March 28, 2023

DOCKET ID No. [EPA-HQ-OAR-2015-0072; FRL-8635-01-OAR]
RIN 2060-AV52
https://www.regulations.gov

U.S. Environmental Protection Agency
EPA Docket Center, Air and Radiation Docket
Mail Code 28221T
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

U.S. Environmental Protection Agency:
Reconsideration of the National Ambient Air Quality Standards for Particulate Matter

Introduction
The Association of Metropolitan Planning Organizations (AMPO) is pleased to provide our comments on the U.S. Environmental Protection Agency (EPA) January 27, 2023, Proposed Rule on the Reconsideration of the National Ambient Air Quality Standards (NAAQS) for Particulate Matter (PM).

What is AMPO?
AMPO is a nonprofit membership organization established in 1994 to serve the needs and interests of metropolitan planning organizations (MPOs) nationwide. Federal highway and transit statutes require, as a condition for spending federal highway or transit funds in urbanized areas, the designation of MPOs, which have responsibility for planning, programming, and coordination of federal highway and transit investments. Under federal law MPOs are designated for each urbanized area with a population of more than 50,000 individuals.

There are over 400 MPOs in the U.S. as reported in the most recent census. Each Metropolitan Planning Organization (MPO) includes a policy board composed of local and regional elected officials who collaboratively decide what transportation investments will be made within their MPO

region. The MPO investment plans must: 1) extend for at least 20 years in the future, 2) be updated every four years, and 3) meet all federal planning requirements, including EPA's transportation conformity requirements. In some states there are additional planning requirements for state departments of transportation (DOTs) and MPOs.

Context

AMPO applauds the recently enacted Infrastructure Investment and Jobs Act (IIJA)[1] and specifically the Carbon Reduction Program which can help MPOs, transit agencies, and states reduce $PM_{2.5}$ and GHG (CO_2) emissions by funding carbon reduction strategies and projects. Additionally, the Congestion Mitigation and Air Quality Improvement Program (CMAQ) is intended to help reduce criteria pollutant emissions and relieve congestion; and has included a funding set-aside for $PM_{2.5}$ nonattainment and maintenance areas for many years. Both programs will provide funding for projects with multi-pollutant benefits, including reducing $PM_{2.5}$ emissions from on-road mobile sources. AMPO expects that these two programs, in addition to others in the IIJA, will help state DOTs and MPOs fund strategies to meet their respective attainment targets for the existing NAAQS.

Comments

AMPO supports EPAs proposal to: 1) revise the primary $PM_{2.5}$ NAAQS by lowering the level to between 9-10$\mu g/m^3$ and, 2) retaining the existing $PM_{2.5}$ 24-hour NAAQS at 35$\mu g/m^3$. However, we urge EPA to fully consider our recommendations on implementation.

Table 1 below shows the status of $PM_{2.5}$ nonattainment and maintenance areas as of February 28, 2023. (In addition to these $PM_{2.5}$ areas, there are currently 100 nonattainment and maintenance areas for the 2008 and/or 2015 ozone NAAQS.) This table also shows the number of counties EPA estimates would violate their proposed Annual $PM_{2.5}$ NAAQs of 10 $\mu g/m^3$ and 9$\mu g/m^3$ respectively.

[1] Public Law No: 117-58 (11/15/2021)

Table 1: PM2.5 Nonattainment and Maintenance Areas February 28, 2023.			
Current PM NAAQS	**Number of states**	**Number of nonattainment or maintenance areas**	**Number of counties**
2012 Annual $PM_{2.5}$ NAAQS 12µg/m^3	4	9	20
2006 24-hour $PM_{2.5}$ NAAQS 35µg/m^3	19	32	121
Totals	**23**	**41**	**141**
EPA PROPOSAL			
2023 Annual $PM_{2.5}$ NAAQS 10µg/m^3	?	?	**50**
2023 Annual $PM_{2.5}$ NAAQS 9µg/m^3	**?**	**?**	**112**
Totals	**23+**	**41+**	**141-253**

The existing $PM_{2.5}$ nonattainment and maintenance areas have control strategies in place, in many cases multi-pollutant reduction strategies, to reduce $PM_{2.5}$ emissions from on-road mobile sources pursuant to the transportation conformity regulations. Below are our specific comments and recommendations on the proposed rule.

