INTERAGENCY MONITORING OF PROTECTED VISUAL ENVIRONMENTS

IMPROVE

Volume 4, No.3 Summer 1995 October 1995

IMPROVE MONITORING UPDATE

Preliminary data collection statistics for the Summer 1995 season (June, July, and August) are:

Data Type	Collection Percentage
Aerosol Data	94%
Optical (transmissometer) Data	95%
Optical (nephelometer) Data	93%
Scene (photographic) Data	86%

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 Winter 1995 (December 1994, January 1995, and February 1995) are complete and seasonal summaries have been submitted to the NPS.

Optical Visibility Reports Delivered

Nephelometer and transmissometer visibility data reports were delivered to the NPS on October 26, 1995. The nephelometer-based data cover the period Spring 1993 through Spring 1995; data from Spring 1993 through Winter 1995 were revised due to modified data processing procedures. The transmissometer-based data report covers the period Summer 1994 through Spring 1995.

IMPROVE Optical and Scene Monitoring Quality Assurance Documentation

Optical and scene monitoring and data reduction procedures of the IMPROVE program are fully documented in a set of Standard Operating Procedures and Technical Instructions. A newly revised version of this documentation has just been released. The Standard Operating Procedures (SOPs) describe general procedures, protocols, methods, schedules, responsibilities, etc. for a given class or group of related tasks such as Calibration of Optical Monitoring Systems. SOPs reference Technical Instructions (TIs) for more detail. Technical Instructions present the step-by-step procedures for a specific instrument, method, etc. such as Calibration of an Optec NGN-2 Nephelometer. A total of 17 SOPs and 63 TIs comprise the current set of documents and describe installation, routine monitoring, calibration, maintenance, and data reduction procedures of optical and scene instrumentation.

Update continued on page 3

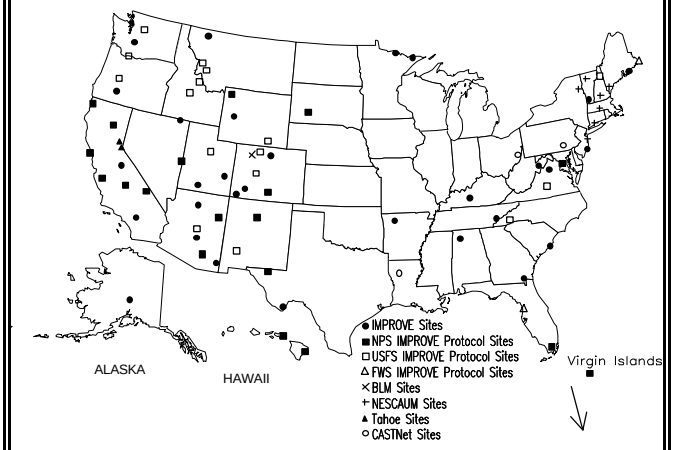

Figure 1. IMPROVE and IMPROVE Protocol Sites October 1995

VISIBILITY NEWS....

IMPROVE Newsletter Now on the Internet

The National Park Service Air Resources Division Home Page now provides access to the IMPROVE Newsletters. The text from all past issues is now on-line and both text and graphics of this and future issues will be available. Take time to browse the NPS Home Page to discover other important and interesting natural resource related information. You can reach the NPS Home Page at httl://www.nps.gov.

IMPROVE Video

A new video entitled *Meeting the Air Quality Challenge* is being developed by the IMPROVE program. This video highlights the IMPROVE monitoring methods and uses of IMPROVE data for research and regulatory applications. The video will be available early next year.

National Acid Precipitation Assessment Program

The National Acid Precipitation Assessment Program (NAPAP) is preparing an update to their 1990 State of Science and Technology Reports. Visibility was the subject of Volume III - Report 24 in the 1990 edition. Look for an update to this report in the near future.

For further information contact:

NAPDP Office of the Director
1110 Vermont Avenue NW Suite 810
Washington, D.C. 20005
202/296-1002

Visibility News continued on page 2

***Visibility News** Continued from page 1...*

IMPROVE Spatial and Temporal Patterns Report

The next edition of Spatial and Temporal Patterns and Long Term Trends of the Chemical Composition of Haze in the U.S. is nearing completion.

In the first of the IMPROVE Spatial and Temporal Patterns reports, National Park Service and CIRA (Cooperative Institute for Research in the Atmosphere) scientists compiled and analyzed IMPROVE and related historical data collected through 1990. The most recent report presents all data collected through 1994. Tabular and graphic displays in this comprehensive report highlight the spatial and temporal trends of visibility related data taken throughout the U.S. The report is currently undergoing peer review and will be available for general distribution within several months.

