

REGIONAL HAZE WORKGROUP

Core Issue 1: 5- year Progress Reports

5/17/13

Issues and Concerns:

- The regional haze rule requires States to evaluate and reassess their regional haze plans every ten years, and conduct a SIP revision. Every five years a progress report is required, where the State identifies changes in emissions and visibility impairment. In addition, the State must “determine the adequacy of the existing SIP” in making reasonable progress, and revise the plan within one year if found to be “inadequate”. This 5-year progress report must also be in the form of a SIP revision (whether found inadequate or not).
- States support the idea of providing progress reports, however in most cases, five years is too short to show clear and significant trends. This raises the question about evaluating the “adequacy of the SIP” over such a short time period. A full evaluation of the State’s regional haze plan is required every 10 years, and as such 5-year progress reports should be only be a summary of data, emission changes, and visibility trends.

Rule Citations:

40 CFR 51.308(g) and (h)

Recommendations:

1. **Eliminate the need for the progress report to be in the form of a SIP revision.** The only time-requirement for regional haze SIP submittals imposed by the Clean Air Act (CAA) in section 169A relates to the long-term strategy for making reasonable progress. It requires that each SIP contains a long-term strategy based on a period of ten to fifteen years. EPA selected 10 years, and requires a comprehensive SIP revision for regional haze. There is no CAA requirement for a 5-year progress report; rather, this is introduced in the Regional Haze Rule. The purpose of this progress report is to identify emission and visibility trends, and report on implementation. Basically, the progress report is an early planning tool for the comprehensive SIP revision. This can be accomplished in a simple, factual report, without being in the form of a SIP revision. If EPA feels that public review is needed, this can be accomplished apart from requiring a formal SIP revision.
2. **Eliminate the determination of adequacy requirement.** In the West, where Class I visibility is generally much better than in the East, and natural sources play a much larger role, the timeframe of five years is too short to see any definitive results from the 10-year strategy. It is more appropriate in the West to review ten (or more) years of data to establish trends in visibility for use in judging whether reasonable progress is being made in controlling anthropogenic sources.
3. **Synchronize the 5-year reporting period with other EPA programs.** If the regional haze SIP planning period were expanded to 12-15 years, for example, to coordinate better with the NEI, the mid-course review would then occur every six to seven years. That would provide a longer period of emissions and monitoring data on which to identify trends. See the discussion of Core Issue 4, Integrate Planning.

REGIONAL HAZE WORKGROUP

Core Issue #2 - Achieving Natural Conditions and Reasonable Progress

5/17/13

Issues and Concerns:

- The Regional Haze Rule (RHR) focuses on attainment of natural visibility conditions by 2064. Yet the RHR Preamble recognizes Natural Conditions may need to be redefined in each planning period. Current estimates, for example, do not fully account for the role and variability of fire in Class I area ecosystems.
- Further, the Western States have found that anthropogenic sources outside the states' control, such as offshore shipping and international and global emissions are significant contributors to Class I area visibility impairment.
- Even for anthropogenic emissions within the states' control, it is unlikely that **all** emissions can be eliminated and Natural Conditions attained by 2064, if ever. Even if it were possible to eliminate all anthropogenic emissions, is that a practical and desirable goal? We rely on sources of anthropogenic emissions for sustenance, economic well-being, transportation, and recreation.
- Western States have found that despite significant reductions in SO₂ and NO₂ emissions, which come mostly from anthropogenic sources, the impact of wildfires and other sources outside our control interfere with the ability to show reasonable progress. This puts states in the position of having to explain why their haze plans fail to meet their haze goals, due to natural or international sources.
- BART provided a major focus for setting 2018 reasonable progress goals (RPGs). The RHR provides little direction on setting RPGs for 2028 and beyond. The RHR specifies that States "should consider major and minor stationary sources, mobile sources, and area sources." Yet, States may lack legal authority to regulate all types of sources to improve visibility. Some States cannot be more stringent than the federal government.

