

Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Enhanced Wetland Monitoring in Rocky Mountain CESU Network Parks

Discipline: Natural
Type of Project: Technical Assistance
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Student Participation: Yes
Effective Dates: 9/7/2016- 12/31/2019
Funding Amount: \$55,000

Investigators and Agency Representative:

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Project Abstract: The Rocky Mountain Network (ROMN) monitors wetland ecological integrity (WEI) in ROMN Parks including Florissant Fossil Beds NM (FLFO), Rocky Mountain NP (ROMO), Glacier NP, and Great Sand Dunes National Park and Preserve (GRSA) to inform park wetland management and protection. The ROMN is "enhancing" its wetland monitoring efforts to better serve this management need.

GRSA is preparing an Ungulate Management Plan/Environmental Impact Statement (UMP/EIS) and, based on input and advice from the planning team, would like to build upon and enhance existing ROMN wetland monitoring to provide information for the UMP/EIS and other potential future management actions at GRSA. Work with the Wetlands Program of the Colorado Natural Heritage Program (CNHP) at Colorado State Univ. (CSU) to cooperatively plan for and implement enhanced wetland monitoring. The CNHP Wetlands Program has many years of experience monitoring wetlands in the San Luis Valley and across Colorado. CNHP is also very familiar with GRSA having been a partner with NPS and others to complete the GRSA vegetation map and inventory.

The products of this Task Agreement include a draft enhanced wetland monitoring plan of wetlands relative to the GRSA UMP/EIS; a first round of field monitoring (at ~40 wetland sites); a certified dataset for those sites, and a report detailing the analysis of the data relative to ungulates in GRSA. The report will include draft ecological thresholds and/or management assessment points. It also includes additional wetland monitoring in FLFO and ROMO and a certified dataset for monitoring sites in those parks.

The results of this work will include estimates of wetland status and ecological thresholds and management assessment points. The results are intended to inform the UMP/EIS process and content and wetland management in the parks in general. The results are also intended to help park staff, scientists and the public understand the dynamics of hydrology, vegetation and ungulates, and how wetland and riparian systems could respond to climate change, ungulate management, and potential future management actions such as hydrological restoration (e.g., removing wells or ditches).

This project focuses on evaluating and monitoring the response of wetlands to ungulate management, hydrology and climate change in network parks. It will provide both NPS scientists and managers and outside scientists and the public with an understanding of how wetland and riparian communities regulated by weather and near surface hydrology respond to recent and greatly increased ungulate use as well as climate change and other stressors. This applies to wetlands in the park and in the Rocky Mountain Region and other high elevation arid environments. The project also provides research, learning and seasonal employment opportunities for current and recent undergraduate and graduate students who will conduct the fieldwork.

Keywords: Wetlands, monitoring, CESU, National Park Service, Colorado State University