Recommendations

1) Promote early implementation of $PM_{2.5}$ reduction strategies through Early Action Compacts (EACs)

Under the Early Action Compacts (EACs) that were developed to help meet the 1997 ozone NAAQS, EAC areas had to show that they would reduce ozone pollution earlier than would be required under the Clean Air Act. EACs were executed by regions, states, and EPA in 29 areas in 12 states. As an incentive to reduce emissions early, EPA deferred the effective date of nonattainment designations subject to meeting all EAC commitments and milestones. The areas were also relieved of New Source Review (NSR) and conformity requirements during the implementation of the EACs.

By promoting the EAC concept of early reductions of $PM_{2.5}$, MPOs and states can consider what additional control strategies are needed over and above those proposed as federal controls by the U.S. EPA and then identify additional cost-effective emission reductions if necessary. States and MPOs can focus now on how to make progress toward attainment. Below are several suggestions on how

EPA could implement an approach like the Ozone Early Action Compacts where states and prospective $PM_{2.5}$ nonattainment areas could commit to emission reduction strategies yet not be designated nonattainment unless they failed to meet their commitments. This voluntary approach is most likely to lead to early implementation of programs that will be cost-effective and implementable through the MPO planning process (e.g., programming funds for alternative fueled transit vehicles, purchase of alternative fueled vehicles for municipal fleets, purchase of clean truck technologies, etc.).

The major reductions in NO_x over the past twenty years are due to federal control strategies on heavy-duty engines and low sulfur fuels; these strategies reduced the overwhelming share of on-road NO_x reductions nationwide. What federal controls does EPA anticipate adopting to reduce $PM_{2.5}$ in a commensurate manner? For example, can nonattainment and maintenance areas assume that all elements of EPA's Clean Truck Program will be implemented on schedule? Are there other federal controls anticipated that will reduce $PM_{2.5}$ emissions?

The following discussion demonstrates that States and MPOs have active efforts underway to reduce emissions now. Due to these on-going efforts, if the EAC approach is allowed, we are likely to see earlier $PM_{2.5}$ reductions than would otherwise be the case.

a. Acknowledge existing control strategies being implemented.

Many nonattainment or maintenance areas for $PM_{2.5}$ (23 states, 141 counties) are also ozone nonattainment areas [there are 100 (2008 and 2015) ozone nonattainment and maintenance areas] and MPOs are implementing control strategies that will reduce NO_x, VOCs, (precursors to ozone) and $PM_{2.5}$, which in some cases, is also an ozone precursor. These actions will contribute to meeting a new annual $PM_{2.5}$ Annual NAAQS. MPOs should be provided with time to assess the $PM_{2.5}$ reductions that are resulting from these existing multi-pollutant reduction strategies and adjust in concert with their overall transportation planning activities. $PM_{2.5}$ reduction strategies being implemented by MPO regions through their Long-Range Plans and Transportation Improvement Programs (TIPs) include, but are not limited to:

1) Intersection improvements
2) Signal improvements
3) Bicycle/pedestrian facilities
4) Grade separations
5) Park & Ride facilities
6) Traffic flow improvements
7) Intelligent transportation systems implementation
8) Major transit investments
9) Travel Demand Management (TDM) programs
10) Vehicle replacements, repowers, rebuilding, after-treatment, or other technologies.

b. Alternative fueled vehicles

Many MPOs include programs to reduce emissions from the on-road mobile source fleet including transit fleets, school buses, diesel engine retrofits and replacements, advanced truck technologies and alternative fuels and vehicles. All these strategies will reduce PM and other criteria pollutants as well as CO_2, a key Greenhouse Gas pollutant.

c. Participation in U.S. Department of Energy Clean Cities program

This includes promotion and funding of alternative fuels, advanced vehicles, mobility solutions, and other fuel-saving strategies. These strategies reduce $PM_{2.5}$, VOCs, NO_x and GHG (CO_2)emissions. In 2020 the Clean Cities Coalitions achieved their goal of removing the equivalent of over one million conventional cars from the roads. About 265 million people (80% of the U.S. population) live inside the boundaries of Clean Cities coalitions.[2] Many states and MPOs participate in and support Clean Cities programs.

