BRITISH COLUMBIA

ORDER – UNGULATE WINTER RANGE – U-4-008 - INVERMERE TSA

The following order applies to the area identified within the attached Schedule A and takes effect on the 10 day of February, 2005.

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

The Deputy Minister of Water, Land and Air Protection orders that:

1. the ungulate winter range shown in the map set out in the attached Schedule A (#U-4-008) is established;
2. the ungulate winter range shown in the map set out in the attached Schedule A U-4-008, Invermere TSA) is established for moose (*Alces alces shirasi*), white-tailed deer (*Odocoileus virginianus ochrourus*), mule deer (*Odocoileus hemionus hemionus*), elk (*Cervus elaphus nelsoni*), bighorn sheep (*Ovis Canadensis canadensis*) and mountain goat (*Oreamnos americanus*);
3. the general wildlife measures outlined in Schedule 1 are established for the ungulate winter range as shown on the attached Schedule A; and
4. 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 Invermere Timber Supply Area.

Schedule 1 – General Wildlife Measures - Forestry

1. Forest practices carried out within the boundaries of ungulate winter range polygons as shown on Schedule A must result in, as the case may be,
   (i) stand stocking, or
   (ii) retention of forest cover
   that is not less than the forest cover retention requirements that apply as a percentage of the total area of each Habitat Type in a Landscape Unit as:
   (iii) set out in Column 3 of Table 1, and
   (iv) as defined in Column 4 of Table 1.

   Notes:

   (ii) Forest cover retention requirements, in hectares, that apply to the total area of a Habitat Type in a Landscape Unit, are to be determined as set out in Appendix 1 attached to this Order.

2. Forest practices carried out within the boundaries of ungulate winter range polygons as shown on Schedule A must not result in more than 33% of any Managed Forest Habitat Type being less than 21 years in age.

   Note: The maximum area, in hectares, of early seral representation for any Managed Forest Habitat Type is to be determined as set out in Appendix 1 attached to this Order.

3. These General Wildlife Measures do not apply for the purposes of timber salvage to address wildfire or serious forest health issues.

4. These General Wildlife Measures do not apply for the purposes of exploration, development and production activities when these activities have been authorized for purposes 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*.

Table 1. Forest Cover Requirements for Ungulate Winter Range

		Column 3	Column 4
Habitat Type	**Ungulate Species**	**Landscape and Stand Level Forest Cover Retention Requirements**	**Definitions that pertain to Forest Cover Retention Requirements**
Open Range	Elk, Bighorn sheep, Mule deer, White-tailed deer, Mountain goat	Stocking standards: 5 – 75 stems/ha	Include 5 – 20 stems/ha of the largest 1/3 of the diameter range
Open Forest	Elk, Bighorn sheep, Mule deer, White-tailed deer, Mountain goat	Stocking standards: 76 – 400 stems/ha	Include 20 – 50 stems/ha of the largest 1/3 of the diameter range
Managed Forest (Dry)	Elk, Bighorn sheep, Mule deer, White-tailed deer	Mature Cover 10% (min)	>100 years and evergreen[1] CC ≥ 20%, or layer 1 age >100 years
		Stocking standards: Multi-layered stocking standards – provincial standard	
Managed Forest (Transitional)	Moose, Elk, Mule deer, White-tailed deer	Snow Interception Cover 10% (min), and	>60 years and evergreen CC ≥ 40%.
		Mature Cover 10% (min)	>100 years, Fd or Sx leading and evergreen CC ≥ 40%
Managed Forest (Mesic)	Elk, Mule deer	Snow Interception Cover 10% (min), and	>60 years, and evergreen CC ≥ 40%
		Mature Cover 20% (min)	>100 years, Fd or Sx leading and evergreen CC ≥ 40%
Managed Forest (Moist)	Moose	Snow Interception Cover 20% (min)	>60 years and evergreen CC ≥ 40%
Managed Forest (Wet)	Moose	Snow Interception Cover 30% (min)	>60 years and evergreen CC ≥ 40%

[1] Evergreen crown closure means all conifers except larch counted at full relative crown closure; and larch and deciduous at 50% of their relative crown closure.

Avalanche Tracks	Moose, Elk	50 m of forest cover adjacent to high value[2] habitat within avalanche tracks.	>60 years old

[2] High value habitat within an avalanche track is defined as an area that is supporting herb or low shrub vegetation communities as defined in the *BC Land Cover Classification Scheme*.

