

HABITUATION, HUNTING, AND RECREATION: UNDERSTANDING HUMAN INFLUENCES ON ELK BEHAVIOR ON THE WILDLAND-URBAN INTERFACE

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Elk (*Cervus elaphus*) are increasing in many areas throughout the west, especially in the wildland-urban interface (WUI). Wildlife managers are unable to use traditional public hunting to manage these elk given the resistance WUI homeowners to hunting near their homes. As an example of this problem, the intrinsic growth rate of the North Hills Elk Herd in Missoula has been ~11 percent since the early 1980s, and the herd now numbers over 300 animals. North Hills' landownership is a complex matrix of public and private lands that range from partial to complete exclusion of hunting; thus, elk harvest is low and provides little population-level regulatory ability. Little research has been done assessing either the effects of hunting on elk distribution or the specific effects that hunting has on elk and human avoidance in the WUI. We used resource selection functions (RSF) based on GPS-collared adult female elk during the fall 2007 hunting season to test the effects of hunting on elk resource selection and avoidance behaviors in the WUI. Preliminary RSF results suggest that elk avoided areas of human use only during hunting season. Building on this work, a series of approach trails will be implemented to determine the degree of avoidance of humans by elk for hunted and non-hunted populations. This knowledge will allow managers to better understand the degree of hunting necessary to reduce elk habituation while providing needed information on the efficacy of current hunting seasons for managing WUI elk populations.