Managing Idaho's Landscapes for **Ecosystem Services: Recreation and** Wildlife on Public Lands

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Biological Sciences, Anthropology, and Human-Environmental Sciences



Why



Urban populations have significant effects on surrounding natural systems through outdoor recreation. Increased human visitation to natural areas affects biological communities that, in turn, affect the value of the lands for recreation and other ecosystem services.



What

How are wildlife affected by recreation?

- How does motorized and non-motorized recreation affect golden eagles? (Spaul poster)
- TRAILS: a simulation model to forecasts effects of recreation on eagle population given current levels of recreation, and slight increases in recreation (Pauli poster)
- In the future: We will broaden focus to include jackrabbits & additional predators

Who



This project has contributed to the training of 4 graduate students and 7 undergraduate students at Boise State.

Our collaborators on the project are from Purdue University, University of New Hampshire, and USGS The project is supported by: MILES, Bureau of Land Management (BLM), US Fish and Wildlife Service (USFWS), and the Idaho National Guard.



Recreation communities

How do recreationists become motorized vehicle users? (Kinney and King poster) In the future: How do interactions between different types of recreationists affect visits?

Biological communities

• How do ecological processes change with shifts in biological communities? • In the future: studies of predator and prey interactions with simulation (IBM) models

How do landscape and wildlife influence recreation patterns?

- · What landscape features predict recreational shooting? (Pauli and Sun poster)
- · How do landscape features influence behavior of motorized recreationists? (Frey poster)
- · In the future: Does perception of landscape and wild life influence recreation community composition?

Treasure Valley Project, Recreation and Wildlife







Fig. 1. The use of wildlife habitat models to predicted habitat suitability of recreational shooting within the Morley Nelson Snake River Birds of Prey National Conservation Area. Darker areas represent locations of greater suitability while lighter areas denote regions of lower suitability. Circles are represent golden eagle territories. From Pauli et al. *in review*



Fig. 2. Will eagles become tolerant of recreation disturbance? It is possible, but not fast enough to offset increasing recreation.Box plots represent sizes of simulated eagles populations exposed to recreation. From Pauli et al. *in review*