

WESTERN STATES AIR RESOURCES COUNCIL



March 26, 2010

EPA Docket Center
U.S. Environmental Protection Agency
Mail Code: 2822T
1200 Pennsylvania Avenue N.W.
Washington, D.C. 20460

Attn: Docket No. EPA-HQ-OAR-2005-0172

Dear Sir or Madam:

The Western States Air Resources (WESTAR) Council, an association of 15 western state air quality managers, appreciates the opportunity to comment on the reconsideration of the National Ambient Air Quality Standard (NAAQS) for ozone. WESTAR member states will provide additional comments on aspects of the proposal that are of particular concern to them.

At the public hearing on August 30, and in writing on October 9, 2007, WESTAR commented on the proposed revision to the ozone NAAQS. In those comments, WESTAR supported a health science based approach to establishing the level of the standard. In addition, WESTAR stressed the need for federal funding commensurate with the need to analyze ozone in the western U.S. as has been provided for the eastern U.S. in the past. We reiterate our support for the science based standard setting process and the necessity of federal funding to support the development of the technical and policy analyses to address ozone in the West. The attached comments elaborate on these concerns, respond to questions posed in the reconsideration notice regarding an expedited implementation schedule and identify additional implementation issues of concern to western states.

Thank you for the opportunity to comment on this important issue. We look forward to working in partnership with EPA to successfully implement a revised ozone NAAQS in the West.

Sincerely,

A handwritten signature in black ink that reads "Martin Bauer". The signature is written in a cursive, flowing style.

Martin Bauer, President
Western States Air Resources Council

Attachment

ATTACHMENT

WESTAR Comments on the Reconsideration of the National Ambient Air Quality Standards for Ozone, Docket No. EPA-HQ-OAR-2005-0172

Schedule

1. Many WESTAR states are concerned about EPA's proposal to accelerate the designation process for the primary ozone standard.

- On page 3036 of the preamble, EPA states that “many of the areas that would be violating the proposed primary ozone standard are also violating the 2008 ozone standards. State Governors have provided recommendations on these areas pursuant to the 2008 ozone standards and recommendations may not need much further evaluation.” While some WESTAR states believe that their current recommendations will be sufficient, many others will be required to evaluate new areas that were not addressed in the 2008 recommendations. States will require the full 12 months provided by the Clean Air Act to prepare recommendations for these new areas.
- Because of the lack of monitoring data, it will be difficult to determine the status of large rural areas or appropriate boundaries for these areas. Conversely, rural counties that have ozone monitors may potentially be unfairly treated as nonattainment areas when the problem is due to regional background levels, not local emissions.
- Nonattainment designations in some areas will involve complex jurisdictional issues because a number of ozone monitors are located in areas with nearby tribal lands. In addition, when ozone monitors are close to state boundaries interstate coordination will be necessary. Multiple EPA regions may also be involved. For example, there are three different EPA regions, four states, and multiple tribes in the Four Corners area. States bordering Mexico or Canada may have additional issues to address. Because multiple jurisdictions will need to be consulted, and coordination will be necessary, 129 days will not be adequate for states and tribes to make nonattainment area recommendations.

2. Many WESTAR states are concerned about EPA's proposal to accelerate the SIP deadline for submitting an attainment SIP. WESTAR agrees with EPA's goal to limit any delays in health protections associated with the reconsideration of the standards. We also recognize that some states will benefit by being able to coordinate the development of ozone and PM analyses. However, EPA needs to consider that some States are not as far along as others in their technical analyses and development of emission reduction strategies, especially in non-urban areas. The acceleration should be encouraged for those States that are able to build on work that has already been completed for the 1997 and 2008 standards, but should not be mandated because many States will be addressing new areas and new issues rather than building on existing plans. The implementation rule should allow a full three years after designations for States to complete SIPs for the primary ozone standard.

- The Eastern U.S. has been working on regional ozone issues for many years, but the process is just beginning in the western U.S. Regional transport and regional background levels must be more fully understood before much of the West can plan for attainment of an ozone standard in the range of 60 to 70 ppb.
- There are large areas in the West with no ozone monitoring data. In addition, the complex terrain throughout much of the West means that ozone monitoring data from hundreds of miles away may not be a good indicator of local conditions. The gaps in the monitoring network need to be filled to ensure that regional ozone modeling is providing a good picture of ozone levels in the West. If SIPs are due in 2013 there will not be time to include the new monitoring data in the technical analyses or the attainment demonstrations. On September 11, 2009 WESTAR submitted comments on the proposed ozone monitoring rule that address monitoring issues in more detail.

