

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Snowshoe Hare Response to Forest Treatment and Decreasing Snowpack under Climate Change

Discipline: Natural
Type of Project: Research
Funding Agency: Bureau of Land Management
Other Partners/Cooperators: University of Montana
Effective Dates: 9/1/2011 to 9/30/2016
Funding Amount: \$200,000 [FY14: \$50,000; FY13: \$50,000; FY2012: \$50,000; FY2011: \$50,000]

Investigators and Agency Representative:
BLM Contact:

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Project Abstract: Snowshoe hares, the primary prey species of Canada lynx (listed threatened under the Endangered Species Act), are known to respond dramatically to certain changes in forest structure. Although there have been a number of snowshoe hare projects, these projects have not addressed the effects of silvicultural treatments for specific forest types, such as the western larch or quaking aspen. Snowshoe hare response to silvicultural treatments in western larch and quaking aspen will be conducted in this project.

Long-term planning under climate change requires detailed study of high-profile focal species, whose population dynamics can be linked to both local silviculture activities as well as unambiguous climate drivers modeled at ecologically appropriate scales. The project will focus on how seasonal coat color mismatch in snowshoe hares, a priority species with high public attention, may affect population dynamics in the face of decreasing snowpacks under climate change. The project will add new value to existing efforts by using radiotelemetered hares to 1) evaluate the effects of specific thinning treatments on movement, abundance, and survival of hares; b) determine if forest stand structure affects the phenology of seasonal coat color change and degree of mismatch with a snowless background, thereby influencing potential for hares to adapt to a decrease in snowpack. Project results will be used to help with the conservation and recovery of the Canada lynx.

Outcomes:

Keywords: Snowshoe hare, silviculture treatment, climate change, Canada lynx