

National Park Service  
Briefing Statement

July 14, 1999

Region/Office: NRPC-Air Resources Division

Issue: Cooperative NPS/EPA Park Research and Intensive Monitoring of Ecosystems Network (PRIMENet)

Background: In September 1996 the Environmental Protection Agency and the National Park Service signed an interagency agreement to cooperate on a program of long-term monitoring of environmental stressors in park units and research on the effects of those stresses on ecosystems. Fourteen parks are included in the PRIMENet: Acadia, Big Bend, Canyonlands, Everglades, Denali, Glacier, Great Smoky Mountains, Hawaii Volcanoes, Olympic, Rocky Mountain, Sequoia-Kings Canyon, Shenandoah, Theodore Roosevelt, and Virgin Islands National Parks.

The National Park Service is sponsoring air quality monitoring in parks, including ozone, wet and dry deposition, visibility, and meteorology. The Environmental Protection Agency has added UV-B monitors at parks to determine changes in irradiance with depletion of stratospheric ozone.

Ecosystem research is being sponsored by the EPA at selected parks. These projects include investigations of amphibian populations, effects of UV, nitrogen deposition, and ozone on ecosystems, and screening for contaminants in parks. We are also looking into methods of extrapolating from point environmental measurements to park-wide exposure and response.

Park Research Needs committees were organized to list the ten top research and monitoring needs of the fourteen parks included in PRIMENet. These needs statements were influential in framing the research questions. An Oversight Committee of NPS and EPA representatives selected the research areas and determines the relevance of projects to park and EPA needs. Park contact persons were selected to act as liaisons between EPA and NPS. This program is integrated with the NPS-ARD air monitoring and research programs, and with the Service-wide Inventory and Monitoring Program.

Status: As mid-1999 all PRIMENet parks have installed UV-B monitors, in addition to wet and dry deposition instrumentation and meteorological towers.

EPA researchers will soon release the contaminants data collected in 12 of the PRIMENet parks during summer 1998. In 1999 we began a six-park study of UV-B dosimetry methods. Amphibian population data are being collected at three of these sites, coordinated with EPA and USGS researchers. The parks that have integrated UV and amphibian measurements are Glacier, Olympic, and Sequoia NPs; UV dosimetry extrapolations are taking place in Rocky Mountain, Acadia and Great Smoky Mountains NPs.

The third annual PRIMENet meeting will be held in November 1999 at Sequoia National Park. This meeting will include an update on research and monitoring, along with planning for additional amphibian and UV-B research in parks.

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