

## **Project Summary**

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

**Project Title: Ecology of Wild Horses and Burros in the Rocky Mountain Region and Western USA: Research to Provide Ecological Information and Tools to Improve Management**

**Discipline:** Natural  
**Type of Project:** Research  
**Funding Agency:** USGS  
**Other Partners/Cooperators:** Colorado State University  
**Effective Dates:** 9/15/2014 - 9/14/2015  
**Funding Amount:** \$109,585

**Investigators and Agency Representative:**

USGS Contact: Kate Schoenecker, USGS Fort Collins Science Center, 2150 Centre Ave, Bldg C, Fort Collins, CO 80526; 970-226- 9329; schoeneckerk@usgs.gov

Investigator: Randall Boone, Colorado State University, Fort Collins, CO 80523; 970-491-1806; Rboone@nrel.colostate.edu

**Project Abstract:** The overall goal of this research is broad ecological research with multiple study elements to answer needed questions about the ecology of wild horses. 1) develop a noninvasive tool for population estimation using fecal DNA, and describe the genetic structure of the population; 2) GIS carrying capacity modeling to develop a forage-based model to calculate carrying capacity of free-roaming horses within a specific herd management area (HMA), and use it to investigate the potential role of climate change in altering carrying capacity of grazers in HMAs; 3) research to test the safety and efficacy of radio collars and radio tagging devices designed specifically for feral horse and burro females, and to make this tool available to wild horse managers; AND 4) demography research to study the general ecology of wild horses and answer some of the questions that are known for native North American ungulates, but have never been studied in wild horses.

**Outcomes with completions dates:** September 14, 2015

**Keywords:** wild, horses, burros, ecology, management, USGS, Colorado State University