



# Protection of Visibility: Amendments to Requirements for State Plans

## Final Rule

Docket ID: EPA-HQ-OAR-2015-0531  
82 FR 3078; January 10, 2017

U.S. Environmental Protection Agency  
Public Webinar – January 26, 2017

# Webinar Overview



- **Protecting Visibility**
  - A primer on relevant background information for the regional haze program.
- **Final RHR Revisions**
  - An in-depth discussion of each main topic area of the final rule, including:
    - Clarifications Regarding Long-Term Strategies and Reasonable Progress Goals;
    - Other Clarifications and Changes to Requirements for Periodic Comprehensive Revisions of Implementation Plans;
    - Changes to Definitions and Terminology Related to How Days Are Selected for Tracking Progress;
    - Impacts on Visibility from Anthropogenic Sources Outside the U.S.;
    - Impacts on Visibility from Wildland Fires Within the U.S.;
    - Clarification of and Changes to the Required Content of Progress Reports;
    - Changes to RAVI Provisions;
    - Changes to FLM Consultation Requirements;
    - Extension of Next Regional Haze SIP Deadline from 2018 to 2021;
    - Changes to Scheduling of Regional Haze Progress Reports;
    - Changes to the Requirement that Regional Haze Progress Reports be SIP Revisions; and
    - Changes to Requirements Related to the Grand Canyon Visibility Transport Commission.
- **For More Information**
  - We provide web links and email/phone contacts to assist with any further questions.

# Protecting Visibility



- The Clean Air Act established a national visibility goal to prevent any future, and remedy any existing, visibility impairment in national parks and wilderness areas.
  - Note: “Impairment” specifically refers to human-caused air pollution.
- 1980: EPA finalized regulations to address Reasonably Attributable Visibility Impairment (RAVI).
- 1999: EPA promulgated the Regional Haze Rule (RHR)
  - RHR calls for states to establish goals and emission reduction strategies for improving visibility in mandatory Class I Federal areas.
  - Describes required actions when submitting regional haze state implementation plans (SIPs) and progress reports.
    - Plans must demonstrate how states have made, and will continue to make, progress toward achieving their visibility improvement goals.
  - The first state plans were due in 2007 and covered 2008-2018, the first planning period.
  - This final rule revision addresses requirements for the second and subsequent planning periods.



- Clarifications Regarding Long-Term Strategies (LTS) and Reasonable Progress Goals (RPGs)
  - The final rule organizes the requirements in the regulatory text applicable to second planning period SIPs (§51.308(f)) to better reflect the actual sequence of steps in the regional haze planning process, as follows:
    1. Calculate current visibility conditions, the Uniform Rate of Progress (URP), & the URP line (“glidepath”).
    2. Develop the LTS, by (among other things) evaluating sources that impact visibility at Class I area(s) for potential control measures by considering the four statutory factors.
    3. Calculate RPGs, which comprise projected visibility conditions at the end of the applicable implementation period, and compare the RPG for the 20% most impaired days to the URP line.
  - The final rule clarifies that all states, not just those with Class I areas, must consider the four statutory factors when developing their LTSs.
  - The final rule clarifies that, in developing the LTS, a state must document:
    - The criteria used to determine which sources or groups of sources were evaluated.
    - How these four factors were taken into consideration in selecting the measures for inclusion in its LTS.
    - The technical basis on which the state is relying to determine the emission reductions from anthropogenic sources in the state that are necessary for achieving reasonable progress towards natural visibility conditions in each mandatory Class I Federal area it affects.