3. WESTAR supports the option to designate areas for the secondary standard on a two-year schedule rather than the compressed schedule that has been proposed for the primary standard. For the reasons described above, it would be extremely difficult to accelerate the designation process in the West because the secondary standard will require an analysis of new, non-urban areas that were not evaluated in past nonattainment area recommendations.

4. Table 1 on page 3033 of the reconsideration presents EPA's accelerated "Schedule for Exceptional Event Flagging and Documentation Submission for Data to be Used in Designation Decisions for New NAAQS." It requires that for 2007-2009 data, both flagging and documentation be submitted by November 1, 2010. Because the exceptional event rule limits data that may be flagged to data that exceed the standard, the states will be unable to determine what data needs to be flagged prior to the standard being promulgated. Nor will states be able to start the review of 2007-2009 data early because as EPA notes, ". . . until the level and form of the NAAQS have been promulgated, a state would not have complete knowledge of the criteria for excluding data." (75 FR 3032).

Promulgation of the new standard on August 31, 2010, would allow only two months to review three years of data to identify events, gather data and prepare the extensive analysis that EPA requires to demonstrate an exceptional event, hold the mandatory 30-day public comment period, and respond to public comments. Exceptional events that occur in the 1st or 2nd quarter of 2010 would also be subject to a 60-day schedule; thus, they would need to be flagged and fully documented 60 days after the end of the quarter in which the event occurred - before the new standard is even promulgated. EPA's proposed schedule is unrealistic and should be revised.

5. In addition to the issues raised above for the primary standard, if EPA adopts the alternative accelerated schedule for exceptional event flagging for the secondary ozone standard it is not clear what criteria States should use to flag data for a standard based on a seasonal cumulative impact. EPA needs to update the exceptional event rule to address the W126 standard as soon as possible after finalizing the ozone standard.

Funding/Workload

6. Increased funding is critical, and needs to be provided by federal FY2011.

- As noted earlier, ozone monitoring needs to be addressed. However, as detailed in WESTAR's comments on the ozone monitoring rule submitted on September 11, 2009, WESTAR is greatly concerned about the cumulative effect of increasing monitoring requirements without concomitant funding from EPA, particularly in a time of economic challenges facing state governments.
- WESTAR states need to build regional modeling capability; improve inventories; and address unique issues such as winter-time ozone, the impact of fire, high altitude areas and the variability and importance of biogenic emissions in the diverse ecosystems in the West.
- Further evaluation of the biogenic model is needed to ensure that high biogenic emission estimates for western deserts are appropriate considering the mix and density of vegetation in those areas.
- Tremendous effort will be required to build a strong stakeholder process in rural areas that have not traditionally been involved in the development of a SIP.

States are currently facing extreme budget problems due to the recession and will have difficulty meeting all of these needs without additional funding from EPA.

7. EPA's assumptions in its Regulatory Impact Analysis (RIA) about workload for State/Local air programs are not realistic for many western states. While some western states have been addressing state-wide ozone levels for many years, other states will be facing new issues as they determine how to reduce ozone levels both inside and outside of their major population centers. It will require a tremendous effort to improve the technical information (inventories, models, etc.); educate local governments, including rural communities about new requirements; and, develop strategies. In addition, it will require a significant effort to determine what emission sources are affecting regional background ozone levels and the degree to which interstate and international transport is contributing to the problem. The Eastern U.S. has been grappling with these issues for many years through the OTC, OTAG, and other regional analysis efforts. The RIA needs to account for similar efforts that will be required to develop an understanding of ozone in the West.

