Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Bison demography in relation to groomed roads during winter

Type of Project: Technical Assistance

Funding Agency: National Park Service

Other Partners/Cooperators: Montana State University

Effective Dates: April 1, 2004 – September 30, 2007

Funding Amount: $49,000

Investigators and Agency Representative:

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Project Abstract:

The purpose of this project is to gain expertise and services that improve our understanding of the issue of bison demography, winter movements, and distribution patterns with respect to the groomed road system at Yellowstone National Park. The work would initially involve inventorying, coalescing, and integrating existing data sets from the Yellowstone Center for Resources (winter use wildlife monitoring), Resource Management & Visitor Protection (bison road use and winter wildlife monitoring), Montana State University (miscellaneous data sets), and other sources.

Outcomes with completion dates:

1. June 1, 2004 – Project plan reviewed and approved by Montana State University and the Yellowstone Center for Resources. The project plan should identify other collaborative efforts (e.g., investigators, schedule, products) between Montana State University and Yellowstone National Park that will address specific questions regarding the influence of road grooming on bison in Yellowstone National Park using databases and findings from this project.
2. September 30, 2004 – Report on aggregation of existing data sets for demography and winter use, including integrated databases of similar information regarding population estimates, seasonal distribution patterns, spatial and temporal variation in activity budgets, and information on bison use of the road system in Yellowstone National Park that can be used to conduct rigorous analyses of the spatio-temporal patterns and drivers of bison population growth, movements, and use of the groomed road system in Yellowstone National Park.
3. September 30, 2004 – Report on assessment of data quality, description of the data integration efforts and the integrated databases of similar information, and discussion of suitable analytical protocols for the integrated databases. This report should address the adequacy of data that has been collected to date with respect to elucidating the interactions between road grooming activities and bison abundance, vital rates, movements, and distribution.
4. September 30, 2004 – Report that identifies data gaps and critical needs, and provides recommendations for future research and monitoring regarding bison winter movements, distribution patterns, and other environmental factors potentially influencing their use of the groomed road system in Yellowstone National Park. These recommendations should address management questions focused on resolving effects to bison from road grooming during winter.
5. September 30, 2005 – Final report on demography (thesis and publications), including copies of digital databases and analyses created during this project. This report should also include analyses of population estimates and vital rates that provide insights into the interactions between road grooming activities and bison abundance, vital rates, movements, and distribution.
6. September 30, 2005 – Report on recommended long-term population monitoring program (thesis/manual).

Keywords: bison, winter use, roads, Yellowstone National Park, Montana State University

For Administrative use only:

Date Annual Report Received:

Date Final Report Received:

Publications, etc. on file: