



Before the Dust Can Settle,

NEW Ozone Standards

by **Lucinda Minton Langworthy** and **Aaron M. Flynn**

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The proposed revisions to the ozone standards, if they are adopted as proposed, may present new grounds for a judicial challenge.

The U.S. Environmental Protection Agency (EPA) recently proposed to revise the primary and secondary National Ambient Air Quality Standards (NAAQS) for ozone.¹

This proposed rule would revise the existing 8-hr 75 parts per billion (ppb) primary NAAQS to a level within the range of 65–70 ppb. It would revise the secondary standard to match the revised primary NAAQS. Absent a significant reversal, the agency's proposed action will require yet another round of dramatic emission reductions at a time when industry is struggling to comply with the agency's growing regulatory demands.

This proposal comes just as implementation of the present ozone NAAQS, which were promulgated in 2008, gets underway in earnest. In 2012, EPA designated all parts of the country as either non-attainment, unclassifiable, or unclassifiable/attainment for the 2008 NAAQS.^{2,3} The nonattainment areas were classified as marginal, moderate, serious, severe, serious, or extreme and were given attainment deadlines that ranged from 2015 to as late as 2032, depending on their classification.⁴ At that time, EPA indicated that it planned to issue a rule instructing states on requirements for the plans they are charged with developing to bring the nonattainment areas into compliance by the relevant deadlines. EPA proposed such an implementation rule approximately one year later.⁵ The final version of this rule, however, was not signed until February 13, 2015, almost two months after EPA proposed revisions to the standards that the rule is intended to implement.⁶

Proposed Rule Means More Work for States, Industry

Developing plans in accordance with the new implementation rule will involve an enormous amount of work by states and substantial commitments of state resources. At the same time that EPA's new implementation rule is placing these burdens on the states, the proposed rule will potentially disrupt state planning activities by requiring states to redirect their efforts. EPA is causing this disruption without offering reasonable examples of strategies that all states could use to meet the current—let alone the newly proposed—ozone NAAQS, leaving the roadmap for compliance particularly uncertain. Indeed, in projecting in its Regulatory Impact Analysis (RIA) what would be required to attain a revised standard nationwide, EPA relies substantially on emission reductions from “unknown controls.”⁷ Which industries such unknown controls might apply to and whether those controls are cost-effective, or even technologically available, is unexplored territory.

That EPA's proposed rule, if finalized, would be costly and burdensome to industries and their customers is beyond dispute. EPA's RIA estimates the cost of attaining a revised NAAQS throughout the United States (excluding California) at \$3.9 billion

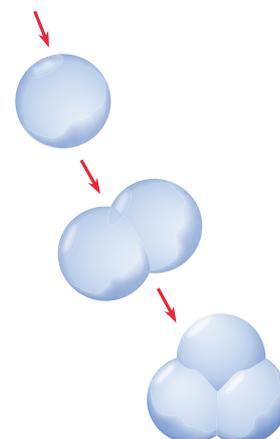
to \$15 billion in 2025 alone.⁸ For California, EPA estimates costs only post-2025 because the agency does not believe that the state will attain by that date. The estimated cost to California industries and consumers of a revised NAAQS in the proposed range may be as much as \$1.6 billion.⁹

The proposed rule would disrupt the existing process to implement the 2008 NAAQS and impose these substantial additional costs even though the science on ozone health effects has not advanced in any appreciable way since the termination of reconsideration proceedings in 2011 or the prior NAAQS review. The human clinical studies identified in this review merely confirm the results of studies that were available as far back as 2002. Similarly, the epidemiological studies EPA has identified are subject to the same uncertainties as the studies relied on previously. Ultimately, none of the new research supports a finding of adverse human health outcomes at ozone concentrations lower than the level of the current primary standard.

