Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Climate change impacts on key carnivores in the Northern Rockies: the combined effects of climate change, fragmentation, and human activities on grizzly and wolverine populations in the transboundary Flathead and Glacier Park ecosystem, years 2 and 3.

Type of Project: Research
Discipline: Natural Resources
Funding Agency: National Park Service
Other Partners/Cooperators: University of Montana
Effective Dates: 3/15/2010 – 12/31/2012
Funding Amount: $184,000

Investigators and Agency Representative:
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Project Abstract: The University of Montana will analyze existing ecological data for grizzly bears and wolverines in the transboundary Flathead and the Glacier Park ecosystem and to collect new field data to:

1. Develop baseline data on grizzly bear and wolverine distribution, density, seasonal habitat use patterns, movement patterns, and dispersal requirements in relation to human use in areas subject to fragmentation;
2. Assess and project the cumulative impacts of ongoing and expected human activities that can fragment the transboundary Flathead and Glacier Park ecosystem at 3 scales: site-specific, watershed, and regional. These impacts will include mortality risk, habitat use, and movement and dispersal in order to assess effects on ecosystem function, integrity, and connectivity.
3. Assess the expected effects of climate change on foods and habitat use in the area and project expected needs for grizzly bears and wolverines to maintain population connectivity with adjacent habitats and populations as climate change impacts proceed.
4. Develop appropriate management strategies for cores, buffers, and linkages in order to maintain ecosystem structure and function, including operative metapopulations of grizzly bears and wolverines.

Outcomes with Completion Dates:
Annual Report: December 31, 2009; December 31, 2010; December 31, 2011
Final Report: December 31, 2012

Since this project is contingent upon yearly appropriations, each year can be a stand-alone project. If work is discontinued after one or more succeeding years, a final report will follow one year after the fiscal year final funding runs out.

Keywords: carnivores, grizzly bear, wolverine, climate change, fragmentation, human activities, Flathead and Glacier Park ecosystem, Glacier National Park, University of Montana