2009 A CHALLENGING YEAR

In fiscal year 2009, MARAMA’s 20th year, new leadership re-energized EPA, and the economic crisis led MARAMA agencies to tighten budgets and eliminate staff positions. Throughout the year, national changes increased uncertainty in air quality management. In December 2008 the D.C. Circuit remanded EPA’s Clean Air Interstate Rule (CAIR). CAIR remained in place while EPA developed a replacement, and sources reduced emissions, but the uncertain enforceability of future reductions prevented approval of regional haze plans depending on CAIR. Meanwhile, Congress did not approve bills to codify Phase 2 of CAIR and to cap greenhouse gasses. In May 2009 EPA proposed disapproval of ozone state implementation plans for Baltimore, Philadelphia, and parts of the New York area, asserting that the plans were inadequate to demonstrate compliance with air quality standards by June 2010. In September 2009, EPA announced its reconsideration of the ozone ambient air quality standards adopted in 2008, leaving states with an uncertain target for future ozone attainment plans.

To help address these challenges, MARAMA members took concrete actions in 2009 to address air quality issues. New Jersey led the region in developing tighter sulfur in fuel regulations to reduce regional haze and fine particle pollution, and states in the Ozone Transport Region worked to adopt tighter emissions controls on a variety of sources to reduce ozone pollution. MARAMA states sought and received grants to reduce diesel emissions. Delaware, Maryland, and New Jersey, as members of the Regional Greenhouse Gas Initiative, began implementing the first mandatory cap and trade program in the US to reduce greenhouse gas emissions. Several MARAMA states developed detailed information on air quality near schools. States submitted regional haze plans and continued to seek EPA approval of ozone and PM attainment plans. MARAMA members pursued major enforcement actions and began to assess their air monitoring networks in light of new requirements. EPA enhanced its air quality training program through national webinars and participation in regional workshops and courses. And air quality improved: many areas met the standards.

MARAMA’s services helped member agencies weather these tumultuous times. As described in this report, MARAMA conducted an active program of training and workshops, completed and initiated additional projects to reduce diesel emissions, began developing the emissions inventories needed next year for regional air quality modeling, and worked to promote regional coordination. In these difficult times, I appreciate more than ever the support that our members give each other through their participation in MARAMA and the opportunity for the MARAMA staff to take part in the work to improve air quality in the region.

Susan S.G. Wierman

Susan S.G. Wierman
Executive Director
REGIONAL COORDINATION AND PLANNING BECOME FOCUS

MARAMA worked closely with the Ozone Transport Commission (OTC) to provide technical support for development of plans to improve visibility in national parks and wilderness areas and to assess the impact of the remand of EPA’s Clean Air Interstate Rule. MARAMA analyzed emissions inventory information and provided technical support regarding emissions controls and potential emissions reductions for preliminary modeling to assess the impact of the CAIR remand and the potential for substitute emissions reductions. MARAMA drafted a schedule to help coordinate regional emissions inventory and modeling work for the next few years.

PLAN DRAFTED TO IMPROVE VISIBILITY

In 2009 MARAMA completed a draft of the District of Columbia’s Regional Haze State Implementation Plan. MARAMA customized a draft plan for the District using the MANE-VU SIP Template and best practices from draft SIPs developed by other states. Contracting with MARAMA for this service allowed the District to focus on implementing the requirement for Best Available Retrofit Technology to improve downwind visibility.

PERMITS AND ENFORCEMENT COORDINATION EMPHASIZED

In 2009 MARAMA conducted classes, workshops and conference calls to help build members’ capabilities in permitting and enforcement. MARAMA hired a contractor and worked with EPA Region 3 to develop and present the “Workshop on Advanced Pre-Construction Permitting with a Focus on NSR Reforms.” MARAMA recruited state/local speakers to help EPA present a new course “Clean Air Act Enforcement Lessons Learned.” This advanced training in new requirements emphasized the need for enforceable permits. MARAMA supported member attendance and scheduled conference calls to build coordination among member agency permit staff and facilitate presentations by experts.

TRAINING ENHANCES MEMBER CAPABILITIES

MARAMA organized and supported members attending 28 training events this year. The MARAMA Training Committee helped schedule events that met members’ key training needs.