Rule citations:

40 CFR 51.308(d)(1) Reasonable Progress Goals

40 CFR 51.308(d)(2)(iii) Natural visibility conditions for the most impaired and least impaired days

40 CFR 51.308(d)(3) Long-term strategy for regional haze

Recommendations:

1. **Focus only on "controllable" sources.** The RHR needs to clarify that the State can only control anthropogenic sources that are within the State's legal authority and jurisdiction, and that there are technological and economic limits on the controllability of anthropogenic sources.

2. **Allow an “affirmative demonstration” of reasonable progress.** Under the RHR, a State must demonstrate reasonable progress based on implementation of the emission reduction strategies in its SIP. However “uncontrollable” sources (both natural and some anthropogenic) can adversely impact the reasonable progress demonstration such as an abnormally high wildfire year affecting the 20% worst days. In such cases, the RHR should allow a State to make an “affirmative demonstration” that it is making reasonable progress – except for impairment caused by natural events or uncontrollable anthropogenic sources that are beyond the State’s legal authority or jurisdiction.
3. **Treat some types of anthropogenic fire as “natural”.** Much of current federal forest policy is focused on application of prescribed fire as a means for restoring and maintaining healthy forests and reducing the risk of wildfire. Federal land managers consider smoke from this kind of activity as natural and a necessary part of the forest ecosystem. This is different from the more traditional use of prescribed fire where the objective is mostly waste disposal and economic benefit. The Western Regional Air Partnership (WRAP) developed a policy in 2001 called “Classifying Fire Emissions” to distinguish between natural and anthropogenic prescribed fire under the RHR. The RHR should reflect this policy and treat impacts from natural prescribed fire in the same manner as wildfire impacts; ecosystem management fires should not “count” when demonstrating reasonable progress.
4. **Recalculate or redefine Natural Conditions.** In the RHR Preamble, EPA contemplated that Natural Conditions may need to be recalculated in each planning period, as the technical basis improves for estimating what Natural Conditions in 2064 should be. However, even with recalculation, it may be impossible to achieve a purely natural condition, based on the elimination of all anthropogenic contribution to haze. Sources such as offshore shipping, and international and global emissions, will continue to contribute to Class I Area impairment, yet lie outside a State’s jurisdiction. Likewise, eliminating all anthropogenic emissions from within the state is impractical. All of these factors point to the need for EPA to refocus their efforts on either recalculating natural conditions to a more realistic level, or consider redefining the term in a similar manner, so that the 2064 target is attainable.
5. **Clarify in rule or guidance how to set new Reasonable Progress Goals (RPG) for 2028 and beyond.** Now that BART has been addressed, it is unclear how future RPGs should be established. While the RHR directs States to consider *all types* of sources, the rule does not specify any level of control (e.g., RACM/RACT) or any process for identifying relevant sources and determining controls. The initial round of RPGs was estimated through modeling but the availability and capacity of modeling resources is uncertain.

An option and alternative to the above:

6. **Give States the option of choosing Regional Emission Reduction Targets (RERTs).** Allow Western States the option of following a Section 309 type of approach, based on regional emission reductions (similar to the “SO₂ milestones” developed by Grand Canyon Visibility Transport Commission in the 1990s). Now that BART has been addressed, the current RHR has no other clear focus on where to make additional haze improvements. Much of “low hanging” emission reductions have been taken. A first step in implementing a RERT approach could be to develop a

conceptual model that identifies anthropogenic sources of visibility-impairing pollutants and their current levels of control. RERTs have the potential to be more consistent with ongoing State programs for attainment and maintenance of the NAAQS and thus more readily integrated into a state's ongoing activities.

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Core Issue #3 – Developing effective Long-Term Strategies after BART to achieve Reasonable Progress

5/17/13

Issues and Concerns:

- Under the first planning period, BART addressed emissions from large stationary sources. With BART now done, the emphasis shifts to the Long-Term Strategy for reducing visibility impairment from non-BART stationary sources and other source categories, such as mobile and area sources.
- While BART provided a specific process for identifying eligible sources and evaluating controls, the Regional Haze Rule provides only minimal information on how to develop effective long-term strategies to achieve reasonable progress. For example, it is unclear how the “4-factor analysis” in Section 308(d)(1) of the rule would apply to any other sources besides point sources, or how a State can be expected to identify and evaluate “all anthropogenic sources of visibility impairment” in developing a long-term strategy in Section.308(d)(3).
- While the RHR does not need to provide the same level of detail as the BART process, it does need to provide clear and consistent criteria or guidelines for identifying sources or source categories for consideration for emission controls. In other words, how do we identify which sources or categories should be considered for emission controls, and what would be considered “reasonable” controls, as part of a long-term strategy to improve haze?
- Essential to any evaluation of controls is the ability to demonstrate how the identified sources or source categories are affecting Class I area visibility, in order to quantify or measure improvements in haze. However, there are major technical and resource issues that States will face in conducting such evaluations, and limited assistance expected from regional planning organizations in the future. Without a strong technical basis to show reasonably attributable visibility impairment, and without more clarity in the RHR on how to demonstrate “reasonable progress,” it will difficult for States to make any progress in improving haze and implementing the RHR.

Rule citations:

- 40 CFR 51.308(d)(1)(i)(A) – the four factor requirements
- 40 CFR 51.308(d)(3) – the long-term strategy for regional haze

Recommendations:

1. **Need clear and consistent criteria.** The RHR needs to identify consistent criteria or guidelines for identifying sources or source categories for consideration for emission controls. For example, a procedure for considering control on non-BART stationary sources could easily be outlined with different considerations for different categories. Criteria could include:

- Emissions quantity
- Distance to nearest Class I area
- Q/d (quantity over distance)
- Set percentage of sources in a category, e.g., top 10 percent of emitters
- Current controls on the source

The procedure could be structured so that the sources most affecting visibility are addressed during each planning period. Once the top sources are addressed, they should fall in their “rank” during the next planning period. Thus, with each subsequent planning period, a new group of sources should rise to the top as the as those most affecting visibility in Class I areas.

2. **Clarify the “4-factor analysis” provision.** Clarify through rule or guidance how to apply the “4-factor analysis” to other sources besides point sources – and add a fifth factor that addresses the need to show the contribution to haze by the source.
3. **Clarify how to measure haze improvements.** Under the long-term strategy requirement, provide further clarification on how States should quantify or measure improvements to haze, such as submitting data showing reductions in visibility-impairing emissions .
4. **Strengthen the legal authority of “Reasonable Progress.”** Through rule, define “reasonable progress” in more detail, per the clarification recommendations above, but also focusing the legal basis for this requirement, similar to how BART was a “driver” for implementing the RHR. This will help States that lack sufficient legal authority at the state level in developing effective long-term strategies to improve haze.

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Core Issue #4 – Integrate Planning

5/17/13

Issues and Concerns:

