

**Public Abstract**

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**Title:RESOURCE SELECTION BY BLACK-FOOTED FERRETS IN RELATION TO THE SPATIAL DISTRIBUTION OF PRAIRIE DOGS**

Once extinct in the wild, the black-footed ferret (*Mustela nigripes*) is one of the rarest mammals in North America. Reintroductions of ferrets at 13 sites over 10 years have resulted in only 3 self-sustaining populations. Such results draw into question our current knowledge of ferret habitat requirements and how managers select and manage reintroduction sites. In 2005 and 2006, I monitored ferret resource use at one successful (Conata Basin, SD) and one un-successful (UL Bend, MT) reintroduction site. Space use by predators is known to be influenced by the spatial distribution of prey, and I found that prairie dog burrow distribution strongly influenced ferret resource selection. In addition, territoriality and home range size of ferrets were correlated with prairie dog distribution. Assessing the suitability of prairie dog colonies as ferret reintroduction sites likely requires spatially explicit, fine-scale measurement of prairie dog distribution. Further, managers should focus on preserving and enhancing large contiguous areas or patches of high prairie dog density as a key requirement for successful establishment and maintenance of ferret populations.