The events with the largest attendance promoted regional coordination and helped members share best professional practices and learn about new requirements and scientific findings. The largest events were two offerings of an Advanced Permits Workshop (86 attendees), a Regional Emissions Estimates Conference (82), EPA’s Clean Air Act Lessons Learned Workshop (67), two offerings of the Diesel Boot Camp (62), MARAMA’s State Implementation Planning Workshop (53), the MARAMA Monitoring Committee meeting (51) and the MANE-VU Science Meeting focused on Total Reduced Nitrogen (50).

EPA staff participated as speakers or instructors in all of these large events except the Diesel Boot Camp. Other speakers or trainers included local/state/regional staff, university professors, contractors and MARAMA staff.
### MARAMA HISTORY: CELEBRATING 20 YEARS
ANOTHER MILESTONE! FOR 20 YEARS, MARAMA HAS PROMOTED COORDINATED APPROACHES TO AIR QUALITY MANAGEMENT. AIR QUALITY HAS

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<td>The Governors of six Mid-Atlantic States along with the Mayors of the District of Columbia and Philadelphia and the County Executive of Allegheny County, Pennsylvania sign an agreement forming MARAMA.</td>
<td>James E. Hambright becomes first Executive Director. MARAMA issues a report on the potential impacts of adopting the California Low Emission Vehicle Program.</td>
<td>MARAMA and NESCAUM complete a NOx Budget Model Rule to help states implement the 1994 Ozone Transport Commission (OTC) Memorandum of Understanding on NOx Reductions. MARAMA hires Susan S.G. Wierman as its second Executive Director.</td>
<td>The NESCAUM-MARAMA-OTC regional ozone map project produces the first daily ozone maps for the entire Mid-Atlantic and Northeast Regions. MARAMA publishes the report <em>1995 Ozone Atlas for the Mid-Atlantic Region</em>.</td>
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<td>With support from MARAMA and NESCAUM, Carnegie Mellon University completes an improved regional ammonia emissions inventory system, which is still in use nationally today. MARAMA issues a report analyzing MANE-VU visibility data to help identify pollution sources.</td>
<td>MARAMA and Rutgers University complete the design of a VOC sampling course. MARAMA focuses on emissions from petroleum refineries, issuing a report identifying best practices in emissions calculation.</td>
<td>MARAMA releases a draft Regional Haze SIP Template for MANE-VU. MARAMA staff and members analyze methods for forecasting levels of fine particle pollution.</td>
<td>MARAMA issues the report <em>A Guide to Mid-Atlantic Regional Air Quality</em>. MARAMA also issues the region’s first report comparing fine particle data from continuous and standard monitoring methods.</td>
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### EMISSIONS INVENTORY DEVELOPMENT UNDERWAY
MARAMA’s strong emphasis on preparing emissions inventories supported regional air quality modeling efforts. These inventories are unique in their region-wide scope and the specific format used in regional air quality models. MARAMA strives to promote both regional consistency and state-level approval of the data included in the regional inventory.

MARAMA began the year by cosponsoring with NYSERDA, NARSTO and NESCAUM a workshop to identify ways to improve regional emissions estimates. A key message was the need to look beyond traditional sources of information when compiling emissions data.

Through its contract with MACTEC, MARAMA initiated development of the 2007 stationary point source and non-road mobile source emissions inventories. MARAMA obtained data from state and local agencies and coordinated review of contractor work products. MARAMA held numerous sector-specific work group conference calls to keep members informed and promote information sharing. MARAMA led regional efforts to meet new EPA requirements for using the new MOVES software to estimate emissions from on-road mobile sources.

MARAMA promoted consistency of emissions calculation methods both within the Region and with other regions. As cochairs of an Eastern Regional Technical Advisory Committee effort, MARAMA built consensus and understanding of the most up-to-date methods for calculating stationary area source emissions.
### 1998:
MARAMA and NESCAUM release the comprehensive *Status Report on NOx Control Technologies and Cost-Effectiveness for Utility Boilers.*

### 1999:
West Virginia becomes MARAMA’s 10th member organization. MARAMA initiates a pathmark series of reports analyzing ozone precursor data and forms the Mid-Atlantic Regional Technical Center.

### 2000:
MARAMA agencies design a database which becomes a national model for collecting PM$_{2.5}$ data and submitting it to EPA.

### 2001:
Five MARAMA states join MANE-VU, and two help form VISTAS. MARAMA partners with NESCAUM and OTC to provide technical services to MANE-VU, a partnership that continues today.

### 2006:
MARAMA, EPA and State and Local members launch the Mid-Atlantic Diesel Collaborative. MARAMA issues reports on PM$_{2.5}$ data analysis, residential wood combustion and regional haze.

