

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Interpreting 250m Moderate Resolution Imaging Spectroradiometer normalized difference vegetation index in the Colorado Plateau

Type of Project: Research

Funding Agency: National Park Service

Other Partners/Cooperators: Utah State University

Effective Dates: 9/1/2004 - 6/1/2006

Funding Amount: \$66,400

Investigators and Agency Representative:

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Project Abstract:

The goal of the proposed work is to conduct a proof-of-concept field campaign in which intensively measured ground conditions will be compared with MODIS NDVI. The comparison will be conducted in the following ecosystems: (1) grassland, (2) shrub land, and (3) woodland, to consist of a mixed pine/juniper overstory with possible understory grass and shrubs. Depending on the sites selected for field work, BSCs may be significant ecosystem components. It is recognized that further testing will be required if this monitoring approach is to be extended to more sparsely vegetated areas or other vegetation formations not specifically included in this work. More specifically, our objective is to correlate MODIS NDVI with FC, green FC, LAI, PAI, and beginning and end of growing season. This will be attempted at three sites in one or more National Park units of each network - Southern Colorado Plateau and Northern Colorado Plateau I&M networks. This goal will be addressed in two stages:

1. Development of a detailed work plan.
2. Ground measurements, and their comparison to MODIS NDVI.

Outcomes with Completion Dates:

A detailed work plan will be produced by January 1, 2005. Following analysis in the fall of 2005, we will deliver a final report providing quantitative assessments of the relationships between MODIS NDVI and green FC, total FC, the ratio of total:green FC, PAI, and plant phenology and/or other agreed upon measures as specified in the final work plan. The final report is due December 1, 2005.

Keywords: vegetation index, remote sensing, normalized difference vegetation index (NDVI), MODIS, Northern Colorado Plateau I&M Network, Southern Colorado Plateau I&M Network, Utah State University

For Administrative Use Only:

Date Annual Report Received:

Date Final Report Received:

Publications, etc. on file: