

**ORDER – UNGULATE WINTER RANGE #U-4-001 – WEST KOOTENAY**  
**(ARROW TSA, KOOTENAY LAKE TSA, REVELSTOKE TSA, CASCADIA TSA, TFL**  
**3, TFL 23, WOODLOTS AND COMMUNITY FORESTS)**

This order is given under the authority of sections 9(2) and 12(1) of the *Government Actions Regulation* (B.C. Reg. 34/2018) (GAR).

1. The Regional Executive Director (RED) of Forests, Lands and Natural Resource Operations and Rural Development, Kootenay Boundary Region, being satisfied that
  - i. the following area contains habitat that is necessary to meet the habitat requirements for mule deer (*Odocoileus hemionus*), white-tailed deer (*Odocoileus virginianus*), Rocky Mountain elk (*Cervus elaphus nelsoni*) and moose (*Alces alces*); and
  - ii. the habitat requires special management that is not otherwise provided for under GAR or another enactment;

orders that

- a) the area shown in the map set out in the attached Schedule A (U-4-001) and contained in the Ungulate Winter Range (UWR) spatial layer stored in the Geographic Warehouse (WHSE\_WILDLIFE\_MANAGEMENT.WCP\_UNGULATE\_WINTER\_RANGE\_SP) is established and replaces the boundary established for ungulate winter range U-4-001 on December 13, 2005 for mule deer, white-tailed deer, Rocky Mountain elk and moose. The centre point of the line on the attached Schedule A is what establishes the UWR boundary; and
- b) if there is a discrepancy between the areas shown in the map set out in the attached Schedule A and the UWR spatial layer stored in the Geographic Warehouse (WHSE\_WILDLIFE\_MANAGEMENT.WCP\_UNGULATE\_WINTER\_RANGE\_SP), the areas as detailed in the UWR spatial layer will take precedent; and

2. The Regional Executive Director (RED) of Forests, Lands and Natural Resource Operations and Rural Development, Kootenay Boundary Region, being satisfied that
  - i. the general wildlife measures (GWMs) described below are necessary to protect or conserve winter range habitat requirements for mule deer, white-tailed deer, Rocky Mountain elk and moose; and
  - ii. GAR or another enactment does not otherwise provide for that protection or conservation;

orders that

- a) the GWMs outlined in Schedule 1 are established for UWR U-4-001;
- b) for the purposes of section 2(3)(a) of the *Government Actions Regulation*, these General Wildlife Measures apply to minor tenures;
- c) the Ungulate Winter Land Base to which these General Wildlife Measures apply excludes Private land, Federal land and Provincial Parks/Protected Areas. In addition,



- broadleaf-leading stands are excluded from the application of these General Wildlife Measures. See the Appendix for specific area inclusions and exclusions; and
- d) 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*, or the *Geothermal Resources Act*.

## **Schedule 1:**

### **Definitions**

**Management Unit:** Management Units are spatially identified within the Schedule A map. Woodlots and community forest licences are considered separate Management Units for the calculation of Schedule 1 forest cover targets. A community forest licence may contain more than one Management Unit and can subsequently have more than one forest cover or forest characteristic objective under Schedule 1 if these Management Units represent different biogeoclimatic subzones.

**Habitat Officer:** A British Columbia public service employee working as a biologist within the Ministry responsible for administering the *Government Actions Regulation*.

**Ungulate Winter Land Base:** The Ungulate Winter Land Base (UWLB) is the area to which Schedule 1 General Wildlife Measures apply and to which snow interception cover, early seral and forage targets are calculated against. See Appendix (1) for the full spatial definition of the UWLB and subsequent net-down procedure used for compliance reporting calculations.

### **General Wildlife Measures (GWMs):**

1. **Snow Interception Cover (SIC)** – Forest practices carried out within the boundaries of ungulate winter range Management Units, as shown in Schedule A, must result in retention of forest cover that is not less than the forest cover retention requirements that apply as a percentage of the total Ungulate Winter Land Base.
2. **Early Seral** - Forest practices must result in equal or greater than 60% of the Ungulate Winter Land Base of any Management Unit being 21 years of age or older. Forage Areas do not contribute to early seral thresholds.
3. **Forage** – Forest retention targets for Forage Areas only apply to areas identified on the Schedule A map. Where multiple Forage Areas occur within a single Management Unit, minimum forest cover requirements are calculated across the combined area of all Forage Areas within that Management Unit. This may result in uneven forest retention levels across Forage Areas of a single Management Unit.
4. Broadcast aerial application of herbicides is prohibited within UWR Management Units.

The desired forest characteristics required to maintain ungulate winter range are detailed within Table 1 below.