Grand Canyon Visibility Transport Commission (GCVTC)

The Grand Canyon Visibility Transport Commission (GCVTC) will conduct meetings in several locations to explain and obtain public comment on the commission's draft report, *Options for Improving Western Vistas*. The report, expected to be available by mid-November, will discuss and assess options for managing air pollutant emissions that contribute to haze in Class I areas on the Colorado Plateau.

The cities and dates where the meetings will be held are listed below:

Reno, NV	Nov. 27
Moab, UT	Nov. 28
Denver, CO	Nov. 28
Albuquerque, NM	Nov. 29
Las Vegas, NV	Nov. 29
Salt Lake City, UT	Nov. 30
Santa Fe, NM	Dec. 4
Phoenix, AZ	Dec. 4
Portland, OR	Dec. 5
Sacramento, CA	Dec. 5
Las Cruces, NM	Dec. 6
St. George, UT	Dec. 6
Rock Springs, WY	Dec. 6
Grand Junction, CO	Dec. 6
Flagstaff, AZ	Dec. 6
District of Columbia	Dec. 7
Los Angeles, CA	Dec. 7

For additional information or exact meeting locations, contact the GCVTC executive office at the Western Governor's Association, 303/623-9378.

SPECIAL STUDIES

Mount Zirkel Reasonable Attribution Visibility Study

The year-long monitoring component of the Mount Zirkel Reasonable Attribution Visibility Study is nearing an end. Annual monitoring began in December 1994 and will end November 30, 1995. Intensive monitoring periods were also conducted in February 1995, August 1995, and September 15 to October 15, 1995. Analyses of collected data are underway. The program plan calls for a final report to be compiled by June 1996.

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

Dan Ely
Colorado Department of Public Health
and Environment
303/692-3228

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 six-week field measurement component of the study was successfully conducted during Summer 1995 in Great Smoky Mountains National Park. Data analyses are now underway by the participating researchers.

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

Readers' Survey

The IMPROVE Newsletter has been published quarterly since March 1, 1992 (Premier Issue). As always, we encourage you, the readers of the newsletter, to let us know what type of information you would like to see in the newsletter and to contribute articles or article ideas to the newsletter at any time. We need your ideas, thoughts, and comments.

Please take a moment to complete the enclosed questionnaire and FAX your response to 970/484-3423, or fold and mail your response to the address on the reverse side of the survey.

Air Quality Study of the Northern Front Range of Colorado

During the 1995 Colorado Legislative session, House Bill 95-1345 was passed authorizing the Northern Front Range Air Quality Study. The primary goals of the study are:

- To determine the sources of existing air pollution in the Denver urban region, attributing to each identified source or source category an estimate of its particulate emissions, particulate precursors, and other substances; and
- To collect data necessary to support informed decision-making for the future, including measurement of existing exposure levels and the assessment of how best to meet state visibility goals and state and federal air quality standards.

Under the terms of House Bill 95-1345, the study will be jointly funded through private and government sector agencies, will be governed by a Technical Advisory Panel, and will be technically managed by Colorado State University. The study calls for both winter and summer comprehensive monitoring programs. Primary air quality and visibility monitoring and analyses components of the study will be carried out by a selected contractor or contractor team. Meteorological monitoring and analysis components of the study will be performed by NOAA. The study area extends from Parker Ridge south of Denver to the Cheyenne Ridge near the Wyoming/Colorado border and from the Continental Divide to Fort Morgan in eastern Colorado.

Colorado State issued an RFP on September 20 and proposals were due on October 18. The External Peer Review Committee and Technical Advisory Panel has since decided to reject all bids, to further analyze the project, and to issue a new RFP sometime in the future. The current schedule calls for a final report to be submitted to the Colorado State Legislature and the Governor by October 15, 1996, but the schedule could change as the program takes form.

Colorado State University has recently hired Doug Lawson as the Technical Project Manager. For further information on the study contact:

Doug Lawson, Ph.D.
Colorado State University
CIRA - Foothills Campus
Fort Collins, CO 80523
970/491-8233

Correction Notice

The previous issue of the IMPROVE Newsletter, Spring 1995, was incorrectly identified as Volume 3, Number 6.

Please note the correct identification for the Spring 1995 issue is Volume 4, Number 2.

Southern Appalachian Monitoring Initiative

The Southern Appalachian Mountains Initiative (SAMI) is a regional assessment effort to improve air quality through public and private cooperation in the Southern Appalachian region. Established in 1992, SAMI focuses on air quality issues in the Southern Appalachian Mountains, specifically the effects on visibility, water, soil, plants, and animals in an eight state region (Alabama, Georgia, Kentucky, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia). Unlike other regional programs, SAMI is a voluntary initiative not mandated by the Clean Air Act.

