File: 18046-20 MK FSP Supporting Documentation

November 21, 2006

To: File

From: Sharon Dow, R.P.F.
Planning Forester
Prince George Business Area
BC Timber Sales

Re: Wildlife Tree Patch Retention Support Documentation

For the purposes of the Mackenzie Forest Stewardship Plan (FSP), BC Timber Sales has provided an alternate result that is consistent with the objective for retaining wildlife trees and the landscape level objective of designing blocks consistent with patterns of natural disturbance. This alternate result replaces section 66(2) of the FPPR, and states that only cutblocks greater than 15 hectares in size will have 3.5% wildlife tree patch retention.

The attached File Note dated September 26, 2005, was written to support an identical alternate result proposed in the Prince George FSP. This document is included here as the research and justification is also applicable to the Mackenzie Forest District.

Sharon Dow, R.P.F.
Planning Forester
Prince George Business Area
BC Timber Sales

Attachment(s):

File: 10765-25/PG FSP Support Documentation

September 26, 2005

Re: BC Timber Sales Prince George Forest Stewardship Plan:
Wildlife Tree Patch Retention Support Documentation

Section 66(1) of the Forest Planning and Practices Regulation (FPPR) states that over the course of any given year, at least 7% of the combined cutblock areas harvested will have wildlife tree patch retention. Section 66(2) of the FPPR states that every cutblock will have 3.5% wildlife tree patch retention.

For the purposes of the Prince George Forest Stewardship Plan (FSP), BC Timber Sales has provided an alternate result that is consistent with the objective for retaining wildlife trees and the landscape level objective of designing blocks consistent with patterns of natural disturbance. This alternate result replaces section 66(2) of the FPPR, and states that only cutblocks greater than 15 hectares in size will have 3.5% wildlife tree patch retention. Blocks less than 15 hectares may or may not have wildlife tree retention depending on the attributes within the block, and the block configuration regarding distance to cover requirements.

Two research projects have been undertaken supporting this approach: BC Ministry of Forests Prince George Research Team and Alberta Foothills Model Forest.

BC Ministry of Forests, DeLong and Tanner (1996) evaluated nine wildfires north of Prince George, in the Salmon Valley. The fires burned between 1934 and 1953, prior to substantial fire suppression, ranging in size from 159 to 2,239 hectares. Areas of standing trees remaining within the fire boundary were identified (island remnant), with the smallest size at 0.2 hectares.

Foothills Model Forest Research (Andison, 2004) evaluated 24 wildfires on the eastern slopes of the Rocky Mountains – from Rocky Mountain House to Grand Cache and east to Whitecourt. The fires burned between 1946 and 1982, with no fire suppression and ranged in size from 28 to 15,908 hectares. Additional analysis was completed on these 24 fires to define 246 disturbance patches. These ranged in size from 0.2 hectares to greater than 200 hectares. As a result, the Foothills Model Forest island remnant analysis considered disturbance from 0.2 hectares to 15,908 hectares. Areas of standing trees affected by fire and

remaining within or on edge of the fire boundary were identified (island remnant), with the smallest size at 0.02 hectares.

DeLong and Tanner determined that:

- Island remnants comprise 3% to 15% of the total disturbed area, and range in size from 0.2 hectares to 73 hectares;
- As wildfire size increases, so does the proportion of area in island remnants; and
- As wildfire size increases, so does the size of individual island remnants.

Foothills Model Forest Research determined that:

- On average, 10% of the disturbed area remains in island remnants and ranges in size from 0.02 hectares to over 40 hectares;
- Wildfires less than 20 hectares in size have no island remnants;
- As wildfire size increases, the proportion of area in island remnants remains static. This is due to the higher resolution of analysis. When the small island remnants are removed from the analysis (to enable comparison with DeLong and Tanner), the results are consistent with DeLong and Tanner; and
- As wildfire size increases, so does the size of individual island remnants.

The result that BC Timber Sales has proposed (cutblocks less than 15 hectares do not require wildlife tree retention) is consistent with both the Alberta Foothills Model Forest and BC Ministry of Forests research.

This approach is consistent with the research from Alberta Foothills Model Forest that wildfires less than 20 hectares do not contain island remnants. Although the research suggests that cutblocks up to 20 hectares in size do not require any wildlife tree retention, BC Timber Sales has reduced this to 15 hectares to recognize that research in this field is still developing.

In addition, this approach allows for improved consistency with DeLong and Tanner research. By eliminating the need for wildlife tree retention on small blocks (less than 15 hectares), additional wildlife tree retention can be applied on larger blocks while still meeting section 66(1) of the FPPR. This ensures that timber supply is not unduly reduced while providing at least 7% wildlife tree patch retention on the combined cutblock areas harvested in any given year.

Maggie Marsland, RPF
Planning Forester
Prince George Business Area
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