Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Mapping prairie dog habitat at the Little Bighorn Battlefield National Monument, Montana

Discipline: **N**atural
Type of Project: Technical Assistance
Funding Agency: National Park Service
Other Partners/Cooperators: University of Wyoming
Effective Dates: August 1, 2011 – December 31, 2012
Funding Amount: $10,000

Investigators and Agency Representative:
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Project Abstract: The primary purpose of Little Bighorn is to preserve and protect the historic and natural resources pertaining to the Battle of the Little Bighorn and to provide visitors with a greater understanding of those events which led up to the battle, the encounter itself, and the various effects the encounter had on the two cultures involved. The black-tailed prairie dog is a Montana species of concern and the black-footed ferret is a federally-listed endangered species. Neither species occur within the park, but most likely occupied the site during the Battle of Little Bighorn in 1876. Prairie dog habitat exists within the park and 3 colonies exist within 5 miles. Black-footed ferrets prey primarily on prairie dogs, but currently prairie dogs do not occur in numbers large enough to support them.

USFWS has been interested in reintroducing ferrets to Big Horn County. After a plague outbreak, prairie dog numbers were too low to move plans forward. The colony nearest the park has grown from 17 acres in 2003 to approximately 72 acres, now with one burrow inside the park. In order to reintroduce prairie dogs, and subsequently ferrets, to Little Bighorn a better understanding of the potential habitat is needed within the Park. This project proposes to analyze slopes, soils, and land cover data to identify suitable habitat for the prairie dog. Assal and Lockwood (2007) used GIS and remote sensing to locate colonies in Wyoming and a similar method can be done within Little Bighorn. The result of the analysis would be a suitability map of prairie dog habitat along with maps of the final vegetation, slope, and soil data used in the analysis. These maps will help the park select the most culturally and environmentally appropriate location for reintroduction of prairie dogs and ferrets in the future.

Outcomes with Completion Dates: December 31, 2012

Keywords: Prairie dogs, habitat, mapping, remote sensing, the Little Bighorn Battlefield National Monument, University of Wyoming, Wyoming Geographic Information Science Center's (WyGISC)