Signed this 10 day of Feb, 2005
Gordon Macatee, Deputy Minister
Ministry of Water, Land and Air Protection

APPENDIX 1

1. The forest cover retention requirements, in hectares, for each Habitat Type in the ungulate winter range polygons of a landscape unit are derived from the sum of the area of a Habitat Type found within all the UWR polygons of the landscape unit.

   For example, if the total area of a Habitat Type in the ungulate winter range of a Landscape Unit is 1000 ha, then the forest cover retention requirement is the prescribed % of that total area as set out and defined in Table 1. If we were considering "Dry Managed Forest" the requirement would be 100 ha. (10% of 1000 ha.).

   Once derived, the forest cover retention requirement is to be applied across UWR polygons in the landscape unit.

   When applied, broad spatial distribution of the required forest cover retention is desirable to maintain a close interspersion of the forest cover to winter forage areas. Distribution is not required to be proportionately applied to each location of the Habitat Type in UWR of a Landscape Unit.

2. The maximum amount of early seral representation, in hectares, for the Managed Forest Habitat Types in the ungulate winter range polygons of a landscape unit are derived from the sum of the area of a Habitat Type found within all the UWR polygons of the landscape unit.

   For example, if the total area of a Managed Forest Habitat Type in the ungulate winter range of a Landscape Unit is 1000 ha, then the maximum amount of early seral representation, in hectares, is the 33% of that total area of that Habitat Type in the polygons of UWR in the Landscape Unit - the amount of early seral representation would be 330 ha. (33% of 1000 ha.).

   Once derived, the maximum early seral amount is to be applied across UWR polygons in the landscape unit.

3. In instances where forest retention requirements are in deficit or early seral representation is exceeded, a person proposing forestry activities may apply for an exemption from the requirement to comply with the applicable General Wildlife Measures. Authority to consider an exemption is provided in section 92(1) of the *Forest Planning and Practices Regulation.*

   A spatially explicit recruitment strategy submitted to the Minister's delegate with a request for exemption will assist in timely consideration of the exemption request, and will inform the conditions, if any, of the exemption that may be granted prior to commencement of forestry activities.

4. Where an area in an ungulate winter range polygon is subject to a field verified ecosystem restoration plan, a person proposing to carry out activities under that field verified ecosystem restoration plan may apply for an exemption from the requirement to comply with the applicable General Wildlife Measures, in as much as the field verified ecosystem restoration plan conflicts with the General Wildlife Measures. Authority to consider an exemption is provided in section 92(1) of the *Forest Planning and Practices Regulation.*

   A copy of the field verified ecosystem restoration plan should be submitted with the exemption request to the Minister's delegate to assist in timely consideration of the exemption request. The plan will inform the conditions, if any, of the exemption that may be granted prior to commencement or continuation of activities consistent with the field verified ecosystem restoration plan.

   Future Ecosystem Restoration Plans should take direction from the stocking standards and cover retention targets in Schedule 1.

5. In instances where field verification of site series determines an area is a different Habitat Type than that shown in Schedule A, the forest retention targets for the Habitat Type determined through site series field verification will apply. The site series associated with each Habitat Type is shown in Table 2. The minimum operational planning scale for field verification is two hectares.

