



## MANE-VU Timeline For Regional Haze Implementation Plan Preparation

The MANE-VU Timeline for Regional Haze State/ Tribal Implementation Plan (SIP/TIP) Preparation is intended to guide state and regional efforts needed to meet the requirements of EPA’s regional haze rules. It identifies the key tasks that must be undertaken and the approximate schedule for completing those tasks. It is intended to be revised as more information becomes available and as initial tasks are completed.

### Diminishing Views

Every year there are over 280 million visitors to our nation’s most treasured parks and wilderness areas. Unfortunately, many visitors aren’t able to see the spectacular vistas they expect. During much of the year, a veil of white or brown haze hangs in the air, blurring the view. Most of this haze is not natural. It is air pollution, carried by the wind often many hundreds of miles from where it originated. In eastern parks, where one used to be able to see a point 90 miles away, now one often can only see sites that are just 15 to 25 miles away.

Haze is caused when sunlight encounters tiny pollution particles in the air. Visibility can often be reduced over large regions, and is therefore called Regional Haze. Haze-forming air pollutants come from a variety of natural and human-made sources. Natural sources include windblown dust, and soot from wildfires. Human generated sources include vehicles, electric utility and industrial fuel burning, fires, and various manufacturing operations.

Some pollutants that form haze have also been linked to serious health problems and environmental damage. For example, particles such as nitrates and sulfates contribute to acid rain, which makes lakes, rivers, and streams unsuitable for many fish and erodes paint, buildings, and historical monuments. Reducing haze will also help protect public health and the environment.

### To See Clearly: National Efforts

Recognizing their scenic beauty, the U.S. Environmental Protection Agency (EPA) designated 156 major national parks and wilderness areas as Federal Class I Areas. The Class I Areas include, for example, Acadia National Park in Maine and Lye Brook Wilderness area in Vermont.

In 1977, Congress established the national goal of restoring pristine visibility conditions in these major national parks and wilderness areas. Section 169 of the Clean Air Act calls for the prevention of any future, and the remedying of any existing, human-made visibility impairment in Class I Areas. Over the following years modest steps were taken to address the visibility problems in Class I Areas. The control measures taken mainly addressed visibility degradation caused by specific pollution sources, and did little to address regional haze issues in the Eastern United States.

Then, in 1999, EPA adopted its Regional Haze Rule. This rule addresses the combined visibility effects of various pollution sources over a wide geographic region. Casting such a wide-reaching pollution net means that many states – even those without Class I Areas –are required to participate in haze reduction efforts. EPA designated five Regional Planning Organizations (RPOs) to promote the cooperation needed to address regional haze. The Northeast states and several Mid-Atlantic States, including the District of Columbia, formed the Mid-Atlantic / Northeast Visibility Union (MANE-VU).

The Regional Haze rulemaking process was not without controversy. On May 24, 2002 the US Court of Appeals, DC District Court ruled on the challenge brought against EPA’s 1999 Regional Haze Rule. The Court remanded to EPA certain provisions of the rule, but upheld the fundamental haze rule goals of natural visibility and no degradation requirements. EPA has not finished revising the Regional Haze rule pursuant to the remand.



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The Regional Haze Rule requires states, in coordination with the EPA, the National Park Service, the US Fish and Wildlife Service, the US Forest Service, and other interested parties, to develop and implement plans to reduce the pollution that causes regional haze. Tribes may also adopt plans. These plans are called State Implementation Plans (SIPs) or Tribal Implementation Plans (TIPs).

The first Regional Haze SIPs/TIPs will be due in late 2007 or early 2008. The deadline will be three years after the designation of areas not meeting National Ambient Air Quality Standards for fine particulate matter (PM<sub>2.5</sub> nonattainment areas).

The Regional Haze Rule requires states to establish goals for each Class I Area to 1) improve visibility on the haziest days, and 2) ensure no degradation occurs on the clearest days. States have flexibility in determining reasonable goals for Class I Areas, taking into consideration the requirements of the Clean Air Act. The Regional Haze Rule requires states to develop and periodically reevaluate long-term strategies, including enforceable measures designed to ensure continued progress.

## Core Requirements

The following discussion will be worded with respect to SIPs. The same requirements would apply to any tribe that chooses to submit a TIP.