### 2007:

### 2008:
MARAMA’s report on the *Mid-Atlantic Truck Engine Idle Reduction Technology Demonstration Program* provides insights and guidance for states calculating diesel emission reductions. MARAMA assists Virginia with implementing its State Diesel Emission Reduction Campaign.

### 2009:
MARAMA receives a grant under American Recovery and Reinvestment Act of 2009 Clean Diesel Campaign Funds which supports projects in Pennsylvania, Maryland and Virginia totaling over $8.5 million.

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**CHANGE IN ANNUAL NO$_x$ EMISSIONS FROM THE TOP NO$_x$ SOURCES 2002 VS. DRAFT 2007**

Most of the large NO$_x$ sources in the region reduced emissions between 2002 and 2007. This improved air quality throughout the region.
DIESEL EMISSION PROJECTS BEGIN TO SEE RESULTS

Fiscal Year 2009 was a landmark year for MARAMA efforts to reduce diesel emissions from the construction, goods movement, school bus, and urban fleets sectors. Through funding from four different grants, MARAMA continued to support the Mid-Atlantic Diesel Collaborative by assisting partners to develop and administer projects. Fifteen separate projects, covering nearly all member agencies were well on their way by the close of Fiscal Year 2009.

RETROFITS AND REPLACEMENTS COMPLETED

<table>
<thead>
<tr>
<th>Number</th>
<th>Type of Equipment/Vehicles</th>
<th>Technology</th>
<th>Location</th>
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<tbody>
<tr>
<td>77</td>
<td>Fire Engines</td>
<td>Diesel Oxidation Catalysts</td>
<td>Philadelphia, PA</td>
</tr>
<tr>
<td>10</td>
<td>Waste Haulers</td>
<td>Diesel Particulate Filters</td>
<td>Pittsburgh, PA</td>
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<tr>
<td>7</td>
<td>Dray Trucks</td>
<td>Diesel Particulate Filters</td>
<td>Hampton Roads, VA</td>
</tr>
<tr>
<td>5</td>
<td>School Buses</td>
<td>Propane School Bus Replacement</td>
<td>Gloucester County, VA</td>
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DIESEL PROJECTS SUPPORT ECONOMIC RECOVERY

EPA awarded MARAMA over $4 million to reduce diesel emissions in the Mid-Atlantic Region. One of the largest clean diesel stimulus grants awarded, it is supporting eight projects that will reduce emissions from boats, trains, buses, cement trucks, off-road equipment, and other vehicles in the coming year. Matching funds from partners will leverage a total effort of over $8.5 million. MARAMA also administered an economic stimulus grant of $1.73 million awarded to the Virginia Department of Environmental Quality in support of four projects that will clean up drayage trucks serving the Port of Virginia, replace older diesel powered school buses with 2010 emissions compliant propane powered buses, install idle reduction technology on school buses and provide an incentive to use biodiesel to public fleets.

The grants enabled MARAMA to create one additional part-time position and increase hours for the Region’s Diesel Program Manager, Susan Stephenson. MARAMA also hired Emissions Advantage and Virginia Clean Cities to provide technical support for the projects and used additional legal services to review contracts and subawards.
In 2009 the MARAMA Directors recognized three individuals for outstanding service to MARAMA:

- Alison Riley – for her valuable support for the Mid-Atlantic Diesel Collaborative
- Sue Redmond – for over 15 years of outstanding service as MARAMA's CPA
- Susan Stephenson – for outstanding leadership of the Mid-Atlantic Diesel Collaborative

Thanks to Alison, Sue, and Susan for making a positive difference for regional air quality.
2009 PUBLICATIONS

MARAMA publications issued during FY 2009 focused on emissions.

"Emissions Factors for Condensable Particulate Matter Emissions from Electric Generating Units" (January 2009) MARAMA members provided stack test data for expert analysis by Arthur Werner, William Hodan, and Scott Justice of MACTEC. This report will help improve particulate emissions estimates for future inventories. (Funded by Regional Haze Agreement with OTC.)

"Documentation of 2018 emissions from Electric Generating Units in the Eastern United States for MANF-VU’s Regional Haze Modeling" (August 2009) MARAMA worked with Greg Stella of Alpine Geophysics to compile and develop information detailing emissions projections for the eastern U.S. (Funded by Regional Haze Agreement with OTC.)

WHAT IS MARAMA?

The Mid-Atlantic Regional Air Management Association, Inc. 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 members to implement common requirements.

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Susan A. McCusker, Environmental Planner
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