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## **Ground Rules Addendum** **– *Mountain Pine Beetle Operations***

As referenced in both the *Mountain Pine Beetle Action Plan for Alberta* and *Interpretive Bulletin for Planning Mountain Pine Beetle Response Operations*, modified operating ground rules (OGR's) are necessary to implement quick Mountain Pine Beetle (MPB) operations. The following addendum outlines the changes to ground rules as outlined on the provincial template for ground rules titled the *Alberta Timber Harvest Planning and Operating Ground Rules Framework for Renewal* on the SRD website.

All companies in the MPB Area of Concern identified in the MPB Action Plan, and others potentially affected by MPB will be contacted to address changes to their ground rules. Companies with new ground rules based on the provincial template will utilize the ground rules contained in this document to develop the addendum to their own ground rules. Companies with existing FMA ground rules that were not developed following the provincial template will follow the wording of the ground rules in this document as much as possible in order to develop an addendum to their ground rules. Where company ground rules don't adequately deal with the intent of the following ground rules, the wording of the rules below will be utilized in the addendum. The revised ground rules for each company will form an appendix to the existing set of ground rules.

The Area Manager, based on advice from the Forest Health Officer (FHO), will provide written direction on which level of MPB control (Control (Beetle) vs. Salvage) is necessary for which compartments, which will then determine which ground rules apply. Prevention (Pine) Strategy ground rules apply indefinitely.

In addition to these ground rules, the Area Manager has the authority to waive or modify the application of individual ground rules for site-specific reasons.

### **3.0 OPERATIONAL PLANNING**

#### **Control (Beetle) Strategy**

1. A Compartment Assessment (3.2) is not required.
2. The regional Forest Health Officer and forest company representative will agree on the harvest area boundaries subject to beetle strategy harvesting.
3. Replacement to OGR 3.4.1 and 3.4.3 - A Final Harvest Plan will be accepted by Alberta if validated by a RFP. All affected operators have agreed to the design.
4. Modification to OGR 3.4.5 – information item b) SHS is not required.
5. Modification to OGR 3.4.6 – information items b), c), f), and j) are not required.
6. Modification to OGR 3.4.8 d) – Alberta will provide specific direction on permanent sample plots in the harvest area regarding retention/ protection in relation to MPB risk.
7. Replacement to OGR 3.5.1 – Alberta will respond to AOP submissions within 10 working days of submission. The Area Manager has the authority to approve AOPs.
8. Modification to OGR 3.5.4 – information item f), not required. (No new permanent roads should be necessary, so a road corridor plan should not be required per OGRS 11.2.1, and 11.2.2).

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### **Salvage Strategy**

9. Compartment Assessments may be required as determined by Alberta. If so, OGRS 3.2.2 and 3.2.4 apply.
10. The forest company will determine the harvest area boundaries subject to beetle salvage harvesting.
11. Replacement to OGR 3.4.1 and 3.4.3 - A Final Harvest Plan will be accepted by Alberta if validated by a RFP. All affected operators have agreed to the design.
12. Modification to OGR 3.4.5 – information item b) SHS is not required.
13. Modification to OGR 3.4.6 – information items b), c), and f) are not required.
14. Modification to OGR 3.4.8 – information items e), and g) are not required. Information item d) – Alberta will provide specific direction on permanent sample plots in the harvest area regarding retention/ protection in relation to MPB risk.
15. Replacement to OGR 3.5.1 – Alberta will respond to AOP submissions within 10 working days of submission. The Area Manager has the authority to approve AOP's.
16. Modification to OGR 3.5.4 – information item f) not required. (No new permanent roads should be necessary, so a road corridor plan should not be required per OGRS 11.2.1, and 11.2.2).

### **Pine Strategy**

Note that a Compartment Assessment is required as the means to re-sequence the existing sequence and meet the Pine Prevention Strategy objective to reduce the area of susceptible pine stands in compartments identified as being very susceptible to MPB infestation. The goal is to reduce the area of susceptible pine stands in the Rank 1 and Rank 2 categories in the Sustained Yield Unit (SYU) to 25% of that projected in the currently approved FMP at a point twenty years into the future.

