



LIMITING WILDLIFE MORTALITIES ON HIGHWAY 10 IN THE INTEREST OF *PUBLIC SAFETY AND ECOLOGICAL INTEGRITY*

Wildlife mortalities due to vehicular traffic, commonly known as road kill, have been an issue since the day cars first appeared. In the name of public safety and ecological integrity, Parks Canada employees in Riding Mountain National Park (RMNP) and elsewhere have been working for years at reducing wildlife mortality rates. Practices such as limiting amounts of road salt and installing effective signage in key areas have proved somewhat successful.

PUBLIC SAFETY

Public safety is an inherent concern for Parks Canada. Parks Canada's national public safety program aims to reduce incidents and minimize their severity through prevention and appropriate response. The cornerstone of prevention is effective communication with the public and raising risk awareness.

In RMNP, one of the main public safety concerns is wildlife such as moose, elk, white-tailed deer, coyotes and others crossing Highway 10, the main highway through the park. The national park is teeming with all sorts of animals, and colliding with some of the larger ones can be fatal. Drivers need to use extra caution when driving on the section of Highway 10 through RMNP. While collisions with wildlife still occur, preventative measures taken since the late 1990's have significantly reduced the amount of incidents.

The section of Highway 10 through Riding Mountain national Park was designed as a parkway for leisurely driving, including curves and rest stops a reduced speed. Since then vehicle design and lifestyles have changed. Increased traffic, faster cars, faster pace, and longer commutes are the norm. Hwy 10 is also a major north-south throughway.

In 1996, when taking a second look at the problem of wildlife road collisions, park wardens proposed the following measures to reduce collisions. First, they proposed greatly reducing the amount of road salt that was used on the highway. **Ungulates** are attracted to salt and experiments elsewhere had shown that substituting salt with sand could reduce accidents while maintaining a high standard of safety. Second, utilizing **GPS and GIS technology**, wardens were also able to determine where most of the collisions occurred. These areas with higher densities of collisions were presumably hotspots where the highway intersects with **wildlife corridors**. Wardens proposed installing new warning signs in these areas, encouraging drivers to use extra caution. Lastly, park employees proposed running an on-going information campaign publicizing the risk of collision.



All of these preventative measures were applied and the results have been very positive. Although they still occur, especially in winter months when small amounts of road salt still need to be applied, the frequency of collisions has been greatly reduced.

ECOLOGICAL INTEGRITY

The idea of reducing wildlife mortalities along Highway 10 was not solely a public safety concern for Parks Canada. It was also a question of maintaining ecological integrity, which can be defined as an ecosystem's *native state of being*, with indigenous components (plants, animals and other organisms) and processes (such as growth and reproduction) intact.

Each of Canada's national parks has a unique ecological integrity, and RMNP's definitely includes the circulation of wildlife across Highway 10, a man-made obstruction added to the landscape in the early 1930's. Finding ways to allow the safe crossing of animals across busy roads such as Highway 10 is however only one example of measures taken across the country to preserve the integrity of natural areas.

In the past, the prevalent attitude was simply to designate natural spaces such as parks, and hope that ecological processes would self-manage. The reality is quite different; national parks are much more sensitive than previously thought. They can be subject to stresses originating both inside and outside, and unless action is taken, deterioration across the whole park system may continue. Somewhat paradoxically, national parks must be gently managed by people in order to be protected.