

ORDER – UNGULATE WINTER RANGE #U-3-003

Merritt TSA

Mule Deer

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-3-003) is established;
2. the ungulate winter range in the attached Schedule A is established for mule deer (*Odocoileus hemionus*);
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 Schedule 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 ungulate winter range polygons establishes the boundary;
5. 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;
6. 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 deer, elk and sheep in the Merritt Timber Supply Area;
7. the general wildlife measures listed below do not apply to the extent they would prevent the following:
 - i. harvesting within an ungulate winter ranges when it is required to address worker safety: for example felling of danger trees within a UWR along adjacent cutblock boundaries. Harvesting to address worker safety will be conducted in a manner that does not result in a material adverse impact on the ungulate winter range habitat within the designated ungulate winter ranges
 - ii. harvesting within an ungulate winter ranges to recover timber damaged by fire, insects or other similar events.
8. For the purposes of section 2(3)(a) of the *Government Actions Regulation*, these General Wildlife Measures apply to minor tenures; and
9. all woodlot license agreements are exempt from this order. Those areas are to be managed in accordance with section 9 (3) of the *Woodlot Licence Planning and Practices Regulation*.

Definitions:

The following definitions are provided to clarify terms used in the general wildlife measures outlined below.

Primary forest activity: as defined in the Forest Planning and Practices Regulation of the Forest and Range Practices Act, means one or more of the following:

- a) timber harvesting;
- b) silviculture treatments;
- c) road construction, maintenance and deactivation.

Ungulate winter range planning cell: is an ungulate winter range polygon established by this order.

Schedule 1 – General Wildlife Measures (GWM)**Forestry Practices:**

1. A person who carries out primary forest activities in an ungulate winter range planning cell must ensure that the activities do not result in the retention of the amount of snow interception cover (SIC) dropping below those set out in Table 1 for ungulate winter range planning cells delineated in the attached Schedule A.
2. The amount of SIC that will be retained for each ungulate winter range planning cell, consistent with Table 1, will exhibit the attributes set out in Table 2 for each snowpack zone (SZ).
3. For the purpose of GWMs 1 and 2; where more than one SZ falls in one ungulate winter range planning cell, the amount of SIC retention area for that planning cell will be calculated separately for each SZ.
4. In the moderate SZ, planning cells with insufficient forest cover to enable compliance with general wildlife measures 1 and 2, forest activities must retain forest cover exhibiting the SIC attributes as set out in Table 3.
5. Pursuant to GWM 4, forest cover exhibiting SIC attributes of a higher rank order must be selected first before selecting those from a lower rank order.
6. For the purpose of GWMs 1 and 2; when calculating the percent of snow interception required per planning cell, the amount of area of roads and right of ways under permit is not included in the total planning cell area for this calculation.

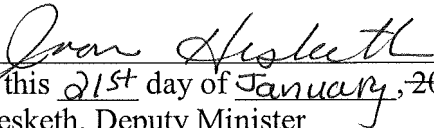

Signed this 21st day of January, ~~2007~~ 2008
Joan Hesketh, Deputy Minister
Ministry of Environment

Table 1: Area of Snow Interception Cover (SIC) by Snowpack Zone

Snowpack Zone (SZ)	BEC* Units	SIC retention Area (% of planning cell)
Shallow	BG, PP, IDFxh1, IDFxh1a, IDFxh2, IDFxh2a	15 %
Moderate	IDFdk1, IDFdk1a, IDFdk2, IDFdk3, IDFunk, MS	33%
Deep	ESSF, ICH, CWH	40%

* BEC: Biogeoclimatic Ecosystem Classification

Table 2: Minimum Snow Interception Cover (SIC) Attributes by Snowpack Zone

Snowpack Zone	BEC Units	Tree Species	Minimum Stand Age (FIP** age)	Minimum Canopy Closure (FIP** crown closure)
Shallow	BG, PP, IDFxh1, IDFxh1a, IDFxh2, IDFxh2a	Douglas-fir >70%	7+ (≥121 years)	n/a
Moderate	IDFdk1, IDFdk1a, IDFdk2, IDFdk3, IDFunk, MS	Douglas-fir >70%	7+ (≥121 years)	4+ (≥36 %)
Deep	ESSF, ICH, CWH	Douglas-fir >70%	7+ (≥121 years)	5+ (≥46 %)

** FIP: Forest Inventory Planning, MoFR standard inventory file.

Table 3: Snow Interception Cover (SIC) Step-down when minimum attributes are not available

Rank Order	Species	Age (FIP age)	Canopy Closure (FIP crown closure)
1	Douglas-fir > 70%	5+ (≥81 years)	4+ (≥36 %)
2	Douglas-fir > 50%	5+ (≥81 years)	4+ (≥36 %)
3	Douglas-fir > 50%	5+ (≥81 years)	2+ (≥16%)
4	Douglas-fir > 30%	5+ (≥81 years)	2+ (≥16%)

Appendix 1 – General Information:

- 1) Authority to consider an exemption from these General Wildlife Measures (GWMs) 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. The exemption application should include a rationale describing the nature of the problem, including map(s) if necessary, 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 the commencement of activities. Upon receipt of a complete application, a determination will be made within 30 days of arrival. Incomplete packages will be returned to the proponent for resubmission.

