

## **Project Summary**

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

**Project Title:** Integrating Natural Resource and Cultural Sensitivity with Energy Conservation Recommendations for Historic Structures in Rocky Mountain National Park through Student Design Teams, Phase 1 and 2

**Discipline:** Interdisciplinary  
**Type of Project:** Technical Assistance  
**Funding Agency:** National Park Service  
**Other Partners/Cooperators:** Colorado State University, University of Colorado at Denver  
**Effective Dates:** 9/1/2009 - 5/31/2014  
**Funding Amount:** \$55,000 (FY09: \$50,000; FY10: \$5,000)

**Investigators and Agency Representative:**

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**Project Abstract:** Rocky Mountain National Park currently partners with a multidisciplinary research team working toward converting historic and non-historic structures into models of culturally and ecologically sensitive applications of energy efficiency measures with renewable energy applications. These structures are within landscapes treasured for the aesthetic value and cultural context so any conversions for energy efficiency and renewable energy systems must account for the historic fabric of the buildings and sites, the view shed around the sites, endangered species, and natural resources that could be impacted by construction activities. A multidisciplinary graduate student team approach has started creating an implementation guide and design recommendations for improving energy efficiency while taking into account ecological and cultural issues specific to the park setting. Colorado State University (CSU) and University of Colorado-Denver are partnering to provide the park service with leading faculty and students in historic preservation, sustainable building and natural resources. In addition, we will draw on our connections to other colleges and departments including mechanical engineering, landscape architecture and interior design. We will also bring in the Colorado Forest Service and renowned green building professionals from Colorado. The team is working cooperatively with the staff of the park to design a charrette and related follow up that provides creative and innovative ideas for appropriate applications of energy conservation measures.

**Outcomes with Completion Dates:**

List of Products:

1. Detailed charrette report
2. Implementation Recommendations based on graduate student research.
3. Tool for implementing best practices for alternative energy sources based on student research into different technologies, historic building issues, and natural resource issues.

Due Date for Final Report and/or Other Products: May 31, 2010

**Keywords:** historical structures, energy audit, Rocky Mountain National Park, Colorado State University, University of Colorado at Denver