

Response to Schneider *et al.* 2007. “Scenarios are Plausible Stories about the Future, not Forecasts”

## Plausible Stories or Tall Tales?

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Schneider *et al.* (2003) makes repeated “predictions” such as “structural change to the forest predicted by our model.” They also state, “in our model, the availability of caribou habitat decreased from 43% of the study area to 6% as a consequence of industrial development,” a specific forecast of effect. Schneider *et al.*’s (2007) statement that the “scenarios were not intended to be forecasts or predictions” is contrary to the available evidence.

The justification provided in Schneider *et al.* (2007) for “100 m as a reasonable cutoff for meaningful ecological impacts” is referenced to “the consensus estimate of 20 caribou biologists.” This is an elaboration of the justification provided in Schneider *et al.* (2003) of “the consensus estimate of 20 biologists with caribou experience... determined through a workshop process.” In both cases, no personal communications or workshop notes or proceedings are referenced to support the assumption. This unsubstantiated assumption is contrary to the available literature regarding this issue, as discussed in Harron (2007).

Schneider *et al.* (2007) further contend that “the projected impacts correlate well with the 50% decline in the local caribou population observed over the past decade.” This statement is supported by “Alberta Woodland Recovery Team (2006), unpublished data,” but no subsequent reference is provided. The *Alberta woodland caribou recovery plan 2004/05–2013/14*, released by the Alberta Woodland Caribou Recovery Team (2005), is available and would have provided an available reference, except that this document does not support the Schneider *et al.* (2007) claim of a “50% decline in the local caribou population.” The Alberta Woodland Caribou Recovery Team (2005) confirms the earlier estimated trends in the local

woodland caribou population calculated by McLoughlin *et al.* (2003) that two of the four groups in the area have stable or nearly stable populations, whereas the other two groups, for which there is information, have projected declines of about 3% per year. Based on the stated trends, a projected 10-yr decline of approximately 10–20% could be anticipated for the local woodland caribou. This is substantially lower than the “50% decline” suggested by Schneider *et al.* (2007). The model results are therefore not supported by the calculated local population trends, and given that potentially half of the woodland caribou populations in the area have nearly stable populations, it is clear that the model results are potentially refuted by this information.

Schneider *et al.*’s (2007) statement that the model “conclusion holds true regardless of the size of the area used to buffer these linear features” can be tested using a simple scenario. A hypothetical area, e.g., 11 km<sup>2</sup>, of woodland caribou habitat is intersected by 10 parallel seismic lines located 1 km apart. Schneider *et al.*’s (2007) contention that the “avoidance effect is... 250 m” would result in a loss of 50% of the habitat in the area. Using the results of Dyer (1999), i.e., 40% effective loss up to 100 m and 4% effective loss between 100 and 250 m, the effective loss of habitat would be about 9%. If the number of seismic lines is doubled to 20 parallel seismic lines, the former predicts 100% effective habitat loss, whereas the latter projects effective habitat loss to increase from approximately 9 to 18%.

The size of the buffer therefore has a substantive influence on the model’s conclusions. The use of model assumptions that are speculative, unsubstantiated, or inconsistent with the available literature does not

satisfy the basic scientific principles of transparency and reproducibility and does not serve the needs for responsible woodland caribou management.

Responses to this article can be read online at:  
<http://www.ecologyandsociety.org/vol12/iss2/resp1/responses/>

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