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**Park/NPS Unit:** DINO—Dinosaur National Monument  
**Title of Project:** Develop Yampa River Flow Prescription and Long-term Research and Monitoring Recommendations for Protection of Riparian Vegetation Resources in Dinosaur National Monument

**Administered through the:**

- Colorado Plateau Cooperative Ecosystem Studies Unit Cooperative Agreement Number H1200-09-0005  
 Desert Southwest Cooperative Ecosystem Studies Unit Cooperative Agreement Number H1200-10-0001  
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**CESU Partner:** Utah State University (USU)

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**Amount Funded:** \$46,000

**Project Dates:**

**Start Date:** April 1, 2011

**End Date:** June 30, 2013

## **PROJECT ABSTRACT:**

Providing adequate long-term, science-based stewardship for Dinosaur's river resources is a daunting task. This task agreement provides for development and delivery of two distinctly different products that are synthetic in nature and based on data and experience developed by the PI and others over a period of several decades. These products will serve as the basis for developing a long-term protection strategy that is science-based, flexible and transparent.

### **Product #1:**

The PI will construct an instream flow prescription for the Yampa River that maximizes the likelihood of maintaining existing and historic native riparian vegetation conditions (a spatially and temporally diverse array of native cottonwood and box elder stands and key native plant communities, resistance to invasion by non-native/invasive plant species, pattern and areal extent of vegetated and unvegetated geomorphic features) in Deerlodge Park and the Yampa Canyon from Deerlodge Park to Echo Park.

### **Product #2:**

The PI will summarize existing data and knowledge and develop long-term research and monitoring recommendations for protection of native riparian vegetation resources in Dinosaur National Monument, with emphasis on characterizing the special values and challenges associated with three distinct river reaches:

- The Yampa River from Deerlodge to Echo Park (representing relatively unregulated river conditions)
- The Green River from Browns Park to Echo Park (representing compromised resource conditions strongly influenced by dam operations for five decades), and
- The Green River from Echo Park to the southwest boundary of the monument (representing a hybrid river suffering impacts from regulation, but receiving benefits/mitigation from the unregulated Yampa).

This product will include development and articulation of hypotheses and predictions that would logically drive a research and monitoring program aimed at providing the best possible stewardship for riparian vegetation resources over the next half century. Priorities for focusing long-term research and monitoring efforts will be identified.