Mid-Atlantic/Northeast Visibility Union

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BOARD AGREES TO PURSUE CONTROLS

On June 20, 2007, the MANE-VU states agreed to three major statements that describe a regional strategy to be pursued by MANE-VU states, provide the basis for consultation with other regions, and further emphasize the need for the U.S. Environmental protection Agency (EPA) to strengthen the Clean Air Interstate Rule.

One of the underpinnings of the statements was an identification of 167 Electric Generating Unit (EGU) stacks within and outside MANE-VU whose emissions had the greatest impact on MANE-VU Class I areas in 2002. The statements adopted on June 20 asked states to pursue controls on these stacks that would reduce their emissions by at least 90 percent by 2018. (See related story on page 2 regarding selection of the 167 stacks.)

In addition to reductions from the 167 EGU stacks, strategies to be pursued within MANE-VU or other regions include adoption of rules to reduce the sulfur content of fuel oil or to reduce emissions from coal-fired sources and other sources affecting visibility at Class I areas. Please see the text of the statements, which are posted on the MANE-VU website, <u>www.manevu.org/meetings.asp</u>, under the June 7 meeting materials.

On June 7, the MANE-VU Class I states adopted a resolution describing the principles they would follow to establish reasonable progress goals for their Class I areas. The resolution is posted on the MANE-VU website as part of the documentation of the June 7 meeting.

In the resolution, the Class I states agreed to set reasonable progress goals for 2018 that provide as much or more progress in visibility improvement as would be achieved under a uniform rate of progress to achieve natural visibility conditions by 2064. The goals will be set by the Class I states at levels reflecting implementation of measures that the Class I states determine are reasonable after they have consulted with the contributing states. The Class I states recognize that each state should be given the flexibility to choose other measures that achieve the same or greater benefits. The Class I states also call upon EPA to implement reasonable national control measures and to provide sufficient funding for the states to conduct the analysis needed to submit 5-year progress reports.

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THE MANE-VU SIP TEMPLATE CONTINUES TO TAKE SHAPE

Regional Haze State Implementation Plans (SIPs) are due to EPA December 17, 2007. Each state's SIP will identify how that state will meet the requirements of EPA's Regional Haze Rules, including control measures to improve visibility in Class I areas.

During the spring and summer, the Mid-Atlantic Regional Air Management Association (MARAMA) helped the MANE-VU SIP Workgroup review and improve the MANE-VU Regional Haze SIP Template, a model for SIPs.

The SIP Template and related documents and appendices are available on MARAMA's website <u>www.marama.org/</u> <u>visibility/SIP_Planning/index.htm</u>. Work is ongoing to fine tune the template and add remaining technical appendices.

The template provides a jump start for the process; however, individual states are free to revise it to meet their needs. Before the state submits its SIP to EPA, it must hold public hearings. Consultations with other states and with Federal Land Managers are prerequisites for those hearings.

EGU CAIR+ REPORT RELEASED

MANE-VU released its report on use of the Integrated Planning Model (IPM®) to compare controls required under EPA's Clean Air Interstate Rule (CAIR) with stricter controls on power plants in the Eastern United States. The report documents resulting emissions reductions and estimates the costs of meeting these tighter restrictions.

The report is posted on the MARAMA and MANE-VU websites at <u>www.marama.org/reports/</u> and <u>www.manevu.</u> <u>org/Document.asp?fview=Reports</u>. The report indicates that additional emission reductions could be achieved by 2018 at reasonable costs.

Further analysis of the results is underway as the Ozone Transport Commission (OTC) and MANE-VU work with other regions and EPA to consider the feasibility of strengthening CAIR. Additional emission reductions from the Electric generating Unit sector could help states meet new ambient standards for ozone and fine particle pollution as well as improving visibility at Class I areas.



