Cariboo-Chilcotin Land Use Plan

Regional Mule Deer Winter Range Strategy

INFORMATION NOTE #2

Guidance for MDWR General Wildlife Measure Exemption Requests for Salvage of Insect-killed Douglas-fir

Prepared by: Mule Deer Winter Range Strategy Committee

Prepared for:

The Regional Management Team

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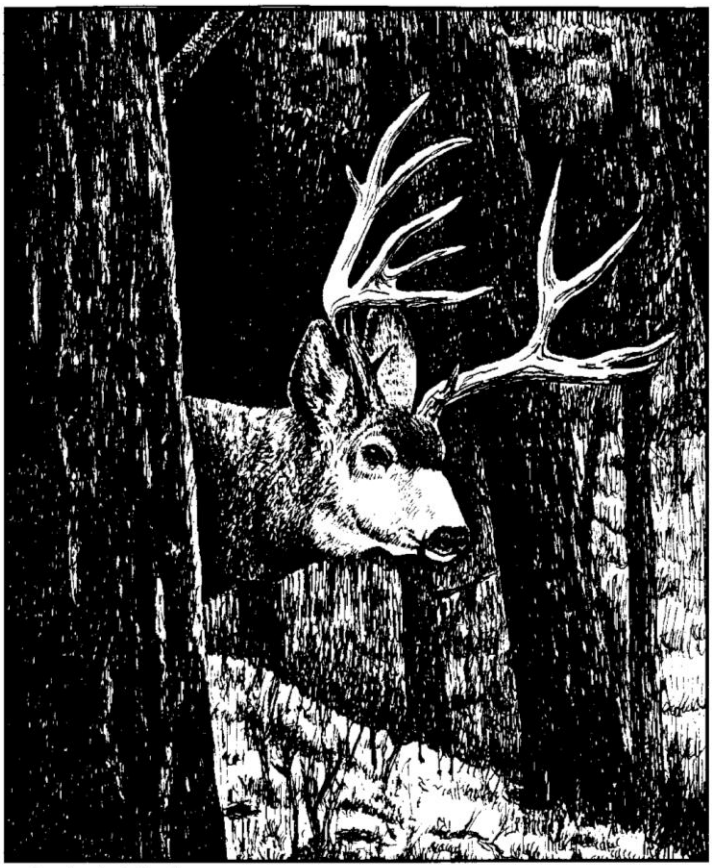

Drawing by J. Youds

Mule Deer Winter Range Strategy Information Notes are prepared by the Cariboo-Chilcotin Mule Deer Winter Range Strategy Committee for purposes of technical clarification of the General Wildlife Measures, established under the Government Action Regulations of FRPA. These notes are prepared in response to issues and questions presented to the MDWR Committee or recognized by the members of the Committee.

Members of the Mule Deer Winter Range Committee include: Becky Bings – chair (FLNRO), Michaela Waterhouse (FLNRO), Chris Nowotny (FLNRO).

Information Note #2 Guidance for MDWR General Wildlife Measure Exemption Requests for Salvage of Insect-killed Douglas-fir

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Draft Guidance for MDWR General Wildlife Measure Exemption Requests for Salvage of Insect-killed Douglas-fir

1.0 Background

This guidance document has been developed in response to requests to harvest dead trees killed by Douglas-fir bark beetle on mule deer winter range. The General Wildlife Measures (GWM) established by Amended Order #U-5-001, U-5-002 or U-5-003 do not specifically deal with salvage; neither GWM 6 (beetle sanitation to remove currently infested stems nor GWM 10 (clumpy single tree selection) apply to this type of harvest activity. Proposals to conduct salvage harvesting are therefore required to be submitted as a request for an exemption from GWMs 6 through 10. Exemptions are a special administrative process granting a person the authority to operate in a manner not otherwise allowed under law (sec 92(1) of Forest Planning and Practices Regulation of FRPA, Appendix 1 MDWR GWM). Salvage of dead timber may be proposed as an exemption if the proposal results in a net benefit to the Ungulate Winter Range species being managed for as opposed to taking no action (Appendix 1 MDWR GWM).

Sanitation harvesting of current Douglas-fir bark beetle infected stands (GWM 6) should be a priority over salvage harvesting.

Additional guidance on salvage, of fire-killed trees on MDWR, is also available (Information Note #1 Guidance for Fire-damaged Stands - MDWR Strategy Committee June, 2014).

