



**File Code:** 2580

**Date:** April 7, 2009

Ms. Barbara Morin  
Supervising Environmental Scientist  
Rhode Island Dept. of Environmental Management  
Office of Air Resources  
235 Promenade Street  
Providence, RI 02908

Dear Ms. Morin:

This letter is in response to the Rhode Island Draft Regional Haze State Implementation Plan (SIP) dated January 26, 2009, which was submitted to the Federal Land Managers for review. Since you represent the responsible agency, we are providing our technical review comments (Enclosure 1) to you which focus on the eight content areas outlined in our October 13, 2006, letter to Stephan Majkut (Enclosure 2).

The Eastern Region of the Forest Service has a new Air Resource Management Team available to work with you and your staff on all air resource issues. Please add the Air Resources Specialist for Rhode Island, Ralph Perron, ((802) 222-1444 or [rperron@fs.fed.us](mailto:rperron@fs.fed.us)) to your Federal Land Manager list. As required in the Code of Federal Regulations (CFR), consultation and collaboration with our Agency can be maintained through Mr. Perron.

We look forward to working with you to improve air quality values, including progress towards the visibility goal set by Congress for our Class I areas. In spite of our legal involvement in this process, please realize that only the United States Environmental Protection Agency can make a determination about the document's completeness and provide final approval.

We would appreciate a response regarding our comments per Section 51.308(i)(3) of the CFR. Please contact Mr. Perron if you have technical questions about the substance of our comments.

Sincerely,

*/s/ Lee Nightingale (for)*  
KENT P. CONNAUGHTON  
Regional Forester

Enclosures (2)

cc: Ralph Perron, Paul Stockinger, Richard Gillam, Tom Wagner, Meg Mitchell



## Enclosure 1

### USDA Forest Service Comments Regarding Rhode Island Draft Regional Haze Rule State Implementation Plan (SIP)

The air program staff of the U.S. Forest Service has reviewed the Rhode Island Draft Regional Haze State Implementation Plan (SIP), dated January 26, 2009, and has developed the comments listed below. We look forward to the Rhode Island Department of Environmental Management response to these comments, as required in the Code of Federal Regulations (CFR) per section 40 CFR 51.308(i)(3). For further information regarding these comments, please contact Ralph Perron at (802) 222-1444 ([rperron@fs.fed.us](mailto:rperron@fs.fed.us)) or Rick Gillam at (404) 347-5058 ([rgillam@fs.fed.us](mailto:rgillam@fs.fed.us)). The comments below are categorized by the emphasis areas outlined in our letter to Mr. Stephan Majkut dated October 13, 2006, included as Enclosure 2. That letter discussed our perspectives relevant to Regional Haze SIP preparation.

#### Overall Comments:

We are interested in the Rhode Island Regional Haze SIP because analyses conducted by MANE-VU have shown that air emissions sources located in Rhode Island affect visibility in Forest Service Class I areas in the states of Vermont, New Hampshire, and West Virginia (see Table 2.1 of Draft SIP and Attachment B – MANE-VU Contribution Assessment). We recognize the impacts from Rhode Island sources are relatively small, but this does not negate the requirement that the Regional Haze SIP include all measures deemed necessary for Rhode Island to obtain its share of emissions reductions needed to meet the Reasonable Progress Goals for the Class I areas in the states listed above. Specific information on enforceable controls and compliance schedules for Rhode Island sources should be provided in the SIP.

#### Specific Comments:

##### Natural Condition and Uniform Rate (Section 4 of Draft RI RH SIP)

- No comments.

##### Emission Inventories (Section 6 of Draft RI RH SIP)

- The discussion of emissions inventories is generic and only explains the work done by MANE-VU and NESCAUM. This section should include additional discussion of how the Rhode Island specific emissions (presented in Tables 6.1-6.4) were generated.
- We would like Rhode Island to commit to annually tracking emissions and reporting how the projected emissions compare to actual emissions in 2012 and 2018.

##### Area of Influence (Section 2 of Draft RI RH SIP)

- The discussion regarding Rhode Island's contribution to visibility impairment at other States' Class I areas is very brief. Additional discussion should be provided to support Rhode Island's assertion that its impacts are "minimal." Section 8.2 of the Draft SIP

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provides additional information on Rhode Island's contribution to sulfate impacts. It is suggested that at the very least, a reference to Section 8.2 be added to Section 2.

### Reasonable Progress Goals and Long Term Strategy (Sections 10 and 11 of Draft RI RH SIP)

- Since Rhode Island has no Class I areas, it is acceptable to state that Rhode Island agrees with the reasonable progress goals established by the States of Maine, New Hampshire, Vermont, and New Jersey for their Class I areas. Even though the impacts are minimal, this section should also, at least, recognize that emissions from Rhode Island sources impact Class I areas in West Virginia and Virginia as well.
- Section 11.0 indicates the long term strategy includes “enforceable emissions limitations, compliance schedules and other necessary measures” to achieve the reasonable progress goals established by other States for their Class I areas. The information presented in Sections 11.1-11.4 is mostly generic MANE-VU information that applies to other states. Specific information on enforceable controls and compliance schedules for Rhode Island sources should be provided as well.
- In Section 11.4, Rhode Island indicates it will be relying on the MANE-VU “Ask” in its long term strategy. However, there is little information provided about specific actions that will be taken by Rhode Island to meet the “Ask.” Specifically, in regards to the “low-sulfur fuel oil strategy,” Rhode Island only commits to review the details of this strategy in five years to determine whether requiring low-sulfur fuel “remains a viable option for implementation by 2018.”
- The long-term strategy should include specific commitments and enforceable emissions limitations needed to demonstrate that Rhode Island is obtaining its share of the emissions reductions needed to meet the reasonable progress goals. Additional information should be added to Sections 11.9 and 11.10 of the Draft SIP to demonstrate that Rhode Island is doing its “fair share.”
- Table 11.2 in Section 11.5 of the Draft SIP lists sources that were shut down after 2002. Are there any other sources that are planning to shut down before 2018? If information is available for any other sources that are expected to shut down before 2018, it should be discussed in this section.
- We request that Rhode Island provide language in their SIP linking the Regional Haze and New Source Review programs and continued FLM coordination between these programs. Currently, there is no mechanism in the SIP to ensure the emissions from new stationary sources or major modifications of existing sources will make reasonable progress toward the national visibility goal (40 CFR 51.307). This could be especially important for emissions from new sources that were not anticipated in 2018 emission inventories.

### Wildland Fire (Section 11.7 of Draft RI RH SIP)

- We agree that based on existing inventories of smoke emissions from wildfires and prescribed fires, they are not a significant emission source for Rhode Island or a significant contributor to regional haze in downwind Class I areas at this time. It would be helpful to add a reference to the specific sections in Attachment V which support this

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claim. Also, we request that Rhode Island commit to track smoke emissions in the future to help determine the level of contribution for future planning periods.

Regional Consistency (Section 3 of Draft RI RH SIP)

- No comments.

Verification and Contingencies

- No comments.

Coordination and Consultation (Section 3 of Draft RI RH SIP)

- No comments.

Best Available Retrofit Technology (BART) (Section 9 of Draft RI RH SIP)

- Rhode Island has no BART sources. No comments.

Editorial Comments and Additional Suggestions:

- An “executive summary” would be helpful. Section 1.0 essentially serves this purpose, but additional specifics about Rhode Island’s actions should be added, including specifics of the long-term strategy.
- Section 5 discusses the monitoring strategy being used to assess visibility conditions. Even though Rhode Island does not have any Class I areas, this section demonstrates the importance of continued operation of the IMPROVE monitoring network. We ask that Rhode Island add a statement expressing their support for continued operation of the IMPROVE network.
- In Sections 7.1 and 7.3, brief discussions of model performance would be helpful.
- The numbering of footnotes throughout the document needs to be checked (e.g., the text on page 65 refers to notes 11 and 12, but they are numbered as 13 and 14).
- On page 88, there is a reference to Figure 11.6. The document does not contain a Figure 11.6.



File Code: 2580-2

Date: October 13, 2006

Mr. Stephan Majkut  
Chief, Office of Air Resources  
Rhode Island Department of Environmental  
Management  
235 Promenade Street  
Providence, RI 02908

Dear Mr. Majkut:

Over the past several years, members of both our staff and yours have participated with neighboring states and tribes in the Central States Regional Air Partnership to develop best approaches and tools for preparing plans that will reduce haze in Class I areas. With preparation of your Regional Haze State Implementation Plan (SIP) at hand, we want to focus on collaboration with you and your staff to ensure success. As you know, consultation with you is required in the Regional Haze Rule (RHR). This is a priority for our air program.

