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A Highway 40 North Demonstration Project Update
Putting Natural Disturbance Research to Work

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What Did We Learn - *About Using A Natural Pattern Foundation?*

With the Hwy40 planning process now complete, our focus has turned to pouring over meeting minutes, perspectives from participants, and objectively evaluating the experience. As a demonstration project, our primary goals are to a) to learn, and then b) to pass on a summary of any new insights. Fortunately, the Hwy40 project proved to be a tremendous source of new information as it relates to the degree to which collaborative, natural-pattern based operational planning in Alberta is both beneficial and feasible.

The first and most obvious question is the effectiveness of using natural disturbance patterns as a foundation for creating holistic solutions for other values. This was easily the greatest success of the Hwy40 project.

In terms of process, the use of disturbance patterns as a starting point for planning created a universal, secure foundation for discussions within the Planning Team. As we had hoped, natural patterns formed a universal reference point for virtually all land planning decisions. The fact that ten individuals from ten different agencies developed and supported a single disturbance design is a testament to the potential of adopting a common planning foundation.

In terms of outcome, as the Table below suggests, when we applied the decision-support models provided to us by the various agencies involved, the chosen disturbance scenario (the A-C combo shaded in grey) provided superior performance for almost every identified value. Furthermore, it is interesting to note that the "No Disturbance" option was a sub-optimal management scenario.

Qualitative Performance of the Chosen Disturbance Scenarios Against the Eight Identified Planning Indicators.

Planning Indicator	Planning Scenario				
	A	B	C	A-C Combo	No Disturbance
Industrial footprint	Minimal Increase	**Moderate Increase**	**Moderate Increase**	Minimal Increase	**No Increase**
Timber quality	**Moderate**	Poor-Moderate	**Moderate**	**Moderate**	N/A
MPB threat mitigation	Moderate Reduction	Small Reduction	**Moderate - High Reduction**	**Moderate - High Reduction**	**No Reduction**
Caribou habitat impact	Minimal	**Moderate**	**Moderate**	Minimal	**None**
Wildfire threat mitigation	Moderate Reduction	Negligible Reduction	**Moderate - High Reduction**	**Moderate - High Reduction**	**No Reduction**
Opportunity for learning	Moderate	**Low**	**High**	**High**	Moderate.
Opportunity for public viewing	Moderate	**Low**	**High**	**High**	**Low**
Grizzly bear habitat impact	**Moderate**	Low	Low	Low	**None.**

In the end, the Hwy40 Planning Team identified a disturbance scenario that was optimal for most of the identified values, and sub-optimal for none. This experience strongly suggests that a adopting a natural disturbance pattern foundation for operational planning is a robust strategy for achieving *sustainable forest manage*ment as it was originally conceived.

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