2.0 Impacts of Salvage Harvesting

Large scale mortality of large Douglas-fir trees has caused both the snow interception capacity and forage availability to decline; however, standing dead trees will continue to provide visual cover (from predators and humans), and thermal cover (reducing wind chill) for mule deer.

There is a risk that harvest of the dead trees will further impact these key habitat attributes and functions, retard recovery by delaying regeneration while increasing deer mortality and harassment through development of road and trail access. Unless salvage operations are planned in a way that will mitigate impacts on mule deer winter habitat, salvage will reduce the supply and effectiveness of that habitat more than if the standing dead timber were to be left to decay and fall in place.

The removal of dead Douglas-fir trees has the potential to negatively impact mule deer winter range as described below:

- If fir salvage also allows for removal of non-target live trees, this will result in decreased forage, shelter and snow interception. Current habitat suitability will decrease further and long-term objectives will take longer to achieve.
- Removal of dead trees may result in damage to regeneration that has established.
- Removal of dead trees will decrease drought/frost protection provided by structure, decreasing survival of planted or natural fir regeneration. This could delay stand re-establishment and achievement of long-term objectives.
- Removal of dead trees removes structure that provides some snow interception and acts as a heat sink reducing the surrounding snow. Snow reduction is a major benefit to deer.
- There will be increased access through road and skid trail development.
- There will be increased grass cover in harvested gaps that could retard regeneration establishment and increase cattle foraging. Cattle incidentally kill or damage regeneration.
- There may be increased sightability of deer for hunters and other predators.

The potential removal of high value wildlife trees is also a concern in these areas, because of the geographic overlapping habitats of MDWR and numerous other species, including red and blue listed species, associated with wildlife trees.

3.0 Demonstration of Net Benefit

If salvage harvesting is combined with other activities/treatments that contribute to achieving MDWR objectives, the result could offset the negative impacts of harvesting and may be considered a net benefit to MDWR. Some potential activities that could be carried out in conjunction with salvage, in order to be considered a net benefit are:

- acceleration of future stand development by planting and establishing fir faster than natural regeneration.
- potential to combine salvage harvesting with stand maintenance (thinning) where appropriate.
- rehabilitation of all in-block temporary access structures (part of NAR).
- application of Btk if spruce budworm is active. The regional entomologist should be contacted and provided spatial data on harvest areas so that prioritization can be made for treatment in stands with Btk if WSB population numbers justify treatment.
- post-harvest follow up the subsequent year to identify and remove any new Douglas-fir bark beetle attack trees.

4.0 Proposed Strategies and Outcomes

In addition to the General Wildlife Measures and associated Long-term objectives maps, MDWR management objectives for the Shallow/Moderate Snowpack zone are described in Management Strategy for Mule Deer Winter Range in the Cariboo-Chilcotin Part 1a: Management Plan for Shallow and Moderate Snowpack Zones (Land Management Handbook 60 Dawson *et al*., 2007). The exemption request must be structured with strategies to meet a set of intended outcomes, based on MDWR objectives, throughout the different phases of a salvage operation. Examples of strategies or activities that should be addressed at each phase are below:

<u>Planning Phase</u>

Meets long-term planning objective by mapped habitat class

Placement and deactivation of roads

Allocation of wildlife tree patches

Set the context of this harvest in relation to future harvests or other harvest activities *i.e.*GWM6

Harvesting Phase

Activities to ensure green tree retention (minimize removal and damage)

Reforestation Phase

Reforestation of all gaps exceeding 0.1 ha under as per GWM 1. A network of large gaps would be considered a separate stratum from the rest of the stand.

In areas where a few trees are removed it may be more appropriate to ensure stocking using the single tree stocking guidelines.

http://www.for.gov.bc.ca/ftp/hfp/external/!publish/Stocking%20Standards%20for%20FDPs/Single_Tree_Selection_Stocking_Standards.pdf

Stand tending

Undertake thinning to accelerate stand development, may be done concurrently with harvesting

Forest health surveys and management plans for Douglas-fir bark beetle and spruce budworm

Some strategies will provide for outcomes to be met within a short time frame while others will be met in the future. Strategies and outcomes should be considered and discussed in the relevant phases, for three time periods:

Pre and Immediate Post Harvest (0-4 years):

