

Comments on

**Risk and Exposure Assessment for Review of the Secondary National Ambient Air Quality Standards  
for Oxides of Nitrogen and Oxides of Sulfur**

Second Draft

EPA-452/P-09-004a

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U.S. Environmental Protection Agency

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Good Morning. Before I begin, I want to comment EPA staff on a greatly improved second draft of the REA. Thoughtfulness to CASAC comments and significant effort shines through each section.

This thoughtfulness is especially important to New York State because it is a large and varied landscape of cultural and natural resources. We are pleased that the Adirondack region was selected as one of the case study areas. We also hope and expect that the REA be expanded to include other major areas sensitive to inputs of S and N. We understand that the Adirondack region holds a vast and varied amount of data over a long time period, but it is important to start analysis for other areas like the Catskills.

It might be useful to consider lakes and streams differently in utilizing indicators such as ANC. The response of Adirondack streams has been slower than the lakes and this should be noted. Studies indicate that Base Cation Surplus may be a better indicator than ANC in characterizing biological impacts in our streams and should be considered in this REA. It might be useful to begin evaluation of more direct indicators like Aluminum, pH and Base Cation Surplus for future critical loads analysis. Using these direct indicators may show ties between aquatic and terrestrial indicators.

On the subject of terrestrial and aquatic indicators, while it is understood that there may not be a direct correlation between ANC and BC:Al, it might be possible to determine which is more limiting and conduct an analysis based on that data.

The current models, which are relied on so heavily for these reviews, should be updated and expanded. It would be useful if a recommendation were made for resources to be spent on getting actual data rather than relying on model defaults or the judgment of the modelers. Taking the longer view of this process, emphasis should be placed on making key input parameters available. Data which might be important are: weathering rates, base cation uptakes and ANC for ecosystems. And for atmospheric components; dry deposition rates and reactive N components. For all systems, there is a lack of data in the high elevation areas greater than 600 m.

The data collection required leads to the overall approach of this process, it should be the intention of this review to identify areas of missing data. This longer view approach will only help both this review process as well as the next. Whether this can be done within the boundaries of this CASAC review, or whether EPA must form a separate committee to identify and fill these data gaps, we feel it must be done. Pursuing this exercise will result in better modeling, less uncertainty, and more protective regulatory outcomes due to good data. Furthermore, it will aid in the development of complex critical loads.

While we appreciate and support the view of nitrogen as both a nutrient and a problem, it is not supported that in all cases in which a forest is nitrogen limited that nitrogen is good for that system. Specifically in colder climates in high elevations, if fertilization occurs at the wrong time of year, bark may not harden and the tree is not as protected, especially for red spruce in higher elevations of the northeast, fertilization by N in the fall has been shown to disrupt natural hardening off of the trees, thus causing them to be more susceptible to winter freeze/thaw damage. It may also be helpful to state why growers spend money on fertilization and this group is trying to limit it.

In the Policy Assessment, please be sure to also add the use of Base Cation Surplus as a possible indicator to characterize biological impacts in streams, it was mentioned in the ISA and it would be consistent to consider this in the Policy Assessment as well.

In this draft PM was discussed briefly, rather than not at all in the first draft. This is a step in the right direction. Another beneficial step would be to discuss where the PM NAAQS process is in relation to this and be mindful that both are aware of what the other is doing.

Some specific data which might be relevant to the Policy Assessment may become available in the next 12-18 months. One Study sponsored by the New York State Energy Research and Development Authority is expected to examine weathering rates for New York and the Adirondacks.

The Department does not feel that the three options placed before the CASAC for setting a secondary standard are protective of public welfare. While it is understood that the court deadline is quickly approaching and that a decision must be made, it would be necessary proceed with analysis and setting a protective standard even after this deadline. It is important that this new way of setting standards be done right and the process cannot be rushed but please do not delay after the deadline. Of the three options, we encourage you to choose the one that best allows for continued discussion and the eventual setting of a protective standard that is biologically relevant.

Thank You for your time.