

## **Project Summary**

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

Project Title: Develop Prescriptive IPM Control Plan for Field Bindweed at Grant-Kohrs Ranch National Historic Site

**Discipline:** Natural  
**Type of Project:** Technical Assistance  
**Funding Agency:** National Park Service  
**Other Partners/Cooperators:** University of Montana  
**Effective Dates:** February 23, 2011 - December 31, 2014  
**Funding Amount:** \$5,000

**Investigators and Agency Representative:**

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**Project Abstract:** The primary goal of this technical assistance proposal is develop effective Integrated Pest Management (IPM) methods for control of field bindweed so that culturally significant vegetation representative of the Grant-Kohrs Ranch's entire history and legacy of land use will be retained and preserved.

The invasive and legally declared noxious weed "field bindweed" is either now well established and/or expanding in portions of irrigated pastures and hayfields at the Grant-Kohrs Ranch National Historic Site (GRKO). The impacted Pasture/Hay Fields Component Landscape comprises 30% (401 of 1326 acres) of the managed cultural landscape at GRKO. Field bindweed is displacing culturally appropriate vegetative species in spite of attempted control measures. Field Bindweed has recently been ranked the highest priority for control at GRKO based upon the Alien Plant Ranking System analysis used for the preparation of the 10 Park Northern Rocky Mountains Invasive Plant Management Plan Environmental Assessment. The following attributes of field bindweed make control extremely difficult: perennial, rhizomatous growth form, seed longevity, poor response to herbicide, and ability of the plant to become dormant during periods of stress.

According to the Grant-Kohrs Cultural Landscape Report, Part Two, Treatment Recommendations (February 2009), "maintaining healthy plant communities representative of...irrigated hayfields and pastures (primarily consisting of introduced pasture grasses) is of primary importance for park management" and "Noxious weeds are a primary threat to the healthy functioning of...irrigated pastures/hayfields." Because of field bindweed impacts, site specific Integrated Pest Management (IPM) methods need to be developed immediately to stop the invasion and to preserve the historic pasture/hayfield vegetation components.

Development of effective IPM methods for control of field bindweed needs to incorporate a number of site factors. The fields are flood irrigated mid-May through mid-September. Most of the impacted fields are either cut annually and/or grazed with livestock. Any herbicide prescriptions also need to be selected with consideration of the herbicide tolerance of the forage legumes, and replant intervals for these legumes and desirable grasses.

**Outcomes with Completion Dates:** Draft final report due by December 16, 2013

**Keywords:** Grant-Kohrs Ranch National Historic Site, University of Montana, Integrated Pest Management (IPM), field bindweed, culturally significant vegetation