- Carry out pre-harvest forest inventory - including cruise information and survey of all 4 layers
- Pre-harvest plan (across the extent of the MDWR)
    - Plan of how much timber and from what areas in the MDWR is planned for harvest
- Plan amount, location and design of Wildlife Tree Patches
- Access Plan (skid trails, roads and landings)
        - Deactivation plan/schedule or decommission plan with roads/trails becoming part of NAR
- Harvest Plan (including regeneration protection, stand improvements, stand structure following harvest)
- Identify and develop tactics to address Forest Health factors (including follow-up for windthrow and pest incidence)
- Reforestation Commitments
    - Species (Douglas-fir) and techniques that will be employed to establish fir

Short term (4 to 20 years)

- Monitoring to demonstrate fir establishment and improved mule deer habitat stewardship
- Undertake stand surveys in addition to standard free-growing (stand inventory information to assist in ongoing planning for MDWR)

Long-term (>20 years)

- Licensees will not be responsible for implementation post-free growing. However, an outlook of what condition the stand at the point of free-growing declaration, and description of incremental work required to regenerate a fir leading stand must be identified to guide investments in stand development.
- Interaction of harvest plans with Mule Deer Winter Range plans and objectives

5.0 Review of Exemption Submissions

Exemption submissions will be reviewed by assessing how the proposed treatments or activities meet or work toward achievement of the MDWR objectives as outlined in MDWR management plans and GWMS, resulting in a net benefit to the MDWR. The attached table is a review checklist of exemption submission expectations.

MDWR Salvage Exemption Review Checklist

Desired Management Outcome	Functioning mule deer winter habitat within all areas of CCLUP and FRPA designated MDWRs, to support regional mule deer population over winter
Objectives to Achieve	Demonstration of net benefit to MDWR, in terms of working towards achievement of Long-term objectives as well as stand level objectives. **1. Long-term Spatial Stand Structure Objectives** High Moderate Low **2. Stand Level Objectives** Basal area targets Canopy opening size Clumpiness Fir composition Tree size distribution Wildlife tree retention Special topographic features Damage limits to non-target Access development
How to Achieve Objectives	**1. Long-term Spatial Stand Structure Objectives** *Assessment of current MDWR condition relative to High, Moderate and Low Stand Structure objectives* **2. Describe how stand level objectives will be addressed to provide a net benefit:** **Basal area targets and tree size distribution**: *How does proposed salvage work toward BA targets?* *What will be residual basal area and distribution of remaining live trees?* *Is thinning proposed in areas of live trees that need to be thinned?* **Fir composition and canopy opening size:** *How do opening sizes compare to size allowed in GWMs?* *If opening sizes similar to GWMs but surrounded by dead trees, how will fir be re-established?* *If opening sizes are larger than GWMs, how is fir to be re-established?* *What is the commitment to regenerate and re-establish fir? (default to FSP may not be adequate)* *Will fir be re-established on site faster than what would happen naturally, if no salvage was conducted?* **Wildlife tree retention:** *What is the plan for wildlife tree retention?* **Damage limits to non-target:** *What are the proposed limits of damage to non-target trees?* *How much farther away from BA targets will the site be with removal of healthy green trees?* *How is damage to healthy green trees and regeneration being minimized?* **Access development and topographic features:** *How are roads, landings and skid trails being designed to minimize impacts?* **Forest health:** *Will there be post-harvest follow-up to identify and remove new Douglas-fir bark beetle attacked trees (sanitation)?* *Will application of Btk be considered if spruce budworm is active?*

6.0 *FRPA* Legislation

Forest Planning and Practices Regulation

General wildlife measures

69 *An authorized person who carries out primary forest activities on an area must comply with each general wildlife measure that applies to the area.*

Exemptions by minister responsible for **Wildlife Act**

92 *(1) The minister responsible for the Wildlife Act may exempt a person from section 69 of this regulation in relation to a general wildlife measure, if satisfied that*

(a) the intent of the general wildlife measure will be achieved, or

(b) compliance with that provision is not practicable, given the circumstances or conditions applicable to a particular area.

Forests and Range Practices Act

Power to impose conditions

112 (1) Except in prescribed circumstances a person with a discretion under this Act to make an order, grant an exemption, give a consent, grant an approval, or grant an authorization under this Act or the regulations may

(a) impose conditions that the person considers necessary or desirable in respect of the order, exemption, consent or approval, and

(b) remove or vary the conditions by own motion or on the application of a person who is the subject of the order, exemption, consent or approval.

(2) A condition imposed under subsection (1) is conclusively deemed to be part of the order, exemption, consent or approval in respect of which it is imposed, whether contained in or attached to it or contained in a separate document.