EPA's regional haze rules require the following core elements in regional haze SIPs:

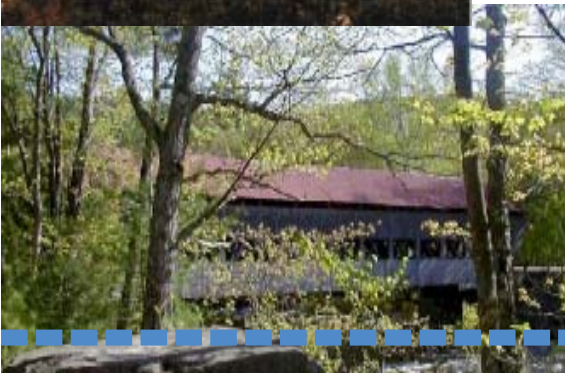
- Calculation of Baseline and Natural Visibility Conditions,
- Reasonable Progress Goals,
- Best Available Retrofit Technology Requirements (BART) for certain sources, and
- A Long-Term (ten to fifteen year) Strategy for Achieving Reasonable Progress Goals.

States with Class I Areas must include all four elements in their SIPs. States that do not contain Class I Areas must collaborate with Class I states in establishing baseline and natural visibility conditions and reasonable progress goals. In addition, states that do not contain Class I Areas must help achieve the reasonable progress goals by implementing BART and other emissions controls required by the long-term strategy for areas they affect. Consultation with other states, EPA and Federal Land Managers is required.

To meet these core requirements, states and/or regional planning organizations will have to implement several important technical and analytical tasks, including:

- Monitoring visibility for each Class I Area,
- Developing baseline and future emissions inventories,
- Assessing each state's contribution to visibility impairment in each affected Class I Area,
- Modeling and data analysis to support the contribution assessment and demonstrate the effectiveness of long-term strategies and interim measures, and
- Performing technical and economic analysis of the reasonableness of BART and other strategies included in the SIP.

States may utilize data and analyses conducted by regional planning organizations like MANE-VU to satisfy SIP requirements. If a long-term strategy requires controls in addition to those already in place or on the way, states will be required to adopt regulations to reduce their contribution to regional haze in affected Class I Areas.



## Importance of Strong Federal Rules

Preliminary analysis of the reductions required to achieve Clean Air Act goals for visibility indicates that significant emissions reductions will be needed in broad regions affecting Class I Areas. MANE-VU supports strong federal controls to reduce emissions of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) in order to help achieve those goals.

The adoption of strong federal emissions controls on SO<sub>2</sub> and NO<sub>x</sub> in the eastern United States is an important early step in MANE-VU SIP preparation. Ideally, federal controls should be sufficient to fulfill the first increment of progress in meeting visibility goals.

Without strong federal legislation and/or regulations implementing these controls in the eastern United States, it will be nearly impossible for MANE-VU Class I Areas to achieve the natural visibility goals Congress intends.

## Anticipated Need for Additional State Rules

In the longer term, additional state emissions controls are likely to be needed. Based on preliminary source apportionment analyses, it is likely that such controls should address the following sources:

- BART controls for sources not covered by federal controls,
- Fires, including prescribed fires, agricultural fires, residential wood combustion, and various open burning sources,
- Sulfur in fuel used by industrial, institutional, and residential furnaces, boilers and processes,
- Other sources near Class I Areas that contribute to visibility impairment.

It is likely that many of these same sources will require controls in order to meet PM<sub>2.5</sub> standards in urban areas designated nonattainment. In addition, mobile source controls are anticipated to be important for PM<sub>2.5</sub> and may have impacts on some Class I Areas.

## Stakeholder Participation

MANE-VU intends to provide opportunities for stakeholders to review and comment on key documents and other work products throughout the SIP development process. The MANE-VU Communications Committee is developing a work plan for providing information to the public and to stakeholders that goes into more detail about stakeholder involvement than this document. Several key opportunities for stakeholder involvement have been identified in this document, and comments are welcomed concerning additional contributions stakeholders would like to make to the process.



## Critical Early Tasks and Recommendations for Consideration

The Timeline identifies several critical tasks that are already underway or that will be undertaken in the next two years. These include the following:

- Calculate natural conditions where sufficient data exists, and develop and approve a methodology for calculating baseline conditions and natural conditions where additional data is needed.
- Develop a SIP template for MANE-VU states.
- Complete an initial contribution assessment by fall 2004.
- Agree on standardized emissions inventory methods.

