008, LE-1-009, LE-2-001, LE-2-011, LE-2-012, LE-2-013, LE-2-014, LE-2-015, LE-2-017, LE-2-018 and LE-4-001):**

**To Minimize Impacts To Caribou Health From Livestock:**

- 4.1 Within existing and new range tenures that overlap with Low Elevation Winter Ranges, do not introduce domestic animals, such as, but not limited to, domestic sheep, without a full risk assessment to avoid introducing health risks caribou.



Signed this 3<sup>rd</sup> day of Dec, 2005

Chris Trumpy, Deputy Minister

Ministry of Environment

## **Ungulate Winter Range #U-7-012**

The following information is intended to provide background information and support to the legal order establishing UWR 7-012. These appendices are not part of the legal order for UWR 7-012.

### **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 1.1

1. Whenever possible, within Low Elevation Winter Range Aggregates<sup>1</sup> 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 Low Elevation Winter Range Aggregates rather than having activities in all units all the time.
2. In keeping with an adaptive management process, review and update Access Management Plans to consider and incorporate UWRs, so that human use of high value winter caribou habitat is avoided. Access management points should include 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 3.5 i) & 3.7

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<sup>1</sup> Low Elevation Winter Range Aggregates are made of a grouping of low elevation TLH and NTLH polygons. Please refer to Table 1.

**NOTE 1:**

GWM 3.7 and 3.5 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 3.7 is a further refinement of GWM 3.5 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 Low Elevation Winter Range Aggregate 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 High Elevation UWR or within a TLH in Low Elevation UWRs when caribou are present. Forestry operations may proceed only when caribou are not utilizing the specified area where supported by monitoring information completed to professional standards (i.e. on-ground assessments, aerial surveys, etc.) that confirms caribou are not occupying the UWR. Generally, windows of winter caribou use for these UWRs are:
  - i. December 1 to April 15 (late winter) in Low Elevation UWRs (Vanderhoof, U-7-012)
  - ii. December 31 to March 31 (late winter) in High Elevation UWRs (Vanderhoof, U-7-012)

Due to the seasonal fluctuations in weather and the unpredictability of caribou herds, the above dates are presented only as approximations.

**To Minimize Predation**



1. The specific size and distribution of the TLH units, the current lichen habitat value (MOE, 2005), and the existing harvesting history within each Low Elevation Winter Range 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 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 Low Elevation Winter Range 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 NTLH's and TLH's are part of the Low Elevation Winter Range Aggregate 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 Low Elevation Winter Range Aggregate (for 70 years post harvest). Said another way, they are part of the portion of the Low Elevation Winter Range Aggregate that will have harvesting and silviculture activities.

2. When considering which 'half' or 'portion' of the Low Elevation Winter Range Aggregate 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 <sup>2</sup>“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 a Low Elevation Winter Range Aggregate.
  - 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, Low Elevation Winter Range Aggregates develop a pattern of disturbance (spatially and temporally) that minimizes fragmentation by maintaining large continuous patches of mature forest balanced by large continuous patches of regenerating forest, such that caribou have the ability to space out (away from early seral habitat that attracts

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<sup>2</sup> 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.

predators). Patch size and seral stage targets for Laidman RMZ have been identified for a High Biodiversity Emphasis Option (BEO) Biodiversity Guidebook (Prov. BC, 1995), which gives biodiversity conservation a high management priority. Within the Caribou Management Strategy, which was 2001 Vanderhoof Forest District policy, (McAllister,2001) patch size targets were slightly modified from the High BEO option of the Biodiversity Guidebook to more closely represent the natural ecology found in the Laidman RMZ. More information on natural disturbance dynamics is now available; 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. Under this approach, Vanderhoof Forest District is part of the Moist Interior natural disturbance unit, and has refined patch size distribution, block design, species composition, and structure associated targets. This direction should be applied at landscape in which the UWR are embedded.

Further to GWM 1.2

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.
2. <sup>3</sup>Within all UWRs, except HE-3-001 (Naglico Hills area), do not use snowmobiles or other motorized access from December 1 to May 1.

### **To Maintain Food**

Further to GWM 3.5

#### **NOTE:**

Please see Note 1 and Note 2 under the heading To Minimize Displacement regarding the relationship between GWM 3.7 and GWM 3.5 i).

1. 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

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<sup>3</sup> The Caribou Management Strategy (McAllister, 2001), which has been adopted as Vanderhoof District Policy outlines a general closure on snowmobiles from December 1 to May 1 for the area that corresponds to these UWRs (except for the Naglico Hills area (HE-3-001)).

of Environment's <sup>4</sup>"Classification Guide for Terrestrial Lichen Habitat – MOE – Omineca Region" (MOE, 2005).

2. Within TLH's that are identified for first pass harvest (the non functioning half or portion of an Low Elevation Winter Range Aggregate), 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 Low Elevation Winter Range 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 Low Elevation Winter Range 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 GWM 3.6

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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<sup>4</sup> 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.

4. Target Low Elevation Winter Range 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 Low Elevation Winter Range 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.
6. Restrict fire suppression activities within high elevation UWRs when there is not a significant risk to adjacent forest lands.