Appalachian Mountain Club, Environmental Defense Fund,
National Parks Conservation Association, Natural Resources Defense Council

September 8, 2008

John Bunyak
Air Resources Division
National Park Service
P.O. Box 25287
Denver, Colorado 80225

Re: Federal Land Managers' Air Quality Related Values Work Group (FLAG)

Dear John,

On behalf of National Parks Conservation Association, Appalachian Mountain Club, Natural Resources Defense Council, and Environmental Defense Fund, please accept these comments on the June 27, 2008 revisions to the Federal Land Managers' Air Quality Related Values Workgroup (FLAG) Phase I report. Please note that, for the reasons set forth under comment 1 below, we are requesting a 60-day extension of the comment period.

1. Recommendations for evaluating visibility impacts

FLAG provides recommendations, procedures interpretation of results for assessing visibility impacts of new or modified sources on Class I area resources. Visibility impacts from such sources are determined by measuring the change from natural background visibility conditions.

We have a major concern that FLAG Phase I report is directing permit applicants to utilize estimates of ***annual average natural visibility conditions*** for each Class I area as presented in Table V.1-2, unless otherwise recommended by the FLM or permitting authority (p. 38). The more protective and appropriate approach for Class I areas is the one currently used by some state agencies for regional haze or BART implementation, that is, ***20% best visibility conditions***, as provided in Table V.1-1.

The Clean Air Act (CAA) bestows on Federal Land Managers (FLMs) an affirmative responsibility to protect Class I areas from air pollution. The CAA directs that the FLMs identify and protect air quality related values, including visibility. It is clear from the legislative history of the CAA that Congress intended the FLMs to adopt the most protective policies in protecting Class I areas:

> "The Federal Land Manager holds a powerful tool. He is required to protect Federal lands from deterioration of an established value, even when Class I [increments] are not exceeded. … While the general scope of the Federal Government's activities in preventing significant deterioration has been carefully limited, the FLM should assume an aggressive role in protecting the air quality values of land areas under their jurisdiction. ***In cases of doubt the land manager should err on the side of protecting the air quality-related values for future generations***." Senate Report No. 95-127, 95th Congress, 1st Session, 1977 (emphasis added).

Even if the average background visibility standard is scientifically valid, that does not give the FLMs unfettered discretion to rely upon it. The 20% best visibility days standard is also scientifically valid, and it provides greater protection for Class I areas. The CAA mandates that FLMs err on the side of protecting the Class I areas, so the most protective scientifically valid method must be used.

Based on the CAA mandate, FLAG must recommend the most protective policy for managing Class I visibility resources, and one that conforms with the regional haze rules. Using the 20% best visibility days standard is consistent with the relevant regulatory regime for regional haze, and creates a "cleaner" background against which to compare new pollution inputs than does using an annual average background visibility standard. Moreover, reliance solely on annual average impacts is not consistent with the regional haze rules, and would not assure the reductions of visibility impairing pollutants needed in order to achieve the CAA goal of natural visibility.

The FLAG Phase I report contains no analysis or discussion supporting how the annual average background visibility standard would be at least as protective of Class I visibility resources as the 20% best visibility day standard. As such, the draft report represents an arbitrary basis for rejecting a 20% best visibility say standard in favor of an annual average background standard.

FLAG revisions contemplated in 2006 would have imposed a two tier test, first measuring modeled emissions against the 20% best natural background conditions; if the source failed that test, it would be allowed to model emissions against annual average natural background conditions, but would also be required to mitigate visibility impairment. There is no explanation in the June 2008 FLAG Phase I report why this earlier formulation has been dropped, or the annual average test alone has been deemed to be sufficiently protective of Class I visibility. Again, this lack of explanation in

the draft report provides an arbitrary basis for choosing the annual average background standard over the 20% best visibility days standard.

Moreover, we are concerned that guidance as currently formulated allows two, and potentially more, standards for determining natural background visibility. It is entirely possible that a state using the annual average natural background visibility standard would permit impairment of visibility in a neighboring state's Class I area that the neighboring state – using the 20% best visibility day standard – would not have permitted. To "err on the side of protecting the air quality related values for future generations," as the CAA intends, FLAG should require a uniform and consistent application of the 20% best visibility day standard.

