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# ***Interactive comment on “Simulated impacts of mountain pine beetle and wildfire disturbances on forest vegetation composition and carbon stocks in the Southern Rocky Mountains” by M. K. Caldwell et al.***

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This is a well-written and well-organized paper. The issue of time until recovery of lodgepole pine forests in the Rocky Mountains, heavily affected by both wildfires and mountain pine beetle (MBP) outbreaks, is timely and highly relevant. The literature review is well done for the most part. The FVS parameterizations are well justified with relevant ancillary information from the MTBS and FIA programs.

Regeneration seems to be one of the largest sources of uncertainty in these simula-

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tions, if not the largest. I would think that this uncertainty increases over time, with time since disturbance. Because the plots were established following a random stratified design, it seems safe to assume the full range of conditions that would affect regeneration are represented, in as unbiased a manner as is possible with this many field plots. It is helpful to see a statement to this effect in the Discussion (top of P12944), but the authors might remind the readers of the sampling design.

The blow down events referred to at the top of P12946 could be cited, and have occurred within this study area. See Buma and Rumbaitis del-Rio pubs.

The authors conclude by mentioning all the factors that were not considered in these simulations. Yet the biggest one of all, climate change, is not even mentioned. This is the biggest shortcoming of the paper. Did the authors consider projecting these disturbance scenarios under anticipated climate change scenarios, using Climate-FVS? Why did they not use it? I'm not saying that they need to explicitly consider climate change, or use Climate-FVS, but it certainly deserves mention. See the recent Crookston et al. pub in Forest Ecology and Management.

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Interactive comment on Biogeosciences Discuss., 10, 12919, 2013.

**BGD**

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