

2012 Nadina District FREP Summary: Biodiversity

Stand-level biodiversity assessments measure the effectiveness of forest practices at retaining habitats with the structural attributes necessary for species dependent on wildlife trees and coarse woody debris (CWD). This is accomplished in two ways: (1) by evaluating the quantity, volume and condition of large woody debris left in harvested areas compared to retention areas and (2) by comparing existing snag density and forest structure with baseline cruise data for that biogeoclimatic subzone.

This report summarizes key findings and provides recommendations to improve on-the-ground resource management practices and decision making.

Key Findings:

- 70 cutblocks were sampled from 2006 to 2011, totalling **2293.4 ha** of gross area.
- The average percent retention on the 70 cutblocks was **16.1%**.
- Approximately **70%** of the retention patches were located on the edge of blocks.
- The average windthrow in the retention patches was **7.1%**.
- The average patch retention/block was **4.9 ha**, with an average block size of **32.8 ha**.
- **39%** (15/38) cutblocks harvested 2005 and earlier (*FPC*) had “no” retention (<0.5%), while only **9%** (3/32) cutblocks harvested after 2005 (*FRPA* era) had no retention.
- The volume of CWD (≥ 10 m/ >20 cm) in the harvested areas is **88%** of the volume found in the wildlife tree patches (an unmanaged area being used as a baseline surrogate).
- The density of CWD (≥ 10 m/ >20 cm) in the harvested areas is **23%** of the density found in the respective wildlife tree patches.
- The average “big trees” (>40 cm dbh) per hectare in all retention areas in the cutblocks harvested 2005 and earlier (*FPC*) was **12.5**. On cutblocks harvested after 2005 (*FRPA* era), the average number of big trees was **26.9**.
- **52%** of the retention on the cutblocks is constrained for other reasons (eg. riparian, CHR, visual) in addition to wildlife tree retention
- **56%** of the cutblocks that have retention (29/52) have no ecological anchors (eg. bear den, cavity nest, mineral lick)



Recommendations for Continued Improvement of Stand-level Biodiversity Management:

- Continue with the positive trends under *FRPA* for retention, volume of coarse woody debris retained and number of big trees per hectare
- Leave retention patches on **all sizes** of units, even if the retention consists of dead pine
- Increase the number and size of internal patches
- Leave large pieces of CWD scattered throughout the cutblock
- Center patches around the most suitable trees and distribute the patches throughout the cutblock
- Locate patches to minimize windthrow risk, and incorporate individual trees (both live and dead) with high wildlife value
- Conduct workshops/field visits with harvesting supervisors and equipment operators to discuss retention strategies, including identification of candidate high quality retention areas and coarse woody debris, and implement “best practices” as strategies for retention on cutblocks

