

## **IMPROVE Steering Committee Meeting Summary**

### **February 24-26, 1986**

The fourth IMPROVE Steering Committee Meeting was held February 24-26, 1986, at the National Park Service office in Ft. Collins, Colorado. The purpose of this meeting was to discuss and determine the overall information requirements for the visibility protection program, to identify sources of data (including the IMPROVE Program) evaluation methods and their adequacy, and to evaluate resource requirements. An outline for a report on the requirements and status of visibility information was developed (see outline below). The NPS offered to contract the writing of this report. In response to the need to develop an approach for investigating existing visibility impairment in protected areas, the steering committee committed to plan and conduct a prototype study (funds permitting).

### **Information and Methods Requirements and Status for the Visibility Protection Program**

- I. New Source Review
  - A. Background evaluation
    - 1. Characteristics
      - a. Existing and estimated “natural” levels
      - b. Optical, aerosol (concentration and composition) and NO<sub>2</sub>
      - c. Multiyear
    - 2. Requirements
      - a. Coverage at all protected areas (priority ordered)
      - b. Minimum standards for quality, quantity, and representativeness
      - c. Permit authority consultation with FLM information
    - 3. Information sources
      - a. Federal – IMPROVE, EPA, FLM, NWS, acid deposition, etc.
      - b. State and local
      - c. Private – permit applicant, others as appropriate
  - B. Impact analysis (both single and cumulative impacts)
    - 1. Characteristics
      - a. Multilevel – screening and more refined
      - b. Multiscale – plumes, layers, regional, etc.
      - c. Ability to handle terrain and meet conditions such as trapping and stagnation
      - d. Able to handle secondary and fugitive emissions
      - e. Incorporates sensitivity analysis and error propagation
      - f. Output consistent with computer imaging techniques
    - 2. Information requirements
      - a. Source characteristics
      - b. Meteorology
      - c. Scenic vista characteristics
      - d. Background data (from I.A. above)
    - 3. Process requirements
      - a. Performed only as needed
      - b. Minimum standards for model and input data quality and representativeness
      - c. Permit authority consultation with FLM

- II. Existing impairment investigation
  - A. Identification of suspected impairment
    - 1. FLM responsibility
    - 2. Human observation
  - B. Documentation/certification
    - 1. Characteristics
      - a. Photograph or instrumental measure supplemented by photo (trained observer rejected)
      - b. Shows intensity, duration, frequency, and location
      - c. IMPROVE responsibility
    - 2. Requirements
      - a. Performed at all impairment identified areas in priority order
      - b. Minimum standards for quality, quantity, and chain of custody
  - C. Attribution
    - 1. Characteristics
      - a. Contiguous plume documentation or
      - b. Extinction budget/source apportionment analyses
      - c. IMPROVE responsibility
    - 2. Requirements
      - a. Performed at all impairment certified areas
      - b. Minimum standards for quality, quantity, and chain of custody of data employed
      - c. Sensitivity/error propagation analysis
  - D. Analysis of control measures
    - 1. EPA responsibility
    - 2. Engineering and modeling approach
- III. Long-term strategy
  - A. Annual evaluation and report
    - 1. Trends, status, and change – optical and aerosol
    - 2. Status and schedule for new source review analysis and existing impairment investigations
  - B. Evaluation and report (3-year cycle)
    - 1. Effectiveness of implemented control measures (uses monitoring data)
    - 2. Effectiveness of candidate control measures (modeling)
- IV. Development requirements
  - A. Monitoring (optical and aerosol)
    - 1. Improved technology
    - 2. Testing and evaluation
    - 3. Performance standards
    - 4. Guidance documentation
  - B. Modeling
    - 1. Improve and extend simulation capability and output utility
    - 2. Testing and evaluation
    - 3. Performance standards
    - 4. Guidance documentation

- C. Human perception
  - 1. Identify appropriate parameters, relationships, and levels
    - a. Monitoring
    - b. Modeling
    - c. Regulation
- D. Source attribution
  - 1. Improved methodology
  - 2. Testing and evaluation
  - 3. Performance standards
  - 4. Guidance documentation

**Other Items**

The steering committee agreed to support the planning and implementation of the documentation and attribution phases of an investigation of suspected existing impairment. FLM members of the committee will make recommendations concerning the most appropriate protected area for this effort for consideration prior to the next meeting. A study plan will be developed which will include resource requirements. The steering group agreed that funds needed for this effort should not be taken from those previously identified for the IMPROVE long-term monitoring program.

The NPS offered to task one of their contractors to prepare a report based upon the outline shown above. Some portions of the report may be written by NPS personnel. Among other things the document should be written as an aid to those who must implement visibility regulations. It should include sources and characteristics of available data and a discussion of the advantages, limitations, and data requirements of the various analysis approaches.

Funds transfer to NPS from EPA should occur in March. Development and review of the statements of work for the IMPROVE and auxiliary NPS monitoring program is progressing as expected. Contracts should be in place by the end of the summer.

Proposal evaluation will begin prior to the next meeting and should be finalized at that meeting.

**Action Items**

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|---------------------------------|---|
| Marc Pitchford and David Joseph | Develop and refine the outline "Requirements and Status" for circulation in the meeting summary by 3/7/86 |
| Marc Pitchford                  | Prepare a draft meeting summary by 3/12/86  |
| William Malm and Marc Pitchford | Prepare a task assignment for preparation of the "Requirements and Status" report by 3/14/86              |
| FLM participants                | Identify candidate areas for the prototype study of existing impairment by 3/28/86                        |

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## **IMPROVE Steering Committee Meeting Agenda**

Dates: February 24-26, 1986

Location: National Park Service office in Ft. Collins, CO

### February 24

- 1:00 pm Introduction
- 1:15 pm Review of visibility data requirements
- 2:00 pm Design criteria for data collection, interpretation, and handling
- 3:00 pm Break
- 3:15 pm Discussion of sources of visibility data (IMPROVE and non-IMPROVE)
- 5:00 pm Adjourn

### February 25

- 8:00 am Discussion of criteria for studies of existing impairment
- 10:15 am Break
- 10:30 am Discussion continued
- 12:00 pm Lunch
- 1:30 pm Discussion of sources of visibility data on existing impairment (IMPROVE and non-IMPROVE)
- 3:00 pm Break
- 3:15 pm Discussion of resource requirements, roles, and responsibilities
- 4:00 pm Summary and action plan
- 5:00 pm Adjourn

### February 26

- 8:00 am IMPROVE unfinished business

Note: Some of these discussions will involve the legal and policy implications of EPA's implementation of visibility Part II requirements. Members involved in this program should plan to meet with Janet Metsa on Feb. 26.

**IMPROVE Steering Committee Meeting Participants**  
**February 24-26, 1986**

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