Regional Background Levels

8. The report *Regional and Local Contributions to Peak Local Ozone Concentrations in Six Western Cities*, prepared for WESTAR by Sonoma Technologies, May 30, 2006, estimated background ozone levels (natural background plus transported anthropogenic ozone) from

between 47 ppb and 68 ppb at six western cities during high ozone episodes. This is consistent with data from remote National Parks that show exceedances of the proposed ozone standard throughout the West. States are finding it difficult to determine the causes of these high observed concentrations, given the small amount of local emission sources in or near some of these National Parks. The high levels may be caused by transport, major sources that are upwind of the area, biogenic contributions, fire, local emissions within some National Parks or a combination of all of the above. Table 1 shows the 4th high 8-hour ozone level at western National Parks to illustrate the high levels that are occurring throughout large areas in the West. Reducing emissions in urban areas may not be sufficient to address this regional problem.

Table 1. 2006-2008 4th Highest 8-hr Ozone at Western National Parks with Ozone Monitors

Sites operated by the National Park Service	State	2006–2008
Canyonlands Island in the Sky	UT	71
Chiricahua	AZ	69
Craters of the Moon	ID	(67)
Death Valley	CA	81
Denali	AK	58
Glacier	MT	53
Grand Canyon	AZ	70
Great Basin	NV	72
Joshua Tree Black Rock	CA	104
Joshua Tree Cottonwood Canyon	CA	(79)
Lassen Volcanic	CA	77
Mesa Verde	CO	71
Mount Rainier	WA	58
Petrified Forest	AZ	70
Pinnacles	CA	79
Rocky Mountain	CO	76
Sequoia and Kings Canyon Ash Mountain	CA	(105)
Sequoia and Kings Canyon Lower Kaweah	CA	96
Yellowstone	WY	66
Yosemite	CA	(89)
Zion	UT	71
Sites operated by cooperating state agencies		
Badlands	SD	62
Mount Rainier	WA	(59)
Saguaro	AZ	74
Theodore Roosevelt	ND	63
Wind Cave	SD	66

Numbers in parentheses indicate data incomplete (< 75 % complete in one year or 90% complete over 3 years)

Alaska-Arizona-California-Colorado-Hawaii-Idaho-Montana-Nevada-NewMexico-NorthDakota-Oregon-SouthDakota-Utah-Washington-Wyoming

WESTAR, 1218 3rd Ave, Seattle, WA 98101 (206)254-9142

9. The 2007 Ozone Staff Paper uses the term policy relevant background (PRB) to describe the combination of natural background and transported international emissions. The Staff Paper indicates that EPA used a PRB estimate of 15-35 ppb in the RIA modeling. The highest PRB levels were found to occur in western cities during the springtime. The Ozone Staff Paper also indicates that higher PRB values occur at higher elevations due to contributions from hemispheric pollution and stratospheric intrusions. The report *Regional and Local Contributions to Peak Local Ozone Concentrations in Six Western Cities*, prepared for WESTAR by Sonoma Technologies, May 30, 2006, assumes a natural background ozone level of 35 ppb based on literature reviews, however the literature also states that natural background ozone concentrations in the West can range from about 25 ppb to 40 ppb. Further study is needed to determine the variability of PRB and the degree to which PRB levels affect ozone during exceedances at western ozone monitoring sites. This issue becomes increasingly important as the level of the ozone standard moves closer to PRB levels. WESTAR agrees with CASAC's most recent review of the ozone NAAQS proposal (EPA-CASAC-10-007, February 19, 2010) that states:

“...as levels for ozone standards move closer to “background” levels, new issues may arise with implementation. As the Agency moves forward with the next ozone review cycle, it would be well advised to carefully consider any new monitoring and implementation issues that may arise, particularly as background levels vary throughout the country. In addition, with implementation of the new W126 form for the secondary standard, we suggest that EPA collect information and seek additional research that could be used to inform continued refinement of the standard as well as its implementation.”

EPA needs to address PRB levels during the development of the current implementation rule rather than waiting to address this issue during the next NAAQS review cycle.