17. Modification to OGR 3.2.1 - The area for pine strategy harvest on which the CA is required is determined jointly by the Forest Health Officer and forest company representative based on susceptibility model outputs and field checks. Alberta will rely on such models, augmented with validation of outputs through professional judgement of Forest Health staff.
18. OGR 3.2.4 applies. OGRS 3.2.2 and 3.2.3 do not apply.
19. In the CA, the company will assess the impacts of their re-sequencing proposal against a short list of values consistent with the requirements of the Forest Management Planning Standard, Annex 1, standard 5.6i (a-e) as interpreted on page 3 and 4 of the *Interpretive Bulletin for Planning Mountain Pine Beetle Response Operations*.
20. Modification to OGR's related to FHP – FHP's are required except the following OGR's are not applicable: OGRS 3.4.1, 3.4.5 b), 3.4.6 b), c), 3.4.8 e) and g).
21. OGR 3.5.1 applies.

## **4.0 UTILIZATION**

### **Beetle and Salvage Strategy**

22. OGR 4.2.1 – The salvage operations tree/piece utilization standard may apply.
23. Modification to OGR 4.2.3 – When measured from root collar, stump height shall not exceed a block average of 15 cm. Conditions such as steep slopes, deep snow, and butt flare may cause the average stump height to slightly exceed 15 cm. Exceptions may be approved in the FHP.

## **5.0 INTEGRATION WITH OTHER USERS**

### **Beetle Strategy**

24. Modification to OGR 5.4.1 – Given the rapid nature of level II operations, it's recognized that incorporation of all concerns in a timely manner may not be possible.

### **Beetle, Salvage, and Pine Strategies**

25. Modification to OGR 5.5.1 – It is recognized that visual quality may be impacted as a consequence of beetle and salvage harvesting. Signage and other forms of public communication to explain the nature of operations at harvest sites, which are highly visible to the public, will be necessary. Specific notification to key stakeholders for Pine Strategy operations will be necessary.

## **6.0 WATERSHED PROTECTION**

For further information on Riparian Areas, see Section 9.4 of the *Interpretive Bulletin for Planning Mountain Pine Beetle Operations*.

### **Beetle Strategy**

26. Modification to OGR 6.0.4 – Where green attack trees are found, removal of trees within riparian protection areas may be approved subject to the following:

- i. An SRD approved beetle survey has been conducted throughout the riparian protection area. (See appendix 1 – Percent Attack Surveys)
- ii. Frozen Ground (defined as frost to a depth of 20cm)
  - If greater than 10% of the trees within the riparian protection area are attacked, pine can be logged using conventional skidders.
  - If less than 10% of the trees are attacked, trees will be treated as a level 1 response.
- iii. Non-frozen Conditions
  - If greater than 25% of the trees within the riparian protection area are attacked, pine can be removed using low ground pressure equipment (eg. skidder tire width of 36 inches) to minimize soil disturbance within the riparian protection area.
  - less than 25% attack of the trees in the riparian protection area, trees will be treated as a level 1 response.

	<b>Level II – Stand Level Treatments (Industry)</b>	<b>Level I – Single Tree Treatments (SRD)*</b>
<b>Frozen</b>	> 10% green attack in stand	< 10% green attack in stand (single tree treatment)
<b>Non Frozen</b>	> 25% green attack - low ground pressure equipment recommended	< 25% green attack

\* Level I response is the preferred strategy within Riparian protection areas for slopes exceeding 40%, sensitive soils, or critical wildlife habitat. ie. Class A watercourse.

Retention of non-pine tree species will be a priority to compensate for removal of pine.

27. OGRS 6.0.2 and 6.0.6 are not required.

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### **Pine Strategy**

28. Modification to OGR 6.0.4 – Single tree removal of high risk pine will be considered on a site-specific basis. Increased levels of removal will be considered based on: 1) location and amount of high susceptibility stands in the vicinity of the riparian area, 2) ease of access – if re-entry is feasible, then delay removal until Level 1 and II treatments. Retention of non-pine tree species will be a priority to compensate for removal of pine.

## **7.0 HABITAT MANAGEMENT**

Direction on habitat management is also provided in the *Interpretive Bulletin for Planning Mountain Pine Beetle Response Operations*.

### **Beetle Strategy**

29. OGRS 7.1.2, 7.2.9, 7.3.2, 7.3.3 apply.

30. Modification to 7.3.1 – Unless one of the following conditions has occurred, all debris from infested trees and tops are to be burned by June 15<sup>th</sup> annually: [Further information is being developed to clarify where to apply the MPB debris disposal requirements. This information will be inserted into this OGR addendum as soon as it is ready.](#)

- Leaving debris in conjunction with a baiting strategy may occur as approved by the Forest Health Officer.
- Where post harvest assessment of harvest debris determines no beetle presence, debris shall be dealt with as per original ground rules.

