

## **Project Summary**

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

**Project Title:** Implement Light Study Recommendations and Conduct Preventative Museum Preservation Tasks at Grant-Kohrs Ranch NHS

**Discipline:** Cultural  
**Type of Project:** Technical Assistance & Education  
**Funding Agency:** National Park Service  
**Other Partners/Cooperators:** Colorado State University  
**Effective Dates:** 9/30/2009 - 12/31/2011  
**Funding Amount:** \$11,111

**Investigators and Agency Representative:**

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**Project Abstract:** The project implements the primary recommendations of the 2010 Historic Light Study for Grant-Kohrs Ranch House. An ongoing issue in managing the ranch house is the need to balance preservation of historic materials at a relatively low light level with visitor enjoyment at a light level at least perceived to be higher. The study proposes how this balance can best be met. First, reduce the amount of sunlight transmitted through the windows so they can be used as a tool in achieving lighting goals. Second, limit the time objects are exposed to light in order to slightly raise the amount of light while remaining within museum professional limits. Third, enhance the visitors' perception of brightness by allowing their eyes to fully adjust to the interior light and by balancing the light within a room to avoid glare or overly dim spaces.

A plan is needed to accomplish this balance and will be based on four principal approaches. The plan should complement the site's interpretive intention as described in the Historic Furnish Study and interpretive plan. It must not lose track of park service requirements to preserve historic fabric and ensure visitor enjoyment and safety needs be met. And the plan should be sustainable - operationally and in its energy consumption.

To accomplish this plan, there are three areas of background needed and are the primary products of this agreement: a Light Exposure Guide, a table of illumination for Deer Lodge, and a solar altitude chart for the Kohrs home. There are several other specific recommendations that staff hired through this agreement will implement to meet the goals of limiting light coming through the windows.

**Outcomes with Completion Dates:** September 15, 2010

**Keywords:** Light study, museum preservation, visitor enjoyment, student intern, Grant-Kohrs Ranch NHS, Colorado State University