

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Meadow Ecological Integrity Protocol Development
Discipline: Natural
Type of Project: Research
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Effective Dates: 9/1/2006-4/15/2009
Funding Amount: \$73,758

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. The protocol development process and the monitoring program to be initiated at SIEN will include wetland mapping in watersheds chosen to represent the full range of landscapes and habitats in SIEN. We will also review and compile all existing data from wetlands in SIEN. This protocol will allow the development of an approach for choosing survey and sentinel sites, and instrumentation and analysis of sites (both sentinel sites that would receive annual monitoring and survey sites sampled less frequently, as applicable).

Outcomes with Completion Dates:

Initial products include draft protocol for monitoring meadow ecological integrity including data management and analysis. With additional funding, products will include watershed classification for the SIEN parks, wetlands maps and final reports.

- Fall 2007: investigator annual report'
- April 2008: draft protocol on the I&M web site for peer review
- Fall 2008: final protocol for review
- Spring 2009: Final report

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

For Administrative Use Only:

Date Annual Report Received:
Date Final Report Received:
Publications, etc. on file: