

Rocky Mountains Cooperative Ecosystem Studies Unit
Project Summary

Project Title: Long term changes in wetland and riparian areas in Rocky

Discipline: Natural

Type of Project: Research

Funding Agency: National Park Service

Other Partners/Cooperators: Colorado State University

Student Participation: No

Effective Dates: March 1, 2020 through December 31, 2021

Funding Amount: \$14,986

Investigators and Agency Representative:

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Project Abstract:

Project Goals: This project will monitor vegetation composition in plots established in a 1997 to monitor the effects of fen restoration following a dewatering ditch removal as well as take readings from hydrologic monitoring wells, originally installed in the 1980s. The wells and vegetation monitoring plots were first established in Big Meadows fen in a previously-ditched section as well as an un-ditched section along with the natural Green Mountain fen. New data will allow the project team to analyze vegetation composition trends and mid-summer water table levels and do a 33- year time series of vegetation composition to determine how a section of Big Meadows has recovered from being ditched for approximately 80-100 years prior to its restoration in 1989. In addition, the project will identify any changes that may have occurred due to ungulate browsing in recent decades, particularly effects on woody plants.

Project Objectives: A replication of vegetation analyses conducted at monitoring wells from 1997 – 1998 by Cooper and Chimner as well as at wells established by Shaunda Wenger in 1993 and 1994 will be conducted. All wells will be relocated, the vegetation sampled, and water loggers will be installed in many of the wells to evaluate modern water table depth and dynamics relative to the original measurements. Through this project, long-term datasets will be created, providing a quantitative analysis of change over time. The field work will be accomplished during the summer of 2020, with the vegetation data collected during the first full week of August, 2020. All data will be archived with the National Park Service, and all analyses will be provided as reports to Rocky Mountain National Park.