

# RETENTION IN SPRUCE BEETLE SALVAGE OPERATIONS

1. Background
2. What's your prospective?

# *Background*

- ▣ In 2005 CF provided “Guidance on Landscape-and Stand-level Structural Retention in Large-Scale MPB Salvage Operations”
  - Landscape-level Planning and Operations
    1. Plan out as many years as possible
    2. Spatially explicit, consider full range of values
    3. Recognize retention levels may vary by landscape unit
    4. Develop plan cooperatively so its known and honored by all operators
    5. Complete Salvage operations in the area as quickly as possible

# *Background*

## Stand-level Planning and Operations

1. Retain areas with live trees
2. Maintain stand-level retention for the rotation
3. Retain operable areas
4. Vary the amount of stand-level retention with the size of the cut-block based on opening size

**Table 1. Recommended proportion of stand-level retention based on opening size.**

| Opening Size  | Percent of Opening Un-harvested/retained |
|---------------|------------------------------------------|
| <50 ha        | 10%                                      |
| 50 – 250 ha   | 10 – 15 %                                |
| 250 – 1000 ha | 15 – 25 %                                |
| > 1000 ha     | > 25 %                                   |

# *Lessons learned*

FPB special report 35 in November 2009

- Did Foresters respond to CF's guidance?
  - Yes at the stand level (more retention within individual blocks)
  - No at the landscape level (No long term, large scale, spatially explicit planning)
  - Defining the size of an “opening” is challenging
    - FPB identified two different possible methods.
- Recommendations to Gov't
  - Clarify gov't objectives for wildlife and biodiversity at the landscape-level in areas affected by large-scale salvage
  - Provide leadership about landscape-level retention
  - Evaluate achievement of objectives at the landscape-level throughout the area of salvage operations

# *Lessons learned*

- Landscape level retention
  - MPB salvage operations resulted in extremely large unintended patches/openings.
  - 10 largest patches in Omineca as of 2016, utilizing same delineation method as described in the PG biodiversity order (Openings less than 30yrs.)

| patch id | patch area | managed stand | mature forest | inblock retention | pct mature forest | pct in block retention | pct retention combined |
|----------|------------|---------------|---------------|-------------------|-------------------|------------------------|------------------------|
| 3237     | 62,522     | 52,399        | 5,560         | 4,563             | 10.61             | 8.71                   | 16.19                  |
| 6209     | 46,642     | 40,144        | 2,791         | 3,708             | 6.95              | 9.24                   | 13.93                  |
| 1808     | 39,156     | 32,676        | 3,175         | 3,305             | 9.72              | 10.11                  | 16.55                  |
| 7878     | 35,337     | 30,485        | 2,455         | 2,397             | 8.05              | 7.86                   | 13.73                  |
| 5654     | 23,396     | 20,094        | 1,446         | 1,856             | 7.20              | 9.24                   | 14.11                  |
| 3765     | 22,827     | 19,362        | 1,851         | 1,614             | 9.56              | 8.34                   | 15.18                  |
| 3470     | 21,676     | 18,447        | 1,878         | 1,351             | 10.18             | 7.33                   | 14.90                  |
| 5730     | 19,087     | 16,513        | 1,144         | 1,430             | 6.93              | 8.66                   | 13.49                  |
| 1425     | 14,881     | 11,953        | 1,774         | 1,154             | 14.84             | 9.65                   | 19.67                  |
| 7731     | 14,494     | 12,163        | 1,283         | 1,048             | 10.55             | 8.62                   | 16.08                  |
| Totals   | 300,018    | 254,235       | 23,356        | 22,427            | 9.46              | 8.78                   | 15.38                  |

# Moving Forward

- ▣ CF wants to update retention guidance for spruce beetle salvage operations within Omineca region
- ▣ What do you think should or shouldn't be included?