10. The preamble (page 3038) states that “Cross border O₃ contributions from within North America (Canada and Mexico) entering the U.S. are generally thought to be small.” This is not consistent with the experience of WESTAR States. Border cities in New Mexico, Arizona, and California are significantly affected by emissions from neighboring communities in Mexico. In addition, there is a growing body of evidence that emissions from Asia are impacting background ozone levels in the Western U.S. A recent paper, *Increasing springtime ozone mixing ratios in the free troposphere over western North America* published in Nature (Vol 463, January 21, 2010), analyzes ozone levels in the mid-troposphere that could be contributing to background ozone levels in the west. As the preamble notes, “The impact of foreign emissions on domestic air quality in the United States is a challenging and complex problem to assess.” Emissions from ocean-going vessels can also be a significant factor in coastal areas. WESTAR encourages EPA to accelerate efforts to better understand and address international transport. This information is needed in the near term to improve regional models and to help states develop the best emission reduction strategies.

Classifications

11. EPA has not yet promulgated changes to the ozone implementation rule for the 1997 standard that would clarify how areas that were previously classified as nonattainment areas under Part D, Subpart 1 of the CAA will be classified under Part D, Subpart 2. Further changes to the implementation rule will be required to address classification and implementation requirements for the proposed revisions to the ozone standard.

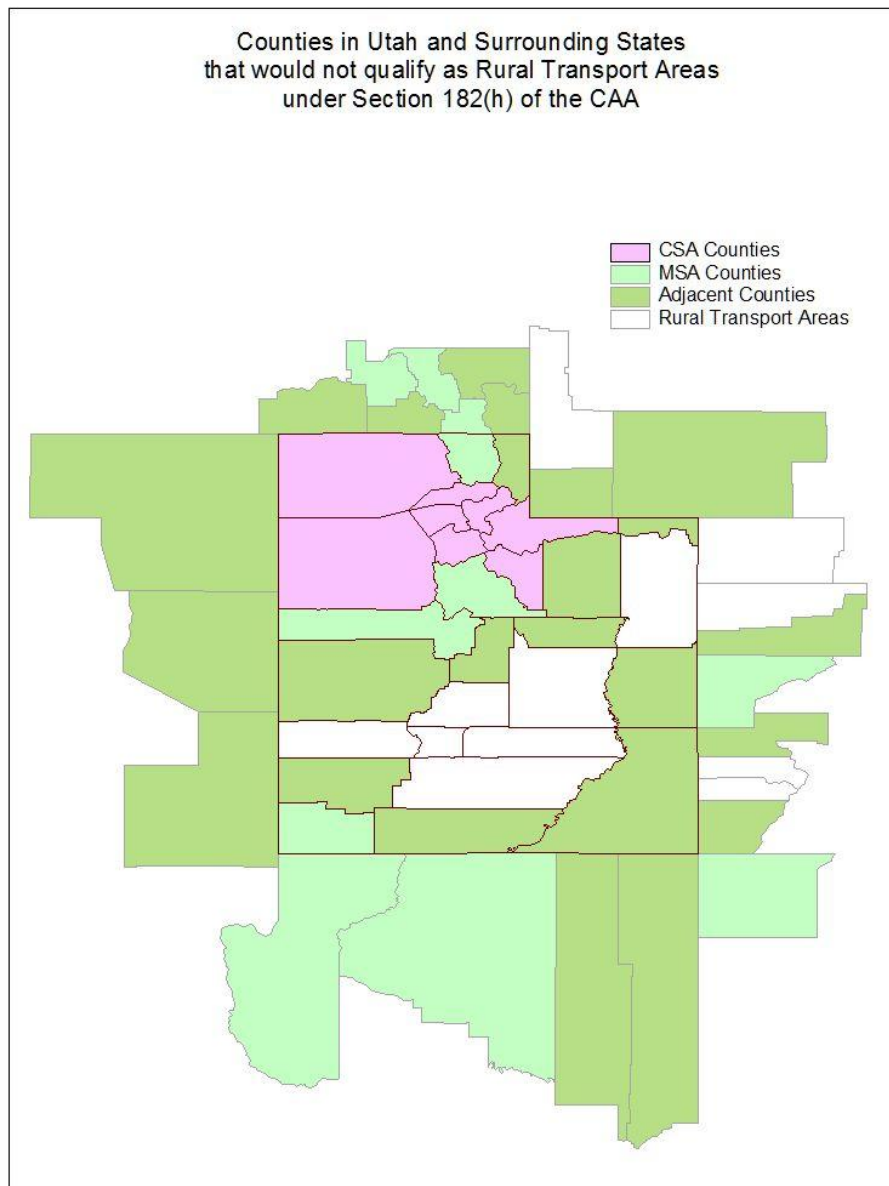
- Areas that are designated with a marginal classification will be bumped up to a moderate classification if the area does not attain the standard within three years. Considering the difficulty that many western states will have building the capability to model regional impacts and determine the cause of high ozone levels in both urban and rural areas, control strategies may not be implemented in time to attain the standard this quickly. This problem will be exacerbated by the compressed designation schedule proposed by EPA. Areas initially classified as marginal must be looking ahead to mandatory requirements that would apply if the area is bumped up after three years.
- EPA's proposed classification scheme (FR 74, page 2936, January 16, 2009) establishes the cutoff level between the marginal and moderate classification at 92 ppb, a level that is 15 percent above the 80 ppb 1997 NAAQS. If EPA uses a similar classification scheme, and finalizes a NAAQS at the low end of the proposed range, then the cutoff level between the marginal and moderate classification would be 69 ppb. Under this scenario, remote National Parks in the West may be classified as moderate nonattainment areas. This classification would trigger mandatory requirements under Part D, Subpart 2.
- Areas that are classified as moderate and above are required by the CAA to implement mandatory emission reduction strategies, depending on the severity of the ozone problem in an area. Many of these strategies, such as a mandatory 15 percent VOC reduction or an I/M program may not make sense in rural nonattainment areas that are affected by background ozone levels and transport rather than local emissions. Implementation of mandatory strategies in those areas will be difficult and costly with little environmental benefit.

