

**File Code:** 2580  
**Date:** March 31, 2021

Ms. Gail Good  
Director, Air Management  
Wisconsin Department of Natural Resources  
101 S. Webster Street  
PO Box 7921  
Madison, WI 53707-7921

Dear Ms. Good:

On February 22, 2021, the State of Wisconsin submitted a draft Regional Haze State Implementation Plan describing your proposal to continue improving air quality by reducing regional haze impacts at mandatory Class I areas across our region. We appreciate the opportunity to work closely with your State through the initial evaluation, development, and, now, subsequent review of this plan. Cooperative efforts such as these ensure that, together, we will continue to make progress toward the Clean Air Act's goal of natural visibility conditions at our Class I areas.

This letter acknowledges that the U.S. Department of Agriculture, U.S. Forest Service, has received and conducted a substantive review of your proposed Regional Haze State Implementation Plan. This review satisfies your requirements under the federal regulations 40 C.F.R. § 51.308(i)(2). Please note, however, that only the U.S. Environmental Protection Agency (EPA) can make a final determination about the document's completeness, and therefore, only the EPA has the ability to approve the document.

We have attached comments to this letter based on our review. We look forward to your response required by 40 C.F.R. § 51.308(i)(3). For further information, please contact Trent Wickman at [trent.wickman@usda.gov](mailto:trent.wickman@usda.gov) or (218) 341-8646.

Again, we appreciate the opportunity to work closely with the State of Wisconsin. The Forest



Service compliments you on your hard work and dedication to significant improvement in our nation's air quality values and visibility.

Sincerely,

X *Constance Cummins*

Signed by: BRIAN VOSBERG  
CONSTANCE CUMMINS  
Forest Supervisor

Enclosure

cc: Paul Strong, Don Shepherd, Alisa Liu, Tim Allen

*Wisconsin Regional Haze Plan - Technical Comments*

The plan is very comprehensive and well organized. It is logically sequenced and generally well explained. We specifically appreciated the development of the 2028 “adjusted” emissions and itemized list of associated emission reductions. We also recognize the significant emission reductions of nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) made in Wisconsin since 2005 due to economic and regulatory drivers.

*Air Quality Setting*

The draft Technical Support Document (TSD) from LADCO<sup>1</sup> was developed to support the development of regional haze state implementation plans for the second haze implementation period for the member states<sup>2</sup>. The TSD contains technical analyses that characterize the nature of visibility impairment and characterize important contributors to the impairment at Class I Areas in Minnesota and Michigan.

