



***WRAP Workshop on Reasonable Progress Goals
and the Sources and Control Options for Sulfate and Nitrate***

**January 10-11, 2006
Tucson, AZ**

There are two major goals for this workshop. The first is to address the reasonable progress requirements of the regional haze rule for Section 308 and 309(g) SIPs and TIPS. During this portion of the workshop, the “glidepaths” for each Class I area will be presented and discussed and compared to the visibility projections for 2018. Workshop participants will also discuss the other factors to be considered when establishing reasonable progress goals, how they may be jointly considered in the goal-setting process, and any further data collection and analyses needed for this process.

The second goal of the workshop is to present and discuss the WRAP’s key technical results regarding sulfates and nitrates and their implications for the regional haze strategies to be included in SIPs and TIPS. With much of the WRAP’s technical work complete, the workshop will provide an opportunity to align regional strategies with supporting data and to guide the completion of the technical work. As summarized on the agenda below, sulfates and nitrates share many qualities that enable their joint discussion at this workshop. A second workshop will be hosted by the WRAP in early 2006 for dust, carbon, and smoke. All WRAP members and stakeholders are encouraged to attend.

RSPV Lee Alter at lalter@westgov.org or 520-628-3173

Hotel Information

Westward Look Resort
245 East Ina Road
Tucson, AZ 85704
520-297-1151 or 800-722-2500
<http://www.westwardlook.com>

A room block has been set up for Jan. 9-10 under "WRAP" at a contracted rate of \$88 per night. The resort fee has been waived.

Rooms will be held in the block until December 9.

Transportation

The Westward Look Resort recommends the Arizona Stagecoach. Their desk is located in the baggage claim area of the Tucson airport. Reservations are not necessary but can be made by calling 520-889-1000. The cost is \$35 one way or \$60 round trip. Travel time to the Westward Look is approx. 45 minutes.

***Tuesday, January 10, 2006:
Reasonable Progress Goals***

Background: The State must establish for each mandatory Class I Federal area within the State a goal for improving the most impaired days and a goal for preventing deterioration of the least impaired days. The goals (expressed in deciviews) must be based on consideration of the following factors:

- the costs of compliance;
- the time necessary for compliance;
- the energy and non-air quality environmental impacts of compliance;
- the remaining useful life of any potentially affected sources;
- the emission reduction measures needed to achieve the goals;
- consultation with upwind states; and
- for the most impaired days, the uniform rate of progress needed to achieve natural visibility conditions in 2064.

8:30 Introductions and Opening Remarks from WRAP Co-Directors

8:45 How were the glidepaths determined? *[Marc Pitchford, NOAA/EPA]*

- Baseline conditions
- Natural conditions

9:15 What are the emissions in 2002 and 2018 and how were they determined?
[Alice Edwards, AK DEC]

10:15 Break

10:45 What are the 2002 and 2018 visibility modeling results and how were they determined?
What are the major caveats in using modeling results in the implementation plans?
[John Vimont, National Park Service]

11:45 What are the current visibility projections for 2018 and how do they compare to the
uniform rate of progress (i.e., glidepath)? Handouts will be provided for each area.
[Lee Alter, WGA]

12:15 Lunch

1:15 A Weight-of-Evidence Framework for Integrating Technical Results and Supporting
Haze-Mitigation Policies *[Joe Adlhoch, Air Resource Specialists]*

2:30 Adjourn

3:00 Depart for tour of Sabino Canyon and dinner

Wednesday, January 11, 2006:
Sources and Options for Sulfate and Nitrate

Background: Of the six major visibility-impairing aerosol species (fine soil, coarse mass, elemental carbon, organic carbon, sulfate, and nitrate), sulfate and nitrate share several common characteristics. They are both secondary pollutants whose gasses are emitted predominantly by anthropogenic combustion sources and subject to long-range transport. Together, they typically account for a third or more of the visibility impairment on the 20% worst days. Both aerosols are dependent on and sometimes compete for ammonia emissions. Given these similarities, sulfates and nitrates are often treated with the same assessment techniques and share similar emission control strategy options.

8:30 Sulfate Session

Stationary Source Emission Trends of SO₂ and NO_x [*Patrick Cummins, WGA*]

Demonstration of the weight-of-evidence framework [*Joe Adlhoch*]

- How much of the regional haze is due to sulfate?
- What have been the historical trends in sulfate concentrations and sulfur emissions?
- What are the contributions of natural and manmade emissions to sulfate?
- How are these emissions expected to change between now and 2018?
- How is visibility expected to change, and how does this compare to the glidepath?
- What is our confidence in the answers to these questions, and how might a weight-of-evidence approach be used to determine appropriate policies?

What are the costs and haze benefits of additional SO₂ emission reductions? [*Kathy Kaufman, EPA*]

10:00 Break

10:30 Nitrate Session (similar in format to the sulfate session)

12:00 Lunch

1:00 What is meant by all the other factors? How may they be analyzed? How may all the factors be considered together when establishing goals, and how may States and Tribes demonstrate adequate consideration of them in their implementation plans?
[*Lee Alter, WGA; Bruce Polkowsky, NPS; Invited: Kathy Kaufman, EPA*]

2:30 Next Steps

3:00 Adjourn