



Training Continues as Cornerstone

MARAMA Develops Course on 3 Standards for Hazardous Air Pollutants

Continuing to serve the region's training needs, MARAMA's Training Committee identified the need for a Maximum Available Control Technology (MACT) course focusing on three recently promulgated MACTs: Hazardous Organic NESHAP (HON), Polymer Resin, and Miscellaneous Organic Chemical Production and Processes (MON). While developed specifically for MARAMA members, the course was also designed to be used nationally.

Structured for classroom use, the course included a mix of instruction and trainee participation. Participants were encouraged to submit specific case studies in advance so they could be addressed during the course.

Taking a New Approach to helping States Get Training

MARAMA assisted five member agencies in offering EPA Region III's High Priority Violators (HPV) Policy Course. EPA presented the new course in Virginia, Maryland, Delaware, Allegheny County and Pennsylvania over a five month period. MARAMA's support ranged from arranging for use of state facilities to handling registration and course publicity. A total of 148 members attended, and all agencies were represented.

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**Summary by
Event Type and Number of Participants**

Training: 492 attendees at 17 offerings
These are courses or issue specific workshops that provide specific technical and policy training.

Regional Coordination: 388 attendees at 13 events
These events foster interaction, both technical and policy among MARAMA members and also between our members and professionals across the United States.

National / Regional: 76 attendees at 14 events
MARAMA support for these events ranges from sending member agency staff, to providing logistical and planning support.

2005 Training Planned

Each year MARAMA assesses its member's training needs. During 2004 this process took place under the auspices of EPA and STAPPA/ALAPCO's Joint Training Committee (JTC). Based on the review, MARAMA was pleased to set its 2005 Training Schedule, which is available on our website at www.marama.org/calendar.

National coordination also allows us to take advantage of courses developed by other regional organizations, such as the Best Available Control Technology course we held in July 2004. This course was originally developed for WESTAR by RTP Environmental Associates, Inc. At MARAMA's request the instructors added a section on Best Available Retrofit Technology to better serve the region's needs regarding upcoming regional haze plans.

On the national needs assessment stage, MARAMA took the lead in designing and compiling statistics on National Training Grant funds. The statistics allow the JTC to gain a better understanding of how each organization uses its training dollars.

2004 Training Event Snapshots

- Most popular workshop in 2004 - New Source Review/Prevention of Significant Deterioration, with 67 participants. Thanks to EPA Region III and Virginia's Department of Environmental Quality for helping organize this successful event.
- Booked Solid - CARB 200 level courses on Stationary Reciprocating Engines, Baghouses, VOC Control Devices, and Dry Cleaning, as well as the BACT Determination Course presented by RTP Environmental Associates, Inc. were completely filled.
- MARAMA sponsored seventeen courses in 2004. Ten were CARB courses with a total of 244 participants, and three were Rutgers courses with a total of 97 participants.

Event Summary By Jurisdiction

FY 2004	Number of Events Held in Each Member Jurisdiction	Number of Members Supported from Each Jurisdiction
Allegheny County	0	22
Delaware	0	88
District of Columbia	3	34
Maryland	10	86
New Jersey	4	110
North Carolina	2	35
Pennsylvania	6	142
Philadelphia	6	40
Virginia	4	135
West Virginia	0	38

Another 148 MARAMA members attended the HPV Policy Course. Two hundred twenty six participants from outside MARAMA also attended events within our member jurisdictions.

Strengthening PM_{2.5} Forecasting in the Region

MARAMA's PM_{2.5} forecasting project developed PM_{2.5} forecasting tools for nine forecast areas. Prototype tools were delivered to MARAMA forecasters in September 2003 before EPA launched year-round forecasting. Enhanced and refined tools were delivered to MARAMA forecasters in October 2004. The project included an analysis of PM_{2.5} monitoring and meteorological data using statistical software and the development, testing, and evaluation of each interactive forecasting tool. The project provided insights into the general nature of fine particle pollution in the region. Some of the findings of the forecasting work are summarized below.