Table 2. Site Series Descriptions for Habitat Types

Habitat Type	Concept Definition	Intended Field Verified Ecosystem Units
Open Range	Lands ecologically suited to production of bunchgrasses and dryland shrub species. Snow accumulations are typically low. (includes existing open range, meadows, cultivated and similar cover classes with </=10% tree crown closure)	**PPdh2,** 02a, 02b, 01 **IDFdm2, un,** 02,03; **IDFdm2a, un2,** 02; **MSdk,** 02 **ICHdm,** 02; (& Rock talus sites)
Open Forest	Lands ecologically suited for production of large-crowned open forest with bunchgrasses and dryland shrub species. Snow accumulations are typically light. (typically </=40% tree crown closure, multi-storied stand structure, and low stocking levels)	**PPdh2,** 03, 04 **IDFdm2, un,** 01 warm, & neutral <1000m (except in LUs I32, I35 and I38) **IDFdm2a, un2,** 03 Fd leading **MSdk,** 03 Fd leading; **ICHdw,** 02; **ICHdm,** 03 Fd leading **ICHmk1 except Golden,** 02; **ESSFdk,** 02; **ICHwk1,** 02; **ICHvk1,** 02
Managed Forest (Dry)	Lands ecologically suited for Fd and/or Py dominated forest. These provide forage values for 1-3 decades during the forest regeneration phase. Stands may also be partial cut to help promote forage. Snow is typically light to moderate.	**IDFdm2, un,** 01 cool, and neutral >1000m, 04, 05 (except in LUs I32, I35 and I38) **Golden ICHmk1** 02; **ICHmw1** 02
Managed Forest (Transitional)	Lands ecologically suited for Douglas-fir climax stands often having a heavy lodgepole pine and larch component. These provide forage for 1-3 decades during the forest regeneration phase. Snowpack is typically light to moderate.	**IDFdm2a, un2,** 03 Non-Fd leading, 04, 01, 05 **IDFdm2** 04, 01, 05 in LUs I32, I35 and I38.
Managed Forest (Mesic)	Lands ecologically suited to pine leading stands which provide forage values for 1-3 decades during the forest regeneration phase. Moderate snow accumulations necessitate the retention of cover.	**MSdk,** 03 Non-Fd leading, 04, 01, 05 where elk, deer capability mapped.
Managed Forest (Moist)	Moist ecosystems providing forage values for 1-3 decades during the forest regeneration phase. Moderate snow necessitates retention of cover.	**MSdk,** 03 Non-Fd leading, 04, 01, 05 where moose capability only mapped. **ICHdw,** 01a, 01b, 03, 04; **ICHdm,** 03 non-Fd leading, 01, 04, 05
Managed Forest	Wetter ecosystems providing forage values for 1-3 decades during the	All other site series not listed above or below in

(Wet)	forest regeneration phase. Moderate to deep snow necessitates retention of cover.	**ICHmk1, ESSFdm1, ESSFdm2, ESSFdk, ICHmw1, ESSFmm1, ESSFwm, ICHwk1, ICHvk1 ESSFwc2, ESSFvc**

6. All forest stands within the areas identified in Schedule A which are inoperable or constrained for timber harvesting and meet the characteristics described in Table 1, can contribute to meeting these measures. Private land, Christmas tree permits, Federal land and Parks and Protected Areas do not contribute to these measures.

7. Forest age and crown closure are based on the best available information at the time of Forest Stewardship Plan approval, or upon plan extension, the information available when the plan is extended.

8. For purposes of timber harvesting, the maximum stocking standards for Open Range and Open Forest Habitat Types do not apply in instances where high densities of small tree stem sizes make it economically prohibitive to achieve the requirements. However, in these instances reasonable efforts to reduce small stem densities should be undertaken.

9. Up to 10% of the area within an operational plan, within a Landscape Unit, may deviate from the stand level measures for Open Forest to facilitate examination of the response of forage communities to variations in tree stocking. These areas must be identified and reported to the Regional Manager, Environmental Stewardship Division for information purposes.

10. Stand level measures for Open Range and Open Forest Habitat Types do not apply to areas where restoration activities have applied prescribed fire.

11. Partial cut stands can contribute to forest cover requirements for Managed Forest [Transitional and Mesic] Habitat Types if the Rank 1 layer is >60 years old and crown closure is ≥40% and for Managed Forest [Dry] Habitat Type if the Rank 1 layer is >100 years old and crown closure is ≥20%.

12. Within Managed Forest [Moist and Wet] Habitat Types, forest stands meeting the ages specified in Table 1, which have previously been subject to light partial cutting, can contribute to meeting these measures in instances where a Qualified Professional has confirmed through field assessment that these stands have suitable snow interception characteristics. Documentation confirming this field assessment is to include the size and location of these stands and is to be submitted to the Regional Manager, WLAP, Environmental Stewardship Division for information purposes.

13. Forest stands with suitable snow interception characteristics which are younger than the ages prescribed in Table 1 can contribute to meeting these measures in instances where a Qualified Professional has confirmed through field assessment that the younger stands have suitable snow interception characteristics. Documentation confirming this field

assessment is to include the size and location of these stands and is to be submitted to the Regional Manager, WLAP, Environmental Stewardship Division for information purposes.