

## **Project Completion Report**

**Project Title:** Technical Support for PRIMENet, Park Research and Intensive Monitoring of Ecosystems Network, FY 00-04, Dr. Perry Brown, University of Montana, College of Forestry and Conservation, Missoula, MT, pbrown@forestry.umt.edu

**Parks:** Glacier NP, Rocky Mountain NP, Acadia NP, Shenandoah NP, Great Smoky Mountains NP, Everglades NP, Virgin Islands NP, Big Bend NP, Olympic NP, Sequoia-Kings Canyon NP, Denali NP, Theodore Roosevelt NP, Hawaii-Volcanoes NP, Canyonlands NP

**Funding Source:** PRIMENet funding from Environmental Protection Agency; Air Monitoring funding from NPS-Air Resources Division

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### **Project Description:**

The Park Research and Intensive Monitoring of Ecosystems network (PRIMENet) was designed by the National Park Service and the Environmental Protection Agency to monitor atmospheric stressors to park ecosystems. In 2004 we further organized and disseminated information collected as part of the UV and air quality monitoring and the effects research. A graduate student worked on the project to maintain the PRIMENet web site and collected the final reports and reprints from the research program. A comprehensive bibliography was developed and posted on the website.

During FY 04 EPA suspended operations at the UV monitoring sites, but the air quality measurements are still being made by the National Park Service. A final report of the data sets from the fourteen sites will be prepared in FY 05 by a student at CU-Boulder. These monitoring and research data sets collected at the PRIMENet parks are also being used by the National Park Service to determine the status of ecosystem quality and insults as part of the national Inventory and Monitoring program. The Web site: <http://www.forestry.umt.edu/research/MFCES/programs/primenet> includes a listing of all publications received and additional synthesis documents.

### **Impact:**

The PRIMENet coordination activity has resulted in greater use of the data on UV and air quality in parks by the EPA and the National Park Service, Air Resources Division and the individual parks. Several of the projects initiated under PRIMENet have been extended and supplemented as part of the EPA-STAR research program and the NPS's Ecological Effects of Air Pollution grants program. This research and monitoring activity has significantly advanced our knowledge of air pollution and UV irradiance at remote park units, and these data can be used to protect natural resources and public health

Results:

- Web site was designed and updated, with regular newsletters sent out to park staff and researchers on climate change, UV and air quality science. See web site: <http://www.forestry.umt.edu/research/MFCES/programs/primenet>
- Two meetings of PRIMENet were facilitated: one in Shenandoan NP, and the final meeting at Hawaii-Volcanoes NP.
- Two University of Montana research associates were hired by the College of Forestry to maintain the communications of PRIMENet: Kate Sullivan and Zia Knupp
- UM maintained a “lending library” for the handheld Macam spectrophotometers. These instruments were surplus to EPA-Duluth (Steve Diamond).
- Final reports for all the research projects were archived on the web site
- Final data analyses still expected from University of Colorado, Boulder (PI Mark Williams) and from NOAA (Betsy Weatherhead).