12. Many major population centers in the West are separated from each other by hundreds of miles of mostly rural land. Section 182(h) of the CAA provides for a rural transport area classification that limits mandatory control strategies for these areas that are primarily affected by transported emissions. However, large areas of the West do not qualify for this classification because rural transport areas cannot include counties that are in an MSA or adjacent to an MSA.

MSAs in the West are often significantly larger than those in the East simply because the county boundaries which serve as the basis for the MSAs are larger. In addition, significant portions of counties within an MSA may be rural in character owing to low population densities. These factors, along with the exclusion of large counties adjacent to the MSA, prevent areas that meet

the intent of the rural transport area classification from qualifying. For example, the Salt Lake City-Ogden-Clearfield CSA disqualifies significant areas in Nevada, Idaho and Wyoming from a rural transport area classification even though the areas in question are hundreds of miles from the urbanized area (or Census defined UZA, based on population density). Figure 1 is a map provided by the State of Utah that demonstrates this example.

Figure 1.



Monitoring

13. Both the existing and proposed Appendix P language (75 FR 3049) can result in double counting of a single ozone episode where ozone transport is an issue. In areas affected by ozone transport, the highest ozone concentrations often occur in the middle of the night. An 8-hour average that begins at 11:00 pm would be counted as an exceedance on the first day, while the 8-hour average that begins at midnight (that overlaps the previous average by 7 hours) would be counted as an exceedance on the second day. Thus, a single plume of ozone lasting for a few hours could penalize a State with two exceedance days instead of one, even if the high ozone did not span both sides of midnight, simply because the monitor records the effects of a transported plume rather than a locally-generated plume that is typically formed during daylight hours.

The double counting of exceedances under the current or proposed language is likely to cause some attainment determinations to be based on annual 2nd-highest 8-hour ozone concentrations instead of the annual 4th-highest 8-hour ozone concentrations stipulated by the standard. Appendix P guidance is not in accord with the form (4th-high) of the standard and should therefore be changed.

The existing Appendix acknowledges this problem. Section 2.1 of Appendix P states: "Because the 8-hour averages are recorded in the start hour, the daily maximum 8-hour concentrations from two consecutive days may have some hourly concentrations in common. Generally, overlapping daily maximum 8-hour averages are not likely, except in those non-urban monitoring locations with less pronounced diurnal variation in hourly concentrations." However, this statement does not account for areas affected by transport where an ozone plume can move across the area in the middle of the night. An example of this problem can be seen at the Lehman Caves National Monument monitor, a very remote site in eastern Nevada that has few local emission sources. On August 13, 2009 all 1-hour ozone values were at 70 ppb (the proposed upper range for the ozone standard) or below. However, at 1:00 am on August 14, 2009 (see attached AQS data report) ozone values increased to 74 ppb and remained above 70 ppb until 10:00 am. This episode is counted as an exceedance on both the 13th and the 14th. The daily maximum 8-hour value on the 13th begins at 11:00 pm and is 73.1 ppb. The daily maximum on the 14th begins at 1:00 am and is 74.5 ppb. These two exceedances have six hours in common. It is an important issue because these two days are the 1st and 2nd highest daily maximum 8-hour values for this monitor in 2009.