2) Nonattainment Area Boundaries

Unless local circumstances have changed significantly, EPA should be consistent with earlier boundary determinations for existing $PM_{2.5}$ nonattainment areas. AMPO urges EPA to provide transparency when making boundary determinations on new $PM_{2.5}$ nonattainment areas. This includes providing data that supports EPA's final boundary designations. In many states and MPO regions, a single county or a few counties may violate a $PM_{2.5}$ 10µg/m^3 or lower NAAQS and these counties may or may not be part of an MPO region. Nonattainment and maintenance area boundaries are significant to MPOs that need to meet transportation conformity requirements. Transportation models and analyses tools are representative of the metropolitan planning areas and nonattainment and maintenance boundaries that differ present modeling challenges.

3) $PM_{2.5}$ Background levels

Some areas of the country, especially in the western states, have $PM_{2.5}$ background levels that exceed the existing $PM_{2.5}$ NAAQS. EPA needs to provide guidance to such areas as to how they can meet the transportation conformity project-level requirements and advance important transportation infrastructure investments.

One example of a major project of national significance being cancelled in part due to conformity $PM_{2.5}$ requirements was the I-710 improvement project in Los Angeles leading from the Ports of LA and Long Beach north. This project had been in the planning stages for over 20 years at a cost of tens of millions of dollars. It was cancelled in 2022 in part because the background levels at the southern terminus of the project are already above $PM_{2.5}$ NAAQS. Therefore, the project could not pass the project-level hot-spot analysis required for transportation conformity. While this may be an unintended consequence of EPA's conformity rule, truly important projects to regional economies and, in this case, to the national economy and freight movement, should not be cancelled due to $PM_{2.5}$ background levels.

[2] U.S. DOE 2020 Activity Report on the Clean Cities Program.

Can EPA provide case studies and examples of cost-effective $PM_{2.5}$ reduction strategies and mitigation measures that could be helpful to MPOs as they assess how to reduce localized $PM_{2.5}$ emissions?

4) Exceptional Events: Wildfires and temperature inversions

Exceptional events continue to occur, specifically wildfires and extreme weather events that will need to be considered as EPA and states consider which areas violate an annual $PM_{2.5}$ NAAQS at a $10\mu g/m^3$ level or lower. The 2016 Exceptional Events Rule – Treatment of Data Influenced by Exceptional Events: Final Rule (81 FR 68216, October 3, 2016) is critical to areas experiencing these events. Additionally, temperature inversions in winter and wildfires in summer months present significant challenges for such areas to reduce $PM_{2.5}$ emissions. For example, in Fairbanks, Alaska over 80% of $PM_{2.5}$ emissions are from wood stoves and power plants with just 6.8% of $PM_{2.5}$ emissions from on-road mobile sources. When 6.8% or even 20% of $PM_{2.5}$ emissions come from on-road mobile sources, what strategies does EPA recommend to address the $PM_{2.5}$ emissions from much more significant contributors like woodstoves, coal-fired power plants, agriculture and wildfires and temperature inversions?

5) Project level conformity issues

All federally funded or approved transportation projects must meet the transportation conformity requirements. Project-level conformity can be a relatively routine analysis however, in $PM_{2.5}$ nonattainment and maintenance areas there may be "projects of air quality concern" that require a localized hot-spot analysis or at least screening for possible hot-spot impacts. This process is expensive and time consuming and we have been provided estimates of 6–12-month project delays and up to $1 million in modeling costs for one project-level analysis on a major project. If the 24-hour $PM_{2.5}$ NAAQS is further lowered, there may be more analyses required of "projects of air quality concern" nationwide. Per the earlier example, these projects could be at risk with a lower $PM_{2.5}$ 24-hour NAAQS and high background levels of $PM_{2.5}$. The burdens of project-level analysis can be substantial because as projects work through the NEPA process there are inevitably changes and these changes must be then made to TIPs, Plans, and programming documents to ensure complete consistency before a project-level conformity determination can be made.

6) Buy America impacts on CMAQ-funded projects.

