

THE BOZEMAN PASS WILDLIFE LINKAGE AND HUMAN SAFETY STUDY™

Lance Craighead and April Craighead
Craighead Environmental Research Institute, Bozeman, MT 59715

Elizabeth Roberts
American Wildlands, Bozeman, MT 59715

Highways and railways are sources of road mortality that threaten wildlife populations through direct mortality, habitat loss, and habitat fragmentation. High volumes of traffic along transportation corridors can block, deflect, or delay daily, seasonal, and lifetime movements. Animal-vehicle collisions also threaten human safety. The transportation corridor along I-90 over Bozeman Pass contains an interstate highway, frontage road and railroad and is likely one of the major barriers for animal movement in the region. At this point, there is strong evidence that the highway acts as a barrier to normal animal movements. The Craighead Environmental Research Institute (CERI), based in Bozeman, has completed the first year of a study to further determine the current extent of this problem and where it can best be mitigated. A total of 127 medium-to-large sized animal road-kills were recorded in 2001 along I-90 over Bozeman Pass. The greatest number of road-kills occurred between milepost 313 and 314 near the Bear Canyon exit and the MRL overpass. Two probable areas of wildlife 'connectivity habitat' were mapped on Bozeman Pass in collaboration with American Wildlands' GIS lab using habitat characteristics and least-cost-path analysis, which correspond closely with the locations of road-kills. In 2002 the study will collaborate with the Western Transportation Institute and Montana Department of Transportation in the design and possible installation of highway fences, cattle guards, and vehicle barriers to improve human safety and wildlife connectivity across the highway.