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## **RESEARCH INTO WILDLIFE/VEHICLE COLLISIONS IN JASPER NATIONAL PARK**

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### **Abstract**

Wildlife collisions with vehicles and trains are examined in Jasper National Park, Alberta. The database used in this research is one of the largest and most complete wildlife/collision databases in North America. Over 4,000 wildlife collisions from 1951 to 2002 have been documented. The main species examined are elk, bighorn sheep, mule deer, moose, white-tailed deer, coyotes, wolves, black bear and grizzly bear. This level and detail of information is critical in designing mitigation solutions to reduce wildlife collisions.

There are a variety of variables that influence collision rates ranging from age class, sex, type of wildlife, vehicle volumes, vehicle type, season, time of day and transportation category. From 1980 to 1999, collisions with wildlife averaged 149 large animals per year. For some species these collision rates are both statistically and biologically significant. In addition, collisions on highways and the railway affect both local and regional wildlife populations. Using collision data as indicators of wildlife composition adjacent to transportation corridors shows changes have occurred in the wildlife composition adjacent to transportation corridors.

Additional research includes an updated assessment of the effect of reduced speed zones in reducing wildlife collisions and an assessment of Strieter Lite Reflectors. Reduced speed zones reduced the rate of collisions with elk and other wildlife but had a negligible affect on reducing bighorn sheep collisions. An analysis of Strieter Lite Reflectors is in preparation. A description of mitigation measures that have been used in Jasper National Park is also provided including suggestions on improved mitigation.