MODELING RESULTS

At the June 7 MANE-VU meeting, Gary Kleiman of Northeast States for Coordinated Air Use Management (NESCAUM) presented new modeling results that incorporated the most up-to-date information about future emissions and indicated that visibility will improve by 2018 at MANE-VU Class I areas at least as quickly as would be required by the uniform rate of progress. The modeling predicted that improvements would just barely exceed the uniform rate of progress at the Brigantine Wilderness in New Jersey with implementation of currently planned measures. Dr. Kleiman also presented results that demonstrate the projected state-by-state contributions to sulfate at each MANE-VU class I site for 2018 after implementation of state and federal "on the books" measures.

New 2018 modeling results were also presented that estimated the impacts of various control measures under consideration, including implementation of the Best Available Retrofit technology provisions of the Regional Haze Rules, controls on 167 key power plant stacks, and the adoption of low-sulfur fuel oil requirements in MANE-VU.

Further modeling studies are underway to help the Class I states choose reasonable progress goals that reflect additional control measures they have determined to be reasonable by 2018.

REASONABLE PROGRESS REPORT AVAILABLE

The final report of MANE-VU's Reasonable Progress Project is now available. This report helped MANE-VU states assess control measures that could reduce regional haze in the Class I areas in the Northeastern and Mid-Atlantic States and in Class I areas outside MANE-VU affected by emissions from within MANE-VU. The document, entitled "Assessment of Reasonable Progress for Regional Haze in MANE-VU Class I Areas" was written by MACTEC Federal Programs, Inc. hired by the Mid-Atlantic Regional Air Management Air Association, Inc. (MARAMA) on behalf of MANE-VU.

The report summarizes MANE-VU's assessment of pollutants and associated source categories affecting visibility in Class I areas in and near MANE-VU, lists possible control measures for those pollutants and source categories, and develops the requisite four factor analysis of those possible measures. (See box below regarding "four factors.")

The table below presents a summary of the four factor analysis for the source categories analyzed; more detailed information is available in the final report document on MARAMA's website <u>www.marama.org/visibility/RPG/index.html</u>.

Source Category	Primary Regional Haze Pollutant	Average Cost in 2006 dollars per ton pollutant reduced	Compliance Timeframe	Energy and Non-Air Quality Environmental Impacts	Remaining Useful Life
Electric Generating Units	SO ₂	IPM® v.2.1.9 predicts \$775-\$1,690 \$170-\$5,700 based on available literature	2-3 years following SIP submittal	Fuel supply issues, potential permitting issues, reduction in electricity production capacity, wastewater issues	50 years or more
Industrial, Commercial, Institutional Boilers	SO ₂	\$130-\$11,000 based on available literature	2-3 years following SIP submittal	Fuel supply issues, potential permitting issues, control device energy requirements, wastewater issues	10-30 years
Cement and Lime Kilns	SO ₂	\$1,900-\$73,000 based on available literature	2-3 years following SIP submittal	Control device energy requirements, wastewater issues	10-30 years
Heating Oil	SO ₂	\$550-\$750 based on available literature. There is a high uncertainty associated with this cost estimate.	Currently feasible. Capacity issues may influence timeframe for implementation of new fuel standards	Increases in furnace/boiler efficiency, Decreased furnace/ boiler maintenance requirements	18-25 years

SUMMARY OF RESULTS FROM THE FOUR FACTOR ANALYSIS

Section 169A of the Clean Air Act requires states to consider the following four factors to determine which emission control measures are needed to make reasonable progress toward improving visibility:

1) costs of compliance,

2) time necessary for compliance,

3) energy and non-air quality environmental impacts of compliance, and

4) remaining useful life of any existing source subject to such requirements.

The plan must include reasonable measures and identify the visibility improvement that will result from those measures (i.e., the reasonable progress goal).

