

## Project Summary

### Rocky Mountains Cooperative Ecosystem Studies Unit

<b>Project Title:</b> Evaluating Wildlife Responses to Motorized Winter Use in Yellowstone National Park, 1998-2004
<b>Type of Project:</b> Technical Assistance
<b>Funding Agency:</b> National Park Service
<b>Other Partners/Cooperators:</b> Montana State University
<b>Effective Dates:</b> May 1, 2004 - September 30, 2005
<b>Funding Amount:</b> \$20,000
<p><b>Investigators and Agency Representative:</b>  NPS KEY OFFICIAL: P.J. White, Yellowstone Center for Resources, POB 168, Yellowstone NP, Wyoming, 82190, (307) 344-2442, <a href="mailto:PJ_White@nps.gov">PJ_White@nps.gov</a></p> <p><b>PRINCIPAL INVESTIGATOR:</b> John Borkowski, Wilson 2-263, Montana State University, Bozeman, MT 59717, (406) 994-4606, <a href="mailto:umsfjbor@math.montana.edu">umsfjbor@math.montana.edu</a></p>
<p><b>Project Abstract:</b> The purpose of this agreement is to gain needed sampling design and statistical expertise through collaboration with Dr. John Borkowski, a statistician at Montana State University. Under a previous task agreement Dr. Borkowski developed models to evaluate if variables related to motorized winter use were associated with changes in behavior of bison, elk, and trumpeter swans during winter 2003. He also integrated data sets collected by biologists from Montana State University, West District Resource Management Office, and Yellowstone Center for Resources during 1998 to 2003. Under this task agreement, Dr. Borkowski will use similar analytical models to: 1) analyze and interpret data collected during winter 2004 regarding the effects of motorized winter use on wildlife; 2) evaluate and compare the effects of motorized winter use on wildlife among years using the integrated data set (1998-2004); and 3) evaluate bison distribution and road use using the integrated data set.</p>
<p><b>Outcomes with completion dates:</b></p> <ol style="list-style-type: none"> <li>1. June 1, 2004 - preliminary report on analyses and interpretation of data collected during winter 2004 regarding the effects of motorized winter use on wildlife.</li> <li>2. August 30, 2004 - final report on analyses and interpretation of data collected during winter 2004 regarding the effects of motorized winter use on wildlife, including recommendations for improving the sampling design and copies of digital databases and analyses created during this project.</li> <li>3. September 1, 2004 - preliminary report on analyses and comparisons of the effects of motorized winter use on wildlife among years from the integrated data set (1998-2004).</li> <li>4. September 30, 2004 - report with recommendations and ideas for the development of a rigorous monitoring plan for winter use (wildlife) during 2005.</li> <li>5. November 30, 2004 - final report on analyses and comparisons of the effects of motorized winter use on wildlife among years from the integrated data set (1998-2004), including copies of digital databases and analyses created during this project.</li> <li>6. December 1, 2004 - preliminary report on analyses and interpretation of bison distribution and road use data collected by the National Park Service during 1998-2004.</li> <li>7. March 30, 2005 - Final report on analyses and interpretation of data collected by the National Park Service during 1998-2004 regarding bison distribution and road use, including copies of digital databases and analyses created during this project.</li> </ol>
<p><b>Keywords:</b> wildlife, bison, winter use, response to motorized vehicles, analytical models, Yellowstone National Park, Montana State University, statistics</p>
<p><b><u>For Administrative use only:</u></b>  Date Annual Report Received:  Date Final Report Received:  Publications, etc. on file:</p>