**UPDATE:**

**EPA’s Proposed NAAQS for Ozone**

358 counties would exceed 70 parts per billion (ppb)

200 additional counties would exceed 65 ppb

U.S. counties exceeding proposed 8-hr ozone standard range of 65–70 ppb (based on 2011–2013 data).


A summary of the development of EPA’s proposed tightening of the 2008 National Ambient Air Quality Standards (NAAQS) for ozone, and representative stakeholder viewpoints.
n December 2014, the U.S. Environmental Protection Agency (EPA) proposed to tighten the 8-hr 2008 National Ambient Air Quality Standards (NAAQS) for ozone (O₃) from 75 parts per billion (ppb) to a level within a range of 65–70 ppb.¹ In this issue of EM, we collect articles from a range of participants in the ongoing NAAQS review process, including EPA, the chair of the Clean Air Scientific Advisory Committee (CASAC), a consultant to the American Lung Association (ALA), state environmental agencies from Maryland and Texas, the American Petroleum Institute (API), and the law firm Hunton and Williams.

The first two articles describe the process EPA and CASAC followed in assessing the science and developing the proposal. EPA’s Karen Wesson and Erika Sasser discuss considerations supporting the proposed health- and welfare-based standards, note proposed changes to the air quality index (AQI), and present the schedule for finalizing the standards and designating non-attainment areas. In addition to summarizing CASAC’s role in the process, Chairman Christopher Frey reviews the CASAC’s conclusions and recommendations to the EPA Administrator on the standards.

The remaining articles provide a range of perspectives from key stakeholder groups, generally focusing on the health-based standard. ALA consultant Deborah Shprentz argues that the science provides strong support for an O₃ standard even lower than EPA’s proposed range. Maryland’s Tad Aburn and coauthors believe an updated O₃ standard is appropriate and achievable, but focus more on implementation issues, particularly the importance of cooperative efforts that continue to reduce regional sources of O₃ complemented by smart local efforts that target each area’s unique local contribution to the problem.

Bryan Shaw, Sabine Lange, and Michael Honeycutt of Texas believe that a thoughtful integration of the scientific data does not support EPA’s assertion that lowering the standard to 65–70 ppb would result in measurable health benefits, summarizing their own assessment of some of the key scientific evidence. Howard Feldman of API argues that the current scientific evidence does not support EPA’s conclusion that revising the present standards is necessary to protect the public health and welfare. He notes that the decline in O₃ prompted by current programs continue under the current standards without the additional high costs and limits to growth in new non-attainment areas. Finally, Lucinda Minton Langworthy and Aaron Flynn of Hunton and Williams also question EPA’s interpretation of the human clinical and epidemiologic studies, as well as the welfare effects evidence supporting the proposal. They state that unnecessary revisions would disrupt implementation of the 2008 O₃ NAAQS and raise a number of difficult issues regarding tighter standards.

We note that EPA, as well as Langworthy and Flynn, highlight that standards in the proposed range are approaching “background” levels measured in remote areas. Because the O₃ background is related to both natural and anthropogenic sources, including international transport, this raises implementation issues invoking difficult-to-address “exceptional events” and international air pollution concerns. As will be discussed in next month’s summary of the 2015 Annual A&WMA Critical Review, a substantial fraction of globally transported O₃ is derived from methane emissions heretofore excluded from regulation as an O₃ precursor. As Aburn et al. note, interstate transport will continue to be an important issue. Tightened standards resulting in more non-attainment areas could lead to a new emphasis on states working individually, together or under new EPA regulations to address interstate transport.

Tighter standards also might pose issues for EPA’s proposed Clean Power Plan (CPP), which, in order to reduce power sector carbon dioxide emissions, envisions substantial actions by utilities

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and states to construct and permit numerous new natural gas-based generating units and infrastructure projects (e.g., natural gas pipelines, new transmission lines) to ensure adequate supplies of natural gas are available to new and existing units and to support intermittent renewable energy generation. U.S. Clean Air Act permitting requirements in O₃ non-attainment areas could pose challenges.

The range of forecast non-attainment varies based on the standards level and timing. EPA estimates that the proposed standards would lead to between 358 and 558 counties with monitors not meeting the standards based on 2011–2013 data. EPA would add more counties without monitors when it completes non-attainment designations in late 2017, but those designations would be based on 2014–2016 monitoring data. EPA modeling projects that many of these counties would attain the standards by 2025 due, in part, to existing regulations. We hope that it is true, but note that the projections are uncertain.

Finally, in assessing potential costs and benefits of alternative new standards, EPA found that benefits exceeded costs over the proposed range of levels, but was unable to fully document strategies to achieve new standards. EPA had to assume adoption of 750 and 150 thousand tons of “unknown” nitrogen oxides (NOₓ) controls for the 65- and 70-ppb standards, respectively, in the Eastern United States, creating a significant uncertainty. As noted above, implementation challenges will depend in great measure on the final level of the standards.

References
1. 79 Fed. Reg. at 75,234.