Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: **Evaluate the effectiveness of noxious weed management through inventory and establishment of long-term monitoring plots at Grant-Kohrs Ranch NHS, phase 1 and 2**

Discipline: **Natural**
Type of Project: Technical Assistance
Funding Agency: National Park Service
Other Partners/Cooperators: University of Montana
Effective Dates: May 21, 2009 – June 30, 2011
Funding Amount: $10,000

Investigators and Agency Representative:
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Project Abstract: The University of Montana (PI Peter Rice) will provide technical assistance to determine outcome of treatment strategies on yellow toadflax, leafy spurge, and Canada thistle at Grant-Kohrs Ranch through establishment and monitoring of variable size plots and comparison to 2003 inventory data. The evaluation area will be focused on original 2003 survey area that was within or immediately adjacent to Clark Fork River riparian areas where a majority of leafy spurge and yellow toadflax are found. **The following actions will be implemented:**

- Evaluate 2003 Invasive Plant Survey of GRKO completed by MSU and survey methods
- Complete site visit and determine plot locations. Variable sized plots will be used to adjust for clumped invasive sites.
- Layout up to 12 permanent, variable size community composition plots and conduct sampling by ocular macroplot method determining canopy cover of all non-target plants as well as the target weeds.
- Analyze new data for comparison to 2003 data and integrate into GIS. At a minimum, the 2009 and 2003 comparisons will be made by overlaying the canopy cover data generated from the 2009 plots with the 2003 transect data in GIS.
- Prepare data summary report to include recommendations for current/future treatment strategies, future desired condition, and suggested monitoring schedule.
- This phase 2 effort will include additional analysis and sampling on this project.

Outcomes with Completion Dates: Data Summary Report including map of variable size plot location, species lists, species richness and diversity parameters, life form summaries, target weed canopy cover comparison to 2003 data, recommendations for current/future treatment strategies that would balance target weed suppression with desirable non-target plant response, future desired condition, and suggested monitoring schedule, due June 30, 2011

Keywords: Grant-Kohrs Ranch National Historic Site, University of Montana, weed control, evaluation, toadflax, leafy spurge, and Canada thistle