Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Fire Management in National Parks – Research, Information Management and Delivery
Discipline: Natural
Type of Project: Research, technical assistance and education
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Effective Dates: 9/1/2007 – 9/30/2012
Funding Amount: $73,866

Investigators and Agency Representative:
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Project Abstract:
This project will provide support for the NPS Fire Program and focus on the field data collection of vegetation, fuels, facility asset, and other resource data for use in enterprise systems and geospatial applications. The vegetation data will support evaluation and validation of fire treatments (including thinning and prescribed fire). The field data will be in the form of latitude / longitude location of the field unit, tabular data, and textual information. Alphanumeric data to and from field units will be interfaced either on a handheld, laptop, workstation, or tablet device in conjunction with geospatial data.

This effort will investigate, research, develop, test, and document software requirements and applications for capturing and transferring field data from mobile devices to enterprise geodatabases running on centralized servers. Software development and testing will be a significant part of this work but will require substantial input and interaction with NPS personnel. Data that are captured via these systems will be ported to various geographical Information systems and other data base applications.

A separate task is to compile, integrate, test, and provide training support for an asset inventory and geospatial database of building footprints, maintained landscapes and other Facilities Management and Fire Program initiatives. Assistance with this project will include broad stakeholder and workflow requirements analyses, workflow documentation, and research, development, and implementation of related spatial data and applications. Close working relationships with and substantial involvement of Federal staff will be required to successfully complete this task.

A third project area is to provide R&D and implementation support for web posting and metadata development by the above projects and other projects such as Fire Management Planning, building locations, and interactive digitizing applications for delineating maintained landscapes, fire perimeters, and other data themes as identified by the project teams.

Outcomes with Completion Dates: Due by September 2012
1. Documentation of research results and implementation recommendations and development requirements for functional interactions among radio systems, GPS, geodatabases, GIS, image services, and related applications.

2. Research and development of refined ArcGIS and associated extensions for field data collection and/or vehicle/personnel tracking.

3. Other data interface applications for field data collection and GPS will be developed utilizing various ArcPAD applications based on research and testing of user requirements.

4. Metadata templates and batch uploading of data and documents to the NR DataStore.

Keywords: fire ecology, fire management, data bases, training, National Park Service Fire Program, Colorado State University

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