Based on the foregoing, we request that FLAG Phase I report be revised to require permit applicants to use the 20% best visibility day standard to estimate natural background visibility conditions. This appears to be the most protective approach, and the one that is consistent with the statute and applicable rules. If you do not make this change, then we request that you extend the public comment period by 60 days so that we may conduct an analysis of the relative visibility protection offered by the two standards and present our findings to you before the FLAG Phase I report is finalized. We believe that analysis will show that the annual average standard provides less protection than the 20% best visibility days standard.

2. Ozone

In the 2000 FLAG Phase I report the W126 and N100 metrics were included in regards to evaluating ozone impacts with the following recommendation:

> The W126 ozone metric is recommended to describe ozone exposure, based on a 24-hour, seasonal (April through October) period of measurement. The number of hours in this period of time greater than or equal to 100 ppb (N100) will also be determined, in recognition of the importance of peak concentrations in plant response.

It is of significant concern to us that the W126 metric is not mentioned in this latest version and instead, in section 4. c., the EPA secondary standard, 8-hour 0.075 ppm, is mentioned. This is essentially the primary standard that was designed to protect human health and is ill-suited to protect vegetation. While "other" metrics are referred to it appears it will be left to a FLM-by-FLM decision (p. 77). We urge that a consistent

exposure metric be used by all FLMs that represents the best science available for the protection of vegetation in Class I areas, i.e. W126.

Further both CASAC and the Park Service have found that the W126 metric is the appropriate and scientifically sound approach for protecting plants and forests from adverse ozone impacts, and that reliance on the 8-hour primary standard to provide such protection is not scientifically justified. It was only due to a last minute political decision made outside the agency that resulted in the secondary ozone standard mirroring the primary.

As stated above, the FLM has an affirmative responsibility to protect the air quality related values in class I areas. Because the W126 metric is recognized as the scientifically relevant one by both CASAC and the Park Service, FLMs must employ that metric to ensure that plants and forests in class I areas are protected from adverse ozone impacts. Moreover, as noted above, the role of the FLM is to err on the side of protection. Therefore, FLMs must select the most protective W126 levels (7 ppm-hours) and the most inclusive averaging window (24 hour and April to October).

We have attached comments that some of the undersigned groups submitted to EPA regarding the rationale to support a protective W126 secondary ozone standard, especially for Class I areas (ATTACHMENT 1). We are also attaching the Park Service's own comments supporting such a standard (ATTACHMENT 2).

By way of example, work in Great Smoky Mountain National Park has demonstrated ozone-related reductions in growth in some tree species and ecosystem-wide impacts related to canopy water use (McLaughlin et al., 2007a, McLaughlin et al., 2007b). We believe it is important for FLMs to be required to consider this type of scientific evidence if it is available to them. McLaughlin, S. B., M. Nosal, S. D. Wullschleger, G. Sun 2007a. Interactive effects of ozone and climate on tree growth and water use in a southern Appalachian forest in the USA. New Phytologist, 174,1 pg 109-124; McLaughlin, S. B. , S. D. Wullschleger, G. Sun, M. Nosal 2007b. Interactive effects of ozone and climate on water use, soil moisture content and streamflow in a southern Appalachian forest in the USA. New Phytologist, 174, 1 pg 125-136.

Because of the availability of this type of information and the W126 issue we raised above we strongly recommend that FLAG consider the following as indicators of ozone effects on vegetation 1) symptoms that are clearly ozone induced such as oxidant stipple, 2) ozone exposures that have been shown to be phytotoxic using the W126

metric; 24-hour and April to October and 3) physiological and growth change impacts must also be considered if this information is available to the FLM.

3. Deposition and Critical loads

We strongly support the use of critical loads for assessing the level of deposition below which *significant harmful* ecological effects do not occur. We believe that it would be useful if this FLAG document clearly defined what specific critical load parameters will be developed and outlined a specific timeline for development and implementation.

We strongly support developing critical loads for nitrogen and sulfur deposition as they relate to acidification and a separate critical load standard for nitrogen deposition as it relates to nitrogen saturation or eutrophication. The USFS has made significant progress developing critical load standards for nitrogen and sulfur deposition in forested landscapes (http://nrs.fs.fed.us/tools/cl/home.htm) and therefore we believe this FLAG report should more aggressively direct FLMs to utilize these existing guidelines and tools. (The link to the USFS critical loads site was not included in June 2008 FLAG Phase I report draft but it should be. Also Appendix H, which was referenced in the June draft as a workshop report for critical loads, should be include in the FLAG Phase 1 report).

We agree strongly that fog and cloud water must be included in total wet deposition as many Class I areas have high elevation forests that receive a significant amount of sulfur and nitrogen in cloud water.

In relation to indicators to monitor for evaluating the effects of deposition of sulfur we suggest adding, as a chemical change, mercury methylation. Some mercury bioaccumulation hotspots have been identified to be due to excess sulfur deposition stimulating methylation of mercury by sulfate-reducing bacteria in wetlands and areas that experience frequent wetting and drying events. Evers, D.C., Y.J. Han, C.T. Driscoll, N.C. Kamman, M.W. Goodale, K.F. Lambert, T.M. Holsen, C.Y. Chen, T.A. Clair, and T. Butler, 2007. Biological mercury hotspots in northeastern U.S. and southeastern Canada. BioScience 57 29-43.

Finally, to underscore the importance of critical loads as an ecosystem management too, we are attaching a letter from Rocky Mountain NP Superintendent Vaughn Baker adopting critical loads to protect RMNP from nitrogen deposition. (ATTACHMENT 3) Further support for the critical loads approach is found in “Critical loads as a policy tool for protecting ecosystems from the effects of air pollutants,” Burns, Blett, et al.,

Ecological Society of America (April 2008), and the National Academy of Sciences, National Research Council January 2004 report and recommendations, “Air Quality Management in the United States.

4. Initial Screening Criteria

The FLMs have proposed an initial screening criteria based on guidelines that EPA developed to control regional haze, which turns on the amount of a source's annual emissions relative to its distance from a Class I area (p. 26). Even if it were appropriate to screen out sources from a more rigorous analysis of visibility impacts based on this assessment, the agencies have not explained why it is appropriate to "expand[] the screening criteria to include all AQRVs, not just visibility."

EPA's BART guidelines were developed to respond solely to the problem of adverse visibility impacts, not the very different consequences of ozone and atmospheric deposition, yet the agencies have provided no analysis supporting the assumption that that the screening criteria adequately protect other AQRVs. There is no legal or rational basis for extending a screen based on visibility impacts to also screen areas from analyses of ozone and deposition impacts. Deposition and ozone transport does not occur in a manner identical to regional haze.

Moreover, as found by EPA in the NOx SIP Call and CAIR rulemakings (incorporated herein by reference), transported ozone significantly contributes to downwind nonattainment in states many hundreds of kilometers away from sources of the emitted precursors. The nature and degree of such contribution is not rationally characterized through use of a simplistic Q/D approach.

5. Discussion of CAIR and BART rules

Based on feedback from permit applicants and State permitting authorities, the FLMs are providing a more detailed description of the adverse impact decision-making process once a source analysis has raised concerns during a first-level and any subsequent analyses. In particular, the FLAG Phase I June 2008 draft states that “[i]f a threshold is exceeded, the FLMs will consider the factors discussed below and make a project-specific determination as to whether or not the impacts are adverse,” (p. 106)

The discussion under “Contextual Considerations” (p. 107) suggests that an adverse impact determination might be avoided for a particular new source based on the fact that other sources contributing pollution to the Class I area are expected to reduce

emissions pursuant to other regulatory programs such as the Clean Air Interstate Rule (CAIR) and Best Available Retrofit Technology rule (BART). This discussion is outdated, worrisome, and needs to be struck in its entirety.

