Forty-Five Years of Grizzly Bear Mortality in the Northern Continental Divide Ecosystem

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Within the last 10 years, the grizzly bear (*Ursus arctos*) population in the Northern Continental Divide Ecosystem (NCDE) has increased in size and doubled its range. Understanding the changes in mortalities is important to guide management of the population. Montana Department of Fish, Wildlife and Parks has maintained a record of documented grizzly bear mortalities since 1971. During this time there were a total of 650 human-caused, independent-aged (≥2 years old) bear mortalities recorded. We reviewed the last 45 years of human-caused grizzly bear mortalities in the NCDE, to determine any changes in mortality demographics, mortality causes, and spatial distribution. During 1975–1992, a quota of 25 human-caused mortalities was in effect and a slight temporal decline in total mortality was observed. Since 1992, the trend in total mortalities has been increasing at approximately 3%/year. Agency removals comprised 24% of human-caused mortalities. Previously, removals were largely associated with anthropogenic foods, but livestock depredations have been the primary cause for removals during the last two decades. Among public-caused mortalities (76%), legal hunting (during 1971–1991) and poaching/malicious kill have been the most dominant causes of death. Defense of life kills and automobile and train collision deaths have increased over time. During the last decade, there was an increase in the number of females with young present that were killed by the public. Whereas most mortalities occurred inside the Recovery Zone during the 1970s and 1980s, >50% now occur outside of it. Wildlife managers can use this information for developing strategies for managing grizzly bear mortality and improving bear-human coexistence.