Even if the evidence were interpreted as showing greater health risk from ozone than when EPA set the 2008 NAAQS, a revised NAAQS would likely do little to alleviate that risk. Much of the calculated health risk from ozone is attributable to ozone that simply cannot be reduced through the NAAQS program. This is the case for risk associated with background ozone (i.e., ozone that results from natural sources like lightning and vegetative emissions and from emissions from other countries). The U.S. Clean Air Act (CAA) provides no mechanism for reducing ozone from natural sources. Nor do the statutory requirements and schedules for states' plans to attain an ozone NAAQS provide a mechanism for states to reduce ozone that originates abroad.

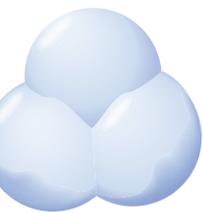
Close to Background Ozone Levels

As the ozone NAAQS are set closer to—or even at—background levels, however, states will face ever-increasing challenges with regard to fulfilling their obligation to provide for attainment of those NAAQS. Even the 2008 NAAQS is quite near background ozone levels. The proposed rule recognizes that ozone concentrations exceeding the



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current NAAQS can be “substantially influenced” by background.¹⁰ Significant background contributions to NAAQS exceedances would occur even more often with a more stringent NAAQS in the range that EPA has proposed. Moreover, background ozone in the United States is likely to increase as ozone-forming emissions in Asia rise.

The proximity of background ozone concentrations to the levels that EPA has proposed for revised ozone NAAQS means that the relationship between background concentrations and NAAQS is an issue that must be addressed during the present NAAQS review. It weighs against a further tightening of the ozone NAAQS. Both EPA and the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit), where all challenges to a revised NAAQS are heard, have recognized that NAAQS need not be set at zero-risk or background concentration levels.¹¹ Furthermore, the D.C. Circuit upheld a prior EPA decision

to set the ozone standard at 0.08 parts per million (ppm; essentially 84 ppb) instead of at 0.07 ppm (roughly 74 ppb), in part, because such a more stringent standard would have been closer to background ozone levels.¹²

Despite past EPA precedent, approved by the D.C. Circuit, in this rulemaking EPA has so far insisted that it must set the level of the primary ozone standard “without regard to the source of the pollutant.”¹³ EPA has suggested that it may seek to reform its so-far-ineffectual “exceptional events” rule to better address background air quality. But with no current indication as to what those reforms might be and whether they would be effective and practical to implement, states and regulated sources have no assurance that they will be helpful in planning measures to attain a revised NAAQS. Similarly, although EPA points to CAA programs aimed at providing relief to rural and international border areas as options for addressing NAAQS exceedances attributable to background ozone concentrations, those programs have been of little assistance to states in the past and are of limited promise for the future. More fundamentally, however, because the proposed rule assumes that EPA should regulate ozone from whatever source, even background, the proposed NAAQS revision is based on a misinterpretation of the governing law and the scope of EPA’s discretion under the CAA. For that reason alone, the proposed revision of the primary ozone standard is not appropriate.

Problems with Secondary Standard

Much of the discussion above applies with equal force to the proposed revision of the secondary ozone standard. By proposing a secondary NAAQS set at the same level primary standard, the proposed rule implicates concerns over background ozone concentrations as to the public welfare-based NAAQS, as well as the health-based standard. And, as with the primary standard, the welfare effects science EPA cites in the proposed rule provides no reasonable basis for a standard set at such a low level.

The tone of the proposed rule’s discussion of the welfare effects science suggests that EPA recognizes the significant limitations in the record.

In Next Month’s Issue...

Preview of A&WMA’s 108th Annual Conference & Exhibition in Raleigh, NC

The June issue will include a special preview of what attendees can expect at this year’s Annual Conference, which is to be held June 22–25 in North Carolina’s state capital, Raleigh. Part of the famed Research Triangle area, which is also the location of the U.S. Environmental Protection Agency’s premier research facility, and known as the “City of Oaks” for its many oak trees that line the streets, Raleigh boasts numerous cultural, educational, and historic sites and is home to several major universities and colleges.

The June issue will also include a summary of the 45th Annual A&WMA Critical Review on Air Quality and Climate Connections by Dr. Arlene Fiore.