- High PM_{2.5} days occurred more frequently in the northern part of the region and within the larger metropolitan areas than in southern, less urban areas of the region.
- Most “Unhealthy for Sensitive Group” (USG) days occurred during the late spring and summer.
- There appears to be a regional component to PM_{2.5} pollution in areas from Washington northward.
- Many high PM_{2.5} days were associated with a stationary or slow-moving high-pressure system over the forecast area.
- In most areas, there are different types of high PM_{2.5} events distinguished by stability characteristics and wind directions.
- The characteristics of high PM days vary with the season.

The data and findings of this project help explain the nature and extent of the PM_{2.5} problem in the forecast areas. Report findings can be used by state air quality agencies to help develop “weight-of-evidence” analyses to support PM_{2.5} State Implementation Plans (SIPs).

Fine Particle Data Analysis Draft Report

Air quality forecasters need to know today's PM_{2.5} concentration to predict tomorrow's PM_{2.5} concentration. Ideally, forecasters would like to have data from Federal Reference Method (FRM) monitors to prepare their forecast.

Unfortunately, same-day FRM data is not available to forecasters because of the time needed to analyze FRM samples. Continuous PM_{2.5} monitors, on the other hand, make and report measurements almost immediately. Data from continuous monitors can be used to forecast air quality if it is correlated to data from FRM monitors.

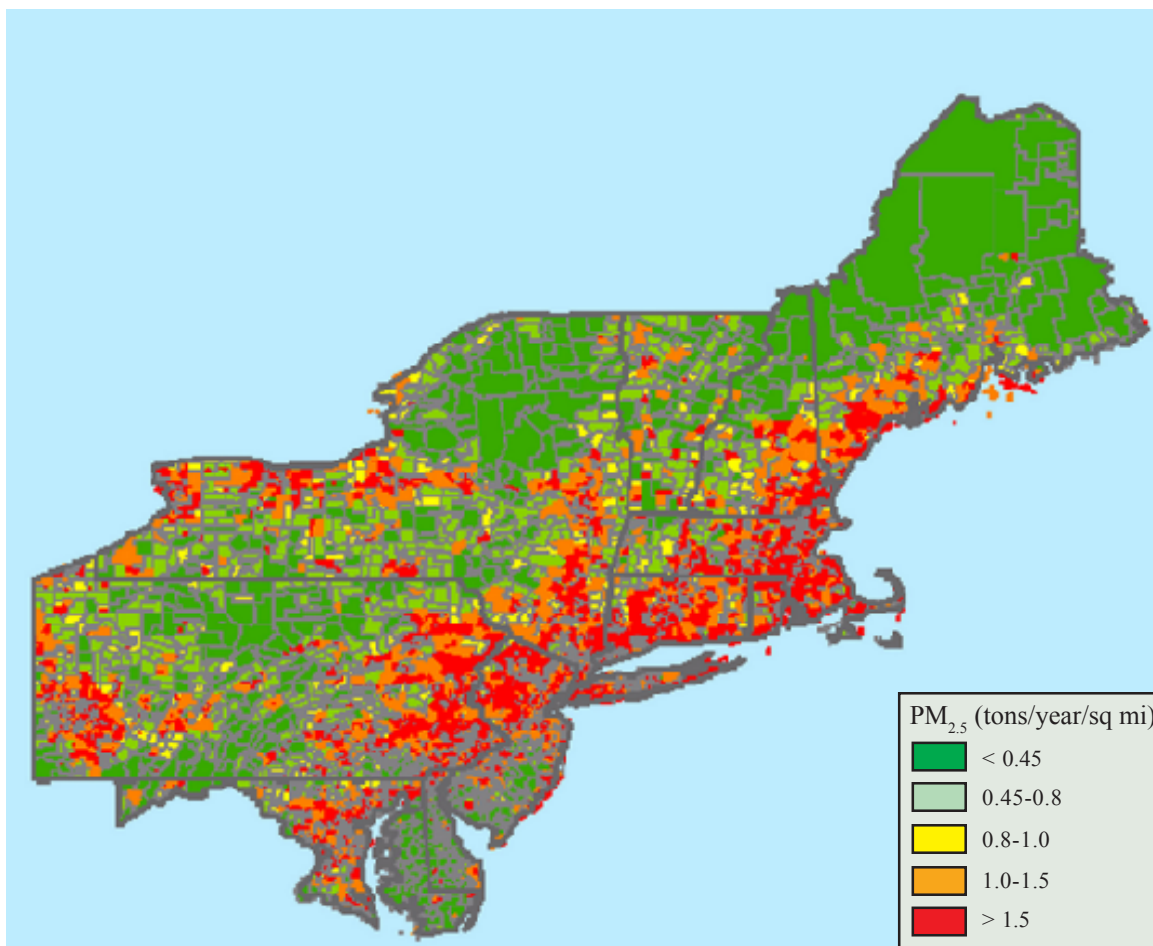
To assist forecasters with the needed correlation, MARAMA analyzed data from FRM and continuous monitors in the region and prepared a draft report titled *Correlating Federal Reference Method and Continuous PM_{2.5} Monitors in the MARAMA Region*.

