Rocky Mountains Cooperative Ecosystem Studies Unit
Project Summary

**Project Title:** Analysis of 10 years of vegetation monitoring data for elk management in Rocky Mountain National Park

**Task Agreement #:** P18AC00861
**Discipline:** Natural
**Type of Project:** Technical Assistance/Research
**Funding Agency:** National Park Service
**Other Partners/Cooperators:** Colorado State University
**Student Participation:** Yes
**Effective Dates:** July 1, 2018 – September 30, 2020
**Funding Amount:** $31,920

**Investigators and Agency Representative:**
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**Project Abstract:** Rocky Mountain National Park (RMNP) supports numerous species of wildlife including large populations of Rocky Mountain elk (*Cervus elaphus*). Elk populations dramatically increased in the park following adoption of a natural regulation paradigm by the NPS in the late 1960's leading to severe degradation of vegetation in the core elk winter range. Motivated by concern over declining vegetation condition and increasing conflicts between elk and humans inside and outside the park, RMNP developed an Elk and Vegetation Management Plan/Environmental Impact Statement (EVMP/EIS) to evaluate a range of alternatives for managing elk and vegetation in the park (USDI, 2007). The Record of Decision for this plan was announced in February 2008 and management actions following the plan commenced during that year (USDI, 2008). The purpose of the EVMP is to guide management actions over a 20-yr time period, reducing the impacts of elk on vegetation and restoring to the extent possible the natural range of variability in the elk population and affected plant and animal communities. A restoration of the natural balance of elk and habitat on the landscape has many auxiliary benefits, including creating improved trout fisheries, bird habitat and increasing available habitat for elk and other wildlife species. These improvements not only provide for restoring high quality wildlife habitat, but also enhance the visitor experience by providing improved opportunities for world class fishing and wildlife viewing.

The EVMP outlines the desired future condition for aspen, montane riparian willow, and upland herbaceous communities and aims to manage elk and vegetation such that significant progress toward reaching these desired future conditions occurs over the 20-yr life of the plan. The selected management alternative relies on a variety of conservation tools including fencing, non-lethal redistribution of elk, active vegetation restoration, and lethal reduction of elk (culling) to achieve management goals. Park resource staff have also worked closely with state partners at Colorado Parks and Wildlife to manage elk via increased hunting opportunities on public and private lands surrounding the park. Construction of fences to protect habitat began in 2008 and continued through 2012, coupled with reductions of the elk population as necessary. The plan incorporates the principle of adaptive management to assess the effectiveness of management actions and adjust management actions as needed to successfully achieve the EVMP's objectives. Determination of whether vegetation objectives are being achieved requires monitoring and evaluation of target vegetation communities, which is the focus of this agreement.