For more details, go to <http://ace2015.awma.org>.

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The proposal acknowledges that of the three key effects the EPA administrator has chosen to focus on—relative biomass loss in trees, crop yield loss, and visible foliar injury—only relative biomass loss provides a basis for setting a secondary standard, questioning whether adverse impacts can be discerned in the remaining effects categories. Even with relative biomass loss, the administrator recognizes that the 2% benchmark that EPA has relied on throughout the ozone NAAQS review as a measure of adversity for that welfare effect, in fact, lacks any rational basis. Given these, and many other scientific limitations, it is difficult to understand how EPA has decided a revision to secondary standard is appropriate.

One area in which the agency has provided a well-reasoned and reasonable proposal is in its decision to retain the current form of the secondary standard. Throughout this review, EPA has been considering abandoning the current standard's form (i.e., the annual 4th highest daily maximum 8-hr ozone concentration) in exchange for a cumulative, seasonal standard, like the "W126" sigmoidally weighted index that has often been the focus of EPA's analysis of the secondary NAAQS. Adopting a standard with a W126 form would bring new complexity and unknown variables to the NAAQS program, such as how existing monitors would perform in ensuring compliance with such a standard.

Wisely, EPA's proposed rule is supported by a straight-forward assessment comparing the level of protection under a W126 form standard with the level of protection that would be afforded by a standard in the traditional form, and that assessment shows that the two approaches offer equivalent

protection. EPA's approach to making this demonstration is, moreover, fully consistent with the D.C. Circuit's decision in *Mississippi vs. EPA*.¹⁴

In that case, the D.C. Circuit remanded EPA's 2008 ozone standard to the agency because EPA set the secondary NAAQS equal to its revised primary standard without first identifying the level of protection that was "requisite to protect the public welfare."¹⁵ Here, EPA has proposed to do precisely what the court required: it has identified a range of protection that it believes satisfies the CAA's "requisite to protect" standard. It has, moreover, set that range, 17 ppm-hours to 13 ppm-hours, using the W126 metric, consistent with the recommendation of the Clean Air Science Advisory Committee. Accordingly, in this respect, the proposed rule is sound.

Conclusion

The bulk of EPA's proposal, however, raises alarms. The agency is straining to find a scientific basis for revision of both the primary and secondary NAAQS when there have been no real scientific advancements to justify revision and the already-stringent current standards have not yet been fully implemented. The revised standards that EPA has proposed are so low as to test whether compliance will be possible in the face of current background concentration levels. EPA is proposing these extraordinary measures even though the D.C. Circuit has clearly ruled that EPA need not take such extreme action. Over the past few years, EPA has more often than not successfully defended its NAAQS in court. The proposed revisions to the ozone standards, if they are adopted as proposed, may, however, present new grounds for a judicial challenge. **em**



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References

1. 79 Fed. Regist. 75,234 (Dec. 17, 2014) (Proposed Rule).
2. 77 Fed. Regist. 34,221 (June 11, 2012);
3. 77 Fed. Regist. 30088 (May 21, 2012).
4. 77 Fed. Regist. 30160, 30167 (May 21, 2012).
5. 78 Fed. Regist. 34,178 (June 6, 2013).
6. See <http://www.epa.gov/airquality/ozonepollution/actions.html#impl>.
7. RIA at ES-6. See <http://www.epa.gov/ttn/ecas/regdata/RIAs/20141125ria.pdf>.
8. RIA at ES-14, Table ES-6.
9. RIA at ES-17, Table ES-11.
10. 79 Fed. Regist. at 75242.
11. See *Lead Indus. Ass'n vs. EPA*, 647 F.2d at 1156 n.41.
12. See *Am. Trucking Ass'n vs. EPA*, 283 F.3d 355, 379 (D.C. Cir. 2002).
13. 79 Fed. Regist. at 75242.
14. See *Mississippi vs. EPA*, 744 F.3d 1334 (2014).
15. See *Mississippi vs. EPA* at 424-25 (quotations omitted).

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