Improving the Emission Inventory

Emissions inventory development is an important step in helping MARAMA members develop State Implementation Plans (SIPs). MARAMA's work to prepare and improve regional inventories will support modeling and analysis for 8-hour ozone SIPs as well as the fine particle ($PM_{2.5}$) modeling needed for $PM_{2.5}$ and regional haze SIPs. Data about the same pollutants from sources throughout the region is needed for each state's work. Most of MARAMA's work on emissions inventories has been supported by grants from the Mid-Atlantic/Northeast Visibility Union (MANE-VU), whose membership includes all but three MARAMA states. All MARAMA members will be able to use data from the MANE-VU-sponsored work, since air quality modeling areas cross regional boundaries.

Improving Residential Wood Combustion Data

The recommended approach to estimating emissions from residential wood burning includes a survey to estimate the amount of wood burned and the type of equipment used (fireplaces, stoves, etc.). These surveys are expensive and time consuming, and most states have not conducted them, so there has been a lot of uncertainty about estimates of emissions from residential wood burning.



2002 $PM_{2.5}$ residential wood combustion emission density map for indoor woodburning equipment for MANE-VU Region

In 2001 MARAMA began a major survey and emissions inventory project to help MANE-VU members improve their estimates of woodburning emissions. Survey design and testing were undertaken in 2001-2002, and a regional survey was conducted in early 2003. In 2004 the revised inventory was developed by MARAMA's contractor, E.H. Pechan and Associates.

The MARAMA emissions estimates were much larger than the previous EPA estimates of emissions from residential wood combustion for the region because the MARAMA inventory included more types of wood burning equipment and updated estimates of the type and amount of wood burned. A major improvement in the MARAMA inventory was the detailed geographic distribution of emissions, which enabled MANE-VU states to correct previous over-allocations of emissions to urban areas.

Preparing Regional Modeling Inventories

Also with support from MANE-VU, MARAMA contracted with E.H. Pechan and Associates to help organize state and national emissions estimates into a regional inventory that can be used to model the 2002 baseline year for SIP development. Working closely with state and EPA representatives, MARAMA designed a process to expedite the preparation of a quality-assured regional inventory in time to support regional haze modeling scheduled to begin early in 2005.

The regional inventory will include emissions from point sources (e.g., power plants and other industrial facilities), area sources (smaller facilities such as dry cleaners, home heating, etc.), and mobile sources (such as cars, trucks, locomotives, off-road vehicles, etc.).

The starting point for the regional inventory was emissions estimates prepared by the states as required by EPA's Consolidated Emissions Reporting Rule. States retain the responsibility and authority to determine the methods and data used for sources in their jurisdictions. The contractor worked with the states to fill gaps in the inventory, review any questionable data and correct mistakes, and provide additional data needed to improve estimates.

Review of Emissions Inventory

In response to a request from stakeholders, MARAMA managed a public review of MANE-VU's draft Emission Inventory during 2004. Tasks included working with states to identify the best mechanism to take and review comments and notifying stakeholders of the process. The states and MARAMA sent notices alerting stakeholders of the opportunity to comment. The appropriate state then directed MARAMA how to address any comments.

2004 Outstanding Service Award Board Recognizes Roger Thunell for Contribution to Regional Inventory Work

Helping the entire region, Roger converted a large database into the format needed for state SIP submittals. He also identified significant corrections needed in contractor work products, improving data for the Mid-Atlantic/Northeast Visibility Union (MANE-VU) region. Roger is with the state of Maryland.

- Thanks, Roger!

