Particulate Matter Research Centers 2005 - 2010

Kick-Off Meeting,

Nov. 30 – Dec. 1, 2005

Research Triangle Park, NC

Gary Foley, Director

National Center for Environmental Research

PM Centers 2005 – 2010

- Harvard University
- Johns Hopkins University
- University of California – Davis
- University of California – Los Angeles
- University of Rochester

PM Centers Meeting in RTP: A First

- Annual meetings held at different PM Center locations.
  - Last year's finale in Washington DC
- Meeting in RTP reflects this year's theme: Fostering interaction among the Centers and EPA

RESEARCH & DEVELOPMENT

Building a scientific foundation for sound environmental decisions

NCER's Research Priorities

- **Particulate Matter**
- **Drinking Water**
- **Global Change**
- **Ecological Services**
- **Human Health Research**
  - **Children's Health**
- **Endocrine Disrupting Chemicals**
- **Computational Toxicology**
- **Economics and Decision Sciences**
- **Pollution Prevention, Sustainability**
- **Nanotechnology**

Past 5 years: Successful PM Centers program

- High visibility and stature in the scientific community
- Major contributions to the scientific knowledge base for the PM standard and implementation
- Significant contribution to our external reviews with Board of Scientific Counselors (BOSC)
- Important in OMB's review of the EPA Air Research Program

PM Centers and EPA research: significant advances in a short time

Some examples

- PM effects observed in epidemiological studies now believed to be biologically plausible
- Role of PM in cardiovascular disease (not just respiratory) represents major shift in thinking -- new involvement of cardiovascular researchers in air pollution research (EPA/PM Centers workshop 2001)
- Use of ambient concentrations in time-series analyses of $PM_{2.5}$ deemed a “relevant metric for public health.” (NRC 2004)
- Elevating the importance of motor vehicle sources, near roadway exposures
- Leading a systematic approach to analyzing source apportionment models (EPA/PM Centers workshop 2003)

Research Outcome Questions

- Who (plural) will use the results?
- How will they use the results?
- Over what period of time, will they use the results?
- What environmental benefits will result from all the uses?
- How will these uses/benefits be measured?

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Evaluating success of PM centers five years from now…

- **Which sources and components of PM are responsible for the greatest risks? How does this vary regionally?**

  ….so that air quality managers can target sources for control

  ….so that policy makers have better information with which to consider future NAAQS decisions

- **How do specific types/components of PM cause or worsen particular illnesses? Who is most affected?**

  ….so that the medical community can advise patients with different illness about reducing the impacts of air pollution

Evaluating success
(cont'd)

- **What innovative approaches for data management/analysis/dissemination will be developed?**

  … so that real-time information can positively affect public health actions

- **What else will we get from PM centers five years from now?**

Best way to get there quickly – working together

- Theme of this meeting:

  promote interaction among scientists to help get to these answers more quickly

- Interaction and coordination among the PM Centers and with EPA is a high priority

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Air Quality & Health Community of Practice

The Public
Public Officials
Advocacy Groups