Of the many and most promising emission reduction strategies that MPOs, transit agencies and states implement, clean vehicles and alternative fueled vehicles and technologies present a notable problem. Over the past several years, the Buy America requirements have caused many such projects to be delayed and cancelled. These requirements require 100 percent of iron and steel components to be domestically sourced. After many years of delays, waivers began to be granted on a routine basis through the second quarter of 2016. But, by early 2017 the waiver process was put on hold due to re-evaluation by the new Administration. Waivers were provided for years based on the understanding that the domestic source requirement was infeasible for vehicle projects and waivers have been contingent upon final assembly in the United States, which was determined to meet the intent of the

Buy America provisions. This is a serious impediment to implementing $PM_{2.5}$ reducing projects and will continue to be so unless the Buy America waiver process is revised.

Unless waivers continue to be authorized for CMAQ-funded projects involving acquisition of clean vehicles, diesel engine retrofits, other advanced truck technologies, and alternative fuels and vehicles, these projects will effectively be ineligible for CMAQ funds.

7) EPA Assumptions on paving shoulders and unpaved roads

EPA's Regulatory Impact Analysis (RIA) makes assumptions regarding paving unpaved roads and shoulders of existing roads as the key transportation-related control strategies. In EPA's cost assessments, between 48% and 80% of the total costs (in 2017 dollars) of implementing this rule will be for these paving strategies. If 20% of the $PM_{2.5}$ emissions are from on-road sources (and much less in many areas), why are 48%-80% of the costs of rule implementation attributed to these two paving measures? Table 2 shows EPA's cost estimates under different scenarios for the $PM_{2.5}$ Annual and 24-hour NAAQS. MPOs have several questions regarding these assumptions.

Table 2: Annualized Control Cost by Control Technology, PM NAAQS (from EPA Table 4.4, Regulatory Impact Analysis (RIA) page 304) based on different PM NAAQS levels as follows. Costs in 2017 dollars.				
Control Technology	**10/35µg/m^3**	**10/30µg/m^3**	**9/35µ/m^3**	**8/35µg/m^3**
Pave existing shoulders at 10% RP*	$0	$0	$0	$7.6
Pave existing shoulders at 25% RP	$31.1	$95.0	$119.6	$755.0
Pave unpaved Roads at 25% RP	$33.7	$111.8	$69.0	$302.5
Total Annual Cost paving shoulders and unpaved roads	**$64.8**	**$206.8**	**$188.6**	**$1065.10**
Total cost all control technologies	$94.5	$257.2	$393.3	$1821.70
Paving shoulders and Roads % of total control costs annually	**69%**	**80%**	**48%**	**58%**
*Note The 10% RP and 25% RP indicate the Rule Penetration percent, or the percent of the non-point (area) residential wood combustion, or area fugitive dust inventory emissions that the control measure is applied to at a specified percent control efficiency.				

a) The cost-effectiveness of paving unpaved roads and shoulders for $PM_{2.5}$ reductions is questionable as is the advisability of paving more in urban areas where water runoff and other issues are a concern. Also, many shoulders in such areas are already paved and there are very few unpaved roads in many prospective $PM_{2.5}$ nonattainment areas. What strategies beyond what is currently being done can transportation agencies reasonably fund and implement to reduce $PM_{2.5}$ from on-road mobile sources?

b) Does EPA assume that State Implementation Plans (SIPs) will include these paving measures and if so, what agency will do this work and pay for implementation and ongoing maintenance?

c) What other on-road mobile source measures did EPA consider and what were the cost-effectiveness of these measures to reduce $PM_{2.5}$?

Conclusion

MPOs have been implementing measures to reduce on-road mobile source emissions for over thirty years pursuant to EPA's transportation conformity requirements. On-road mobile source control measures are in place and a larger share of emission reductions in the past thirty years have come from on-road mobile sources than from any other sector. Tightening the $PM_{2.5}$ NAAQS will be an added conformity burden and is especially concerning in areas with high background levels of $PM_{2.5}$. Given these challenges, EPA should seriously consider AMPOs recommendations regarding implementation. Finally, EPA's proposal that 20% of $PM_{2.5}$ emission reductions come from paving unpaved roads and shoulders of existing roads at 60% of the total implementation cost of the new rule raises serious questions about the cost-effectiveness and viability of this proposal.

We hope our comments and recommendations are helpful to U.S. EPA as you consider how best to implement the $PM_{2.5}$ NAAQS. Please contact me with any questions or if you need additional information.

Sincerely,

William Keyrouze

William Keyrouze
Executive Director