Lakes Forest District Agreement and Guidelines for Beetle Management in Riparian Reserve Zones

Purpose:

The purpose of this document is to address the increasing occurrence of bark beetles within riparian reserve zones (RRZ) by providing guidelines to licensees for beetle management. This document will serve as the "agreement" between the district manager and designated environment official formally required for RRZs under Section 10 of the Timber Harvesting Practices Regulation (THPR), Section 35 of the Woodlot License Forest Management Regulation and Section 4 of the Silviculture Practices Regulation

Guiding Principles

The management and operational strategies, which should be considered, are based on guiding principles, which are derived from the definitions of riparian reserve zone. These definitions and objectives are contained within the Operational Planning Regulation and the Biodiversity and Riparian Management Area Guidebooks:

> "**riparian reserve zone**" means that portion, if any, of the riparian management area or lakeshore management area located adjacent to a stream, wetland or lake of a width determined in accordance with Part 8;

Riparian management area objectives are implemented:

- to minimize or prevent impacts of forest and range uses on stream channel dynamics, aquatic ecosystems, and water quality of all streams, lakes, and wetlands

- to minimize or prevent impacts of forest and range use on the diversity, productivity, and sustainability of wildlife habitat and vegetation adjacent to streams, lakes, and wetlands with reserve zones, or where high wildlife values are present

- to allow for forest and range use that is consistent with (the) above.

To achieve riparian management area objectives, forest practices within the management zone should:

- Where a riparian management area has both a management zone and a reserve zone:
  – reduce the risk of windthrow to the reserve zone
  – retain important wildlife habitat attributes including wildlife trees, large trees, hiding and resting cover, nesting sites, structural diversity, coarse woody debris, and food sources characteristic of natural riparian ecosystems.

- Where a riparian management area has only a management zone:
  – retain sufficient vegetation along streams to provide shade, reduce bank microclimate changes, maintain natural channel and bank stability and, where specified, maintain important attributes for wildlife
  – adjacent to wetlands and lakes, retain key wildlife habitat attributes characteristic of natural riparian ecosystems.

The planning of any harvest or development within either the RRZs should focus on maintaining the elements outlined above.

As part of the decision to manage infested trees within the zones, the following should be considered:

- the strategy for beetle management, including specific activities proposed, and followup activities,
- the risk to the forest resource within and adjacent to the zones in terms of susceptibility,
- the level of beetle infestation (percent of affected area or basal area),
- an assessment of other risks associated with the proposal, which may include slope stability, reduction of WTP percentage, negative impact on wildlife habitat.
- No-action, fall and burn, or MSMA strategies should be considered where management impacts to RRZ values are disproportionate in relation to the probability of meeting beetle control objectives.

It is expected that licensees address the points outlined above in their submission for harvest approval.

Management and Operational Strategies

To assist in rationalizing the harvest within RRZs, MOF and MELP have jointly derived broad strategies for riparian reserve zones where deviations from the expected "no harvest" strategy is necessary to manage bark beetles.

1. Removal of infested trees should not be undertaken where that development would result in deterioration of water quality, measurable increases in stream water temperature or decrease in slope stability.
2. Harvest for control of spruce beetle is not included in this agreement. Trap tree strategies outside of the Riparian Reserve Zone should be utilized.
3. Harvest for control of mountain pine beetle in the East Ootsa South chart area is not included in this agreement. The "catastrophic" nature of the infestation in this area precludes control objectives being met through such actions (Note that the area of "catastrophic" infestation will change over time and be reflected in future versions of this agreement). Infested trees should be retained to contribute to structure and connectivity objectives.
4. The integrity of the riparian reserve zone must be maintained. Harvesting within riparian reserve zones may be carried out where it is necessary for the maintenance of riparian objectives. The emphasis should be "light-impact" harvesting with minimal effect on the basal area (i.e. cumulative basal area removal not to exceed 40% on a per hectare basis).
5. Methods used for the harvest and removal of beetle-infested trees from a RRZ must result in the least amount of damage possible to non-target trees and other vegetation. Only green, current-attack or red-attack trees that still contain live beetles or brood

and trees incidental to their removal may be harvested - trees that are felled for safety reasons or incidental to the removal of infested trees should be left on site.

6. Pheromone baiting for MPB may not occur within 50 meters of a RRZ.
7. Snags(e.g. reds or greys) may only be felled for safety reasons after a qualified Wildlife/Danger Tree Assessor has assessed them as unsafe. However, where live trees or snags need to be felled to facilitate harvest or skidding operations, such snags may be felled without a safety assessment.
8. Where it is sensible to vary the riparian reserve zone boundary for reasons due to terrain, this may be done as long as the integrity of RRZ objectives are maintained. The rationale for varying RRZ boundaries must be based on riparian and biodiversity objectives. It is expected that a tolerance be considered whereby if the boundary is moved closer to the stream edge, a compensatory area be added in a nearby suitable location. RRZ boundaries should also not extend closer than 20 meters from the stream edge.
9. Consideration should be made for the treatment of MSMA within key riparian reserve zones (where maintenance of structure is critical) to within 10 meters of the stream edge. This option should be considered wherever beetle control harvest activities would have a significant impact on RRZ values, but where the infestation, if left unmanaged, threatens RRZ values.
10. No bladed skid trails within the RRZ is the rule. In S1 and S2 stream RRZs short non-bladed skid trails are acceptable, however, there should be no impact on the forest floor. Careful assessment of other less intrusive management options is required before skid trails be considered in an RRZ. Skid trails are not permitted within S3 and wetland RRZs.

The strategies outlined above contain points that guide maximum levels of development within the RRZs. The district manager and designated environmental officer hereby agree that these strategies serve to adequately manage and conserve the forest resource where the RRZs are infested with bark beetles. Where approval is sought for beetle management within these zones, supporting rationale is required within the SP (or request for exemption from SP), detailing the risks and strategies upon which the district manager may make a decision. . Where approval is requested for harvest activities that exceed points 1 to 8 outlined above, the district manager will seek a separate and site specific agreement with the designated environment official.

This agreement is in place for the remaining winter and summer harvest season (effective January, 2001 to November 30, 2001) after which it will be evaluated for appropriateness.

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