31. Modification to OGR 7.4.1 – Retention of non-pine tree species will be a priority to compensate for removal of pine.

### **Salvage Strategy**

32. OGRS 7.1.2, 7.2.5, 7.2.7, 7.2.9, 7.3.1, 7.3.2, and 7.3.3 apply.

33. Spreading of debris is preferred where fuel load problems aren't created.

34. OGR 7.4.1 applies.

### **Pine Strategy**

35. 7.1.2, 7.2.4, 7.2.5, 7.2.7, 7.2.9, 7.3.1, 7.3.2, 7.3.3 apply.

36. Spreading of debris is preferred where fuel load problems aren't created.

37. Modification to OGR 7.4.1 – No pine shall be retained as structure. Retention of non-pine tree species will be a priority to compensate for removal of pine.

### **Beetle, Salvage, and Pine Strategies**

38. OGRS 7.6.1 and 7.6.2 apply.

### **Beetle Strategy**

39. Stand level harvesting will focus on low value and non-critical wildlife habitat wherever possible.

### **Salvage Strategy**

40. High value and critical caribou or grizzly habitat is to be maintained as these strategies take precedence over MPB control at this stage. Adjustments to strategies may be necessary to

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meet species objectives based on landscape attributes following infestation as per direction from Alberta.

### **Pine Strategy**

41. Harvesting in caribou zone should focus first on highest susceptibility stands, in lowest quality caribou habitat. Timing of operations based on advice from Fish and Wildlife Branch.

## **8.0 SILVICULTURE**

### **Beetle and Salvage Strategies**

42. Modification to OGR 8.1.6 – It's recognized that seed zone variances may be necessary for MPB operations and will be reviewed on a case-by-case basis by the Provincial Seed Officer.

### **Beetle, Salvage, and Pine Strategies**

43. Modification to OGR 8.2.3 – It is recognized that maintenance of pine stratum may not be achieved and will be assessed on a case by case basis as part of the review of the Reforestation Program by Alberta.

## **9.0 SOILS**

All ground rules apply.

## **10.0 FOREST HEALTH/ PROTECTION**

All ground rules apply to Pine Strategy harvesting. OGR 10.2.1 (Weed Management) is not applicable to Beetle Strategy harvesting, but is applicable to Salvage Strategy harvesting. OGR 10.3.1. is not applicable to Beetle or Salvage Strategy harvesting.

## **11.0 ROADS & 12.0 REPORTING**

All ground rules apply, except where noted in points 8 and 16 in Section 3.0 above.

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## **Appendix 1 – Percent Attack Surveys**

### **Goal**

To survey 10% of a stand to determine the percentage of the large diameter stems that are currently attacked. This information will be used to determine the best management tactics to employ in any given area.

### **Procedure**

1. Before conducting the Percent Attack Surveys, contact the SRD Forest Health Officer to:
  - Confirm survey procedure is consistent with the management objectives.
  - Review survey data and mapping requirements and submission procedures.
  - Review plot marking technique (flag colors etc.)
  - Review the survey area
2. Determine the number of transects and the length of transects based on the goal of surveying 10% of the stand in question.
3. As a general rule transect width should be 10 m, however the surveyor may adjust accordingly as long as 10% of the stand is surveyed.
4. Transects should be placed in a representative location within the area to be surveyed.
5. On the ground, locate and flag the origin of the first transect to be surveyed according to the schematic map (a corner of the survey polygon). Record transect origin location and bearing on a datasheet.
6. Flag transect origin and label with the word “MPB origin”, year, and bearing. Record the GPS location of the origin on the database using the datum NAD 83.
7. At the end of the transect line, flag a tree with “MPB end”, year, bearing and distance.
8. Examine every tree along transect in a swath (default to a 10 m swath).
9. Look for pitch tubes and/or boring dust.
10. Ensure to examine fading or red trees for live brood. If live brood present, count as attacked tree.
11. Flag each attacked tree (with live beetles) with tape.
12. If the attacked trees in the transect area are to be sanitation harvested, the trees will be labelled as described above, with the addition of a vertical red paint mark from breast height to the ground on the north side of the tree (if required by the FHO)
13. On the datasheet, record the total number of trees from the transect that are greater than 10 cm DBH. Record the number of currently infested trees, and ensure the datasheet is completed and correct.

### **Data collection**

Refer to data sheet.

### **Reporting**

Survey results and map describing the transect line origin and the bearing to be submitted to Forest Health Officer for verification.