

BIGHORN SHEEP POPULATION DYNAMICS ON THE BEARTOOTH WILDLIFE MANAGEMENT AREA, MONTANA

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Abstract: The dilemma of bighorn sheep dieoffs has plagued wildlife biologists and managers for decades. Many states have established augmentation programs in an effort to counteract such dieoffs and maintain viable sheep populations. I studied the population dynamics of a reintroduced bighorn sheep herd on the Beartooth Wildlife Management Area (BWMA) in west-central Montana. After a decade rapid growth, this herd experienced a major disease-mediated dieoff in 1984 and has subsequently been unable to recover to pre-dieoff densities. Primary study objectives included evaluation of sheep reproduction and mortality, habitat use, and disease. Particular emphasis was placed on determining the role of predation in sheep population dynamics. Additionally, transplanted individuals were monitored to evaluate the effectiveness of two augmentation projects (N=39 sheep). Results from this study will provide insight into the post-dieoff population dynamics of small sheep herds and improve our understanding of augmentations and the degree to which they actually assist in population recovery.

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