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FACT SHEET

PROPOSED REGIONAL HAZE REGULATIONS FOR PROTECTION OF VISIBILITY IN NATIONAL PARKS AND WILDERNESS AREAS

TODAY'S ACTION

- The Environmental Protection Agency (EPA) is proposing regulations to improve visibility, or visual air quality, in more than 150 important natural areas across the country. These areas include many of our best known and most treasured national parks and wilderness areas, such as the Grand Canyon, Yosemite, Yellowstone, Mount Rainier, Shenandoah, the Great Smokies, Acadia, and the Everglades. Millions of visitors enjoy the scenic vistas in these areas each year. The proposed visibility regulations are expected to improve visibility beyond these areas as well, across broad regions of the U.S.
- Visibility impairment is probably the most basic indicator of pollution in the air. It has been recognized as a major air quality concern in the United States for many years. EPA recently established annual and 24-hour primary national ambient air quality standards (NAAQS) for fine particles, known as PM_{2.5}, to protect public health. In the recent review of the NAAQS, EPA also determined that the most appropriate way to address regional variations in visibility effects due to particulate matter is to establish regional haze regulations in combination with a secondary standard for PM_{2.5} equivalent to the primary standard. (Note that primary standards are designed to protect public health, and secondary standards are designed to protect public welfare.)

BACKGROUND

- The proposed regulations, which are revisions to the existing 1980 visibility rules, address visibility impairment in the form of **regional haze**. Haze obscures the clarity, color, texture, and form of what we see and is caused by pollutants (mostly fine particles) that are emitted to the atmosphere through a number of activities (such as electric power generation, various industrial and manufacturing processes, truck and auto emissions, burning related to forestry and agriculture, construction activities, etc.). Emissions from these activities generally span broad geographic areas and can be transported significant distances, sometimes hundreds or thousands of kilometers. Consequently, haze occurs regionally throughout the nation.
- Changes in visual range (the most common metric applied to visibility) are not proportional to human perception. For example, a 5 mile change in visual range can either be very apparent or completely imperceptible depending on the amount of pollution that was originally in the air before the change. The deciview scale was developed to address

this situation. For most views in Class I areas, a change of one deciview is considered perceptible by the average person. Each whole deciview increment is perceptible over its entire range (analogous to the decibel scale for sound). A deciview of zero represents pristine conditions.

- The proposed regulations will protect specific areas of concern, known as “Class I” areas. The Clean Air Act defines mandatory Class I Federal areas as certain national parks (over 6000 acres), wilderness areas (over 5000 acres), national memorial parks (over 5000 acres), and international parks that were in existence as of August 1977. There are 156 of these areas protected under the existing visibility protection program.
- EPA is proposing today’s action under the authority of sections 169A and 169B of the Clean Air Act. The proposed visibility regulations serve three important purposes:
 - 1.) The proposed regulations are a vital component of EPA’s overall approach to protecting the public welfare from visibility impairment effects associated with particulate matter. As noted above, EPA has determined in its recent review of the National Ambient Air Quality Standards for particulate matter, that the most appropriate way to address regional variations in visibility effects is to establish regional haze regulations in combination with new standards for particulate matter.
 - 2.) The proposed regulations will result in the development of a comprehensive visibility protection program under the Clean Air Act. The current visibility regulations, issued in 1980, require States to develop strategies for reducing localized visibility impairment that can be attributed to individual sources or small groups of sources. At the time the 1980 regulations were issued, EPA deferred regulations on regional haze visibility impairment until better technical tools and scientific understanding of the components of haze could be developed. The 1993 report by the National Academy of Sciences (NAS), *Protecting Visibility in National Parks and Wilderness Areas*, confirmed that “current scientific knowledge is adequate and available control technologies exist to justify regulatory action to improve and protect visibility.”
 - 3.) The proposed regulations will respond to *Recommendations for Improving Western Vistas*, the report provided to EPA by the Grand Canyon Visibility Transport Commission (GCVTC) after more than four years of technical assessment and discussion. The GCVTC consisted of the Governors of eight western States (Arizona, California, Colorado, Nevada, New Mexico, Oregon, Utah, and Wyoming), the leaders of five Indian tribes (Navajo, Hopi, Hualapai, Acoma Pueblo, and the Columbia River Intertribal Fish Commission), and non-voting federal representatives, including EPA and several land management agencies. EPA is required under the Clean Air Act to take regulatory action within 18 months of receiving the GCVTC recommendations.

- In addition to the NAS and GCVTC recommendations, EPA also took into consideration recommendations and discussions related to regional haze from the Clean Air Act Advisory Committee and its Subcommittee on Ozone, Particulate Matter, and Regional Haze Implementation Programs. The Subcommittee includes representation from a broad group of stakeholders, including State, local, and Tribal governments, industry, environmental groups, and academia.

WHAT ARE THE HEALTH AND ENVIRONMENTAL BENEFITS?

- Visibility impairment occurs as a result of the scattering and absorption of light by particles and gases in the atmosphere. Without the effects of pollution, a natural visual range is approximately 140 miles in the West and 90 miles in the East. However, over the years, in many parts of the United States, fine particles have significantly reduced the range that people can see. In the west, the current range is 33-90 miles, and in the east, the current range is only 14-24 miles. The proposed regulations establish presumptive targets for States to perceptibly improve visibility in Class I areas by about 10% every 10-15 years.
- Good visibility is valued by people throughout the country - in the places they live, work, and enjoy recreational activities. The proposed regional haze program is designed to improve visibility and air quality in our most treasured natural areas so that these areas may be preserved and enjoyed by current and future generations.
- The same particles (sulfates, nitrates, organic carbon, soot, and soil dust) that are linked to serious health effects and environmental effects (e.g., acid rain) can also significantly influence our ability to see. Thus, actions to reduce levels of visibility-improving pollutants will benefit public health and reduce certain adverse effects to the environment.