More Project Highlights and Updates

ELECTRIC GENERATING STACKS THAT IMPAIR VISIBILITY IN MANE-VU

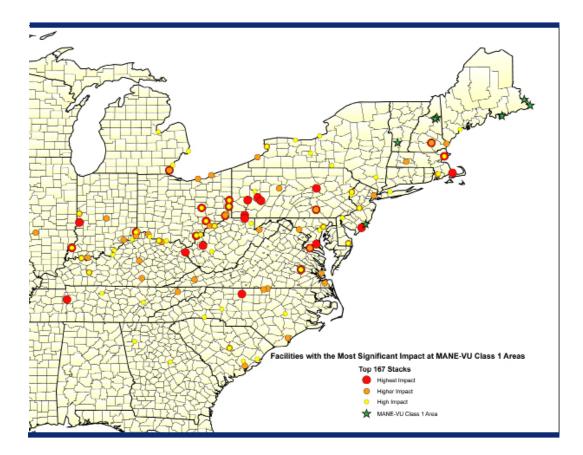
MANE-VU has taken a particular interest in controls on emissions from 167 specific Electric Generating Stacks (EGU) stacks in and around MANE-VU based on CALPUFF modeling documented in MANE-VU's Contribution Assessment. These stacks were identified as the top contributors to sulfate affecting MANE-VU Class I areas in 2002.

Emissions data for the modeling effort came from 2002 Continuous Emission Monitoring System (CEMS) data reported to EPA as required by the Acid Rain Program. This data represents actual emissions from the stack on which the CEMS is placed. A power plant may have several boilers that vent their emissions from a single stack. MANE-VU used EPA and Energy Information Administration data to identify the actual units that were linked to each stack.

The State of Vermont and a contractor for the State of Maryland performed the CALPUFF modeling. Each modeling center identified the top 100 stacks that affected three of the MANE VU Class I areas - Acadia, Brigantine, and Lye Brook. Each modeling center used separate meteorological data sets. This caused some differences in the results: some stacks were identified by both centers and some were not. MARAMA worked closely with Paul Wishinski of Vermont to combine the lists.

Some of the stacks identified as important were outside the states identified as contributing at least 2% of the sulfate at MANE-VU Class I areas. These were dropped from the list, leaving 167 unique stacks impacting one or more MANE-VU Class I area.

Shown below is a map of the location of the top Electric Generating Stacks that impair visibility in the MANE-VU region that were identified and ranked in this project.



At MANE-VU

NEW ADDITIONS TO CAMNET

The North East States for Coordinated Air Use Management is pleased to announce several new additions to the CAMNET website. The Baltimore, Maryland live site now features a wide format, which allows for a wider view and thus a more dynamic and interesting range that includes the Key Bridge. The Acadia site now features a view from across Frenchman's Bay to Mt. Desert Island, and the new format gives a wider range of vision and high resolution viewing. The Brigantine site includes a new Class I airshed camera which will allow for live viewing of visibility conditions at Brigantine. These additions give viewers six wide sites and thirteen sites in total. To view these new additions visit <u>www.haze-cam.net</u>.



MANE-VU WELCOMES NEW EXECUTIVE DIRECTOR

Anna Garcia is the new Executive Director of the Ozone Transport Commission (OTC) and also serves as MANE-VU's Executive Director. OTC is the organization of 12 states and the District of Columbia created by Congress in 1990 to assess and coordinate the control of regional ground-level ozone or "smog" in the Northeast. Ms. Garcia has been the Deputy Director of OTC since April 2004.

Prior to joining OTC, Ms. Garcia served as Director of Operations and State Programs for the non-profit Center for Energy and Climate Solutions, a division of the Global Environment and Technology Foundation. She provides unique environmental and energy expertise in creating partnerships with and among state agencies to design multi-pollutant strategies that have both environmental and economic benefits.

She holds a Bachelor of Arts in Biology from Princeton University and an Executive Masters of Business Administration from George Washington University.

LETTER FROM THE EXECUTIVE DIRECTOR

Dear Reader: Thank you for your continued interest in regional haze issues in the Northeast and Mid-Atlantic states! As the weather turns colder and the hazy days of summer begin to recede from recent memory, the MANE-VU states continue to diligently pursue actions to improve visibility conditions in our parks and wilderness areas.

