Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Characterizing wildland and fire particulate matter emissions and their air quality/visibility impacts
Discipline: Natural
Type of Project: Research
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Effective Dates: 9/1/2007-2/28/2009
Funding Amount: $367,357

Investigators and Agency Representative:
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Project Abstract: The NPS-Air Resources Division will work with Colorado State to investigate the properties of smoke particles produced in actual wildland fires in order to test the general applicability of smoke source profiles and optical properties determined in the two previous years of the study through numerous chamber burns conducted on a variety of fuel types at the Fire Science Laboratory in Missoula, Montana. An aerosol apportionment study is planned for 2008 at a Fish and Wildlife Service air quality monitoring site. The purpose of this study will be to utilize techniques developed in multiple Joint Fire Science Program research efforts to apportion contributions of wild and prescribed fires to regional haze.

Outcomes with Completion Dates:

Sept. 1, 2007	Start of 3rd project year
Sept. 2007 – Feb. 2008	Planning for 2008 field programs Selection of monitoring locations Preparation and testing of instrument deployment packages Personnel training and certification (work capacity testing for wildland firefighters)
Mar – Oct 2008	Window for IMPROVE site smoke marker field measurement campaign; exact dates to be selected top correspond with fire season in region of study
May – August 2008	Window for JFS wildland fire characterization field study; exact dates to be chosen depending on fire conditions and region selected for study
June – Dec 2008	Laboratory analysis of collected filter samples
Sept. 2007 – Feb 2009	Dissemination of results through written reports, conference presentations, and peer-reviewed journal articles
Dec 2008 – Feb 2009	Data analysis and preparation of project final report
February 28, 2009	Project end

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Products include:
1. Annual report submitted to Joint Fire Sciences – September 2008
2. Peer reviewed journal articles - March 2008
3. Final report of the three year project – February 2009

Keywords: Colorado State University, NPS-Air Resources Division, wildland fire, particles, Joint Fire Sciences