Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Develop Landscape-scale Gunnison Sage-grouse Habitat Map Predicting Sagebrush, Herbaceous, & Bare Ground Cover

Discipline: Natural
Type of Project: Research
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Effective Dates: 9/1/2008-12/31/2011
Funding Amount: $15,000 (FY08: $10,000; FY09: $5000)

Investigators and Agency Representative:
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Project Abstract: The Gunnison Sage-grouse (*Centrocercus minimus*) is a species of special concern for all federal and state natural resource management agencies throughout its range. Over half of the estimated 4,500 remaining Gunnison Sage-grouse exist in the Gunnison Basin in west central Colorado. Loss and alteration of sage-steppe habitat, due to many factors, has been identified as a primary reason for declines in Gunnison Sage-grouse populations. Lands within Black Canyon of the Gunnison National Park (BLCA) and Curecanti National Recreation Area (CURE), the only two park units inhabited by Gunnison Sage-grouse, play a significant role in the conservation of the Gunnison Sage-grouse. The overall goal of this project is to develop statistically rigorous mapping products to assess sagebrush habitat within the Gunnison Basin and use these maps to develop habitat selection models and spatially explicit survival models. These mapping and model products will be the backbone for future management and planning efforts on NPS, BLM, CDOW and private (NRCS) lands, and will directly assist with other species and ecosystem assessments. More specifically, this project will provide additional funds to support a student to work on multi-spectral image processing and assessment of the methodologies within the Gunnison Basin. In 2007, CSU/USGS-BRD conducted field vegetation data from pre-determined sample locations. This year they will begin processing satellite imagery data to determine multi-spectral signatures associated with field vegetation measurements and develop predictive models.

Outcomes with Completion Dates:
- **March 15, 2009 – final scope of work and budget**
- **December 31,2011 – final report and MS thesis**

Keywords: Colorado State University, Curecanti NRA, Black Canyon of the Gunnison NP, Gunnison sage grouse, habitat mapping, sagebrush