

Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Web-based Environmental Database Supporting Air Resource Management in Nation Park and Forest Service Lands

Discipline: Natural Resources
Type of Project: Technical Assistance
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Effective Dates: 9/1/2011 - 8/31/2014
Funding Amount: \$385,000 [FY13: \$120,000; FY12: \$175,000; FY11: \$90,000]

Investigators and Agency Representative:

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Project Abstract: The National Park Service (NPS) and Forest Service (FS) use a number of disparate air quality and other datasets to address air quality issues affecting NPS and FS resources. These data are used to generate standard graphical and tabular products reporting on the state of the air quality in NPS and FS lands and tracking progress toward air quality goals. These standard products are used to communicate with other NPS and FS personnel, federal and state regulators, and the general public. These data are also used by the air quality research community in unique analyses and projects to better understand the causes of poor air quality.

A problem regularly faced by the analysts is that many of the data are available from different providers, all using unique data formats and metadata, and the access of these data and the generation of standard data products requires significant effort. The effort could be reduced if these data were available in a uniform format with uniform metadata and tools to automatically generate many of the routine products. Such a system would also benefit researchers who need these data, expanding the data's use.

To address this issue, a centralized integrated environmental database will be created, pulling together many of the datasets regularly used by the NPS and FS in their analyses. The database will contain the raw or native data as obtained from the data providers as well a number of standard summary statistics and derived values. A web-based decision support system will be developed, containing a number of tools to deliver the data and associated metadata in meaningful tabular and graphical formats. It is anticipated that this system will eventually support multiple activities, including NPS and FS air quality analysis and reporting activities and delivery of NPS specific data through the NPS Natural Resource Information Portal (NRInfo). In addition, this system will become the primary source for distributing IMPROVE aerosol and Regional Haze Rule specific datasets.

Outcomes with Completion Dates: August 31, 2014

Analyses, Publications, Web Pages, Final Report

Key Words: web based database, air resource management, National Park Service- Air Resources Division, US Forest Service, Colorado State University, Cooperative Institute for Research in the Atmosphere (CIRA)