- Clarifications Regarding LTS and RPGs (continued)
  - When considering the time necessary for compliance, a state may not reject a control measure because it cannot be installed and become operational until after the end of the implementation period.
    - The state should instead consider that fact in determining the appropriate compliance deadline for the measure.
    - Any emission reductions that will not occur until after the end of the implementation period should not be reflected in the RPGs.
  - The final revisions include a single provision requiring each state to consult with the other states that are reasonably anticipated to contribute to visibility impairment in a mandatory Class I Federal area to develop coordinated emission management strategies.
    - The proposal’s distinction between “contributing states” and “states affected by contributing states” has been removed because the substance of the two proposed provisions was essentially the same.
  - In response to comments received, EPA is incorporating additional clarifying edits; these edits are not substantive, are merely clarifying in nature, and are addressed in the preamble



- Other Clarifications and Changes to Requirements for Periodic Comprehensive Revisions of Implementation Plans
  - The final rule clarifies that the URP line starts at 2000-2004, for every implementation period.
  - The final rule clarifies that visibility conditions on the clearest 20% of days must show no deterioration from conditions in 2000-2004.
    - A clarifying edit makes clear that the baseline visibility condition is also the benchmark for determining whether the LTS and RPGs provide for an improvement in visibility on the most impaired days.
  - The final rule requires an enhanced analytical obligation when the RPG for the 20% most impaired days is not on or below the URP line.
    - If the goal for the 20% most impaired days provides for a slower rate of visibility improvement than that needed to attain natural conditions by 2064, the state must demonstrate that there are no additional control measures for sources reasonably anticipated to contribute to visibility impairment in the Class I area that are reasonable to include in the LTS.
    - This requirement applies to the state with the Class I area and all contributing states.



- Other Clarifications and Changes to Requirements for Periodic Comprehensive Revisions of Implementation Plans (continued)
  - In evaluating RPGs, EPA will consider the controls and technical demonstration provided by a contributing state with respect to its LTS in addition to those developed by the state containing the Class I area with respect to its own LTS.
  - The final rule requires that SIPs contain information needed to make them also serve as progress reports.
    - The only significant additional information required in a progress report and now required in a SIP revision is the requirement to report on the trend in visibility over the whole period since the baseline period of 2000-2004.
  - The final rule updates terminology related to smoke management programs and basic smoke management practices as had been proposed, with two exceptions.
    - The final rule makes simplifying edits and re-titles the list of additional considerations.
    - The final rule requires all states to consider smoke management programs.



- Other Clarifications and Changes to Requirements for Periodic Comprehensive Revisions of Implementation Plans (continued)
  - Clarifications regarding emissions inventories:
    - There is no remaining obligation with respect to the inventory for the 2000-2004 period.
    - There is no rule provision addressing the base year inventory used to model the RPGs.
    - The technical basis for the LTS must include, but is not limited to, inventory information for a year no older than the most recent submission under the Air Emissions Reporting Requirements. There is no provision for an approved exception. However, the final rule provides a 12-month grace period for this requirement.
      - This will allow time for this information to be used in SIP development, such that a submission to the NEI in the period 12 months prior to the due date of the SIP does not trigger a requirement to switch years.
      - The information that is used to develop the LTS does not have to be the same information that was submitted to the NEI.



# Final RHR Revisions



- Changes to Definitions and Terminology Related to How Days Are Selected for Tracking Progress
  - The final rule clarifies that “visibility impairment” means the deviation from natural visibility and therefore is due to anthropogenic impacts.
  - The final rule codifies the proposal’s “Alternative 1,” wherein states must select the 20 percent most impaired days based on anthropogenic impairment
  - The final rule revises definitions in §51.301 to make clear that the 20% most impaired days should be selected based on anthropogenic visibility impairment rather than based on the days with highest deciview values due to impacts from all types of sources, with a few changes from proposal.
    - We are finalizing the proposed changes to the definitions of *clearest days*, *deciview*, *deciview index*, *least impaired days*, and *visibility* along with additional changes we have determined are useful to further clarify the definitions of *most impaired days*, *visibility impairment*, *regional haze*, *natural conditions*, and *natural visibility condition* to more clearly explain that impairment is from anthropogenic sources and that natural sources and their contributions to visibility vary over time.
    - We are finalizing definitions for *natural visibility*, *baseline visibility condition*, and *current visibility condition* that we determined were useful to fully clarify the meanings of these terms.
  - The final rule continues to use the 20% of days with the lowest total deciviews (i.e., “clearest days”) rather than the 20% least impaired days for purposes of tracking any adverse trend in visibility on clear days.



- Impacts on Visibility from Anthropogenic Sources Outside the U.S.
  - The final rule preamble acknowledges challenges with estimating international anthropogenic impacts and notes EPA is engaged in research in this area and will share work to the extent that it might be helpful.
  - We expect that by the time some future SIP revisions are to be prepared, methods and data for estimating international anthropogenic impacts will be substantially more robust.
  - The final rule allows states with Class I areas significantly impacted by international emissions to potentially make an adjustment to the URP.
    - The potential adjustment provided by the final rule codifies the proposal’s “Alternative 1,” i.e., adding to the value of natural visibility conditions (the 2064 end point) an estimate of international impacts, only for the purpose of calculating the URP and only if the Administrator determines the international impacts from anthropogenic sources outside the U.S. were estimated using scientifically valid data and methods.
    - The final rule clarifies that the Administrator’s approval for an adjustment will be part of the Administrator’s review of the full SIP submission for an implementation period, and not a separate action in advance of SIP submission.



- Impacts on Visibility from Wildland Fires Within the U.S.
  - The proposal discussed:
    - Whether measures to reduce emissions from wildland wildfire and wildland prescribed fires may be needed for reasonable progress towards natural visibility conditions; and
    - Whether smoke from fires might cause the projected RPG to be above the URP line, thus triggering the additional analytical requirement to show that there are no additional measures that are necessary for reasonable progress.
  - We are finalizing rule language to allow the Administrator to approve a state’s proposal to adjust the URP to avoid subjecting a state to the additional analytical requirement due only to the impacts of specific types of wildland prescribed fire.
    - The final rule allows potential URP adjustment in accordance with the proposal’s “Alternative 1” (i.e., allow URP adjustment by adding wildland prescribed fire impacts to natural visibility conditions)
    - The final rule clarifies that the Administrator’s approval for an adjustment will be part of the Administrator’s review of the full SIP submission for an implementation period, and not a separate action in advance of SIP submission.



- Clarification of and Changes to the Required Content of Progress Reports
  - The final rule adds a number of explanatory sentences to better indicate what “current visibility conditions” are and how to calculate them.
  - The final rule clarifies that changes in visibility impairment for the most impaired and clearest days, changes in emissions of pollutants contributing to visibility impairment, and assessments of any significant changes in anthropogenic emissions that have occurred are to be provided over the period since the period addressed in the most recent progress report or SIP revision.
  - The final rule revises and clarifies the obligation of states regarding emissions inventories.
    - Explains clearly the most recent year through which the emissions analysis must be extended, by sector.
    - Makes clear that if emission estimation methods have changed from one reporting year to the next, states need not backcast (i.e., use the newest methods to repeat the estimation of emissions in earlier years) in order to create a consistent trend line over the whole period.
  - The final rule requires states to report whether significant changes in anthropogenic emissions that have occurred were anticipated in the most recent SIP.



- Clarification of and Changes to the Required Content of Progress Reports (continued)
  - The final rule requires a state whose LTS includes a smoke management program for prescribed fires on wildland to include a summary of the most recent periodic assessment, *if any*, of the smoke management program.
  - The final rule relieves states of the need to review their visibility monitoring strategies within the context of progress reports.
  - Changes from proposal:
    - The final rule makes the required public comment period on a progress report 30 days (rather than the proposed 60 days).
    - The final rule provides a 6-month grace period for the trigger of the requirement to include emissions information for a recent year.
    - The final rule retains 308(g)(7) regarding monitoring strategies (instead of the proposal to remove it entirely), but makes it applicable only to progress reports for the first implementation period.
    - The final rule contains other minor clarifying edits in response to comments received.



- Changes to RAVI Provisions

- The final rule:

- Expands the RAVI requirements to all states and territories.
  - Exceptions: Guam, Puerto Rico, American Samoa and the Northern Mariana Islands.
  - The geographic coverage of the RAVI provisions and the regional haze provisions is now the same.
- Eliminates requirements for states to periodically assess RAVI.
- Removes existing FIP provisions that require the EPA to periodically assess whether RAVI is occurring and to respond to FLM certifications.
- Clarifies and strengthens the existing provisions under which states must address RAVI when an FLM certifies that such impairment is occurring in a particular Class I area due to a single source or a small number of sources.
  - The final rule text retains the existing approach to the time schedule for state response to an FLM certification of RAVI (3 years, given as “Alternative 1” in the proposal), with added caveat that no response will be due before next SIPs are due (July 31, 2021).
  - The final rule also adds a requirement that FLMs offer to consult with states before making a RAVI certification.
- Edits various portions of §§51.300-308 to make them clearer and more compatible with each other.



- Changes to FLM Consultation Requirements
  - **SIPs:** The final rule includes a requirement that FLM consultation occur early enough in the SIP planning process to allow the state time for full consideration of FLM input, but no fewer than 60 days prior to a public hearing or other public comment opportunity.
    - A consultation opportunity that takes place no less than 120 days prior to a public hearing or other public comment opportunity will be deemed “early enough.”
  - **Progress reports:** The final rule includes a stand-alone requirement that states must offer to consult with FLMs regarding progress reports.
    - This is needed because under the final rule, progress reports are no longer SIP revisions (the FLM consultation requirements had heretofore been applicable only to formal SIP revisions).
    - As with the proposal, consultation must occur no fewer than 60 days prior to a public hearing or other public comment opportunity, but reference to the consultation opportunity being “early enough” has been removed.
      - Reason: anything more than a 60-day period may conflict with the final rule’s requirement to assess current conditions based on the IMPROVE data available 6 months before the progress report due date.

# Final RHR Revisions



- Extension of Next Regional Haze SIP Deadline from 2018 to 2021
  - We are finalizing a one-time schedule adjustment such that SIPs for the second planning period are now due July 31, 2021.
  - The end date for the second planning period remains 2028.
    - That is, the focus of state planning remains emission reduction measures that should be in place or underway by 2028, as had been required by the pre-existing rule.
  - The additional 3 years will allow states to coordinate regional haze planning with that for other federal programs.



# Final RHR Revisions



- Changes to Scheduling of Regional Haze Progress Reports
  - This final rule requires a progress report mid-way between SIP revisions.
  - Second and subsequent progress reports are now due by:
    - January 31, 2025
    - July 31, 2033
    - July 31, 2043
    - ...and every 10 years thereafter.



- Changes to the Requirement that Regional Haze Progress Reports be SIP Revisions
  - The final rule removes the requirement that progress reports take the form of SIP revisions.
    - The SIP revision due in 2021 must include a commitment to prepare and submit these progress reports to the EPA according to the revised schedule being finalized in this rule.
  - States are still required to include certain information that would have been addressed in the progress reports.
    - Language in 51.308(f)(5) expands the scope of SIPs so that the same information as that listed in 51.308(g) will still be covered.
    - Also, §51.308(h) continues to require that at the same time the state is required to submit a progress report, it must also take one of four listed actions concerning whether the SIP is adequate to achieve established goals for visibility improvement.
  - States are required to consult with FLMs and obtain public comment on progress reports before submission to EPA.
    - The final rule mirrors the proposal, except required public comment period has been reduced from 60 days to 30 days.
  - These progress reports will be acknowledged and assessed by EPA, but EPA review will not result in a formal approval or disapproval.



- Changes to Requirements Related to the Grand Canyon Visibility Transport Commission
  - Section 51.309 has limited applicability going forward.
    - Its provisions apply only to 16 Class I areas covered by the Grand Canyon Visibility Transport Commission Report.
    - Its provisions apply only to the first regional haze implementation period (i.e., through 2018).
    - Only three states relied on §51.309.
  - Nevertheless, the final rule makes certain conforming amendments to avoid confusion going forward, including:
    - Updated cross-references.
    - Conforming changes regarding progress reports for the second and subsequent implementation periods.
    - Correction of a typographical error.
    - Removal of the phrase “prescribed natural fire” from the definition of “fire.”

# For More Information



- This final rule and other background information are also available electronically at <http://www.regulations.gov>, the EPA's electronic public docket system, or on EPA's Visibility and Regional Haze web site at <http://www.epa.gov/visibility>.
- For further information about the final rule, contact:

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