

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Evaluating aspen responses to changes in elk abundance, distribution, and behavior following wolf recolonization in west-central Yellowstone National Park.

Discipline: Natural Resources
Type of Project: Research
Funding Agency: National Park Service
Other Partners/Cooperators: Montana State University
Effective Dates: June 1, 2009 - March 31, 2011
Funding Amount: \$10,600

Investigators and Agency Representative:

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Project Abstract:

This project is strongly linked to previous and ongoing research conducted MSU faculty and NPS-YNP biologists into the dynamics of elk in the Madison/Firehole river valleys. The team has acquired more than 10 years of data and has recently published a book on the subject matter. This project supplements the previously-collected elk density and distribution data with newly-acquired vegetation data to advance theories on trophic interactions.

The final report will be a copy of the MS thesis for inclusion in the YNP Research Library, and will include the geospatial data set developed for aspen within the MHSA. The geospatial dataset, in ARCGIS shapefile or geodatabase format, will include information about size class distribution and associated vegetative community composition. Browse conditions for each aspen stand will be classified by architecture type, and changes in browse regimes, (as evidenced by changes in morphological architecture), will be dated to year. The thesis will be a spatiotemporal analysis of aspen stand characteristics in conjunction with data collected previously and published on the density and distribution of elk data from the Madison Headwaters Study Area. It is anticipated that the outcome of this study will lead to publication of the results in the scientific literature.

Outcomes with Completion Dates:

Due Date for Final Report and/or Other Products: October 30, 2009

Keywords: Aspen, elk wolves, Yellowstone National Park, Montana State University