- EPA and the States have championed the need for a multi-pollutant planning process for many years and this approach is especially suited to regional haze. In most States, NAAQS-related controls are a major source of emission reductions and provide significant visibility benefit. State resources are more effectively used when these reductions can achieve multiple benefits. California's approved Regional Haze SIP is a good example of how NAAQS and RH SIP can work well together when they are in sync. In this SIP, pollution control programs to attain the ozone and PM_{2.5} NAAQS are the primary drivers providing visibility improvements and reasonable progress.
- The federal regional haze rule is out of sync with upcoming NAAQS requirements. For example, upcoming SIPs for ozone and SO₂ will likely provide visibility benefits in many states, but the due dates for those SIPs occur after the next revision to the RH SIP in 2018. The NAAQS SIPs are subject to rigid schedules and processes prescribed in the Clean Air Act, but Section 169A of the Clean Air Act does not contain prescriptive measures and timelines. EPA has an opportunity to use that flexibility to foster a multi-pollutant approach that integrates air quality planning processes between regional haze and NAAQS. This multi-pollutant approach would enhance the States' ability to develop regional haze SIPs, and benefit States which have limited legal authority to require emission reductions for non-NAAQS purposes.
- It will be difficult for States to reduce emissions for regional haze from sources that will soon be included in a NAAQS SIP because of uncertainty about the entire suite of controls that will be needed. The NAAQS SIPs are likely to require more stringent controls in affected areas.
- It is also important to identify where NAAQS SIPs would not provide visibility benefits, such as in areas of a state currently attaining the NAAQS. For example, one category of sources identified and studied by the Western Regional Air Partnership (WRAP) for improving regional haze was called "In and Near Sources" – referring to sources emitting inside Class I areas, such as motor vehicles, campfires, road dust, and emissions from nearby communities and other local area sources.
- The 10-year planning period under the RHR results in a focus on strategies that may not consider the longer term trends expected to affect western Class I areas – such as wildfire, drought, international emissions, population growth (amount, concentration, and geographic location), and energy development. Both a short term (10-year) and a longer term planning effort are needed, and should be reflected in the 10-year comprehensive plan review. .

Recommendations:

Overall, the RHR needs to be revised to better reflect the interrelationship between NAAQS and regional haze. To this end, the following are "guiding principles" for future discussions between EPA and Western States in developing specific recommendations on this core issue:

1. Where appropriate, allow State haze SIPs to focus on NAAQS-related controls to meet the RHR.
2. Focus on integrating RHR and NAAQS planning efforts.
3. Identify strategies to reduce haze from sources not addressed through NAAQS.
4. Extend the 10-year planning period if a longer period is needed.

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Core Issue #5 - Class I Area Visitation as a consideration

5/17/13

Issues and Concerns:

- The RHR currently focuses on improving the 20% worst days, regardless of when those days occur, and the number of visitors affected by poor visibility. Many Class I areas have seasonal visitation, where summer visitation far exceeds that in the winter months, especially at Class I areas at high elevations where snow and weather limit access.¹ Other Class I areas are remote and have few visitors at any time.
- Section 301 of the Regional Haze rule cites “visitor use” as one of several criteria in the definitions “adverse impact on visibility” and “significant impairment.” Yet, under Section 308 requirements for setting Reasonable Progress Goals, no consideration is given to visitation.
- This raises the question of whether the regional haze rule should include an option that allows visitation to be a factor in developing regional haze strategies, for improving the 20% worst visibility days, and ultimately for demonstrating Reasonable Progress by the State.

Rule citations:

40 CFR 51.301 Definitions

40 CFR 51.308(d)(1) Reasonable Progress Goals

Recommendations:

1. **Encourage seasonal strategies based on visitation.** States should be encouraged under RHR to adopt strategies that emphasize improving the 20% worst days during periods of high visitor use. One example could be a greater focus on smoke management strategies to reduce visibility impacts in nearby Class I areas from forestry or agricultural burning, when such burning is upwind of a Class I area, and occurs when there is greater visitation, such as during the summer months. Regional haze plans that can show greater haze improvement on high visitation days could be considered making greater reasonable progress than those that do not.
2. **Give credit for improving “worst days” with higher visitation.** A similar approach would be to assign a “weighted value” to the 20% worst days based on the visitation occurring on those days, so that haze improvements are given more credit for Reasonable Progress purposes. Similarly, Class I areas as a whole could be ranked, based on total annual visitation. In this case, States that can show more haze improvement in Class I areas like Grand Canyon that has millions of visitors would get more credit for reasonable progress than similar level of improvement in much less visited Class I areas. This would not negate making visibility improvements in less visited areas, but simply put greater focus on those with higher visitation.

¹ For example, at Crater Lake National Park in Oregon, in July and August, monthly visitation is over 100,000, whereas in November it drops to 7,000, and even less in December and January.