

3-2-22 Comments from Members of the Clean Air Scientific Advisory Committee (CASAC) Particulate Matter (PM) Panel. These comments are from individual members of the Panel and do not represent CASAC consensus comments nor EPA policy. Do not cite or quote.

**Comments from Dr. Marc Weisskopf on the
2-4-22 Draft CASAC Review of the EPA’s Policy Assessment for the Reconsideration of the
National Ambient Air Quality Standards for Particulate Matter
(External Review Draft – October 2021)**

3-2-22

P. 16 lines 23-26:

“The majority of CASAC members believe that a recommendation of 8-10 $\mu\text{g}/\text{m}^3$ is best supported. This argument places more weight on epidemiologic studies with mean concentrations below 10 $\mu\text{g}/\text{m}^3$, including some newer studies not cited in the Draft ISA Supplement (e.g., Yazdi et al., 2021; Vodonos et al., 2018) and by considering Canadian studies, some of which had means even lower than 8 $\mu\text{g}/\text{m}^3$.”

Revise to:

“The majority of CASAC members believe that a recommendation of 8-10 $\mu\text{g}/\text{m}^3$ is best supported. This argument places more weight on epidemiologic studies that show positive associations with precision among populations restricted to those exposed to concentrations below 12 $\mu\text{g}/\text{m}^3$, and therefore mean concentrations after those restrictions that were likely at or below 10 $\mu\text{g}/\text{m}^3$ (Awad, 2019; Hayes, 2020; Danesh Yazdi 2021; Wu, 2020), and those showing such associations at concentrations below 10 $\mu\text{g}/\text{m}^3$ (Ward-Caviness 2020) and below 8 $\mu\text{g}/\text{m}^3$ (Wei, 2020; Wang, 2020). This argument also does not discount Canadian studies, some of which showed such associations at concentrations below 10 $\mu\text{g}/\text{m}^3$ (Zhang, 2021) and 8 $\mu\text{g}/\text{m}^3$ (Christidis, 2019; Pappin, 2019; Pinault, 2017), and considers a meta-analysis, not included in the ISA Supplement, of 52 studies, 14 with concentrations below 10 $\mu\text{g}/\text{m}^3$, that showed significant effects down to 5 $\mu\text{g}/\text{m}^3$ (Vodonos, 2018). Many of these studies (studies referenced here were only those for mortality) are described in section 3.2.2.2.7 of the ISA Supplement where the conclusion is reached that “The evidence remains clear and consistent in supporting a no-threshold relationship, and in supporting a linear relationship for $\text{PM}_{2.5}$ concentrations $>8 \mu\text{g}/\text{m}^3$, based on a large number of studies” with uncertainties about the concentration-response relation remaining at concentrations $<8 \mu\text{g}/\text{m}^3$.”

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