Our focus will be on Class I wildernesses, which the United States Department of Agriculture (USDA) Forest Service (FS) is responsible for. We are coordinating with the other Class I area managers, the National Park Service, and the US Fish and Wildlife Service to facilitate a common message from all federal land managers (FLM). We anticipate leveraging strengths of each FLM to our joint advantage. Since the FLM will be seeking a close working relationship with every state in this SIP writing process, the expectation is to share ideas from across the nation. The objective of every SIP is to play a critical role in a national emissions reduction plan.

Enclosed are detailed perspectives pertinent to the SIP preparation. Any comments or questions should be directed to Ann Acheson, the principal FS point of contact, at (740) 373-9055 ext. 23 or [aacheson@fs.fed.us](mailto:aacheson@fs.fed.us). She will consult on your SIP throughout the required 60-day comment period, sharing our best insights and recommendations. Ann will also work with others on our staff, especially our National Haze Coordinator, Ann Mebane and the Department of Interior. Ann Mebane can be contacted at (307) 587-4597 or [amebane@fs.fed.us](mailto:amebane@fs.fed.us).

As required in the RHR, please identify, at your earliest convenience, your key point(s) of contact. Send all correspondence electronically to both Ann Acheson and Ann Mebane to ensure a successful consultation and SIP.

Sincerely,

*/s/ Forrest L. Starkey (for)*  
RANDY MOORE  
Regional Forester

Enclosure



## **Enclosure 1**

Subject: Rhode Island and Regional Haze Rule Consultation with the United States Department of Agriculture (USDA) Forest Service (FS)  
September 2006

*The following perspectives are merely suggestions or recommendations not direction or requirements. They are deliberately very similar to those prepared by the Department of Interior to contribute to a common sense of purpose for improving haze in all Class I areas. We are sending these perspectives to each state. In so doing, we hope to facilitate inter-state coordination. At the same time, we fully acknowledge the discretion afforded in the Regional Haze Rule (RHR) for unique and creative solutions by individual states in writing plans that reduce haze.*

### **Natural Condition and Uniform Rate**

These factors apply mainly to states that have Class I areas. Other states that contribute to visibility impairment in Class I areas located in a different state might consider including discussion and conclusions on these factors in their individual plans.

The basic calculation of baseline, natural condition, and uniform rate builds the foundation for the entire RHR State Implementation Plan (SIP) process. Considerable discussion and debate at the science and policy level has occurred regarding appropriate methods to be used. As a consequence, several equations that include varying parameters or multipliers are available. Because these calculations can have a significant effect on the resulting progress goal, it is important to provide a detailed description of the methods used in the SIP. Calculations that include only portions of established methods or utilize unique approaches will be better understood if the rationale for these differences is fully explained in the SIP or its supporting documentation. We encourage states to use calculations that are based on equations recommended by the Interagency Monitoring of Protected Visual Environments (IMPROVE) steering committee and that are consistent with recommended approaches from the pertinent Regional Planning Organization (RPO) and the Environmental Protection Agency (EPA) region.

### **Emission Inventories**

Given the complexities associated with modern comprehensive emission inventories, spending some considerable effort in describing how these inventories were developed and used will be important. Emission descriptions will be most informative if they include an evolutionary discussion that includes an actual, base-year inventory used to evaluate model performance; a typical base-year inventory that represents the five year, average state which establishes modeled visibility impacts; and various future year, controlled inventories that demonstrate future visibility conditions. Consider adding future year inventories that are clearly partitioned to delineate source types (by text, charts, or graphics) that are included in each model simulation. Benefits to future visibility conditions suggested in the SIP that are not also clearly linked to a future inventory or are not clearly included in future model analysis, will warrant additional discussion.

One part of your emission inventory includes the implementation of “Best Available Retrofit Technology” (BART) on a subset of pre-Prevention of Significant Deterioration sources. The BART source identification, elimination, and level determination will be of particular interest for review. We would prefer to see a clear progression through the three basic BART phases and a thorough description of the RHR prescribed factor analysis (if applicable). Consider discussing whether BART levels apply to individual or grouped source categories.

## **Area of Influence**

The area of influence of significant visibility-impairing sources is an important SIP element. We suggest that each state clearly identify and apportion by state, or other geographic means, the significant levels of pollutants contributed to each Class I area by source. Developing this information together with neighboring States and Tribes will facilitate consistency. Discussions of changing source area contributions at both the base- and future-year levels will help demonstrate SIP progress. Consider the benefits of presenting this information in the form of transported mass by pollutant or through individually calculated visibility impairment measures. Using a percentage or “Top 10” ranking for current contributions by geographic area may or may not clearly describe progress over time.

