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Colorado Department
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Docket No EPA-HQ-OAR-2005-0172
Environmental Protection Agency
Mail Code 6102T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

RE: State of Colorado Comments on EPA's Proposed National Ambient Air Quality Standards for 8-Hour Ozone (EPA Docket No EPA-HQ-OAR-2005-0172; 75 Fed. Reg. 2938, January 19, 2010)

The State of Colorado submits the following comments on EPA's proposed National Ambient Air Quality Standards for ozone published January 19, 2010. Colorado concurs with the comments of the National Association of Clean Air Agencies (NACAA) on this docket, as well as the comments of the Western States Air Resources Council (WESTAR) on this docket. Where the comments of NACAA and WESTAR differ, *e.g.*, on the expression of the Secondary Standard for Ozone, Colorado's comments are reflected by the comments of WESTAR. Specific comments from Colorado are as follows.

1) EPA's proposal to accelerate the designation process from the traditional two-year timeframe to one year does not properly take into consideration the time it takes to re-consider previous state recommendations (for the 2008 8-Hour Ozone NAAQS), the analysis of existing and potentially new nonattainment boundaries through the 9-factor analysis, the lack of monitoring to adequately determine attainment/nonattainment recommendations, and the State's administrative processes, especially when multiple states and tribes may be part of future nonattainment areas. The State of Colorado will require the full 12 months provided by the Clean Air Act to prepare recommendations, and EPA likely will need up to one year to process Colorado's and other states' recommendations. The full two-year designation process should be adhered to.

2) As the environmental public health data sets become more robust over time, and as a consequence EPA promulgates lower National Ambient Air Quality Standards under Section 109 of the Act (NAAQS), public health exposures to environmental pollutants like Ozone are more subtle, as opposed to gross exposures when standards are at relatively high levels. Thus, it is important that EPA and the Section 109 NAAQS process be considerate and mindful of the actual public health exposure at these relatively low levels, in this case 8-Hour Ozone in the range of 60 ppbv ~ 70 ppbv, which in some instances can approach background levels of ozone experienced on a given day in some states like Colorado. To this end, Colorado requests that, in finalizing the 8-Hour Ozone NAAQS, EPA evaluate and confirm in a response to comment the public health data, including any CASAC information, that would substantiate that the final 8-Hour Ozone Primary NAAQS appropriately reflects the public health exposure when altitude is considered. The 8-Hour Ozone standard has been expressed, and is proposed as, a volume/air volume basis (*i.e.,* parts per million), which is insensitive to differences in altitude and temperature – it reflects a parallel ratio of ozone molecules at altitude or at sea level; when any ozone ppmv reading is reduced to mass (*e.g.*, ug/M3), there can be a distinction in that less mass of the pollutant can exist in the same volume of air at altitude vs. what is observed at sea level. Given this potential distinction, it is important to evaluate and confirm that the standard or its expression appropriately reflects actual public health exposure considering unique circumstances like altitude. Colorado does not have the specific current epidemiological or dosimetry information to understand the public health effects of 8-Hour Ozone considering altitude, *e.g.*, whether a gaseous pollutant like Ozone acts more on surface contact in the lung/airway (*e.g.*, vs. absorption into the bloodstream like fine particulate, or complexing with hemoglobin like carbon monoxide), and thus would the same ratio of ozone molecules regardless of altitude (*i.e.*, expressed as ppmv) reflect the same public health risk even though ozone molecules are more diffuse at altitude, notwithstanding there is arguably less mass of ozone molecules at altitude vs. at sea level (*i.e.*, on a ug/M3 basis). Other considerations such as respiration rates, respiration volumes, and developed/acclimated respiratory systems at altitude are, of course, pertinent to this evaluation. It is noted that in EPA's "Air Quality Criteria for Ozone and Related Photochemical Oxidants" document the agency discusses this issue of mixing ratios vs. absolute concentration in relation to environmental exposures and distinctions in elevation (EPA 600/R-05-004bF, Feb. 2006, p. AX3-64 – AX3-68). Colorado requests that EPA, in finalizing its 8-Hour Ozone NAAQS, evaluate and confirm the pertinent public health information and the resultant actual public health exposure given these aforementioned circumstances, and consider adjustments, if any, as warranted, and to explain the rationale if no adjustments are warranted.

3) EPA's proposal to set the secondary standard based on the highest consecutive three-month period for a weighted average is premised on ozone being highest during summer months. However, ozone has proven to be highest in the winter in certain areas of the western US. At these times, not only are most plants dormant, but they are typically covered with snow. In addition, deciduous trees have little or no potential for uptake in the winter as their leaves have dropped. The secondary standard would be much better served by setting it on the maximum three-month period during the true growing seasons of spring and summer. This would also make the secondary standard be consistent with the rationale that the weighted average only uses daylight hours when stomata are generally open and uptake is likely to occur.

Colorado appreciates EPA's consideration of these comments.

Sincerely,

Paul Tourangeau, Director
Colorado Air Pollution Control Division