SAMI's mission is to identify and recommend measures to remedy existing and prevent future impacts of air pollution on the air quality-related values of the Southern Appalachians. The cooperative effort will consider both environmental and socioeconomic implications of any recommendations.

Phase one activities are currently identifying, gathering, and evaluating existing data, models, and studies to establish a foundation of knowledge and identify information gaps. Phase two activities will build an integrated framework to address environmental, social, and economic responses to changes in air emissions.

SAMI's Public Advisory Committee has developed a brochure and an executive summary that summarizes SAMI. For a copy of the documents, or for more information, contact:

Southern Appalachian Mountains Initiative
The Interchange Building
59 Woodlin Place
Asheville, NC 28801
Telephone 704/251-6889 or 704/251-6208
FAX: 704/251-6890 or 704/251-6452

***Update** Continued from page 1...*

IMPROVE Scene Monitoring Discontinued

The IMPROVE Steering Committee has recommended that visibility-related photographic monitoring be discontinued at all IMPROVE and IMPROVE Protocol sites that have at least a five year photographic record. Monitoring at two sites with more than a five-year record (Grand Canyon and Bryce Canyon National Parks) will continue to assess visibility issues in this sensitive area.

CASTNet Reduces Monitoring

Budgetary considerations forced a reduction in monitoring of CASTNet sites effective September 1, 1995. Monitoring at Connecticut Hill, NY ended while both the Arendtsville, PA and Quaker City, OH sites continue with reduced instrumentation. Monitoring at Sikes, Louisiana remains unchanged.

IMPROVE Newsletter
Readers' Survey
October 1995

To better serve your needs, we ask for your input on this survey. Please fax your completed survey to the number shown at the bottom or fold and mail the survey to the address on the back side.

1. What information are you most interested in receiving in the IMPROVE Newsletter?
   - ☐ IMPROVE monitoring updates ☐ Technical information and scientific findings
   - ☐ Feature articles on visibility issues ☐ Personal profiles of project participants, site operators, etc.
   - ☐ Visibility related news ☐ Monitoring site profiles
   - ☐ Special study updates ☐ News of meetings, conferences, and upcoming events
   - ☐ Other:_____

2. What do you like about the IMPROVE Newsletter?
   - ☐ Variety of articles ☐ Easy to read format
   - ☐ Articles are informative ☐ Information can be used for other resource documents
   - ☐ Articles are pertinent to my interests ☐ Frequency of publication
   - ☐ Other:_____

3 How can we improve the newsletter? (please check and circle appropriate responses)
   - ☐ News articles (more or less) ☐ Technical/scientific articles (more or less)
   - ☐ Increase the variety of articles ☐ Address issues pertinent to my needs (explain below)
   - ☐ Format (explain below) ☐ Frequency of newsletter (more or less often)
   - ☐ Other:_____

4. Do you have any general or specific ideas for feature articles, or would you like to contribute an article?

   _____

   _____

5. Other comments or suggestions? _____

   _____

   _____

   _____

6 Unless you inform us otherwise, you will continue to receive the IMPROVE Newsletter.
If you wish to be removed from the mailing list, please let us know by telephone or fax.

7. Do you know anyone else who would like to be added to the mailing list?

   _____ _____

   _____ _____

   _____ _____

   _____ _____

8. Please FAX your response to: IMPROVE Newsletter 970/484-3423

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Suite E
Fort Collins, CO 80525

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TO:

First Class Mail

IMPROVE STEERING COMMITTEE

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:

U.S. EPA /NOAA
Marc Pitchford
c/o Desert Research Institute
755 East Flamingo Road
Las Vegas, NV 89119
702/895-0432 (Phone)
702/895-0507 (Fax)

NPS
William Malm
NPS-AIR
Colorado State University
CIRA - Foothills Campus
Fort Collins, CO 80523
970/491-8292 (Phone)
970/491-8598 (Fax)

BLM
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Service Center (SC-212A)
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Denver, CO 80225-0047
303/236-6400 (Phone)
303/236-3508 (Fax)

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Air Specialist, Wash. Office
Rocky Mtn. Experiment Sta.
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Fort Collins, CO 80526
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Fish and Wildlife Service
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303/782-5493 (Fax)

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503/220-1651 (Fax)

The next IMPROVE Newsletter will be published in January 1996.

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 newsletter and to provide you with interesting and pertinent information.

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Suite E
Fort Collins, CO 80525

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Your input to the IMPROVE Newsletter is always welcome.

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

Air Resource Specialists, Inc.
970/484-7941 Phone
970/484-3423 Fax

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