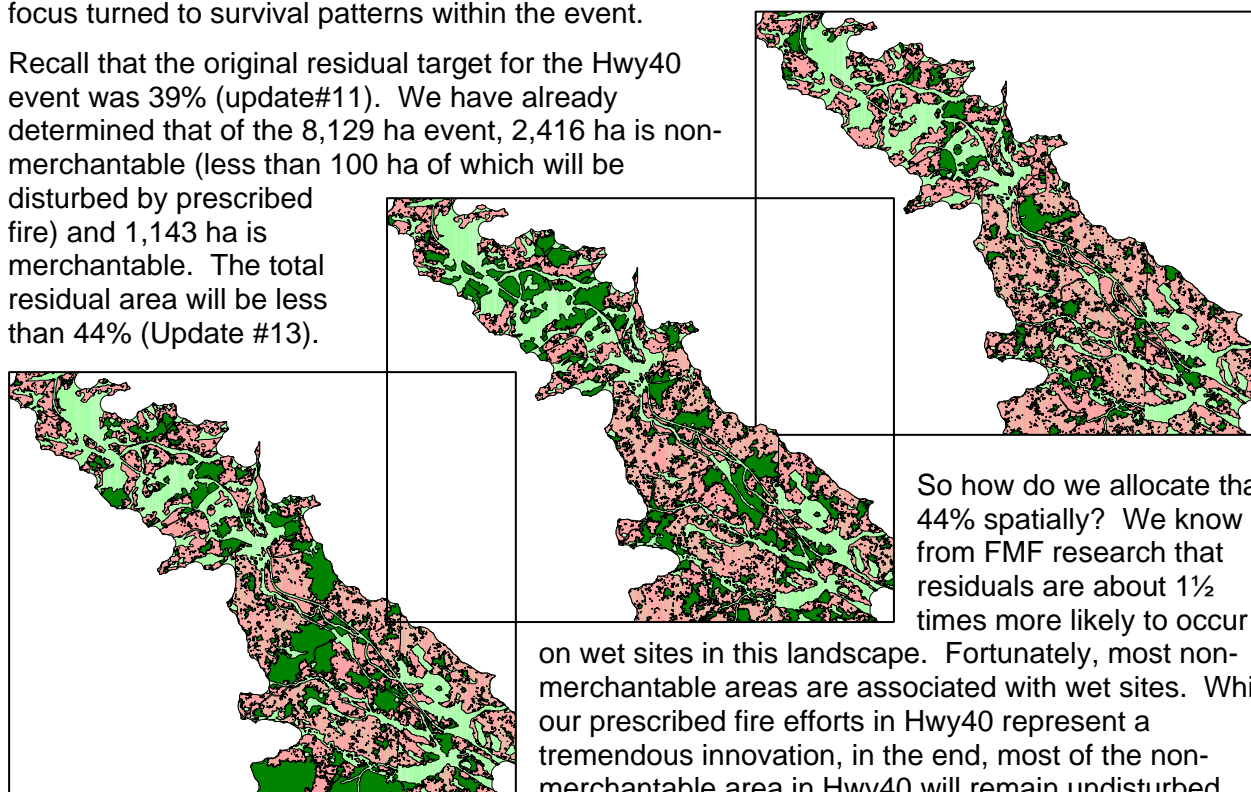


## Question #6: What Survives Within Disturbance Events?

So far, the Hwy40 planning team has agreed on the area, size, and location of the disturbance event, in each case starting with the question “*What would Mother Nature do?*”. At this point our focus turned to survival patterns within the event.

Recall that the original residual target for the Hwy40 event was 39% (update#11). We have already determined that of the 8,129 ha event, 2,416 ha is non-merchantable (less than 100 ha of which will be disturbed by prescribed fire) and 1,143 ha is merchantable. The total residual area will be less than 44% (Update #13).



Within the merchantable forest area of the Hwy40 study area, FMF research suggests that residual location is no more or less likely to occur in one area or forest type than another. In other words, within the operable landbase of the Hwy40 area, residual location is a coin toss historically.

In terms of size, FMF research suggests that there is a very specific size class distribution of residuals. In general, most residuals are very small, but there are a few very large ones.

To help us start visualizing how these complex interactions might manifest themselves, we used the spatial computer model LANDMINE to develop a number of possible residual patterns for the Hwy40 disturbance event area. Three such scenarios are shown here (the non-merchantable deterministic areas in light green, and the merchantable residuals in dark green). The planners used these scenarios, plus the research results, to start designing residual patterns.

In the end, the freedom of choice proved to be a double-edged sword. On one hand, the lack of hard rules made both planners and regulators uncomfortable. On the other hand, the capacity to use residual design – *within the bounds of the historical range* – to address local needs of original planning objectives was tremendous. For example, it is not difficult to see how a thoughtful residual design could allow for multiple woodland caribou travel corridors, minimize new roads, optimize harvesting costs, mitigate concerns over riparian issues, and maximize aesthetic appeal.

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