Mid-Atlantic/Northeast Visibility Union

MANE-VU

NEWSLETTER

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FINAL CONTRIBUTION ASSESSMENT REPORT: BASIS FOR CONSULTATION

After reviewing comments, NESCAUM finalized MANE-VU's report *Contributions to Regional Haze in the Northeast and Mid-Atlantic U.S.* in August. This document incorporates modeling and data analyses from several different sulfate attribution methods to identify geographical regions that influence each Class I area in the MANE-VU region as well as some nearby Class I sites that may be influenced by MANE-VU emission sources. The report may be found at: http://www.manevu.org under Publications, Reports, and Technical Materials.

The contribution assessment report focused on identifying source regions contributing to sulfate, because previous work has shown that sulfate is the predominate cause of visibility impairment in this region and other nearby Class I areas.

The results indicate that all states in the analysis domain contribute to some degree to visibility impairment at MANE-VU Class I sites, and that the cumulative contribution from several groups of states can be significant. Depending on the site and the apportionment method, the report shows that 10 to 25 percent of the annual average sulfate observed at MANE-VU Class I areas can be attributed to states in VISTAS or the MidWest RPO. Contributions from MANE-VU states are larger, approaching 40 percent or more at some sites.

This suggests that upcoming consultation processes aimed at identifying long-term emissions management strategies to improve visibility at MANE-VU Class I sites will require the participation of several states within all three eastern RPOs.

An important aspect of this work is that it brings together several independent methods of data analysis and modeling in order to present a "weight of evidence" demonstration of impact. While some methods are more sophisticated than others, it is gratifying that from this wide range of approaches, a relatively consistent, coherent picture of sulfate formation and transport in the Eastern U.S. emerges.

MANE-VU is now focusing efforts on applying these methods and platforms to new projection inventories for 2018 to develop pollution apportionment matrices which can help determine appropriate reasonable progress goals for adoption.

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STATES EXPLORE ADDITIONAL CONTROL MEASURES FOR SIPS

The States of the Ozone Transport Region (OTR) are considering additional control measures as part of their planning to attain the 8-hour ozone National Ambient Air Quality Standards (NAAQS). Although currently mandated controls will achieve significant emission reductions over the next 5-10 years, additional emission reductions beyond current requirements may be necessary to meet State Implementation Plan (SIP) requirements and to demonstrate attainment, especially in the out years. In addition OTR states are also investigating how these measures would affect Regional Haze and $PM_{2.5}$.

The Ozone Transport Commission (OTC) staff and member states formed several workgroups to identify and evaluate candidate control measures. Initially, the workgroups compiled and reviewed a list of over 1,000 candidate control measures. These control measures were identified through published sources such as EPA's Control Technique Guidelines, STAPPA/ALAPCO "Menu of Options" documents, the AirControlNET database, emission control initiatives in other states including California, state/regional consultations, and stakeholder input. The workgroups developed a preliminary list of approximately 50 candidate control measures to be considered for more detailed analysis. These measures were selected to focus on the pollutants and source categories believed to be the most effective in reducing ozone levels in the Northeastern and Mid-Atlantic States.

The workgroups discussed the candidate control measures during a series of conference calls and workshops held periodically from the spring of 2004 through the summer of 2006. Information was collected and evaluated regarding emission benefits, cost-effectiveness, and implementation issues for each of the candidate control measures and summarized in a series of "Control Measure Summary Sheets" available at www.otcair.org.

Based on the analyses by the OTC Workgroups, the OTC Commissioners made several recommendations at the June Commissioner's meeting in Boston (2006). The Commissioners recommended that States consider emission reductions from the following source categories:

- Consumer Products
- Portable Fuel Containers
- Adhesives and Sealants
- Diesel Engine Chip Reflash
- Asphalt Paving
- Asphalt Production Plants
- Cement Kilns
- Glass Furnaces
- Industrial, Commercial, & Institutional (ICI) Boilers
- Regional Fuels
- Electric Generating Units (EGUs)

Additionally, the Commissioners requested that EPA pursue federal regulations and programs designed to ensure national development and implementation of control measures for the following categories: architectural and maintenance coatings, consumer products, ICI boilers over 100 mmBtu/hour heat input, portable fuel containers, municipal waste combustors, regionally consistent and environmentally sound fuels, small engine emission regulation, and gasoline vapor recovery.

Monitoring Haze

FEDERAL BUDGET CUTS MAY REDUCE AIR QUALITY MONITORING

Due to proposed budget cuts for fiscal year 2007, it may be necessary to reduce the number of monitors deployed to track visibility in Federal Class I areas. The Interagency Monitoring of Protected Visual Environments (IMPROVE) monitoring network includes sites at or near MANE-VU Class I areas. The IMPROVE network also includes monitors at sites other than Class I areas which are designated "IMPROVE protocol sites" because they follow the IMPROVE monitoring protocol. These sites help track transport of pollution to Class I areas.

> Funds partially supporting the IMPROVE network are provided by state and local agencies. Operation of the IMPROVE network is largely supported by the federal land management agencies who manage the Class I areas where the sites are located.

The IMPROVE Steering Committee, under the leadership of scientists from the National Oceanic and Atmospheric Administration (NOAA) and the National Park Service, reviewed the location of IMPROVE monitors nationwide to assess strategies for responding to anticipated budget reductions. The Committee's main goal was to maintain the most robust network possible and consider whether other monitors would be available to track visibility near Class I areas.

The IMPROVE Site Reduction Planning Committee initially proposed decommissioning two IMPROVE sites in the MANE-VU region, the Great Gulf Wilderness Area and the Moosehorn Wilderness Area sites. The Committee also proposed decommissioning the Connecticut Hill site in New York, which is an EPA Protocol site. The IMPROVE Steering Committee requested comments on the proposed approach.

IMPROVE/IMPROVE Protocol Site Network 2006*
MANE-VU Region

MANE-VU provided comments asking that none of its sites be decommissioned. The letter stated that MANE-VU's primary concern about the reduction plan is that an effective monitoring network for its Class I states would be compromised and the requirements of the regional haze regulations in 40 CFR Part 51 would not be met. Other Regional Planning Organizations, individual states, and other stakeholders also submitted comments, which were reviewed by the IMPROVE Steering Committee.

The Committee subsequently placed sites in four categories. Sites were classified as "non-replaceable" sites (those that are the only site available to represent a Class I area), "conditional" sites (that may or may not be necessary to ensure full coverage of Class I areas), "non Class I area" sites (that do not represent Class I areas), and replaceable sites. Two IMPROVE Protocol sites in Pennsylvania were classed as not representative of Class I areas. All other sites in MANE-VU were identified as non-replaceable.

Congress has not yet approved a final budget. Final decisions on restructuring the IMPROVE network will be made after discussion by the national Monitoring Steering Committee.

* This map was excerpted from a original national map produced by EPA entitled "Current Lower 48 IMPROVE and IMPROVE Protocol Network: 118 Candidate Sites are Marked"

MANE-VU EMISSIONS INVENTORY UPDATE

MANE-VU completed Version 3.0 of its 2002 modeling inventory for area, non-road, on-road, and most point sources. Emissions from electricity generating units (EGUs) are in a separate part of the inventory. MARAMA contractor, E.H. Pechan finalized the Version 3.0 2002 inventory in April 2006 and is in the process of creating a report to document the steps taken to create the inventory.

MANE-VU completed Version 3.0 of the 2009, 2012, 2018 baseline modeling inventory. Work is underway by MARAMA's contractor, MACTEC, to incorporate final state comments and prepare inventory documentation.

Modeling data for EGUs was previously prepared in a cooperative effort with other Regional Planning Organizations (RPOs). VISTAS hired ICF to run the IPM model using assumptions agreed to by all eastern RPOs.

Emissions for 2009, 2012, and 2018 control scenarios for various sources are being prepared under MARAMA contracts with MACTEC and Alpine Geophysics. MARAMA also has a contract with ICF to evaluate the feasibility of more stringent controls for EGUs. These scenarios are driven by the OTC control measure analysis described above.

INTER-RPO EMISSIONS INVENTORY WAREHOUSE NOW UP AND RUNNING

The Regional Planning Organizations (RPOs) need to share and access the latest quality-assured modeling inventories in a quick and easy fashion to support related State Implementation Plans (SIP) efforts, as well as make the data available to other interested parties. With the support of all RPOs, MARAMA selected Eastern Research Group (ERG) to create the Inter-RPO Emissions Inventory Warehouse (RPO EI) website. RPOs are now posting emissions inventories on this website.

The site allows users to access national modeling inventories for all source types (point, area, on-road mobile, non-road mobile and biogenic) and create the reports listed below.

- Emissions summary reports,
- Top 10 sources reports,
- Pollutant and/or stack parameter threshold reports,
- Mobile attribute reports, and
- NIF 3.0 Formatted Inventory Data Reports.

Inventories accessible through the Inter-RPO EI Warehouse are expected to be updated four times per year. To access the web site, visit www.rpoei.org.

MANE-VU SIP TEMPLATE CONTINUES TO TAKE SHAPE

As MANE-VU states prepare to meet Regional Haze Rule requirements to submit SIPs to address haze in our nation's major national parks and wilderness areas, MARAMA continues to refine a draft template to assist them in meeting these requirements. Major sections of the SIP Template address assessment of baseline and natural conditions, monitoring, emissions inventory, best available retrofit technology (BART), reasonable progress goals, and long term strategies for visibility improvement.