Additional tasks identified for consideration by MANE-VU directors but not included in the current draft timeline include the following:

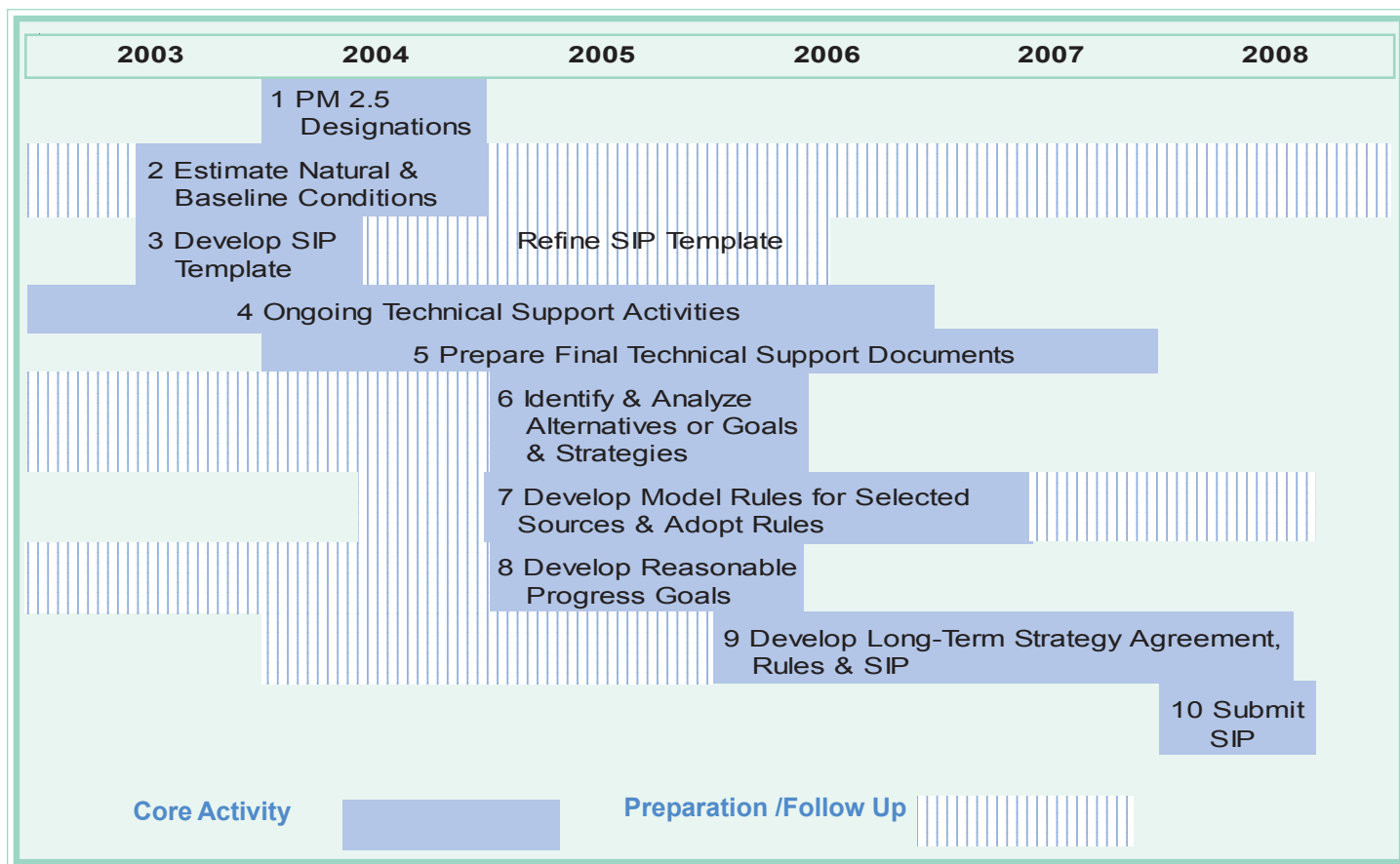
- EPA suggested that each state check with its Attorney General to ensure that the state has adequate legislative authority to adopt regulations to meet Clean Air Act requirements to improve visibility in Class I Areas.
- Gather information about existing state rules for sources identified as potentially needing additional controls.
- Take a proactive position on BART controls, identifying reasonable controls for sources within MANE-VU.