WHAT ARE THE KEY ELEMENTS OF THE PROPOSED REGIONAL HAZE REGULATIONS?

- Because of evidence that fine particles are frequently transported hundreds of miles, the proposed regional haze regulations apply to all States, including those States that do not have any Class I areas. Even though certain states may not have any Class I areas, pollution that occurs in their state may contribute to impairment in Class I areas elsewhere.
- The regional haze regulations propose “presumptive reasonable progress targets” for improving visibility in each Class I area. When implemented, the regulations will improve visibility on the most impaired days and prevent further degradation on the least impaired days. The progress targets are expressed in terms of deciviews, a measure for describing perceived changes in visibility. States will have the option to propose alternate progress targets for approval as well. In this action, EPA is proposing that every 3 years, States

review progress in each Class I area in relation to the area's relevant progress targets.

- States are required to revise their implementation plans for visibility within 12 months of promulgation of the rule. This initial SIP will include: timing requirements for periodic future SIP revisions, progress demonstrations, and emission reduction strategies beginning in 2003 (except as noted). The initial SIP will also include a plan for expanding the current visibility monitoring network in conjunction with the new monitoring network established for the PM_{2.5} standard so that it is representative of all 156 class I areas; plans for enhancing particulate matter emission inventories and modeling capabilities; and plans for assessing sources potentially subject to Best Available Retrofit Technology requirements. States must also install new monitors within 1 year of this SIP submittal.

WHO WOULD BE AFFECTED BY EPA'S PROPOSED RULE?

- State and local air quality agencies will implement the proposed regional haze program through revisions to their State Implementation Plans (SIPs). However, because regional haze often results from pollution emitted across broad regions, EPA encourages interested stakeholders to participate in multi-State planning efforts to develop regional strategies for attaining any needed emission reductions. While the Clean Air Act does identify some specific source types as potential contributors to visibility impairment, ultimately the States will make decisions about specific emission management strategies. In some areas, existing strategies for other air quality programs (such as the program to reduce pollutants that cause acid rain) may provide steady visibility improvements in the near-term.
- Both the proposed regional haze program and Clean Air Act require consultation between the States and the Federal land managers responsible for managing Class I areas (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management). Such collaboration will help in developing State implementation plans and monitoring plans and in predicting the visibility impacts of potential new sources.
- As noted above, the principal human-made sources of pollutants contributing to fine particles in the air include electric power generation, automobiles and other mobile sources, industrial manufacturing activities, burning related to forestry and agricultural activities, and dust from roadways and construction activities. Sources in these and other categories may be affected by this rule, depending on the level of visibility-specific strategies needed in each State.

WHAT ARE THE ESTIMATED COSTS AND BENEFITS ASSOCIATED WITH IMPLEMENTING THE PROPOSED REGIONAL HAZE REGULATIONS?

- In order to determine the economic effect of the Regional Haze program, EPA developed a regulatory impact analysis (RIA). This analysis estimates potential costs and benefits that would be realized by the States implementing the program, by sources of visibility-

impairing pollutants, and by members of the general public who enjoy the scenic vistas at class I areas and value their protection for future generations. The RIA for the regional haze program was developed in conjunction with the RIA for the ozone and particulate matter NAAQS.

- It is important to note that the costs and benefits of the regional haze program are directly linked to the eventual choices that States will make regarding progress targets and associated control strategies in Class I areas. States may seek to demonstrate that alternative reasonable progress targets for specific Class I areas should be set at visibility improvement levels close to the levels that would be achieved by implementation of the NAAQS and other Clean Air Act requirements. Under this scenario, the estimated control costs and monetized benefits for the Regional Haze program could be as low as zero.
- If all States adopt the presumptive reasonable progress target of 1.0 deciview improvement in the most impaired days over 10 years, EPA estimates total annual costs in 2010 to be \$2.7 billion and total annual benefits to be \$1.7 - 5.7 billion. If all States adopt the presumptive reasonable progress target of 1.0 deciview improvement over 15 years, EPA estimates total annual costs in 2010 to be \$2.1 billion and total annual benefits are to be \$1.3 to 3.2 billion. For technical reasons, the costs associated with the presumptive target options in the RIA may be significantly overstated. Since it is likely that some States will adopt the presumptive targets and some will adopt alternative targets for mandatory Class I Federal areas, actual costs and benefits are likely to be lower than these estimates. These estimated costs and benefits are incremental to those expected from implementation of the PM and Ozone NAAQS recently promulgated.

FOR FURTHER INFORMATION

- Anyone with a computer and a modem can download the proposed rule from the Clean Air Act Amendments bulletin board (under "Recently Signed Rules") on EPA's Technology Transfer Network (TTN) by dialing (919) 541-5742. For further information about how to access the bulletin board, call (919) 541-5384. You can also access the TTN directly through the World Wide Web at: (<http://ttnwww.rtpnc.epa.gov/>). For further information about the proposal, contact Mr. Bruce Polkowsky (919-541-5532) or Mr. Richard Damberg (919-541-5592) of EPA's Office of Air Quality Planning and Standards.
- EPA's Office of Air and Radiation's homepage on the Internet contains a wide range of information on air pollution programs and issues, including visibility issues. The Office of Air and Radiation's home page address is: (<http://www.epa.gov/oar/>).