

## **Project Summary**

### **Rocky Mountains Cooperative Ecosystem Studies Unit**

**Project Title:** AIRPACT Pollutant Deposition Maps and Analysis

**Discipline:** Natural

**Type of Project:** Technical Assistance

**Funding Agency:** National Park Service

**Other Partners/Cooperators:** Washington State University

**Effective Dates:** 9/1/2008- 5/14/2009

**Funding Amount:** \$12,000

**Investigators and Agency Representative:**

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**Project Abstract:** The AIRPACT-3 numerical air quality forecast system (<http://www.airpact-3.wsu.edu>) operates daily to provide quantitative estimates of air pollutant concentrations for a domain that encompasses all of Idaho, Oregon, Washington, and portions of bordering areas. The forecast system employs meteorological forecasts from the University of Washington with emissions processing and CMAQ photochemical model simulations to account for the emission, transport, chemistry and fate of a wide range of pollutants. An important aspect of AIRPACT-3 is the fact that the modeling system explicitly treats the wet and dry deposition of a number of pollutants, including ozone, nitrogen species such as nitric acid, sulfur species such as sulfuric acid, and mercury species such reactive gaseous mercury. The objective of this project is to develop a series of deposition maps posted to the web on a monthly and annual basis that shows the total accumulated deposition for each selected species and for total nitrogen, total sulfur, and total mercury. A second objective is to begin to compile deposition data from available sites within the AIRPACT-3 domain as a basis for preliminary evaluation of the deposition estimates at selected locations.

**Outcomes with Completion Dates:** Pollutant deposition maps posted to AIRPACT web site on a monthly basis; a final report is due by March 31, 2009

**Keywords:** atmospheric deposition, nitrogen, sulfur, mercury, maps, Idaho, Oregon, Washington; Washington State University, NPS Pacific West Region