Tasks in 2005 and beyond have not yet been funded. In addition, completing some tasks shown in 2004 will require MANE-VU to adjust certain short-range commitments made to EPA in terms of projects to be completed in these years. Ongoing work will be required to harmonize short and long-range work plans and priorities in technical, communications, and policy areas. MANE-VU's long range strategy may provide a good vehicle for this process.



# Working SIP/TIP Strawman Timeline

## Key Milestones and Work Projections



### 1 PM<sub>2.5</sub> Designations

EPA guidance calls for PM<sub>2.5</sub> designations to be completed by late 2004. PM<sub>2.5</sub> designations will utilize three years of PM<sub>2.5</sub> monitoring data. EPA rules require regional haze SIPs to be submitted one year after designations for PM<sub>2.5</sub> attainment areas and three years after attainment (but not later than 2008) for nonattainment areas.

### 2 Estimate Natural & Baseline Conditions

The difference between natural and baseline conditions defines the amount of improvement that the regional haze SIPs must accomplish by 2064. Both natural and baseline conditions are to be estimated for the 20 percent most impaired and 20 percent least impaired days. EPA guidance recommends baseline conditions be determined using available monitoring data for 2000 to 2004, since some Class I Areas do not have current long-term data records.

MANE-VU developed a technical memorandum in March 2004 including proposed methods for calculating natural conditions as well as estimates using currently available data. After an internal MANE-VU review, these estimates and methods will be made available for review by other regional planning organizations and stakeholders. EPA, Federal Land Managers, and states whose emissions affect MANE-VU Class I areas will be consulted. The Timeline indicates that MANE-VU would approve the methodology at their 2004 meeting. Estimates of natural conditions may be revised as new data becomes available. Baseline conditions will be calculated when 2004 data is available.

### 3 Develop SIP Template

To facilitate development of regionally consistent SIPs, the Timeline calls for the development of a SIP Template. The Template would be an update and revision of WESTAR's SIP Template.

A draft Template will be developed by spring 2004, and will be made available for external review. Revisions will be made taking comments into consideration. As this is a Template it is meant as a starting point for SIP development will be updated as needed.

### 4 Ongoing Technical Support Activities

Documentation of a baseline emissions inventory, forecasted future inventories, modeling, source apportionment, and a contribution assessment will determine contributions to visibility impairment and effects of proposed controls. The Timeline reflects ongoing activities from 2003-2006 in support of first-round haze SIPs. MANE-VU's Technical Support Committee developed a Technical Work Plan to provide more details on tasks included as part of Technical Support Activities.

### 5 Prepare Final Technical Support Documents

Technical support documents will be prepared to support SIP elements. The Timeline establishes an annual cycle of updates and internal reviews to ensure preparation of current, accurate, and needed documents.

### 6 Identify and Analyze Alternatives for Goals and Strategies

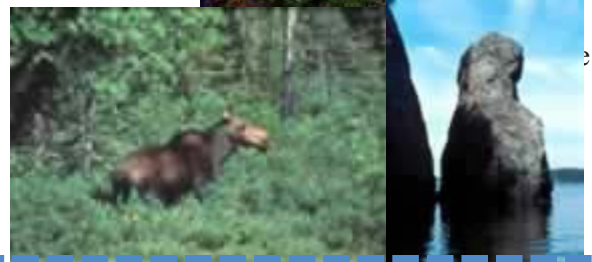
The Clean Air Act requires regional haze SIPs to contain a long-term strategy for improving visibility in Class I Areas. An initial step in developing a long-term strategy is the identification and analysis of alternative strategies. The analysis of strategies also affects the establishment of reasonable progress goals, since for a goal to be reasonable, there must be a reasonable strategy for achieving the goal.

The Timeline calls for MANE-VU to participate in defining an equitable and effective multi-pollutant strategy for the eastern US, to identify current rules (state and federal) that will improve visibility in the region, and to identify additional rules that may be necessary to achieve long-term regional haze goals. Early activities would emphasize the importance of federal controls on SO<sub>2</sub> and NO<sub>x</sub> emissions. By 2005, it will be necessary to have a good idea of what federal controls will be in place and to identify needed state rules and strategies. A report on the ancillary benefits of haze rules is planned for 2005. Emissions reductions that improve visibility will also reduce urban PM<sub>2.5</sub>, acid rain, and nitrogen deposition to sensitive waters, and these ancillary benefits may be important to the reasonableness and viability of needed controls.

