

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Research, design, develop and implement technology in support of the NPS Vegetation Mapping Inventory, the National Park Service Inventory and Monitoring Program.

Discipline: Natural

Type of Project: Research

Funding Agency: National Park Service

Other Partners/Cooperators: Colorado State University

Effective Dates: 7/14/2006 - 9/30/2007

Funding Amount: \$66,301

Investigators and Agency Representative:

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Project Abstract: The NPS datastore is the National Park Service (NPS) GIS and database system to store, manage and disseminate biological inventory and geospatial information for all NPS units identified in the Inventory and Monitoring program (280 parks). CSU will assist the NPS Biological Resource Management Division (BRMD) in researching, designing, developing and implementing internet and desktop technologies and tools in support of the NPS vegetation inventory to store, manage, and disseminate NPS biological inventory and associated information to NPS staff, scientists, educators and visitors to national park units (i.e. the general public). The assistance will allow the National Park Service to serve geospatial datasets and related information technologies to share scientific information consistent with standard protocols and presentations of the respective disciplines related to the vegetation mapping inventory. This inventory has associated fire, fuels, and risk assessment data, as well as statistical components of accuracy assessments, multivariate statistical products, and new protocol developments to further the success of the vegetation inventory.

CSU will provide expertise in GIS database development and geospatial technologies including, but not limited to S-Plus, R, geostatistical packages, spatial modeling and mapping, multivariate statistical products and analyses, accuracy assessments, and protocol developments. Expertise will also be provided in developing tools and procedures to streamline data conversion, manipulation and QA/QC. Specific tasks include:

- Assist and develop accuracy assessments or projections for LANDFIRE datasets on I&M parks, both where the vegetation inventory is complete, and where future inventories are planned
- Research, design, develop and implement a cross walk methodology in concert with LANDFIRE mapping zone guidelines for vegetation inventory NVCS map class to stylized fuel models developed by the Missoula Fire Laboratory and collaborators.
- Assist and document in the cross walk of vegetation map class interpretation to the stylized fuels models for Grand Teton and Rocky Mountain National Parks.
- Develop and provide variability analysis to vegetation inventory and fire fuels data collection.

Outcomes with Completion Dates: NPS technical reports, annual reports, professional papers, Park Science articles, theses, and/or dissertations describing and documenting the methodologies and results of this project and their implications for other land

management agencies will be edited, produced, and distributed as applicable. All draft products are due by March 31, 2007, with final reports due by September 30, 2007.

Keywords: vegetation mapping, spatial models, fire and fuels mapping, geospatial datasets, Grand Teton National Park, Rocky Mountain National Park, Colorado State University, NPS Biological Resource Management Division