

## **IMPROVE Steering Committee Meeting Summary**

### **March 17, 1988**

A meeting of the IMPROVE Steering Committee was held at the NPS offices in Ft. Collins, CO on March 17, 1988. A copy of the meeting agenda and a list of participants are attached.

David Dietrich and John Molenaar of Air Resource Specialists, Inc. of Ft. Collins, and Robert Eldred of the University of California at Davis were available for part of the meeting to brief the steering group on the deployment and operation of the IMPROVE visibility and particle monitoring systems.

The primary objectives of the meeting were to clarify the contribution of participant funds for IMPROVE, to identify impacts of funding changes, and to communicate the status of the monitoring program and other IMPROVE activities.

### **IMPROVE Funding Outlook**

A concern developed for the EPA portion of the funds for the IMPROVE Program this year. In January the EPA funds from the State Grant Program were cut and in particular the \$479K designated for the IMPROVE Program were eliminated. By March, the funds for the state grant program were restored and the contribution to the IMPROVE Program set by EPA at \$300K. EPA proposed to minimize the impact of this lower funding level by making next years' contribution of \$479K much earlier in the fiscal year (the \$400K is anticipated to allow the originally scheduled operations until December 1988).

EPA does not expect to continue funding the IMPROVE Program from the State Grants funds beyond its Fiscal Year 1989 contribution. By that time, EPA anticipates that states will be able to initiate their own programs for gathering the required data. In some states this could mean supporting the land manager in the operation of an already existing monitoring site. However, this may not be the case for many of the states. The implications of this were the subject of discussion by the steering committee. The next few paragraphs is a summary of that discussion.

There are several important advantages to a unified visibility monitoring program for visibility protected Class I areas compared to individual state programs. These include a significantly higher degree of data comparability, cost efficiency, and management simplicity.

It would be unlikely that the land managers could successfully recoup the \$479K per year by negotiating with each of the states that are due to receive in FY-1990 a share of the visibility monitoring presently contributed to IMPROVE. Other possible approaches to obtaining the funds to continue a unified approach include: negotiating for state support from an appropriate organizations of states (e.g., State and Territorial Air Pollution Program Administrator-STAPPA), increase FLM budget support, or solicit a more appropriate EPA program for support.

A document describing the need for monitoring, the advantages of a unified approach, the technical approach, and the associated costs will be required to pursue sources of additional support. The need for monitoring would not be limited to the phase I visibility monitoring needs as was the case when the IMPROVE Program was initiated. Nor would the technical approach be limited to a description of the IMPROVE Program, though the IMPROVE long-term network would probably be the core around which the monitoring approach would be built.

David Joseph agreed to head an effort to prepare the above mentioned proposal. Assisting him are Tom Pace and Neil Berg with support as requested from any of the other steering committee members. The first step is the preparation of an outline and writing assignments for review by the participants.

### **Monitoring Program Status**

Monitoring is being conducted at all of the long-term sites except for the Superstitions Wilderness Area where vandalism is chronic and determined. The steering committee directed UCD and ARS to investigate Tonto National Monument, a few miles north of the Superstitions Wilderness and a site for the earlier EPA/NPS fine particle monitoring program, to see if it is a suitable alternative sites. If Tonto is inappropriate for a transmissometer (requiring security at both ends of the instrument) but available for the particle sampler, particle sampling and photography would be conducted there and the transmissometer would be made available to some other location. If Tonto is not appropriate for any monitoring an alternative location will be selected by the steering committee.

Six of the twenty IMPROVE long-term monitoring sites have transmissometers (two additional non-IMPROVE NPS sites have transmissometers). Full deployment of these instruments at all of the sites is scheduled for completion by spring of next year. Deployment is lagging behind the schedule due to manufacturer delivery delays. The earliest expected delivery for the next three transmissometers is this May. Until full deployment, sites without transmissometers will document optical conditions with photography from which an estimate of the extinction coefficient can be calculated.

A meeting to review the results to date of the reasonably attributable monitoring by IMPROVE was held on March 17<sup>th</sup> and was summarized at the steering committee meeting. EPA is required to indicate in the federal register by August 31, 1988, what it intends to do at those locations where the FLMs have identified impairment. IMPROVE established surveillance programs at several of these locations to aid in determining the existence, nature, and extent of the impairment.

Photography at Voyageurs and Petrified Forest were inconclusive. At the former it is hard to distinguish impairment from the dark bottoms of clouds. At the latter there may be impairment, however it is difficult to determine how the source of the impairment could be identified from the photography. However, time-lapse photography at Moosehorn Wilderness Area indicates frequent intense plumes that appear to impact the protected area from a single emission source.

ARS was asked to summarize by May 1<sup>st</sup>, the photo-surveillance monitoring at Voyageurs, Petrified Forest, and Moosehorn in a series of brief reports. The reports are to indicate the nature and frequency of impairment (or possible impairment) as documented photographically and to contain example photos.

