INTERAGENCY MONITORING OF PROTECTED VISUAL ENVIRONMENTS

IMPROVE

Volume 3, No.6 **Spring 1995** **July 1995**

IMPROVE MONITORING UPDATE

Preliminary data collection statistics for the Spring 1995 season (December, January, and February) are:

Data Type	Collection Percentage
Aerosol Data	97%
Optical (transmissometer) Data	90%
Optical (nephelometer) Data	92%
Scene (photographic) Data	92%

Figure 1 is a map of the current IMPROVE and IMPROVE Protocol sites. The CASTNet program has adopted IMPROVE optical and scene monitoring protocols but is using different aerosol monitoring techniques. Aerosol data for Summer 1994 are complete and seasonal summaries have been submitted to the NPS. Analytical results from one of the external laboratories are needed in order to complete the aerosol data and summaries for Fall 1994.

The Seasonal Summary Report of Nephelometer-Based Visibility Data for Winter 1995 was delivered to the NPS on May 30, 1995. The Seasonal Summary Report of IMPROVE Scene Monitoring for Winter 1995 was also delivered May 30, 1995.

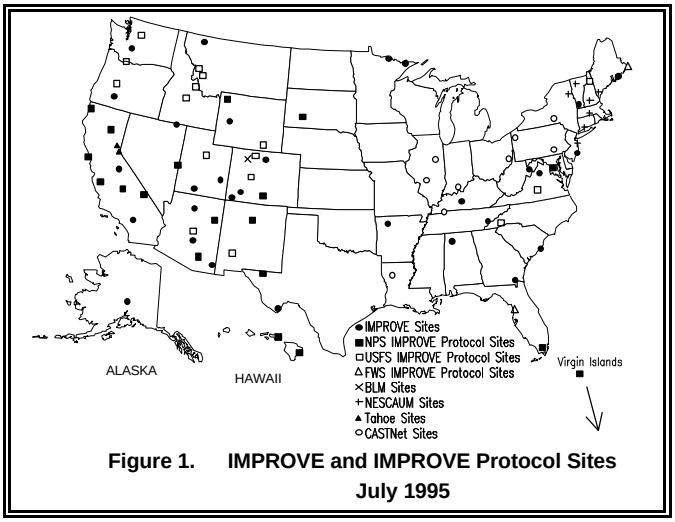

Figure 1. IMPROVE and IMPROVE Protocol Sites July 1995

VISIBILITY NEWS....

SPECIAL STUDIES

Southeastern Aerosol and Visibility Study

The Southeastern Aerosol and Visibility Study (SEAVS) is a partnership among electric utilities, the National Park Service (NPS), Electric Power Research Institute (EPRI), universities, and consulting firms. Its purpose is to enhance the understanding of fine particle characteristics and visibility under humid, summer conditions in the southeastern U.S.

The project will be accomplished in three steps over a 2 1/2 year period:

Step 1 - Develop reliable instrumentation to measure aerosol properties

Step 2 - Conduct a six-week measurement program in Great Smoky Mountains National Park

Step 3 - Produce and test air quality models to simulate the formation of aerosols and their optical properties

The six week field monitoring component of SEAVS began in mid-July at the Look Rock monitoring station in Great Smoky Mountains National Park. This field effort will apply a comprehensive array of synchronized monitoring equipment. Several instrument configurations were designed specifically for this study. Future study components will include comprehensive data interpretation and computer simulations of aerosol and optical properties.

For further information about SEAVS or to receive a copy of the EPRI SEAVS brochure, contact:

EPRI Project Managers:

Pradeep Saxena	415-855-2591
Mary Ann Allan	415-855-2765

National Park Service Manager:

William Malm	970-491-8292

Mt. Zirkel Reasonable Attribution Visibility Study

The summer monitoring intensive for the Mount Zirkel Visibility Study will occur during the month of August. Additionally, planning is underway for a fall intensive. Instrumentation for the summer and fall intensive will parallel the winter monitoring effort with the addition of an SO_2 analyzer and multi-wavelength, size selective nephelometer at the high elevation Buffalo Pass site and an ozone monitoring station at the mid-elevation of Hayden VOR site.