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Signed this 28 day of November, 2019

Ray Morello, A/Regional Executive Director

Kootenay Boundary Region

Ministry of Forest, Lands, Natural Resource Operations and Rural Development

**Table 1. Forest Cover Requirements for Ungulate Winter Range**

Ungulate Winter Range Attribute	Priority Ungulate Species	BEC Subzones	Minimum Forest Cover Area	Forest Characteristics		Management Unit <sup>1</sup>
				Age (yrs)	Crown Closure	
Snow Interception Cover	Mule deer	ICHxw	20%	≥81	≥20%	326, 330, 332, 333, 334, 337
		ICHdw ICHdm	30%	≥81	≥40%	91, 99, 105, 108, 109, 115, 117, 118, 120, 122, 123, 129, 132, 136, 137, 140, 141, 142, 144, 145, 147, 148, 149, 151, 154, 156, 157, 158, 160, 162, 163, 164, 171, 175, 176, 177, 178, 179, 180, 182, 186, 187, 188, 189, 190, 193, 195, 196, 197, 198, 199, 201, 202, 203, 206, 207, 209, 216, 218, 219, 222, 223, 225, 227, 228, 229, 230, 236, 239, 241, 242, 245, 249, 251, 252, 254, 258, 260, 262, 266, 270, (271), 275, 279, 283, 287, 292, 293, 297, 300, 302, 304, 305, 306, 307, 309, 315, 316, 317, 320, 321, 323, 324, 325, 329, 331, 335, 336, 340, 341, 342, 343, 346, 360, 367, 368, W0400, W0401, W0402, W0403, W0407, W0408, W0438, W0491(1), W0494, W0498, W1458, W1670, W1702, W1832, W2110(1)
		ICHmw ICHwk	40%	≥101	≥40%	35, 36, 37, 39, 40, 42, 43, 46, 47, 49, 51, 54, 57, 58, 60, 61, 62, 64, 66, 67, 68, 72, 74, 80, 83, 85, 87, 88, 90, 92, 93, 98, 102, 103, 104, 106, 107, 110, 112, 113, 116, 121, 125, 126, 128, 130, 131, 133, 134, 135, 138, 139, 146, 152, 159, 165, 326, 330, 332, 333, 334, 337, (344), 345, 348, 349, 352, 353, 354, 363, 364, W0405, W0460, W0461, W0491, W0498(2), W1460(1), W1834, W2110,
	White-tailed deer	ICHdw	40%	≥81	≥40%	155, 161, 172, 173, 174, 191, 347, 365, W0498(1), W1702(1)
	Elk	ICHdw	20%	≥81	≥40%	224, 233, 237, 244
		ICHmw	30%	≥101	≥40%	69, 71, 75, 79, (350), 351, W0436, W1460
	Moose	All Subzones	20%	≥61	≥40%	38, 41, 44, 45, 55, 56, 63, 65, 70, 73, 78, 82, 84, 89, 100, 101, 114, 276, 277, 282, 286, 288, 294, 296, 301, 303, W0461(1), W1834(1), W1864
Early Seral	All Species	All Subzones	60%	≥21	N/A	All Management Units
Forage	All Species	All Subzones	10%	≥81	dispersed or patches	Where identified in Schedule A

<sup>1</sup> A Management Unit with a W- prefix denotes the designated Woodlot Licence number.

## APPENDIX

The following information is intended to provide background information and support to the legal order establishing UWR 4-001. This appendix is not part of the legal order for UWR 4-001.

1. Specific provincial land ownership classes and broadleaf-leading stands are excluded from the application of these general wildlife measures (see Tables 1-A and 1-B below). The lands meeting the definitions in Tables 1-A and 1-B do not contribute to the area over which the percentage of minimum forest cover is applied and they do not contribute to meeting the forest retention requirements. For clarification, larch-leading stands DO contribute to Snow Interception Cover requirements.

**Table 1-A:** Ungulate Winter Land Base (UWLB) net-down procedure using the following spatial layer from BC Data Warehouse: WHSE\_FOREST\_VEGETATION.F\_OWN (Generalized Forest Cover Ownership)

Excluded Ownership Codes	Included Ownership Codes
40: Private Land	61: Crown UREP Reserve
51: National Park	62: Crown Forest Management Unit (TSA) or Crown Timber Management Agreement Area
54: Dominion Government Block	68: Crown BMTA
60: Ecological Crown Reserve	69: Crown Miscellaneous Reserve
80: Crown – Municipal Parcels	72: Tree Farm Licence (TFL)
81: Crown – Local/Regional Park	77(B): Crown Woodlot Licence (Schedule B only)
99: Crown Miscellaneous Lease	79: Community Forest
	91: Unknown Ownership/Exceptions

**Table 1-B:** Vegetation net-down procedure using the following spatial layer from BC Data Warehouse: *WHSE\_FOREST\_VEGETATION.VEG\_COMP\_LYR\_RI\_POLY* (Vegetated Land Cover) or the most recent Woodlot Timber Resource Inventory

Excluded	Included
Exclude polygons where the “Leading Species” attribute field includes: aspen/poplar (AC, AT, ATC), birch (E, Ep), unknown hardwoods (Xh) or other hardwoods (Zh).	All other forest types identified within u-4-001  (Larch-leading stands are included at this time due to insufficient information on larch contribution to snow interception.)

