

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Elk Use and Habitat Monitoring at Fossil Butte National Monument, Wyoming

Discipline: Natural
Type of Project: Technical Assistance
Funding Agency: National Park Service
Other Partners/Cooperators: Utah State University
Effective Dates: 4/1/2015 - 7/1/2016
Funding Amount: \$10,000

Investigators and Agency Representative:

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Project Abstract: At Fossil Butte National Monument (FOBU) there is concern that increasing elk use may lead to degraded long-term vegetation conditions. It is difficult to support such assertions in the absence of credible data documenting condition and trends in aspen, riparian, and tall shrub communities. Thus, FOBU is in need of a plan for effective monitoring and assessment of these plant communities. Though all habitat is important, effective aspen monitoring is a logical first step given its obligate status for a wide range of species. Based on the FOBU *Statement of Work* provided by NPS Rocky Mountain CESU office, we propose to review aspen and tall shrub monitoring methods, implement a pilot monitoring project during summer 2015, and deliver a report outlining a comprehensive monitoring approach for these vegetative communities in the coming years.

Outcomes with Completion Dates:

Proposed one-year timeline for FOBU habitat impact monitoring:

- May - June, 2015: research literature, engage experts, and summarize metrics for assessing herbivory in aspen. Develop preliminary survey design and sampling protocol and review with FOBU/CESU team.
- June-September: make field visits to assess appropriateness of monitoring design and plot sample methods. Collect data at minimum of five locations. Compile data and adjust protocols, as necessary, under consultation with FOBU/CESU team.
- October-December: Run preliminary/summary analysis, compile draft report (containing detailed operational protocol), and make recommendations.
- February-March, 2016: Gain FOBU, NPS, and independent review of input and recommendations. Revise and submit final recommendations March 1 for comprehensive aspen-tall shrub herbivory monitoring at FOBU, with recommendations for protocols or way-forward for bitterbrush and sagebrush.

Keywords: Fossil Butte National Monument, Utah State University, elk, habitat monitoring