Because the chief contributor to haze pollution in our region is sulfate particulate, MANE-VU states are examining opportunities to reduce sulfur emissions from sources in and outside the MANE-VU region that are contributing to the haze problem at our Class I parks and wilderness areas. Emissions from key sources including power plants, fuels, commercial and industrial facilities, and others will be reduced by 2018. It is important to reduce sulfate pollution not only in order to improve visibility in these precious areas, but also to improve public health. Sulfate particles in the atmosphere contribute significantly to regional particle pollution that causes human health problems including asthma, bronchitis, cardiovascular and respiratory disease, and premature mortality.

We hope you will find the information in this newsletter helpful in gaining a better understanding of the work our states are doing to restore pristine views to our treasured national landscapes.

Sincerely,

Anna Garcia

Spotlight on the Region's Wild Places

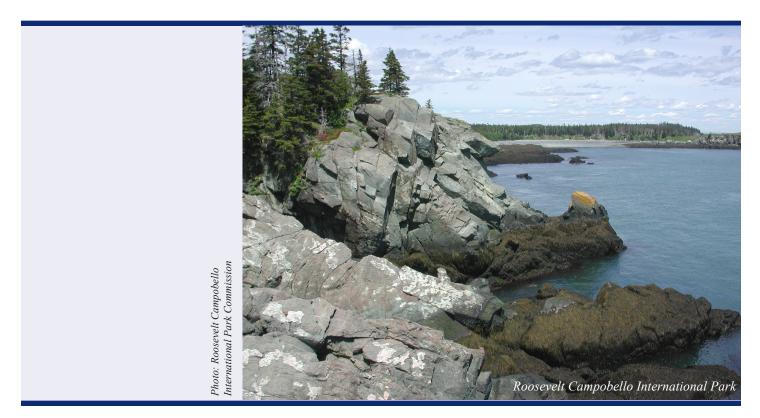
ROOSEVELT CAMPOBELLO INTERNATIONAL PARK: A LIVING MEMORIAL

Franklin D. Roosevelt spent many enjoyable vacations at his summer home on Campobello Island, in New Brunswick's Bay of Fundy. Providing a natural setting for the historic Roosevelt summer home, Canada and the United States established the International Park in 1964. It encompasses an area of 1,158 hectares (2,800 acres). The setting of coastal headland, rocky shore, sphagnum bog, field, and forest offers a variety of habitats.

This area is perfect for hikes and the observation of nature at its best. The Park boasts trails, drives, overlooks, and picnic areas for visitors to explore and enjoy.

At Liberty Point, tidal action characteristic of the Bay of Fundy and wind-dominated vegetation located on a rugged terrain offer the perfect backdrop for painting and photography.

Visitors often view whales, harbor porpoise, and seals from Park observation areas and trails. Just offshore, the cold water, constantly mixed by strong tides and currents, is very productive. The Passamaquoddy Bay area contains perhaps the richest and most diverse invertebrate communities on the eastern seaboard.



Today Roosevelt Campobello International Park serves as a memorial to Franklin D. Roosevelt and a symbol of cooperation between the United States and Canada. According to the Roosevelt Campobello International Park Commission, "The Roosevelt Campobello International Park ... translates all the meanings Campobello had for President Roosevelt into a living memorial. Here we remember the man and his work, his vigor and his leisure. The ... Park ... is Canadian soil which has become part of America's heritage and which is being preserved for the future through the commitment of the citizens and governments of both countries."

For more information visit: www.fdr.net

STAKEHOLDER BRIEFING SET FOR NOVEMBER

MANE-VU will hold a Stakeholder Briefing on November 15 at the Hyatt Regency Hotel in Crystal City, Virginia. Registration starts at 8:00 a.m. and the meeting will convene at 8:30 a.m. The briefing will provide an opportunity for stakeholders to learn the latest information about MANE-VU plans to improve visibility in Class I areas.