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

- 2) An exemption is not required for:
 - a) any harvesting and/or road construction activities related to an approved cutblock (Category A or equivalent); or
 - b) any harvesting and/or road construction activities related to a Special Use Permit by a person who holds a permit under Section 10 of the *Mines Act*.

Appendix 2 – Supporting Information

GWM Clarification

Further to GWM's 1, 2 and 3, the following is intended to provide clarity:

The most appropriate stands for snow interception cover are those that are comprised of older aged Douglas-fir, with a high canopy closure. In all snow pack zones, the initial allocation of snow interception cover is to Douglas-fir stands with the highest age/height. In planning cells where the preferred snow interception cover attributes are not present, forest practices should not result in the removal of stands, up to the levels defined in Table 1, that have the likelihood of developing those attributes in the shortest period of time.

Where available, retain snow interception cover in a variety of patch sizes throughout the planning cell.

Further to GWM 3, the following is intended to provide clarity:

If there are 2 snow zones (shallow and moderate) in a 200 ha planning cell and they each encompass 100ha, the amount of SIC for the Shallow Zone would be 15 ha (15% of 100 ha) and the amount of SIC for the Moderate Zone would be 33 ha (33% of 100 ha).

Excel spreadsheet of SIC targets by planning cell is available at:
ftp://ribftp.env.gov.bc.ca/pub/outgoing/cdc_data/uwr/r7/tuwra_u-3-003.zip

Snow Interception Cover Definition

Snow interception cover is defined as tree crown attributes that have the capability to intercept snow, and thereby reduce snow accumulations on the ground. As snow interception potential is variable dependent upon tree species, stand density, and crown shape and size, it is important to retain stems that will function in an optimum manner. Mature and intermediate aged Douglas-fir in clumps are best suited to meet this need. Larger clumps, or patches, with a high canopy closure are most appropriate in areas of higher snow falls.

Forage Habitat

Energy balance is the key factor influencing the over-winter survival of ungulates; therefore, maximizing the availability of preferred forage and minimising energy loss due to movement in significant snow should be considered.

There is an inverse relationship between rooted forage and forest canopy cover although completely open sites can have less forage than those with a very open canopy. Drier habitats require the removal of more overstorey to generate a substantial shrub response

than do wetter habitats. However, the simple removal of canopy cover may be insufficient to stimulate the desired shrub response.

Rooted forage and litterfall availability is highest under mature forest canopy (compared to immature canopy) and snow interception cover is an important habitat feature of winter ranges, especially in wetter areas dominated by deep winter snow conditions. The importance of Douglas-fir and lichen litterfall for deer increases with snow depth because access to rooted forage declines. Litterfall is more abundant under older stands of snow interception cover.

Recommended forage strategies for the Shallow Snowpack Zone
<ul style="list-style-type: none">- Burn/slash to inhibit conifer in-growth and encourage establishment of native shrubs.- Reduce stocking density.- Control invasive plants.- Develop prescriptions to manage domestic grazing to enhance preferred.

<i>Recommended forage strategies for the Moderate Snowpack Zone</i>
<ul style="list-style-type: none">- Reduce stocking density.- Develop prescriptions to manage domestic grazing to enhance preferred forage for deer.

<i>Recommended cover strategies for Deep Snowpack Zone.</i>
<ul style="list-style-type: none">- Distribute snow interception cover throughout area but concentrate at lower elevations, adjacent to forage and along travel routes and terrain breaks.- Thinning-from-below can be used to open the understorey while maintaining snow interception by the canopy.- Encourage patches of large Douglas-fir for snow interception cover; leave Douglas-fir of the largest size available.- Maintain original stand characteristics in areas of densest canopy closure.

Elk and sheep Section 7 supporting information maps

The elk and sheep maps that were provided as supporting information to the Merritt TSA Section 7 notice are now sitting as part of the supporting information to this order. The maps can be found at the following FTP site:

ftp://ribftp.env.gov.bc.ca/pub/outgoing/cdc_data/uwr/r7/tuwra_u-3-003.zip

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