

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Meadow Ecological Integrity Protocol Development, year 3

Discipline: Natural
Type of Project: Research
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Effective Dates: 5/1/2008-12/31/2009
Funding Amount: \$69,131

Investigators and Agency Representative:

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Project Abstract: Meadow ecological integrity was selected as one of the 10 high priority Vital Signs for the parks of the Sierra Nevada Inventory and Monitoring Network (SIEN), including, Yosemite NP, Sequoia-Kings Canyons NPs and Devils Postpile NM. Initially, this project includes one distinct task, the drafting of hydrologic and floristic portions of the Meadow Ecological Integrity protocol in 2006-2007 for use in SIEN parks. The Sierra Network meadow ecological integrity protocol will emphasize the measurement of vascular and non-vascular floristic composition, invertebrate populations, and hydrology to document meadow condition and change. Additional funds were obligated in FY07 for the full development of the Meadow Ecological Integrity (MEI) protocol. This I&M protocol will be developed using an "integrated" approach, incorporating aspects of vegetation composition and structure, groundwater and surface water hydrology, water chemistry, invasive/exotic plants, invertebrate populations, and landscape composition and dynamics. Wetland monitoring has a rich and complex regulatory context, with federal and state laws requiring attention by SIEN park management. Products for 2008 will include completing the protocol for monitoring wetland meadow ecological integrity, including data management and analysis. This includes development of a watershed classification for network parks; a classification for wetlands within randomly selected watersheds; wetland maps of randomly selected wet meadows and fens; field testing in 2007 and 2008, evaluations of field seasons, revisions to draft protocol based on evaluation of what worked well and what needed changing, acquisition and analysis of monitoring data, final revisions to draft protocol, analysis of two years of data presented in final report, and transfer of data to NPS with appropriate metadata.

Outcomes with Completion Dates:

Finalize protocol for review by Fall of 2008; final report due in spring 2009.

Keywords: Vital Signs Monitoring, wetlands protocols, meadow integrity, Sierra Nevada Inventory and Monitoring Network, Colorado State University