Postcards from the Edge: A Snapshot of the Effect of Oil and Gas Development on Large Mammals in Alberta's Forests

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Energy development is the primary policy directive in Alberta, and as a result, oil and gas impacts a variety of wildlife species. We provide a brief scientific review of the effects of oil and gas development on large mammal species in forest ecosystems in Alberta. Oil and gas development can impact wildlife directly, for example through increased mortality or direct habitat loss, or indirect, mediated by changes in other species such as predators. Woodland caribou in Alberta are declining and three populations are at risk of immediate extirpation. Caribou suffer from direct loss of old growth forest from pipeline, road, seismic line and well site clearings, direct disturbance from seismic blasting, and increased poaching and highway

mortality because of increased access. Caribou also suffer indirect effects such as increased predator efficiency by wolves, which may increase predation rates. Grizzly bears suffer less from direct habitat loss, and can actually be attracted to increased forage production in disturbed areas. However, grizzly bears suffer the most from human caused mortality associated with increased human access. Elk are similar to grizzly bears, except they suffer the indirect effect of increased wolf efficiency with increasing development. Some species, such as white-tailed deer and coyotes, indicators of disturbed habitats, show signs of benefiting from oil and gas development, further altering ecosystem dynamics. Mitigation strategies for reducing negative effects of oil and gas are presented. However, a case study of the failure of the policy process in Alberta to mitigate these effects for caribou is presented, and recommendations for Montana were discussed.