

To the members of CASAC:

Thank you for accepting this written testimony. My name is Dan Jaffe. I am a Professor at the University of Washington in both the Science and Technology Program (UW-Bothell) and the Department of Atmospheric Sciences (UW-Seattle). I am an active researcher in the field of air pollution. My research has been funded by NSF, NASA, NOAA, EPA, NPS and private companies. I have authored or co-authored more than 100 publications in peer reviewed journals.

I want to bring to your attention an article recently published in Environmental Science and Technology:

Jaffe D. (2011) Relationship between Surface and Free Tropospheric Ozone in the Western U.S. *Envir. Sci. Tech.* 45, 432-438, DOI: 10.1021/es1028102.

This article analyzes data from rural CASTNET sites in the Western U.S. and has several key findings relating to the sources of ozone and the feasibility of meeting lower ozone standards at high elevation sites in the western U.S. The main points are:

- 1) Ozone increases with altitude in the western U.S. There are large scale patterns across the western U.S. that indicates a significant influence from the free troposphere on surface concentrations. At elevations above approximately 2000 meters, most sites in the Western U.S. will exceed an 8-hour-65 ppbv standard, assuming the form remains the same.
- 2) At present, there is not a clear understanding of the degree to which domestic emissions impact these sites. It is likely that high ozone days at these sites occur due to a combination of domestic, foreign and natural sources. At this point it is not clear if these elevated sites could meet a 65 ppb standard based on domestic emission reductions.
- 3) Wildfires and intrusions of free tropospheric air clearly contribute to the number of days with an MDA8 greater than 60 ppbv. As we move to a lower standard, EPA will need to provide guidance on applying the exceptional events clause to ozone.

Again, thank you for taking testimony. I will elaborate on these issues during my oral presentation.

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