CONSULTATION WITH OTHER REGIONS IS ONGOING

Consultation with other states whose emissions affect Class I areas is an important requirement of EPA's Regional Haze Rules. MANE-VU Class I states initiated consultation last spring by sending letters to state environmental commissioners/secretaries from states that contributed at least 2percent of the sulfates measured at MANE-VU Class I areas in 2002. In July, MANE-VU scheduled a conference call open to representatives of any of the contributing states. Documents that were reviewed are posted on the meetings page of the MANE-VU website.

Building on the foundation of shared information developed through the conference call, MANE-VU held two meetings, one in Chicago on August 6 with the Midwest Regional Planning Organization, and the other in Atlanta on August 20 with the Visibility Improvement State and tribal Association of the Southeast. Both meetings were well attended and provided opportunities for questions and answers as well as presentations to clarify MANE-VU requests for emission reductions. Follow-up calls provided additional opportunities for consultation and clarification.

As this newsletter goes to press, discussions are continuing, at staff and management levels, between MANE-VU Class I states and states inside and out-side MANE-VU. The consultation process is expected to continue as the states prepare to submit draft SIPs to the Federal Land Managers and EPA for comment and as states reach out to stakeholders.

(See related information about November 15 stakeholder meeting above.) Topics Emerging from the Interstate Consultation Process

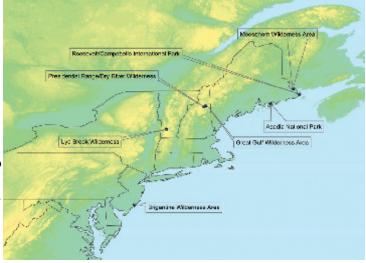
- tween MANE-VU Class I states and states inside and Follow-up on progress in controlling key power plants
 - Ask EPA to strengthen CAIR
 - Investigate controls for ICI boilers (coal fired)
 - Encourage coordination of PM SIPs
 - Increase awareness of diesel options

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 encourages a coordinated approach to 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, leverages progress on other regional air pollution issues, provides a forum for consultation, and encourages coordinated actions, and coordination with other regions.

Section 169A of the Clean Air Act requires the "prevention of any future, and the remedying of any existing impairment of visibility in Class I areas which impairment results from manmade air pollution." Class I areas are national parks



Class I Areas in MANE-VU Region

exceeding 6000 acres, wilderness areas and national memorial parks exceeding 5000 acres, and all international parks in existence on August 7, 1977. There are 156 Class I areas in the United States, and seven in MANE-VU as shown on the map above.

MANE-VU MEMBERS

Connecticut Dept. of Environmental Protection Gina McCarthy, Commissioner

Delaware Dept. of Natural Resources & Environmental Control John Hughes, Secretary

District of Columbia Environmental Health Administration George S. Hawkins, Director

Maine Dept. of Environmental Protection David Littell, Commissioner

Maryland Dept. of the Environment Shari T. Wilson, Secretary

Massachusetts Dept. of Environmental Protection Laura Burt, Commissioner

New Hampshire Dept. of Environmental Services Thomas S. Burack, Commissioner New Jersey Dept. of Environmental Protection Lisa P. Jackson, Commissioner

New York State Dept. of Environmental Conservation Pete Grannis, Commissioner

Pennsylvania Dept. of Environmental Protection Kathleen McGinty, Secretary

Penobscot Indian Nation Dept. of Natural Resources John Banks, Director

Rhode Island Dept. of Environmental Management W. Michael Sullivan, Director

St. Regis Mohawk Tribe Environment Division Kenneth Jock, Director

Vermont Dept. of Environmental Conservation Laura Pelosi, Commissioner

U.S. Environmental Protection Agency Marcia Spink Region III

U.S. National Park Service Christine Shaver

U.S. Fish and Wildlife Service Sandra V. Silva

U.S. Forest Service Ann Acheson

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