

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Evaluating variability, patterns and presentation of acoustic data collected during the winter use season in Yellowstone National Park

Discipline: Natural

Type of Project: Technical Assistance

Funding Agency: National Park Service

Other Partners/Cooperators: Montana State University

Effective Dates: 8/1/2005 - 7/1/2007

Funding Amount: \$11,750.00

Investigators and Agency Representative:

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Project Abstract:

The collection, analysis, and interpretation of reliable information is essential for evaluating the effectiveness of management actions designed to minimize potential adverse effects of winter human use on the natural soundscape (both sound level and audibility) in Yellowstone National Park. The purpose of this contract is to gain statistical expertise through collaboration with Dr. John Borkowski, a statistician at Montana State University. Dr. Borkowski will use statistical techniques to: 1) analyze and assess variability within and among sampling locations of sound level data collected to determine the effects of motorized winter recreation on the natural soundscape; 2) evaluate if the current sampling effort is necessary and sufficient to adequately measure the soundscape in relationship to oversnow vehicle impacts; and 3) recommend appropriate new strategies for collecting, reporting and displaying sound level data.

Outcomes with Completion Dates:

1. October 15, 2005 - draft report on analyses and interpretation of data variability as described in item 1 of the Scope of Work. The report will include detailed explanation of methods and supporting information that explicitly describes statistical techniques used and the rationale for their specific use.
2. January 1, 2006 - draft report on sampling effort as described in item 2 of the Scope of Work. The report will include detailed explanations of methods and techniques used in support of conclusions. The report will also provide a detailed assessment of the strengths and short-comings of the current NPS sampling protocol (effort).
3. March 1, 2006 - draft report on recommended new strategies for collecting, reporting and displaying soundscape data as described in item 3 in the Scope of Work. The report will include a detailed explanation of methods and techniques considered but rejected, as well as those recommended.
4. June 1, 2006 - final reports of the three draft reports above, including copies of digital databases and analyses created during this project.

Keywords: soundscape, motorized winter recreation, Yellowstone National Park, Montana State University

For Administrative Use Only:

Date Annual Report Received:

Date Final Report Received:

Publications, etc. on file: