



IN REPLY REFER TO:

July 17, 2009

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United States Department of the Interior

NATIONAL PARK SERVICE

Air Resources Division
P.O. Box 25287
Denver, CO 80225



Kyndall Barry
Designated Federal Officer
EPA Science Advisory Board
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

RE: FR Doc. E9-14712

Dear Ms. Barry:

These comments are submitted on behalf of the National Park Service (NPS) in response to the U.S. Environmental Protection Agency's (EPA) June 23, 2009, Federal Register Notice for review and comment of the Risk and Exposure Assessment for Review of the Secondary National Ambient Air Quality Standards (NAAQS) for Oxides of Nitrogen and Oxides of Sulfur: Second Draft (EPA-452/P-09-004a). These comments reinforce and supplement comments to be provided at the July 22-23, 2009, Clean Air Scientific Advisory Committee Review Panel's meeting in Research Triangle Park, North Carolina.

The NPS manages 392 parks, monuments, and recreation areas that comprise more than 84 million acres and include many of the most unique and beautiful ecosystems in our country. The Organic Act charges the NPS to conserve these natural resources and leave them unimpaired for the enjoyment of future generations. Yet atmospheric pollutants and atmospheric deposition have impacted the terrestrial and aquatic ecosystems in many of our national parks.

The current secondary standards for the criteria pollutants nitrogen dioxides (NO₂) and sulfur dioxide (SO₂) are intended to protect vegetation from direct damage due to the gaseous forms of these pollutants. EPA has established that these existing standards are not sufficient to protect aquatic and terrestrial ecosystems from the adverse effects of acidification and nutrient enrichment due to nitrogen and sulfur deposition. The NPS commends EPA for carefully documenting the current state of the science and risk assessment. We are pleased to see that EPA has included results of acidification studies in Shenandoah National Park and nutrient enrichment studies in Rocky Mountain and some California national parks in the Risk Assessment.

The NPS also commends EPA for the multi-pollutant approach considered in this risk assessment and supports EPA's efforts to set secondary standards for oxides of nitrogen (NO_x) and sulfur (SO_x) that are protective of sensitive aquatic and terrestrial resources. EPA has described a conceptual model that links atmospheric concentrations of NO_x and SO_x to deposition loadings and to ecological indicators of ecosystem impacts. We believe that it is appropriate and feasible to link ambient air concentrations of NO_x and SO_x to deposition of nitrate and sulfate and to ecological indicators of ecosystem health (e.g., Acid Neutralizing Capacity or Eutrophication Index). The case studies from national parks are appropriate to define critical loads for nitrogen and sulfur deposition that would afford different levels of protection of aquatic and terrestrial resources, and the range in deposition loadings that would meet these critical loads, accounting for variability in meteorological conditions and ecosystem characteristics. We support EPA's continuing efforts to structure a secondary standard that would consider several parameters affecting flux and the sensitivity of various ecological indicators in order to provide necessary protection of ecosystem health in different areas.

We are also pleased that EPA has incorporated an assessment of ecosystem services into the analysis. EPA has documented that ecosystem services are adversely impacted due to aquatic and terrestrial acidification and aquatic and terrestrial nutrient enrichment. The NPS concurs that ecosystem services that are reasonably quantifiable (e.g., recreational fishing, timber harvest, maple syrup production) as well as those that provide non-material benefits (e.g., ecosystem diversity) or reflect societal or cultural values, can and should be used to characterize known or anticipated adverse effects to public welfare, including the magnitude and significance of the resources affected.

EPA correctly addresses the ecosystem impacts due to total reactive nitrogen, not just the contribution of nitrogen oxides. Across the case studies, reduced nitrogen is 30-40% of total reactive nitrogen deposition. If emissions of reduced forms of nitrogen are not to be controlled, then greater emissions reductions of nitrogen oxides would be required to accomplish the desired reductions in total reactive nitrogen. We encourage EPA to work with the Department of Agriculture to implement agricultural practices that would reduce ammonia emissions from agricultural sources (e.g., livestock and fertilizer).

The NPS encourages EPA to continue to consider multi-pollutant impacts to these sensitive ecosystems in the standard setting process. In addition to the impacts of total nitrogen and sulfur deposition, these pollutants also contribute to visibility impairment and (for NO_x) ground-level ozone. Our national parks are experiencing stress from the effects from multiple pollutants. These stressors reduce the resiliency of natural resources and systems. Increasing resiliency -- by establishing and achieving more appropriate and protective secondary NAAQS -- will improve the ability to adapt to the compounding effects of climate change.

For all these reasons we encourage EPA to act expeditiously to establish secondary standards for NO_x and SO_x. If you have questions regarding our comments, please contact Ellen Porter of my staff at (303) 969-2617.

Sincerely,

Christine L. Shaver
Chief, Air Resources Division