The reconsideration proposes two changes related to this problem. The first change removes the phrase, "Because the 8-hour averages are recorded in the start hour . . ." (75 FR 3049). This was probably deleted because it doesn't matter whether the 8-hour averages are recorded in the start hour or the end hour. The same doubling of exceedances would occur with end-hour recording when the transported ozone plume arrives before midnight as would occur with the transported ozone plume arriving after midnight using start-hour recording. The second change is the addition of the sentence, "In these cases, the maximum 8-hour average concentration from each day is used, even if the two averages have some hours in common." (75 FR 3050).

This potential doubling of the number of exceedance days per episode should be addressed by EPA and eliminated. We recommend that EPA utilize the feature from the 8-hour carbon monoxide standard that requires that the 8-hour periods used to define an exceedance may not overlap. This would prevent a single ozone episode of short duration entirely occurring within one day from causing an exceedance on that day and an exceedance on the next day or the previous day.

14. The proposed secondary standard design value is based on the annual maximum consecutive 3-month sum of adjusted monthly W126 index values. This methodology is problematic in areas where wintertime ozone is an issue, and is not consistent with CASAC's Ozone Review Panel that recommended using the "three maximum ozone months of the summer growing season." (Preamble, page 3017). The reconsideration notes that "the 2007 Staff Paper further concluded that the consecutive 3-month period within the O₃ season with the highest W126 index value (e.g., maximum 3-month period) would, in most cases, likely coincide with the period of greatest plant sensitivity on an annual basis." (Preamble, page 3013). In areas where wintertime ozone is an issue, the highest W126 values may occur during the middle of winter when vegetation is dormant, and often covered in snow. Similar issues may occur in desert areas where vegetation is dormant during hot, dry periods in the summer. The form of the standard should be revised to apply to the maximum 3-month period during the growing season.

15. EPA needs to provide further guidance regarding monitor siting requirements to support the W126 standards. The proposed monitoring rule (FR 74, page 34538, July 16, 2009) states, "To provide characterization of O₃ exposures to O₃-sensitive vegetation and important ecosystems, at least one monitoring site is to be located in an area such as those set aside to conserve the scenic value and the natural vegetation and wildlife within such areas. These areas may include Federal, State, or Tribal and/or public interest lands that are subject to elevated O₃ concentrations compared with the rest of the State and are characterized by areas of O₃-sensitive natural vegetation species subject to visible foliar injury, seedling and biomass loss, and other adverse impacts to a degree that could be considered adverse." Western states contain very diverse ecosystems, and further guidance is needed to meet this monitoring requirement. As noted earlier, States are currently facing extreme budget problems, and it will be difficult to site more than the minimum number of required monitors in the near future to support the proposed secondary standard.

16. In general, WESTAR opposes the proposal to allow the EPA Administrator discretion to use incomplete data to calculate design values but recognizes, as noted in the proposal, that there are limited cases where monitoring site closures or moves could lead to incomplete data in areas where long-term data provide a good indication of ozone levels. However, WESTAR is concerned that EPA may use this discretion to prematurely designate an area as nonattainment based on a very limited data record. Ozone is highly affected by meteorology and can vary significantly from year to year. If EPA finalizes the proposal to use incomplete data to calculate design values, the rule should limit the application of this discretion to areas where other nearby monitoring data support the use of incomplete data. The rule should not allow discretion to designate areas with new ozone monitors based on incomplete data. In those cases, it is more

appropriate to designate an area as unclassifiable during the interim period until three years of data are available.

Control Strategies

17. National strategies that are currently under development should be adjusted to facilitate attainment of the 2010 ozone NAAQS, not the less stringent 2008 NAAQS. These national strategies are becoming increasingly important because many source categories cannot realistically be addressed through state and local regulations.