Assisting States in Preparing Regional Haze SIPs

Development of a Regional Haze SIP Template

As states move towards 2008 there is much to accomplish in preparing their first regional haze State Implementation Plans (SIPs). To assist the states, MARAMA developed a Draft SIP Template with assistance from lead SIP writers from Maryland, New Jersey, Pennsylvania, the Visibility Improvement State and Tribal Association of the Southeast (VISTAS), and the Western States Air Resources Council (WESTAR). We began with the Regional Haze SIP Template produced by WESTAR in 2001. MANE-VU's draft template was submitted for federal agency comments in March 2004.

This project was an excellent opportunity for states to gain insight into issues that may arise in developing regional haze SIPs. EPA expressed support for compiling SIP Templates as planning tools for regional haze efforts. MARAMA also received requests for the document from the U.S. Forest Service Southern Region. Late in 2004 the Template was posted for public comment and will continue to be refined and updated as various SIP components are completed.

Getting Feedback from the Public

MARAMA collaborated with the Ozone Transport Commission (OTC) and the Northeast States for Coordinated Air Use Management (NESCAUM) to ensure MANE-VU members were well served by the public participation process.

As part of the regional planning process for haze, MARAMA states as members of MANE-VU developed a set of guiding principles for taking SIP elements before stakeholders for review. This process makes every effort to have items reviewed early, take comments into account, and provide a Summary of Comments and Responses.

MARAMA used this process to help MANE-VU receive and review comments on natural visibility. NESCAUM developed a technical analysis of natural background visibility and a proposed an approach for MANE-VU. MARAMA organized a review process including a briefing on March 17, 2004, followed by a public comment period. The recommended approach to defining Natural Background visibility was accepted at the MANE-VU board meeting on June 10, 2004.

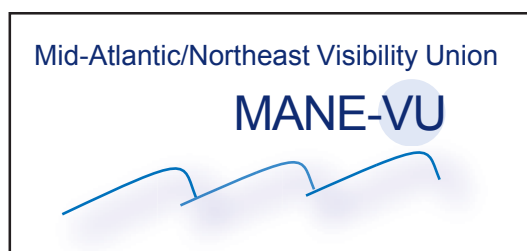
MANE-VU Stakeholder Database

MARAMA maintains a database of stakeholders who are notified of opportunities to comment on draft MANE-VU documents and public meetings.

Please send database additions, deletions, or corrections to Katie Sheen Abbott at ksheen@marama.org.

Crafting a Clear View Message

MANE-VU's interaction with outside groups increased dramatically during 2004 due to public participation opportunities as well as periodic updates on regional haze activities sent to stakeholders. To help brand MANE-VU as an organization, MARAMA worked with OTC to develop a MANE-VU logo and tagline. MARAMA staff developed a series of draft logos ranging from modern to transitional design. The example here is the logo selected for current use.



MARAMA Members Coordinate Petroleum Industry Approaches

In early 2004 MARAMA released the report *Evaluating Petroleum Industry VOC Emissions in Delaware, New Jersey, and Southeastern Pennsylvania*, noting that while the VOC estimation methods used are generally sound, there remain opportunities to improve the quality and comprehensiveness of available information related to VOC refinery emissions. Refineries are major sources of VOCs, which cause ozone and include many hazardous air pollutants. This MARAMA study represented important progress towards determining refinery VOC emissions as accurately as possible.

As a follow-up to the report, in June 2004 MARAMA organized a refinery workshop attended by MARAMA members, EPA, and invited experts. The workshop served as a forum to review and discuss the findings and recommendations of the report, which was prepared for MARAMA by MACTEC Federal Programs, Inc. The workshop promoted collaboration among MARAMA agency staff responsible for compliance/enforcement activities, emissions inventory development, and permitting. Those attending found the discussions very helpful.