2. Areas within the defined Ungulate Winter Land Base of Schedule A, which are inoperable or constrained for timber harvesting and meet the characteristics described in Table 1, can contribute to meeting these General Wildlife Measures.
3. Forest age and crown closures are to be calculated using the most current spatial or site information available at the time. Novel methods for calculating forest age and crown closure must be documented, rationalized, and verified by a Qualified Professional. Tree crown closure is the percentage of ground area covered by the vertically projected crowns of the tree cover for the layer used to derive stand age in Table 1. It should be noted that crown closure values derived from the Vegetation Resources Inventories (VRI) are NOT projected over time. As a result, the crown closure value represents the extent of crown development at the time the VRI polygon was assessed, not the current extent. For accurate determination of crown closure, it is recommended that calculations are based on Light Detection and Ranging (LiDAR) models, *in situ* field measurements or in some cases the Tree and Stand Simulator (TASS) III growth and yield model that meet the age requirement as defined in Table 1.
4. Forest cover retention requirements are applied across a Management Unit for a single priority ungulate species by Biogeoclimatic Subzones (BEC). In instances where a Management Unit contains more than one BEC subzone, the forest cover requirement for the BEC that occupies the greatest area of the Management Unit (measured against the total area not the reduced UWLb) is applied to the entire Management Unit.
5. Forest stands with suitable snow interception characteristics (as per Table 1) which are younger than the ages prescribed in Table 1, OR, stands which have previously been subject to partial cutting, can contribute to meeting forest cover objectives in instances where a Qualified Professional has confirmed through field assessment that the stands have suitable snow interception characteristics. Documentation confirming this field assessment, including the size and location of these stands, is to be submitted to the Habitat Officer for information purposes. These situations are not subject to the exemption process.
6. In instances where a Management Unit’s forest retention requirements are in deficit and/or early seral representation is exceeded:

A person proposing forestry activities to forests that currently contribute to forest retention targets or early seral thresholds, OR future forests that will contribute to these characteristics (i.e. recruitment), must apply for an exemption from the requirement to comply with the applicable General Wildlife Measures. Forestry activities include any activities that impact the retention or early seral thresholds of a Management Unit for the purposes of wildfire, forest health salvage or fuel management.

The authority to consider an exemption is provided in Section 92(1) of the *Forest Planning and Practices Regulation* and Section 79(1) of the *Woodlot Licence Planning and Practices Regulation*. Establishing a recruitment strategy is not considered compliant with the GWMs unless it is identified in an approved exemption.

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. Exemption forms are downloadable from this website: [http://www.env.gov.bc.ca/wld/documents/frpa/GWM\\_Exemption\\_RequestForm.doc](http://www.env.gov.bc.ca/wld/documents/frpa/GWM_Exemption_RequestForm.doc)

[valid as of September 27, 2019]. Send applications to the Habitat Officer.

7. Woodlot Schedule B lands and Community Forests are to be managed as independent Management Units for the application of these General Wildlife Measures. Note that a woodlot or community forest licence may have more than one forest cover or forest characteristic objective depending on the number of Management Units (and their respective objectives) that overlapped the woodlot or community forest in the previous Order (U-4-001 effective February 15, 2007). Subdividing Management Units so they apply only to a woodlot or community forest should not change how woodlots and community forests manage forest cover or forest characteristic objective(s) compared to the previous Order, except that calculations to meet objectives occur at the woodlot or community forest scale, and not the larger Management Unit scale.
8. Forage Areas allow for higher levels of forest harvest to promote the growth of ungulate winter browse species. The minimum forest cover target of 10% can be achieved by either the dispersed retention of individual trees or by patch retention.

Forest cover targets for dispersed retention may be calculated using either retained stems per hectare or retained basal area per hectare. For example, if the pre-harvest assessment of the Forage Area was 1000 stems per hectare (sph) or 100m<sup>2</sup>/ha respectively, then post-harvest retention levels down to 100 sph or 10m<sup>2</sup>/ha would be compliant with General Wildlife Measure 3.

The forest cover target for patch retention is calculated using the combined area of retained forest patches across all Forage Areas within a single Management Unit, then compared against the total area of all Forage Areas within the Management Unit. For example, General Wildlife Measure 3 would be satisfied if the total post-harvest forest patch retention across all Forage Areas within a Management Unit was 10 ha, and the total area of all Forage Areas within that Management Unit was 100 ha.