

APPENDIX 7 STRUCTURE RETENTION

*Slave Lake Pulp FMA
Structure Retention
Strategy*



Submitted by:
The Planning Working Group
Slave Lake Pulp DFMP Implementation Team

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Buchanan Lumber
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Lakeshore Timber Company

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INTRODUCTION

The purpose of this document is to describe the approach to establish, monitor and report harvest area structure retention within the Slave Lake Pulp (SLP) FMA area. The process described herein is the product of a cooperative effort between Slave Lake Pulp, Alberta Plywood, Millar Western Forest Products, Buchanan Lumber, Vanderwell Contractors and the Lakeshore Timber Company. This structure retention strategy facilitates both practical field assessments and cost effectiveness.

The amount of stand structure left in each individual block can vary widely depending on operator, stand type, terrain, cutblock size, aesthetic requirements and wildlife objectives¹. The age and initial composition of a forest stand will determine what structure can be left during harvest operations. This allows for greater amounts of structure in larger cutblocks and more sensitive sites, balanced by potentially reduced amounts in smaller cutblocks. Variation between cutblocks is also desirable under a natural disturbance management program. Thus, the forest companies' intent is to continue to leave variable residual structure within the cutblocks.

GOAL

Mitigate the impacts of forestry practices on biological diversity

OBJECTIVE (1.3)

Develop stand level management strategies

STRATEGIES

- ◆ Structure containing live and dead trees will be retained to create old forest characteristics in young and mid-aged post harvest forests (Schieck et al, 2000). Representative patch retention will be practiced to a minimum level of 1% of the scheduled harvest area across the S20 FMU over the term of the DFMP. The area retained on the harvest areas will be assessed through a post-harvest assessment program.
- ◆ The 1% area will consist of representative merchantable types within the SHS: A minimum of 1% merchantable deciduous and 1% merchantable coniferous area will be retained as structure retention within the cutblocks. Not all harvest areas will have structure retention.
- ◆ Structure retention will be practiced across the FMA in a variety of opening sizes, locations, and terrain.
- ◆ Leave as many individual stems of non-merchantable trees, shrubs and snags as operationally and silviculturally feasible.
- ◆ Areas of non-merchantable timber or shrub areas that are 1 hectare or greater shall be left in conjunction with structure.

¹ “wildlife objectives” – provided by Alberta SRD.

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- ◆ An attempt will be made to incorporate non-merchantable patches within the cut block boundary when such patches exist.
- ◆ The emphasis will be to leave greater amounts of retention in both deciduous and coniferous blocks greater than 100ha while smaller blocks will have less. Research into natural disturbance patterns and processes suggests that more residuals and larger residual polygons should be left if opening size increases.
- ◆ Trees in patches and of varying sizes (minimum .01 ha) may be retained throughout the block. Larger patches may also be left to provide wildlife cover and habitat. Stand structuring also includes utilizing block features by avoiding damage to patches of understorey shrubs and wet areas (draws, water sources) and leaving large wind-firm conifer (also a potential seed source). Site-specific practices will be dependent on initial stand and site characteristics and desired block-to-block variation.
- ◆ Merchantable structure is in addition to any unmerchantable structure in cutblocks.
- ◆ Structure retention in larger blocks (usually greater than 100 hectares) may include a greater range of patch sizes to provide wildlife linkages and feathered edges on the windward side of blocks.
- ◆ Stand structure may not be retained in blocks where forest health issues justify eradication of all mature tree species to combat infestations and diseases (e.g. mistletoe, MPB)
- ◆ Structure retention can include areas buffered for sensitive ecological or wildlife habitat
- ◆ *Merchantable* Structure retention shall be retained in the form of patches rather than individual trees.

The stand structure protocols and monitoring program will be continually monitored and updated to reflect new research and policy.

STAND STRUCTURE MONITORING AND ANALYSIS

In order to monitor the amount of in-block merchantable stand structure retained by operators, a monitoring program has been implemented.

Cutblock Aerial Survey Monitoring

Leaf-on cut-block update photography will be utilized.

- SLP and the other forest industry operators will utilize medium scale (1:30,000) aerial photography of all FMA cutovers.
- An acceptable alternative to the aerial photography approach would be to provide GPS boundaries of the as-built cutblocks. GPS boundaries of all residual areas would also be required.
- Digitizing of patches will be at a resolution of 0.01 ha in size or greater.

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- The volume of the retention patches will be estimated using SLP volume tables and approved net land base file. Each identified patch will be overlaid with the net land base file and a coniferous and deciduous volume will be calculated. This methodology will apply to the FMA holder and all its operators.

STAND STRUCTURE REPORTING

Stand Structure monitoring results will be reported annually by FMU in the forest companies' General Development Plans (GDP). An annual volume drain of 1% will be applied to all operators within the S20 FMU. The actual merchantable volume left will be reconciled with the targets annually. Stand structure monitoring results will also be collected by the FMA holder for all operators in the FMA, tracked annually and reported every five years in the FMA Stewardship report.