

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

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Question #3: Where Does the Disturbance Go?

After identifying how much area to disturb over the next decade and how large the disturbance events should be, the Hwy40 planning team next tackled the question of location. Consistent with our experimental planning process, the first question we asked was "What would Mother Nature do?". In other words, are there places within the study area that are significantly more likely to have a 4,900 – 8,300 ha fire event? The short answer is "no".

However, we do know that natural wildfire events are very simply shaped – basic outlines that anyone could draw. So we started drawing. Using the available spatial data (see update #9), and the perceived requirements of the identified local values, planning team members tabled an exhaustive list of potential disturbance event locations. This "disturbance design" exercise was value-free based largely on the expert opinion of the (core and extended) planning team members (see update #3). This exercise yielded eight different disturbance scenarios.

These eight scenarios were then filtered though a very coarse set of logical criteria such as feasibility, overlap, obvious and significant negative impacts on other values, and adherence to higher-level plan objectives. This process reduced the list to the three disturbance event scenarios shown below in red (see update #2 for a detailed map of the study area). *Keep in mind that the events shown below illustrate only an outline of the disturbed area* – only 50-80% of the area within a natural wildfire event is actually disturbed (see update #11).



The next step was to evaluate each event scenario in terms of other objectives. We did this through a series of objective "planning indicators" based on the best available science representing each of the most critical local values. The team developed and/or acquired seven planning indicators; 1) Fire threat mitigation, 2) Wood fibre quality, 3) Woodland caribou, 4) Grizzly

bear, 5) Integration of industrial activity, 6) Access, and 7) Opportunity for viewing and learning.

As one can imagine, the planning process described above was neither brief nor straightforward. On the other hand, it was highly informative. We learned a lot about the viability of the proposed new planning process during this phase. And in the end, the team agreed on a single (blended) general location for disturbance activities (see adjacent figure). This scenario came close to optimizing the values for all seven planning indicators.



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