Recent refinements to the Template include:

- A review of the BART section by the BART workgroup;
- A review of the Monitoring section by the Monitoring technical support committee; and
- A comparison of MANE-VU's SIP Template to the EPA SIP Checklist by MARAMA.

Following a public review the following Technical Support Documents are now complete and available on MARAMA's website:

- Smoke Management Technical Support Document (TSD) – The revised document addresses comments from the U.S. Forest Service.
- Construction Mitigation TSD – The completed TSD now addresses comments from EPA Region I, which recommended the addition of language to urge the inclusion of state rules limiting diesel emissions from construction projects.

BEST AVAILABLE RETROFIT TECHNOLOGY LAWSUIT RESOLVED

In July 2005, the EPA issued BART Guidelines that provide guidance to states in making BART determinations for large power plants and other BART sources. In these guidelines EPA described several approaches that states could use to determine whether a source should be subject to review under BART or whether it should be exempt from BART.

The EPA was sued on the final BART Guidelines with the Utility Air Regulatory Group (UARG) as the prime litigant. In late 2005, EPA entered into settlement discussions with UARG on several key issues, and on July 19, 2006, the settlement agreement was finalized. EPA and UARG agreed to resolve two of the outstanding issues via the issuance of a guidance memo to the EPA regional offices. This memo describes the pollutant-specific CALPUFF analysis for modeling visibility impacts from EGUs and the averaging period used to estimate the natural background visibility estimate for calculating visibility impacts.

From the FLMs

FEDERAL LAND MANAGERS CONSULTS STATES IN REGIONAL HAZE PLANNING

State consultation with Federal Land Managers (FLMs) is a requirement of the Regional Haze Rule. The National Park Service (NPS) and Fish and Wildlife Service (FWS) sent a letter discussing Regional Haze Rule Consultation to all State Air Directors.

The letter indicated that NPS and FWS are interested in working directly with States to aid in the writing of SIPs and to offer their support and insight as managers of affected Federal Class I areas. The letter identified lead contacts for NPS and FWS who will be available to work with States during the early phases of SIP development and for formal consultation with the FLMs for the U.S. Department of the Interior. The letter asked each State to update information previously provided to the FLMs identifying the State's lead contact for consultation with the FLMs.

From EPA

EPA ISSUES GUIDANCE ON VARIOUS REGIONAL HAZE TOPICS

EPA has compiled two documents answering questions received from various States and RPOs (Regional Planning Organization) related to inquiries about BART, Reasonable Progress Goals, Coordination with RPOs, states and FLMs, etc.

Both documents are available online at http://www.nescaum.org/topics/regional-haze/regional-haze-documents/.

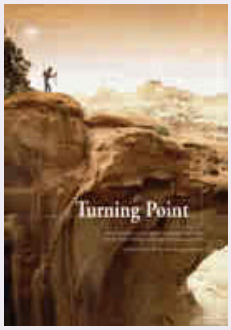
Parks Group Recommends Measures for Cleaning Up Air in National Parks

The National Parks Conservation Association (NPCA) released a report describing how air pollution is damaging national park ecosystems and making 10 recommendations to stop and reverse this damage.

In *Turning Point*, the NPCA identifies sulfur dioxide (SO_2), nitrogen oxide (NO_x), carbon dioxide (CO_2) and mercury as the four pollutants that play the largest role in threatening park habitats and visibility. Power plants and motor vehicles are the largest source of these pollutants, while oil and gas drilling "is increasingly a major threat to the pristine and sensitive ecosystems of the Rocky Mountain West."

Among the report's recommendations are the following:

1) With respect to power plants, a) Congress and the states should force the 1,200 power plants with outdated pollution controls to install modern pollution controls for SO_2 and NO_x, b) new power plants should be required to install the best available pollution controls and ensure that they do not degrade park air quality and c) the maximum limits on toxic mercury emissions should be imposed on each and every coal-fired power plant;
2) Congress and the states should require meaningful reductions in CO_2 emissions, especially from motor vehicles and power plants, the two largest sources;
3) The National Park Service should monitor air quality at each and every park, and every park should adopt the most effective in-park pollution reduction programs; and
4) EPA should ensure that states comply with the obligation in the Clean Air Act to periodically measure air pollution levels in the parks to ensure they do not exceed limits.



For more information on this topic visit the National Parks Conservation Association website at www.npca.org/turningpoint/. The text for this article was taken from the August 18, 2006 STAPPA/ALAPCO Washington Update.

MANE-VU Class I Area Highlight

LYE BROOK WILDERNESS

Lye Brook Falls

Lye Brook is the second largest Wilderness in the Green Mountain National Forest. Lakes, streams, and bogs are scattered throughout its heavily forested 15,680 acre landscape. Few trails exist, so there is ample opportunity for bushwhacking and exploring away from designated footpaths. Lye Brook Wilderness has much to offer those who leave the beaten path. Let your map and compass guide you to more remote areas of the Wilderness. It is full of hidden treasures that, when found, become priceless memories!

