



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

Issue #17 November 2007

By: David W. Andison

Will It Happen on the Ground?

It is likely that *something* will happen on the ground in the Hwy40 study area over the next few years. Whether it is exactly as the Hwy40 planning team designed remains to be seen.

The unforeseen rapid advance of Mountain Pine Beetle (MPB) into the Hwy40 study area over the last two years has added a new and significant planning ingredient. Recall that the Hwy40 study area is part of one of the largest contiguous areas of old pine-dominated forest in the Alberta foothills. It now represents an extreme risk in terms of hosting a major MPB population. To make things even more challenging, this particular outbreak is far from over.

Given the high risk that MPB represents in Alberta to a number of forest-related values, a commitment by any of our partners to install the Hwy40 plan as designed would be unwise. The various land management agencies involved will be making operational planning decisions in the Hwy40 study area as time, resources, and new information permits. But, when they do, the work of the Hwy40 planning team will be invaluable.

Locally, the Hwy40 project has created a robust design on which to build solutions in response to MPB. Through our process, the orientation, size, shape and structure of the Hwy40 event are already designed to minimize the eastern movement of wildfire and MPB. In fact, if anything, the increased risk of MPB today would arguably increase the need to integrate prescribed fire with harvesting, which would make the plan even *more* natural. Adapting the plan to accommodate new strategic choices (such as being more aggressive with respect to dealing with MPB risk or salvaging) only requires changing the size of the existing event. In other words, although not the (only) original goal, we have already created a potential design solution for dealing with the MPB threat locally. Nor is this a coincidence, but rather a direct result of the Hwy40 process.

Provincially, regardless of whether the current MPB infestation collapses or continues to spread, the situation has clearly demonstrated the strategic value of large, well-placed, and *well-designed* disturbances. Over the past 20-30 years, these have been extremely rare. Although easy to say in hindsight, if we had been paying more attention to how Mother Nature had been managing (BC interior and) foothills landscapes in the past, we might not have a MPB problem now.

If anything, the need for well-designed disturbances across a range of event sizes is even more important today. Consider that the MPB 'problem' has focused our attention on three main issues; 1) threat mitigation, 2) salvaging, and 3) post-beetle landscape health (including the potential increased risk of wildfire) – all of which require cross-jurisdictional planning. We could respond to these needs by developing and adopting "best-practices" strategies to deal with each issue as local needs demand. However, we now know that a natural disturbance planning foundation (which advocates variable-sized, well-designed events) is far more likely to address *all* of these needs, and without creating any unanticipated negative consequences. In fact, we have already accomplished this once with a multi-disciplinary team on a landscape within prime MPB territory.

The Hwy40 Demo Project was meant to demonstrate how a natural pattern foundation could create viable solutions for complex planning problems, and we succeeded. The fact that the planning problem has now become even more complex only makes our results that much more relevant. In other words, this may be the ideal time to be looking to Mother Nature for guidance.

In the end, it is not necessary for the Hwy40 disturbance plan to be installed as envisioned for us to benefit from it. The threat of MPB changes nothing other than some of the details.

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