

Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Understanding the Effects of Land-Use Changes on Wildlife Populations across Ecosystems

Discipline: Natural
Type of Project: Research
Funding Agency: USGS
Other Partners/Cooperators: Colorado State University
Students Involvement: Yes
Effective Dates: 9/15/2015 - 9/14/2020
Funding Amount: \$200,000

Investigators and Agency Representative:

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Project Abstract: Broadly, the objectives of this research are to use spatial and demographic modeling approaches to understand how wildlife populations respond to land-uses changes resulting from energy development, climate change, and grazing (livestock) and browsing (elk), evaluating these effects on the conservation and management of species of conservation concern across ecosystems in Western North America. Specifically, will focus on how these changes affect sage-grouse populations within sagebrush ecosystems, white-tailed ptarmigan within alpine ecosystems, and songbirds within grassland, sagebrush, and alpine ecosystems. Will evaluate population-level responses as well as assess how changes in resources conditions affect resource selection and vital rates across life stages for wildlife species of conservation concern. Ultimately, products from this research will help inform management and conservation of habitats required to support viable wildlife populations within these key ecosystems

Keywords: Sage grouse, white-tailed ptarmigan, songbirds, population trends, reactions to habitat modification, climate change, USGS, Colorado State University