

A Highway 40 North Demonstration Project Update

Putting Natural Disturbance Research to Work

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Question #4: How Do We Turn a Scenario into an Event?

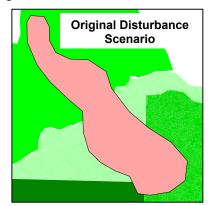
At this point the Hwy40 planning team has agreed on the size, shape, orientation and general location of the area in which disturbance activities will take place over the next 10 years in the Hwy40 study area (shown below on the left). The next step is to translate this generalized disturbance scenario into a more precise natural pattern spatial entity known as the "disturbance event".

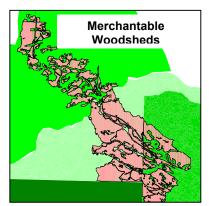
This translation is a function of five considerations:

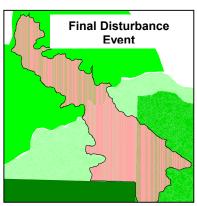
- 1) No disturbance planning within the Hwy40 part of the Willmore Wilderness Area.
- 2) 10-year harvest levels are pre-determined for all forest management companies involved.
- 3) Harvesting and transporting trees is more efficient it is when done in "woodsheds".
- 4) Non-merchantable and inaccessible areas will all be left as harvest residuals although some of these areas may be burnt through prescriptions.
- 5) Some merchantable forest areas within the event will be left as harvest residuals although some of these areas may be burnt through prescriptions.

Recall from Update #11 that we allowed for a total of 39% residual area when calculating the total area of the disturbance - representing the historical average for wildfires. Furthermore, the companies agreed to leave about 20% of the merchantable forest area in residuals. Using these numbers as guides, we identified merchantable and logically efficient woodsheds in and near the original disturbance scenario to meet the allowable cut requirements of each higher-level plan.

Although we will be doing some prescribed burning in some of the residual areas, the "merchantable woodsheds" image below is the equivalent of the "disturbed patches" of wildfires. And using the disturbance event-defining rules developed and used by the FMF Natural Disturbance Program (see the FMF ND Interpretation Note #1), the event outline for the Hwy40 disturbance plan generated from those disturbed patches is shown in the image below on the right.







The final disturbance event that the Hwy40 planning team agreed to develop is 8,129 ha, of which 2,416 ha is potentially non-merchantable residual, and 1,143 ha is potentially merchantable residual. The total undisturbed area of 3,559, or 44%, seemingly exceeds our original residual target of 39%. However, keep in mind that 1) about 6% of the area already exists as long-term disturbances such as roads and well sites, and 2) prescribed burning will disturb some of these residual areas.

For more information on the Hwy40 North Demonstration project, please contact: Dr. David Andison, Bandaloop Landscape Ecosystem Services, Tel.: (604) 225 – 5669, Email: andison@bandaloop.ca, or visit www.fmf.ab.ca