### 7 Develop Model Rules for Selected Sources and Rules

MANE-VU will work with other regional planning organizations to prepare model rules that will reduce emissions beyond existing requirements. These model rules will facilitate regional consistency and speed rule adoption.

The Timeline shows activity on model rules beginning in 2005 and continuing through 2006 and into early 2007. Earlier activity needed depending on EPA's revised BART rules.



## 8 Develop Reasonable Progress Goals

Each state containing a Class I Area must establish reasonable progress goals for improving the most impaired days and establish SIP requirements that ensure no degradation on the least impaired days. Consultation with other states that affect visibility in the Class I Area is required, since establishing the goals will affect the stringency of SIP requirements. Consultation with EPA and Federal Land Managers is also required, in addition to opportunities for public comment.

The Timeline indicates that work to establish reasonable progress goals will continue through early 2006. Consultation activities are expected to peak in 2005, with final adoption of goals in 2006.



## 9 Develop Long-term Strategy Agreement, Rules & SIP

Each state must submit a long-term strategy for each Class I Area that may be affected by air pollution sources within the state. The long-term strategy is the control requirements that will result in visibility improvements consistent with established reasonable progress goals.

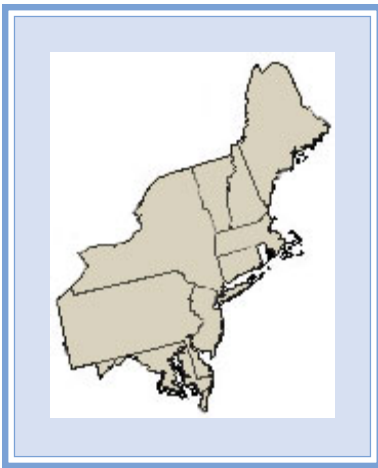
The Timeline calls for the development of an interstate agreement on a long-term strategy or strategies. Initial work to support this activity is expected to begin in 2004, with the core of activities taking place in 2006-7 and possibly extending into early 2008.

## 10 Submit SIP

Regional haze SIPs are expected to be submitted at the same time as  $PM_{2.5}$  SIPs, since there are likely similar supporting analyses needed and sources affected by controls.

EPA rules require SIPs to be submitted no later than 2008. Recent legislative action established SIP submittal deadlines three years after  $PM_{2.5}$  nonattainment areas are designated.

The Timeline does not address continuing requirements to review and resubmit SIPs every five years after the initial submittal.



## About MANE-VU

The Mid-Atlantic/Northeast Visibility Union (MANE-VU) was formed by 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 rule 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.

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.

Members include *Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, the Penobscot Indian Nation, Rhode Island, the St. Regis Mohawk Tribe, and Vermont.*

Also participating as nonvoting members of MANE-VU are the *U.S. Environmental Protection Agency, the National Park Service, the U.S. Fish and Wildlife Service, and the U.S. Forest Service.*

The Ozone Transport Commission executive staff office provides management and administration for MANE-VU. The Mid-Atlantic Regional Air Management Association (MARAMA) and the Northeast States for Coordinated Air Use Management (NESCAUM) conduct MANE-VU's technical projects.



OTC is comprised of 13 states from Virginia to Maine. OTC's main focus is to develop regional solutions to the ground-level ozone problem in the Northeast and Mid-Atlantic regions of the U.S. The OTC is involved in assessments of interstate pollution and the development of recommended air pollution control measures.



The Mid-Atlantic Regional Air Management Association is a voluntary, nonprofit association of ten state and local air pollution control agencies from North Carolina to New Jersey. MARAMA's mission is to strengthen the skills and capabilities of member agencies and to help them work together to prevent and reduce air pollution in the Mid-Atlantic Region.



NESCAUM's members are the six Northeast States as well as New York and New Jersey. NESCAUM's purpose is to exchange technical information, and to promote cooperation and coordination of technical and policy issues regarding air quality control among the member states. To accomplish this, NESCAUM sponsors air quality training programs, participates in national debates, assists in exchange of information, and promotes research initiatives.

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