

EMEND General Overview

Lead by: John Spence

Theme: EMEND General Overviews

Status: Continuing

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Participants

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Background

Adoption of the "natural disturbance" paradigm for boreal forest management has led away from the extensive clear-cutting and toward retention of unharvested residuals to leave structure on the landscape. Effects of size and distribution of residual patches have been studied in Alberta. However, the important question of "how much residual is enough to preserve and protect critical aspects of ecosystem function?" has received scant attention. Thus, there is little scientific basis to guide management of stand structure in the extensive management zone. Retention of either green-tree or dead residual can be significant for forest regeneration. Therefore, sustainable management depends on linking harvest methods to forest regeneration procedures to promote holistic and ecologically-sensitive silviculture. New silvicultural procedures are required to meet the expanded objectives of sustainable management and to assist with evaluation of their implications for productivity.

Objectives

1) to determine which forest harvest and regenerative practices best maintain biotic communities, spatial patterns of forest structure, functional ecosystem integrity in comparison with mixed-wood landscapes that have originated through wildfire and other inherent natural disturbances; and 2) to employ economic and social analyses to evaluate these practices in terms of economic viability, sustainability and social acceptability. These objectives are to be achieved through the large-scale harvest-silviculture experiment or approached through modelling based on the experimental results.

Key Results

n/a