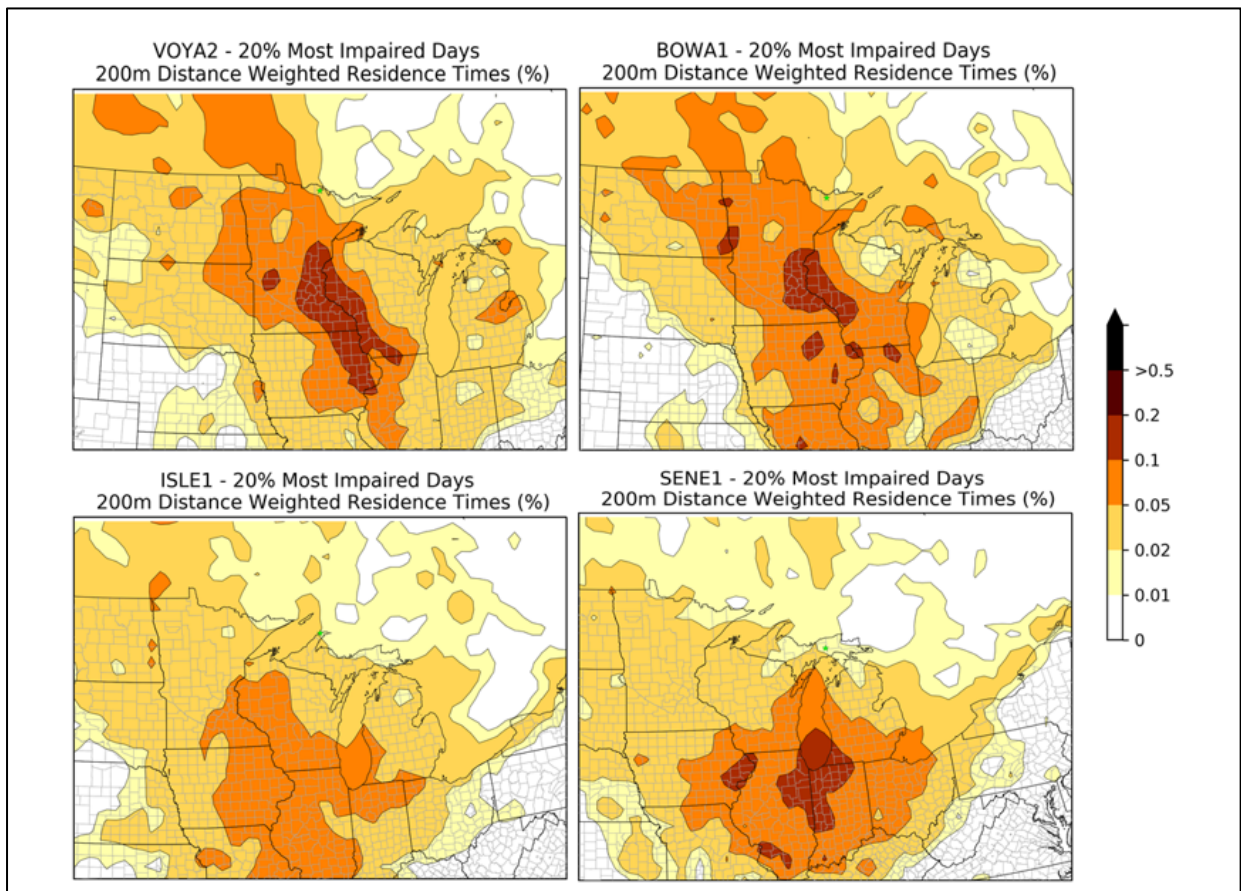


Figure 1 - Distance weighted residence times for air masses reaching the four LADCO Class I areas on the 20% most impaired days for the years 2012 to 2016 taken from LADCO TSD

<sup>1</sup> Lake Michigan Air Directors Consortium, DRAFT Technical Support Document, Modeling and Analysis for Demonstrating Reasonable Progress for the Regional Haze Rule 2018 - 2028 Planning Period, January 27, 2021

<sup>2</sup> Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin

The TSD includes the following key observations for the Boundary Waters Canoe Area Wilderness (BWCAW):

- Visibility has improved over the last 20 years, primarily due to reductions in ammonium sulfate which is due to reductions in sulfur dioxide emissions
- Air masses on the most impaired days most frequently arrived from the south, suggesting that emission sources to the south contribute the most to poor visibility (see Figure 1)
- Wisconsin is the second largest contributing state on the most impaired days

*Source Selection*

The Regional Haze Regulations require each state to perform a reasonable progress analysis for industrial sources impairing visibility using the listed four factors. The LADCO states used a Q/d approach to select these sources.

The choice of an emissions/distance (Q/d) threshold value produces a list of emission sources for further analysis. EPA notes in its guidance that “Whatever threshold is used, the state must justify why the use of that threshold is a reasonable approach, i.e., why it captures a reasonable set of sources of emissions to assess for determining what measures are necessary to make reasonable progress.” Our overriding concern is that a sufficient number of sources were not selected. Wisconsin used a Q/d value of ten that captured essentially only two sources and about half of the state total Q/d. For comparison:

- Ohio used a Q/d value of four which resulted in the selection of 16 facilities and 72% of the total Q/d for all its sources.
- Minnesota used a Q/d value of four which resulted in the selection of 17 facilities and 80% of the total Q/d for all its sources.
- Michigan used a Q/d value of four which resulted in the selection of 10 facilities and about 80% of the total Q/d for all its sources

In EPA’s draft Regional Haze Guidance 80% of each state’s overall impact was suggested as appropriate. We feel Wisconsin’s approach selects an insufficient number of sources as compared to other LADCO states.

facility_name	Qf/d (closest)
EXPERA SPECIALTY SOLUTIONS LLC - Kaukauna	28.8
EXPERA SPECIALTY SOLUTIONS - Rhinelander	13.8
WISCONSIN RAPIDS FIBER AND ENERGY MILL (included with WISCONSIN RAPIDS)	10.2
CATALYST PAPER - BIRON MILL	9.9
WPS - WESTON PLANT - Wausau	7.8
WE ENERGIES - OAK CREEK STATION (INCL ELM ROAD) - 20 mi S MKE	7.0
GRAYMONT (WI) LLC - Superior	6.6
EXPERA SPECIALTY SOLUTIONS LLC - Mosinee	6.4
CALUMET SUPERIOR LLC	5.0

Table 1 – Q/d Table for Wisconsin Sources

If the same Q/d value of 4 used by Minnesota, Michigan and Ohio is applied to Wisconsin, Table 1 includes the following additional sources would be selected (besides the Kaukauna and Rhinelander mills):

- Wisconsin Rapids Mill (recently shutdown)
- Biron Mill
- Weston Power Plant
- Oak Creek Power Plant
- Graymont Superior
- Mosinee Mill
- Calumet (Husky) Refinery

The Weston and Oak Creek plants have pollution controls in place that qualify these sources as “effectively controlled.”

We believe the other four sources above (five counting Wisconsin Rapids), in addition to the two selected by Wisconsin, should conduct a reasonable progress analysis using the four factors.

The emission units of interest at the paper mills are the coal-fired power (non-recovery) boilers. Wisconsin examined the cost effectiveness of pollution controls for SO<sub>2</sub> and NO<sub>x</sub> for the coal-fired boilers at the Kaukauna and Rhinelander mills. You determined that controls for both pollutants - advanced Flue Gas Desulfurization (FGD) and Selective Noncatalytic Reduction (SNCR), respectively, were cost effective.

There are coal-fired boilers at the Biron (B5) and Mosinee (B20, B24) mills (and B20 and B21 at Wisconsin Rapids - if it is restarted) that should also be examined. We feel it is likely that four factor analyses performed on these boilers would also identify cost effective controls.

We do not have detailed information for Graymont or Calumet.

#### *The Relevance of the Four Factors Versus Other Required Elements of Regional Haze Plans*

Wisconsin dismisses the cost-effective controls identified for the Kaukauna and Rhinelander mills for two reasons. The first is:

*However, the cost-effectiveness of any additional control measures based on the four-factor analyses is only one element to consider for what additional measures, if any, should be required for Round 2 reasonable progress. Before considering cost-effectiveness any further, weight should first be given to the following factors and considerations, as allowed for in the Haze Rule and discussed previously (Sections 3.2, 3.3 and 3.5) and further below:*

- *Emission reductions since Round 1*
- *Potential future projects and impacts during the Round 2 timeframe*
- *The Round 2 URPs already being met for 2028, and even the Round 3 URPs already being met for 2038 according to the LADCO modeling “adjusted” glidepaths*

The second is:

*As detailed in Section 3.5.1, the primary emissions for the A-M Kaukauna and A-M Rhinelander mills – SO<sub>2</sub> – are already being addressed under the 2010 1-hour SO<sub>2</sub> NAAQS (to be implemented during the Round 2 time period), and these facilities have already demonstrated SO<sub>2</sub> (and NO<sub>x</sub>) reductions from their Round 1 2018 Targets as well as from the Round 2 2016 Base year emissions. Tables 19A and 19B show the historic and 2028 Modeled emission reductions for these facilities from Round 1 through Round 2*

In summary:

*The WDNR concludes that, when weighing the four-factor analyses against the consideration of the five additional required factors, it is unnecessary to require any additional controls at A-M Kaukauna or A-M Rhinelander to meet Round 2 regional haze SIP requirements.*

We believe this is a misunderstanding of the rule. Reasonable progress goals (RPGs) and the long-term strategy (LTS) are separate plan elements (see 40 CFR Section 51.308 (d)). RPGs are established through the application of the four factors at 40 CFR Section 51.308 (d)(1):

- costs of compliance,
- the time necessary for compliance,
- the energy and non-air quality environmental impacts of compliance, and
- the remaining useful life

The regulation states “The long-term strategy must include enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the reasonable progress goals established by States having mandatory Class I Federal areas.<sup>3</sup>” In a sense, the LTS is a container for the result of the four factor analyses that makes them enforceable. It also contains other measures taken by the state to achieve the RPGs. The rule does not allow states to dismiss controls that are otherwise reasonable simply because Class I area visibility is below the uniform rate of progress.

In the preamble to the final EPA Regional Haze Rule<sup>4</sup>, EPA discusses these concepts (emphasis added).

*Under 40 CFR 51.308(f)(ii), states must **develop their long-term strategies by identifying reasonable progress measures using the four factors** and engaging in interstate consultation. Once their strategies have been developed, states with Class I areas must establish RPGs that reflect existing federal and state measures and the reasonable progress measures in the long-term strategy.*

***The long-term strategy is the compilation of “enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the [RPGs],” and is the means through which the State ensures that its RPG will be met.***

Also starting on page 3093:

*This commenter states that a state should be able to reject “costly” control measures if (1) the RPG for the most impaired days is on or below the [uniform rate of progress] URP line or (2) the RPGs are not “meaningfully” different than current visibility conditions.*

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<sup>3</sup> 40 CFR Section 51.308(d)(2)

<sup>4</sup> Federal Register, Vol. 82, No. 6, Tuesday, January 10, 2017, pg. 3078-3129

*We disagree. **The CAA requires states to determine what emission limitations, compliance schedules and other measures are necessary to make reasonable progress by considering the four factors. The CAA does not provide that states may then reject some control measures already determined to be reasonable if, in the aggregate, the controls are projected to result in too much or too little progress. Rather, the rate of progress that will be achieved by the emission reductions resulting from all reasonable control measures is, by definition, a reasonable rate of progress.***

*What to do if the resulting RPG for the most impaired days is below the URP line? **The URP is not a safe harbor, however, and states may not subsequently reject control measures that they have already determined are reasonable.***

*The commenter's second suggestion, **that states should be able to reject control measures if the RPG for the most impaired days is not "meaningfully" different than current visibility conditions, is counterintuitive and at odds with the purpose of the visibility program.** In this situation, the state should take a second look to see whether more effective controls or additional measures are available and reasonable. Whether the state takes this second look or not, it may not abandon the controls it has already determined are reasonable based on the four factors. Regional haze is visibility impairment that is caused by the emission of air pollutants from numerous sources located over a wide geographic area. **At any given Class I area, hundreds or even thousands of individual sources may contribute to regional haze. Thus, it would not be appropriate for a state to reject a control measure (or measures) because its effect on the RPG is subjectively assessed as not "meaningful."***

*If the State determines that additional progress [beyond the URP] is reasonable based on the statutory factors, the State should adopt that amount of progress as its goal for the first long-term strategy." This approach is consistent with and advances the ultimate goal of section 169A: Remedying existing and preventing future visibility impairment. Congress required the EPA to promulgate regulations requiring reasonable progress toward that goal, **and it would be antithetical to allow states to avoid implementing reasonable measures until and unless that goal is achieved.***

Also of note - from the same reference:

*If a state's analysis fails to ... include cost-effective controls at sources with significant visibility impacts, then the EPA has the authority to disapprove the state's unreasoned analysis and promulgate a FIP.*

*...the CAA vests state air agencies with substantial discretion as to how to achieve Congress's air-quality goals and standards, but states exercise this authority with federal oversight.*

#### *Unknown Future Reductions and Enforceability*

We do not see how possible future reductions due to actions taken to address the SO<sub>2</sub> National Ambient Air Quality Standards (NAAQS) can be evaluated by application of the four factors if their ultimate effect on actual emissions is not known. We also note that addressing compliance with the SO<sub>2</sub> NAAQS does not address nitrogen oxide emissions and related potential controls.

We reviewed the recent nonattainment plan submitted for SO<sub>2</sub> in Oneida county which pertains to the Rhinelander mill<sup>5</sup>. The main actions taken at the mill to gain compliance were to 1) raise the stack, and 2) reduce potential emissions.

- While raising the stack may have reduced SO<sub>2</sub> concentrations at the mill's fence line, it could be argued that raising the stack makes impacts at the Class I Areas worse.
- The reduction in potential emissions in the mill's permit appears to have little to no effect on current actual emissions since they are currently operating far below the permitted levels. Permitted SO<sub>2</sub> emissions were reduced in the nonattainment plan from 3942 to 2710 tons per year but 2016 actual emissions were only 1596 tons.
- We are concerned that the compliance actions taken at the other mills to comply with the SO<sub>2</sub> NAAQS may be similar to those taken at Rhinelander. Rhinelander's actions appear to have no clear benefit to the downwind Class I Areas.

Lastly, with regard to the recent emission reductions in actual emissions at the Kaukauna and Rhinelander mills; it is unclear if these represent temporary reductions or if they can be expected to continue in the future due to enforceable requirements.

#### *Smoke Management Plan*

We appreciate the inclusion of the smoke management plan and look forward to future discussions regarding its implementation.

#### *Other Items*

We are not clear why the former WDNR acid rain site that we now support at Spooner (WI37) was not included on the map of state air monitoring sites.

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<sup>5</sup> Attainment Plan for the Partial Oneida County 2010 SO<sub>2</sub> NAAQS Nonattainment Area – Supplemental Draft For Public Review, Wisconsin Department of Natural Resources, February 2021