

## **Project Summary**

### **Rocky Mountains Cooperative Ecosystem Studies Unit**

**Project Title:** Identification of critical brood habitat requirements for Gunnison Sage-grouse

**Discipline:** Natural  
**Type of Project:** Research  
**Funding Agency:** National Park Service  
**Other Partners/Cooperators:** Colorado State University  
**Effective Dates:** 9/1/2011- 12/31/2015  
**Funding Amount:** \$27,000 [FY12: \$7,000; FY11: \$20,000]

**Investigators and Agency Representative:**

NPS Contact: Theresa Childers, Black Canyon NP/Curecanti National Recreation Area, 102 Elk Creek Road, Gunnison, CO 81230, 970-641-2337 x250, Theresa\_Childers@nps.gov

Investigator: Cameron Aldridge, Research Scientist, NREL, Colorado State University & U.S. Geological Survey, 2150 Centre Avenue, Building C, Fort Collins, CO 80526-8118. (970-226-9433), cameron\_aldridge@usgs.gov

**Project Abstract:** the Natural Resource Ecology Laboratory at CSU will examine brood-rearing habitat use of Gunnison Sage-grouse using their extensive Gunnison Sage-grouse dataset. Understanding habitat needs across each of these life stages will aid USFWS in the designation of critical habitat and will aid NPS and other natural resource management agencies in the Gunnison Basin in making informed conservation management decisions. Specific objectives are listed below.

- 1) Assess habitat, abiotic and anthropogenic characteristics at Gunnison Sage-grouse brood locations across two spatial scales (landscape and patch).
- 2) Develop spatial predictions of critical brood habitat across the western portion of the Gunnison basin.
- 3) Assess the predictive capacity of these models using independent data.
- 4) Extrapolate the landscape models to the entire Gunnison Basin.

**Outcomes with Completion Dates:**

**October 1 - 31, 2011:** Produce draft brood habitat models and predictive surfaces at both the patch and landscape scales. Present these to NPS, USFWS and USGS for internal assessment and review.

**April 1 - October 31, 2012:** Produce draft winter habitat models and predictive surfaces at both the patch and landscape scales. Present these to NPS, USFWS and USGS for internal assessment and review.

**December 31, 2012:** Deliver final draft winter habitat models to NPS and USFWS for incorporation into critical habitat rule. Products will be delivered in the form of geographic information system (GIS) raster or shape files. This product may also be used by other cooperators (BLM, Gunnison County, Forest Service, etc.) as they strive to incorporate Gunnison Sage-grouse habitat requirements into their specific land management plans.

**January 2013 - April 2013:** Complete draft manuscript identifying critical brood rearing habitat across the Gunnison Basin. Share manuscript with NPS, USGS and USFWS and other cooperators and seek comment and review.

**May 2013-September 2013;** Finalize manuscript and submit for publication to the Journal of Wildlife Management. Share final mapped products with the NPS and USFWS.

**Keywords:** Colorado State University, Natural Resource Ecology Laboratory, Curecanti National Recreation Area, Gunnison sage grouse, brood habitat models, winter habitat