

Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Effects of pathway activities on behavior and distribution of Rocky Mountain elk and pronghorn antelope in Grand Teton National Park

Discipline: Natural Resources
Type of Project: Research
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Effective Dates: September 15, 2009 - December 1, 2011
Funding Amount: \$48,608 [FY10: \$8,608; FY09: \$40,000] (also \$79,211 in FY08)

Investigators and Agency Representative:

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Project Abstract: The goals of this research study are to quantify and characterize interactions between ungulates and people using multi-use pathways in the primary transportation corridors of GTNP. Objectives of this effort include quantifying spatial, temporal and behavioral responses of ungulates to pathway activities, evaluating effects of potential ungulate responses to pathway activities on habitat effectiveness and wildlife viewing opportunities from park roads, and assessing visitor use of and behavior on the pathway system in order to provide suggestions for managing activities on pathways that ameliorate potential impacts on ungulates. Specifically, this research will address the following questions:

1. Do path activities alter daily and seasonal behavioral patterns of ungulates?
2. Do path activities displace ungulates from the view shed and habitats observable from the road and pathway corridor?
3. What types of behaviors by path users facilitate ungulate tolerance of activities on pathways?
4. Is it possible to influence or manage how visitors behave on pathways in order to reduce potential impacts to ungulates and wildlife viewing opportunities?

This research will provide park managers with insights regarding ungulate responses to path activities and offer adaptive management approaches to reduce potential negative impacts of path activities. Additionally, efforts will be made to develop methods to address these questions that also serve as long-term monitoring measures to evaluate different adaptive management approaches beyond the duration of this study.

Outcomes with Completion Dates:

March 31, 2008 - 2010: Annual work plan detailing field protocols, logistics, personnel and schedules.

January 31, 2008 - 2011: Annual progress report covering analyses and interpretation of data collected the previous summer regarding the effects of pathways on the behavior and distribution of ungulates. The report will include detailed explanation of the methods and supporting information that explicitly defines and describes the analysis process, explains and interprets analysis outputs.

June 1, 2011 - Digital databases and analyses related to this research. If data are needed prior to this deadline, NPS personnel may request them from the cooperator.

June 1, 2011 - Final Report on analyses and interpretation of data collected during the 2007 - 2010 field seasons regarding the effects of pathways on the behavior and distribution of ungulates, including recommendations for minimizing potential impacts to ungulates for phase I pathways and as applicable, other construction phases. It should also include recommendations for future research and monitoring needs regarding the effects of pathways in GTNP

Keywords: elk, pronghorn, recreational pathway, Grand Teton NP, Colorado State University