The Lye Brook Wilderness is east of Manchester Center in the southern Green Mountains of Vermont. The wilderness area is named after Lye Brook, which flows through its western half. Elevations range from 900 feet to 2,900 feet above sea level, but most of the wilderness area is above 2,500 feet, on a high plateau with several ponds and bogs. Picturesque waterfalls and rocky streams are found here as well as reflecting pools. The western section is extremely steep and three miles of the Appalachian/Long Trail cross the northwest tip of the wilderness.

Approximately 80% of the area is forested with northern hardwoods, including birch, beech, and maple. Thickets of small spruce dot the area, along with remnants of railroad grades and old logging roads. Several species of neotropical birds, black bear, moose, deer, pine martin, and bobcat inhabit these woods. Hunting opportunities for deer bring many seasonal visitors, as do snowshoeing and cross-country skiing in the winter months.

A century ago, heavy logging occurred throughout this area. Railroads transporting materials to and from Manchester scarred the land. Tree stumps dotted the landscape while logs jammed the streams. Workers operated kilns to reduce wood to charcoal. Logging camps and sawmills bustled with activity. Old railroad ties and other remnants of the past can still be seen on parts of the trails.

> "The Burning" is the site of a large fire that took place around 1900. Located in the western portion of the Wilderness, it is a popular spot for wildlife such as moose, wild turkey, whitetail deer, and black bear.

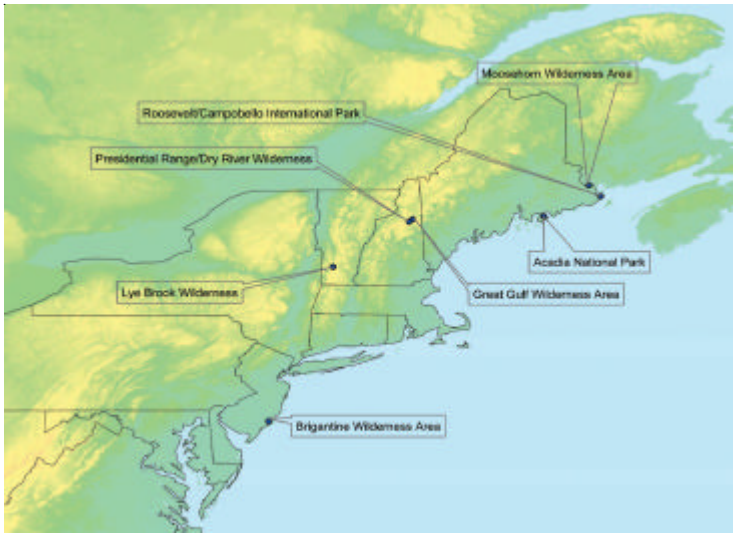
Active beavers also make Lye Brook their home. Look for their carefully constructed beaver huts and dams and listen for the repetitive slap of their tails as a signal of their presence. A pair of loons have been nesting at Bourn Pond, and if you are lucky, their wild call can be heard from miles away. It is requested that non-lead sinkers be used when fishing in this delicate area. Loons have been known to swallow lost lead sinkers to grind food in their throats and as a result are poisoned and may even die.

Sources:
http://www.fs.fed.us/r9/gmfl/green_mountain/recreation_management/wilderness/lyebrk.htm
http://www.wilderness.net/index.cfm?fuse=NWPS&sec=wildView&wname=Lye%20Brook

ABOUT MANE-VU

The Mid-Atlantic/Northeast Visibility Union (MANE-VU) was formed by the Mid-Atlantic and Northeastern states, tribes, and federal agencies to coordinate regional haze planning activities for the region. MANE-VU was formed to encourage a coordinated approach to meeting the requirements of EPA's regional haze rules and reducing visibility impairment in major national parks and wilderness areas in the Northeast and Mid-Atlantic region.

MANE-VU provides technical assessments and assistance to its members, evaluates linkages to other regional air pollution issues, provides a forum for discussion, and encourages coordinated actions. MANE-VU also facilitates coordination with other regions.



Class I Areas in MANE-VU Region

MANE-VU's structure includes a board comprised of state and tribal Commissioners/Secretaries, air program directors and two committees comprised of agency personnel: a Technical Support committee to assess the nature of regional haze, the sources that contribute to regional haze and the technical tools that states will use to develop their programs and a Communications Committee to develop outreach messages and approaches.

MANE-VU MEMBERS

Connecticut
Delaware
District of Columbia
Maine
Maryland
Massachusetts
New Hampshire
New Jersey
New York
Pennsylvania
Penobscot Indian Nation
Rhode Island
Vermont

US Environmental Protection Agency
National Park Service
US Fish and Wildlife Service
US Forest Service

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