At the Office

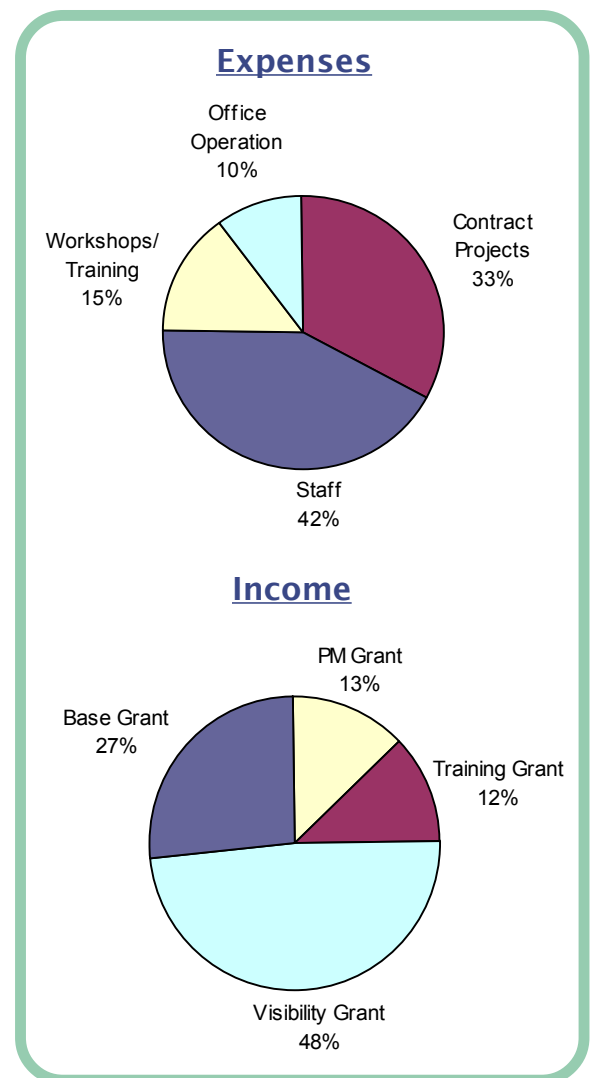
MARAMA Fiscal Year 2004 Financials

MARAMA is funded by grants from the U.S. Environmental Protection Agency under the direction of our member agencies. From October 2003 through September 2004 MARAMA's grant income was over \$1.3 million. Over one quarter of MARAMA's funding came from our base grant, with our training grant and PM_{2.5} grant together making up another quarter. Nearly half of MARAMA's funding came from our MANE-VU regional haze subgrant.

Training expenditures increased in 2004, representing about 12% of overall expenditures. Expenses for technical studies via contracts were about 34%, and office operation remained 11% of overall expenses. Expenses for staff grew to \$545,000, about 43% of total expenses.

Staff Additions

MARAMA was pleased to add three new staff members this year. We welcomed Katie Sheen Abbott as an Air Quality Planner / Outreach Coordinator, Sam Alima as our Accounting/Grants Assistant and Ningqi Hou as a Statistician. Full-time staff increased from seven to nine.



What is MARAMA?

The Mid-Atlantic Regional Air Management Association is a voluntary, non-profit association of ten state and local air pollution control agencies.

MARAMA provides cost-effective approaches to regional collaboration by pooling resources to develop and analyze data, share ideas, and train staff to implement common requirements.

Members

The following State and Local governments are MARAMA members: Delaware, the District of Columbia, Maryland, New Jersey, North Carolina, Pennsylvania, Virginia, West Virginia, Philadelphia, and Allegheny County, Pennsylvania. Members of MARAMA's Board of Directors are listed below.

Executive Board, 2004

John Benedict, **West Virginia, Chair**
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Keith Overcash, **North Carolina, Treasurer**
Ali Mirzakhali, **Delaware,**
Donald E. Wambsgans III, **District of Columbia**
Thomas Snyder, **Maryland**
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Joyce Epps, **Pennsylvania**
Morris Fine, **Philadelphia**
John M. Daniel, Jr., **Virginia**

MARAMA Staff

Susan S.G. Wierman, **Executive Director**
Serpil Kayin, Ph.D., **Senior Environmental Scientist**
Bill Gillespie, **Senior Environmental Scientist**
Susan Stephenson, **Air Quality Planner/
Public Outreach Coordinator**
Megan Schuster, **Air Quality Specialist**
Katie Sheen Abbott, **Air Quality Planner/
Public Outreach Coordinator**
Sam Alima, **Accounting/ Grants Assistant**
Ningqi Hou, **Data Analyst/Statistician**
Alice Lutrey, **Training Coordinator/Office Manager**
Mia Lueth, **Assistant Training Coordinator/Exec. Assistant**

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