According to proposed new guidance:

> "The Agencies recognize that the context within which new source permitting occurs is shifting. Many older major stationary sources will be installing pollution controls over the next 10 to 15 years (e.g., in response to the Clean Air Interstate Rule and Regional Haze Rule). New motor vehicle emission and fuel standards will reduce tailpipe pollution from mobile sources gradually, but significantly, over a similar timeframe. By 2008, States will have developed visibility protection plans that ensure "reasonable progress" toward natural conditions, pursuant to the EPA's Regional Haze Rule. These plans will be reviewed and revised every five to ten years, and thus provide a mechanism for revisiting sources as better technology becomes available or as otherwise needed to maintain progress toward visibility goals. The location and effect of pending pollution control programs on specific Class I areas remains somewhat uncertain; however, the Agencies recognize and appreciate that significant emission reductions are anticipated, especially in the eastern U.S."

Based in part on consideration of "emission changes that have occurred or would occur (i.e., enforceable) by the time the new source begins operation," FLAG implies that applicants might be able to avoid mitigation that otherwise might have been required. As you are aware, the U.S. Court of Appeals for the D.C. Circuit vacated the Clean Air Interstate Rule in its entirety earlier this year (after the FLAG Phase I report was published in June). That means the emissions reductions anticipated to occur under CAIR may not ever occur, may be less than expected, or may occur later than expected. In addition, since most Eastern states have relied upon CAIR for the bulk of their emissions reductions under the Regional Haze Rule, there can be no accounting for those reductions to provide some future benefit to Class I areas. Accordingly, FLAG should not encourage state permitting authorities and applicants to believe they may be able to meet less stringent emissions standards or otherwise avoid mitigation on the basis of future emissions reductions from other sources.

The FLAG discussion of "regulatory developments since FLAG 2000" in the Background section of the June 2008 draft (pp. 3, 8) also needs to be updated to reflect the U.S. Court of Appeals decision vacating CAIR.

6. Appendix C--General Policy for Managing Air Quality Related Values In Class I Areas

We object to the following statement that appears on page 125:

> "While it may not be possible to manage every Class I area in a natural or near-natural state, each should be managed in as pristine a condition as the specific (local) biophysical, legal, scientific, and social/political situation will allow. That is, FLMs will do the best job possible of Park and Wilderness management, based on local constraints and opportunities. The extent of actual protection, therefore, may vary."

This statement suggests that political considerations play a role in determining whether FLMs will fully enforce Class I area legal protections. We acknowledge that, unfortunately, elected and appointed officials have at times sought to prevent FLMs from fulfilling their legal duties, and such political interference may occur in the future. However, FLM's have a clear duty to enforce the laws and regulations that protect Class I areas. Official FLM policy cannot concede that politics can trump the law. This statement must be eliminated.

We invite the FLMs to identify the legal authority under the CAA or other law to support the statement that park or wilderness areas may be managed "in as pristine a condition … as the social/political will allow," or otherwise to support the notion that "social/political" considerations may be weighed in altering or tempering legal obligations. Because we are unaware of any CAA authority allowing or purporting to allow this, we again urge that this statement be stricken.

7. Climate change and Class I areas

The FLAG June 2008 Phase I report is completely lacking discussion of the impact of climate change on Class I areas. A great deal of research over the past decade has demonstrated the serious damage that global warming is already inflicting on sensitive ecosystems in the United States, including Class I areas, and on the need for management responses to protect these ecosystems. In particular, a report released this year under the U.S. Climate Science Program concludes that reducing air pollution stress in sensitive ecosystems is one of the more important steps needed to build ecosystem resilience in the face of climate change. U.S. Climate Science Program, Final Report, Synthesis and Assessment Product 4.4, Preliminary Review of Adaptation Options for Climate-Sensitive Ecosystems and Resources (2008).

Moreover, in April 2007, the U.S. Supreme Court ruled that the Environmental Protection Agency violated the Clean Air Act by improperly declining to regulate greenhouse gas emissions. As a result of this decision, U.S. EPA is obligated to regulate greenhouse gas emissions as pollutants under the Clean Air Act. In July 2008, EPA published an Advance Notice of Proposed Rulemaking entitled Regulating Greenhouse Gas Emissions under the Clean Air Act.

On the basis of the foregoing, we urge the FLMs to develop an AQRV framework for dealing with greenhouse gas emissions. This work should be identified as a priority for FLAG future work identified on page 109 of the June 2008 Phase I report draft.

Thank you for considering our comments. Please feel free to contact us if you need clarification or additional information related to any of our comments.

Sincerely,

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