The final attribution investigation discussed was the WHITEX special study that was co-sponsored by SCENES and IMPROVE. The preliminary data analysis suggest that the Navajo Power Generating Plant is impacting the Grand Canyon. It was felt that an additional study that would take advantage of the information learned in WHITEX would be worth the time and resources required in order to better understand the nature and extent of the Navajo's influence.

**Other Activities**

There are a number of contracts that were reported on by David Joseph. The effort at SAI to adapt the Level I and II screening process for use on a PC is expected to be complete in May and to be presented as a paper at a modeling conference in late summer. The catalog of predictive models in which each model features are summarized in résumé format is proceeding slowly. The DRI contract to develop procedures to document reasonably attributable impairment is running about six months behind the original schedule. The latest completion date from DRI is next month.

A plan to prepare the long-overdue progress report for IMPROVE was approved by the steering committee. The plan is attached.

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## **IMPROVE Steering Committee Meeting Agenda**

Dates: March 17, 1988  
Location: NPS conference room at the CIRA building on the Foothills Campus  
Fort Collins, CO

### March 17

9:00 am	Update of participants' visibility related activities (lawsuits, permits, regulations, etc.)	David Joseph, David Stonefield, and James Byrnes
10:00 am	Funding situation for FY-88 and FY-89	David Stonefield, David Joseph, and James Byrnes
10:30 am	Consequences and options for long-term and existing impairment monitoring programs	William Malm
12:00 pm	Lunch	
1:30 pm	Update on long-term and impairment monitoring activity and results to date	John Molenaar and Thomas Cahill
2:30 pm	Data reporting and quality assurance requirements for the long-term network	Marc Pitchford
3:00 pm	Adjourn	

**IMPROVE Steering Committee Meeting Participants**  
**March 17, 1988**

<u>Name</u>	<u>Organization</u>	<u>Phone</u>
William Malm	NPS, Ft. Collins, CO	303 491-8292
David Joseph	NPS, Denver, CO	FTS 327-2071
Brian Mitchell	NPS, Denver, CO	FTS 327-2071
Bud Rolofson	FWS, Denver, CO	FTS 327-2071
Richard Fisher	FS, Ft. Collins, CO	FTS 323-1232
Al Riebau	BLM, Denver, CO	FTS 776-1762
David Stonefield	EPA, Durham, NC	FTS 629-5540
Tom Pace	EPA, Durham, NC	FTS 629-5634
Neil Berg	EPA, Durham, NC	FTS 629-5651
Marc Pitchford	EPA, Las Vegas, NV	FTS 545-2363

## Approach for Preparing an IMPROVE Progress Report

The goal of the progress report is to provide a complete though brief description of IMPROVE activities and plans. The document should not require a specialized understanding of visibility theory or practice to be readable.

Two previous documents which describe IMPROVE can be used as a source of some of the information needed. They are "Visibility Monitoring Plan for Class I Areas" and "Plans for IMPROVE."

### Proposed Structure

- I. Introduction
  - A. Statement of the goals of the report (bullets).
  - B. Legislative, regulatory, and judicial (law suits) background.
  - C. Rational for multiagency approach from FLM and EPA points of view.
  - D. Statement of the goals of IMPROVE (bullets).
  - E. Statement of the approach (bullets).
  - F. Responsibilities of the IMPROVE Steering Committee (also the use of contractors).
- II. Background Monitoring Network
  - A. Site selection and description (may of sites and as an appendix, a detailed site description).
  - B. Monitoring techniques (instruments and particle analysis tables).
  - C. Quality assurance.
  - D. Data processing and reporting (example standard outputs).
  - E. Status of deployment, operation, data availability.
  - F. Status of IMPROVE look-a-like sites (NPS, Lake Tahoe, Vermont?, etc.).
- III. Impairment Attribution Monitoring {B,C,&D organized by Class I area}
  - A. Process to identify and document suspected impairment (DRI report).
  - B. Class I areas involved and nature of impairment.
  - C. Site-specific nature of studies (maps with protected area, suspected sources, and equipment location).
  - D. Status of monitoring and results.

### Proposed Division of Labor

Editors:

Marc Pitchford & Tom Pace

Contributing Authors:

- I. Introduction—David Joseph (with assistance by Richard Fisher, Bud Rolofson, Scott Archer, and David Stonefield on section I,C.)
- II. Background Mon.—Marc Pitchford & William Malm
- III. Impairment Att. Mon.—David Joseph for section III,A and the FLM steering group representatives for their areas with monitoring (sections III,B,C,&D)

Technical Assistance and Contributions:

Air Resource Specialists, Inc.; University of California,Davis; and Desert Research Institute.

### Proposed Schedule

1. Contributing authors submit drafts of their sections to the editors by 4/22/88.
2. Editors prepare draft report for internal (steering group) review by 5/12/88.
3. Progress report available for outside review by 6/15/88.