## **Reasonable Progress Goals and Long Term Strategy**

Establishing reasonable progress goals for Class I areas in your state and/or acknowledging reasonable progress goals for Class I areas in other states that are affected by emissions from your state, as well as defining associated emissions strategies to meet these goals, form the basis of the SIP process under the RHR.

In developing the statute’s required Long Term Strategy (LTS), your state is offered broad flexibility when determining reasonable progress goals and associated emissions. As noted earlier, the RHR includes a requirement for states to assess a uniform rate of progress and compare that rate to the reasonable progress goals set by those states with Class I areas. We feel that this uniform rate of progress assessment is useful in determining the geographic and economic extent a state can consider when developing the LTS associated with the reasonable progress goals.

In general, we will be looking at the degree to which the LTS is supported by RPO technical work and at the level of consistency among the contributing states. For Class I areas where your state is setting a year 2018 reasonable progress goal of equal or less impairment compared to the uniform rate of progress, our review will focus holistically on (1) whether strategies are applied equitably across source types; (2) if both local and regional emission strategies have been fully examined; and (3) how consistent assessments and strategies are applied regionally.

For Class I areas where the reasonable progress goal is more impaired than the uniform rate of progress, consider presenting information on a component basis. Components could consist of emission source category as before, but also include contributions from individual pollutants or by geographic source area. Our intent is to better understand where and why a strategy falls short of the uniform progress rate goal.

Because each region has focused their emission control strategy on different conditions, presenting results in a component format may assist in showing what level of progress was made in the focus area, versus other less controllable factors.

## **Wildland Fire**

Your state has considerable flexibility as it addresses all anthropogenic sources of visibility impairment, including fire. The RHR requires consideration of smoke management techniques for agricultural and forestry management practices in the development of the LTS part of the SIP. On a short-term basis, fire has the potential to cause significant visibility reduction in Class I areas. If fire contributes to the index used to track long-term, reasonable progress in a Class I area, the visibility SIP should identify how it will be addressed. Your state may already have a smoke management program (SMP) that adequately describes how visibility impairment from fire will be

addressed. If fire has been determined to contribute to visibility impairment, we suggest including a fire emissions inventory along with a comment about its reliability and a projection for changes to the future inventory. If your state has a SMP, is it a basic smoke management program or an enhanced smoke management plan? And has the SMP been certified by the Environmental Protection Agency (EPA) Interim Air Quality Policy on Wildland and Prescribed Fire? Identify the specific SMP requirements for minimizing visibility impairment in Class I areas. Are there differences in state regulation for the way in which smoke from agricultural burning and forest fires are treated? Is there a difference in the way emissions from wildfire, prescribed fire, and wildland-fire-use (WFU) fire are identified and treated on private, state, and federal lands?

### **Regional Consistency**

The RPOs have been working toward regionally-consistent approaches to address visibility impairment throughout the SIP development process. There may be circumstances when different methods were used or impairment assessments reached different conclusions. The FLM understands that each state knows what emission control methods or air quality management strategies work best for its areas. Each state may wish to develop strategies that are independent from RPO or neighboring areas.

In this context, our review of “regional consistency” will have less to do with individual discretion each state has in making decisions, and more on how well a group of states identifies and addresses similar agreed upon goals for each Class I area within a common area of influence.

Regional consistency can also be difficult to evaluate if neighboring SIPs (or portions of SIPs) are released for review at different times. We expect that thorough inter-state consultation processes will lead to consistent descriptions of apportionment and emission control goals, thus resulting in development of similar progress goals, regardless of release dates.

### **Verification and Contingencies**

Little emphasis has been placed in the RHR on verification and even less on contingency planning. By rule, each SIP must identify the monitoring data used to specify the original baseline and also as part of an ongoing progress review at five year intervals.

Given the uncertain future of any individual monitoring site, we suggest that the SIP address the representation of both primary and alternative data sites for each Class I area.

Consider not only the data necessary to measure progress, but also how to account for and mitigate both unexpected and reasonably foreseeable emissions growth, changes to the geographic distribution of emissions, and substantive errors that may be found in emission inventories or other technical bases of the SIPs. These factors, as well as other unanticipated circumstances, may adversely affect your state’s ability to achieve the emissions reductions projected by the SIP. Considering these factors through adaptive management or continual review strategies may assist in avoiding these circumstances.

### **Coordination and Consultation**

The 1999 RHR requires states to consult with the FLM agencies at least 60 days prior to holding any public hearing on a RHR, SIP, or SIP revision (40 CFR 51.308(i)). As named in the cover letter to this enclosure, a single FS air specialist has been assigned to your state.