



Timberline
Natural Resource Group

Roads, Trail and Landings Inventory Project within the Morice TSA

June 6, 2008

Presented by: Dean Sinclair, RPF
Presented to: Morice and Lakes IFPA, Houston

Project Goals

- Quantify the area occupied by RTL
- Identify their location
- Assess site productivity
- Assess rehabilitation potential
- Classify structures based on operational use

Method - Data

- Spatial data collected and updated
- Structures stratified based on:
 - Structure type
 - Harvest method
 - Season
 - Road class
- 29 strata

Methods – Sample Selection

- 15 mapsheets randomly selected
 - Method ensured un-biased, representative results
- 30 target plots per stratum randomly placed on mapsheets using GIS

Methods – Field Sampling

- Each sample site was assessed for:
 - Width (roads and trails)
 - Area (landings)
 - Productivity (only on site with conifers)
- 790 samples established
 - 408 roads
 - 57 trail
 - 325 landings

Productivity Results - Roads

- Only spurs considered temporary and assessed for productivity
- 13% supported conifers
- 30% well spaced and $SI > 12$
- 31% had $SI \geq 17.1$
- Average annual height growth 31cm
- Average age 18 years

Productivity Results - Landings

- 68% supported conifers
- 67% well spaced and $SI > 12$
- 34% had $SI \geq 17.1$
- Average annual height growth 37cm
- Average age 16 years

Productivity Results - Trails

- 30% supported conifers
- 31% well spaced
- No samples met minimum stocking and SI
- 12% had $SI \geq 17.1$

Calculating Non-productive Area

- GIS used to determine (by stratum):
 - Road length, and;
 - Number of landings
- Average road width and landing area applied to determine area by stratum
- % NP samples applied to determine area
 - Samples with stocking $<600\text{sph}$ and $SI < 12$ were non-productive

Existing Non-Productive Area

- 98% of roads and trails NP (12,580ha)
 - 0.82% of TSA
- 85% of landings NP (2,020ha)
 - 0.13% of TSA
- Total area NP = 14,600ha
 - Assumed productive structures will not be used in the future and will contribute to timber supply

Future Losses

- TSR II methodology used
- TSR II provides assumptions for % roads completed in TSA, by class:
 - Mainline – 70%
 - Operational – 40%
 - Spur – 30%
- Used to pro-rate existing NP to future

Area Reductions

	Existing % of TSA		Future % of TSA		
	TSRII	RTL Study	TSRII	RTL Study	
Roads/Trails	0.41%	0.82%	0.65%	1.17%	
Landings	0.26%	0.13%	0.63%	0.33%	
Total	0.67%	0.95%	1.28%	1.50%	

Discussion

- TSRII NP under-estimated when compared to study
 - Many potential reasons for variance, but assessing outside scope of project
- Natural regeneration largely inevitable; but not necessarily to acceptable productivity and stocking levels
- Rehabilitation may expedite process

Conclusion

- Study provides valuable info in regards to regeneration on structures
- Can be used in developing strategies to minimize long-term losses to NP
- Data can be used in timber supply analyses

For more information contact:

Morice and Lakes IFPA

Or

Dean Sinclair, RPF

Timberline Natural Resource Group

250-562-2628