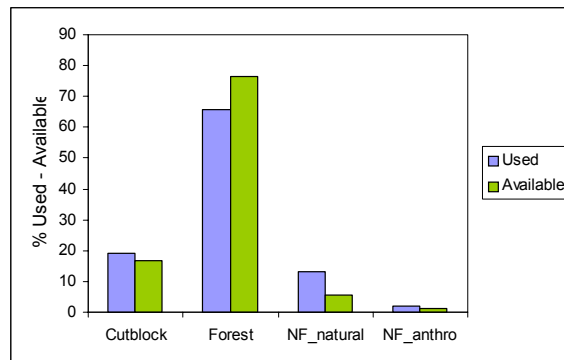


## How do wolves use forest cutblocks in west central Alberta and does this affect predation risk to caribou?

Wolf predation is thought to be the proximate cause for the decline of threatened woodland caribou populations in Alberta. Caribou habitat in west central Alberta is being rapidly developed by resource extraction industries. The resulting landscape changes may alter the movements and distribution of caribou through clearcut logging which eliminates caribou food (lichens) for decades and the development of linear corridors (roads, pipelines, power lines), which caribou tend to avoid. Conversely, alternate prey species for wolves (moose, elk and deer) may increase as a result of these same landscape changes resulting in a corresponding increase in wolf populations, which in turn increase predation risk for caribou. Finally, the travel rates and hunting efficiency of wolves may be enhanced if industrial/recreational activity results in this new access becoming cleared or packed in winter.

Again, predation risk for caribou increases as wolves gain more complete and quicker access into formerly remote areas where snow depth restricted travel for wolves. Information on the response of wolves to forestry activities has received little study to date, potentially hampering long-term planning for caribou conservation.



Nine wolves, from five wolf packs (N fixes = 1604 over 2 winters), were fitted with Global Positioning System (GPS) radio-collars on two caribou ranges in the Rocky Mountain foothills, near Grande Cache, Alberta (2000-2001). This study found that wolves did not use the landscape randomly, and had a significant preference for non-forested natural habitats (shrubs, water) over forested habitats. In addition, forest cutblocks were used proportionately more than both forest and non-forested anthropogenic habitats (pipelines, clearings).

How wolves use cutblock edges is important when deciding how large forest cutblocks should be on caribou ranges. This study also found no evidence that wolves either preferred or avoided forest cutblock edges, although the sample size was small.

Because wolves used forest cutblocks proportionately more than they were available, researchers with this project suggest that forest harvesting should be localized rather than extensive in relation to important caribou habitats to reduce potential predation risk to caribou from wolves.

Further research to simultaneously examine the movements and distribution of wolves and caribou is proposed as a means of determining those landscape changes that significantly increase predation risk; an important land management consideration for woodland caribou conservation.