For more information about the study or to be added to the *Air Quality Impact in the Mount Zirkel Wilderness Area Newsletter*, contact:

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Colorado Department of
Public Health and Environment
303-692-3228

Feature Article

INTERPRETIVE VISIBILITY DISPLAYS IN OUR NATIONAL PARKS

Protecting the visual air quality of our national parks is a primary objective of the National Park Service (NPS). To provide park visitors with more information about visual air quality, the NPS uses a variety of interpretive displays. Interpretive visibility displays educate, inform, and raise levels of awareness at 53 national parks, national monuments, and national landmarks by:

- Informing visitors about the importance of good air quality as related to each park's unique resources.
- Enlightening visitors about how air pollution affects park resources (terrestrial, aquatic, scenic, and cultural)
- Describing the transport, transformation, and sources of air pollution affecting NPS resources.
- Providing information about conservation activities which can help alleviate air pollution in NPS areas.
- Describing statutory authorities which help the NPS protect air resources.
- Summarizing and presenting scientific knowledge about visibility

The displays are most commonly outdoor, wayside exhibits at prominent, popular view points, posters in visitor's centers and museums, or portable exhibits. In most displays, visitors can compare the scenic view they see with photographs of clearer or less clear vistas while they learn about changing conditions and possible causes. Knowing how a vista appears under varying atmospheric conditions and levels of pollution allows the visitor to better understand the conditions they observe. Many visitors are initially unaware of the unique terrestrial, aquatic, scenic, and cultural resources in the parks. Interpretive displays are an effective method of providing the visitor with more information about the natural areas they come to enjoy.

One of the most interesting and effective exhibits is at Yavapai Museum in Grand Canyon National Park. Current visibility data from a nearby transmissometer is transmitted hourly by radio to Yavapai Museum and displayed graphically on the wayside exhibit. Using radio or telephone links it would be possible to automatically provide visitors with current visibility, air quality, or meteorological conditions at popular visitor locations in almost any park unit. Although the Grand Canyon exhibit is unique, all of the displays provide information to increase public understanding.

A recent trip to Grand Canyon National Park emphasized the importance of interpretive displays. A retired couple from the eastern United States were admiring the magnificent vista from Yavapai Museum during their first visit to Grand Canyon National Park. Next to them was the automated interpretive display that updates the measured visual range every hour. They commented on their ability to see as far as 70 miles. As they read the display, however, they discovered that 70 miles was not as clear as the Grand Canyon vista could be. They were interested to learn that man-made pollution from near and far can reduce visibility in the Grand Canyon.

In addition to interpretive displays, the NPS uses a wide variety of interpretive techniques that include brochures, pamphlets, audio-visual programs, videos, technical papers, manuals, lesson plans, and personal contact. Through interpretive programs the NPS promotes public appreciation of the air quality conditions and effects in NPS areas. For more information contact:

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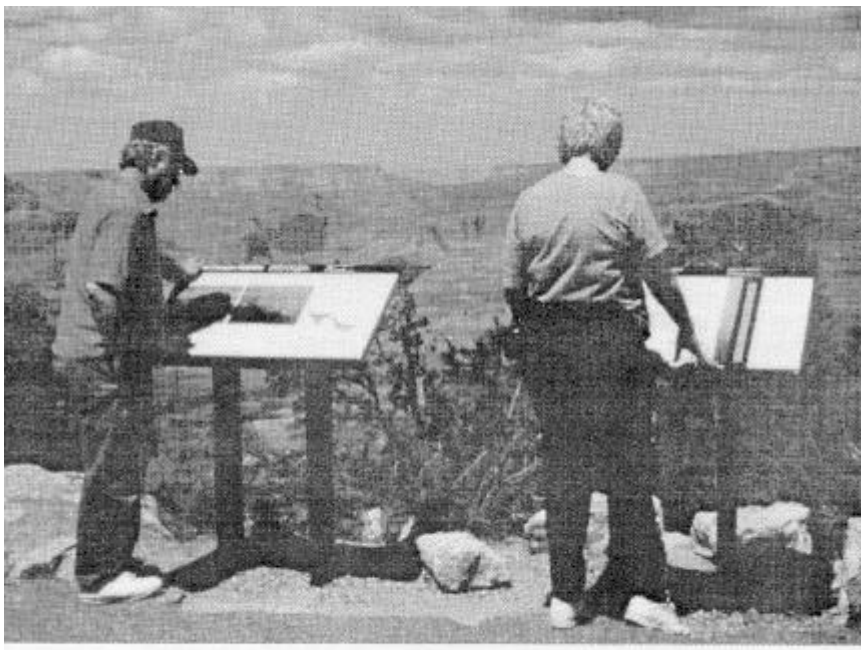
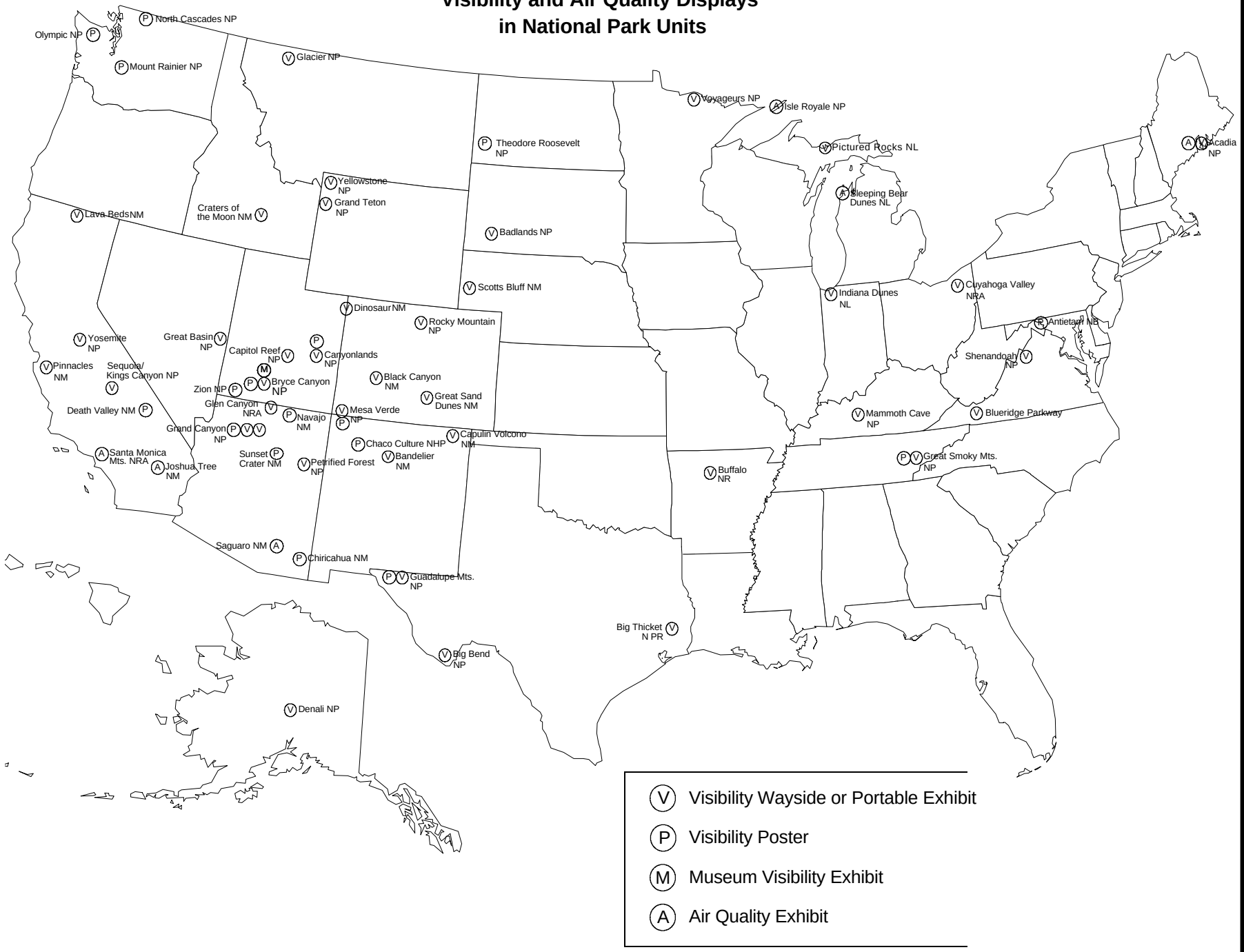


Interpretive Visibility Display at Yavapai Museum in Grand Canyon National Park

Visibility and Air Quality Displays in National Park Units



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IMPROVE Steering Committee members represent their respective agencies and meet periodically to establish and evaluate program goals and actions. IMPROVE-related questions within agencies should be directed to the agency's Steering Committee representative. Steering Committee representatives are:

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The next IMPROVE Newsletter will be published in October 1995.

Please Contact Us: If you know someone who would like to receive the newsletter or if you are no longer interested in receiving a copy, please call us at 970-484-7941. Your ideas and comments are always welcome. We continue to look for ways to improve the newletter and to provide you with interesting and pertinent information.

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For more information, address corrections, or to receive the IMPROVE Newsletter, contact:

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