

# ACA and the Paint & Coatings Industry Address the Current Ozone Standard

The paint and coatings industry has made great strides in reducing air pollution over the last three decades. Current and near-term regulations, as well as pollution prevention and waste minimization practices, have rapidly lowered the amount of volatile organic compound (VOC) emissions from the paint and coatings industry, and will continue to do so in the future.

VOCs, combined with nitrogen oxides (NOx) and sunlight, produce ground-level ozone, a principal component of smog. The U.S. Environmental Protection Agency (EPA) has cited emissions from industrial facilities, electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents as major man-made sources of NOx and VOCs.<sup>1</sup> However, studies have shown, and EPA has acknowledged, that ozone levels have improved by 33 percent over the past 30 years,<sup>2</sup> and VOCs have decreased by 53 percent.

Despite the progress that many industries have made from compliance with federal and state regulations, as well as private initiatives, EPA has committed to lowering the national ozone standard to a point that makes compliance increasingly challenging — if not impossible, given existing technology — for the manufacturing sector. In October 2015, EPA lowered both the primary (health-based) and secondary (welfare-based) National Ambient Air Quality Standards (NAAQS) for ozone from the 2008-set 75 parts per billion (ppb) to 70 ppb, *even though the higher 75 ppb standard was never fully implemented across the country.* The 2015-set ozone standard is forcing a significant number of states that are currently “in attainment” to “non-attainment” status, triggering a requirement to revise their State Implementation Plans (SIP) and adopt even stricter VOC emission regulations for coatings. This triggering event is being realized as ozone monitors across the country are demonstrating a marked improvement in air quality under the 2008 standard of 75 ppb.

The American Coatings Association (ACA) represents the nearly \$30 billion paint and coatings industry in the United States, operating in all 50 states, and employing over 285,000 people engaged in the manufacture, application, and distribution of its products. ACA members are committed to supporting clean air and a clean environment; however, the new standard and regulations are making it difficult to innovate, manufacture products, build new projects, and improve infrastructure.

EPA’s revised ozone standard has impact on almost every industry in the country, making it among the most expensive regulations in our nation’s history. Implementing the new NAAQS has caused

many parts of the country that are in attainment with the current ozone standard to be reclassified as being in non-attainment, or noncompliance. Additional burdens on commercial and industrial activity caused by the more restrictive ozone standard also deleteriously affects the country’s economic competitiveness and job growth, while driving up compliance costs.

**ACA and the coatings industry support restoration of the former national ozone standard of 75 ppb for ground-level ozone, and amending the Clean Air Act regulations to extend the ozone standard’s review period from every five years to every 10 years, in order to provide a concrete target for research and innovation efforts and some stability for the formulation process.**

This *Issue Backgrounder* addresses how air quality regulations have a significant impact on the paint and coatings industry; why continued, demonstrable improvements in air quality need to be recognized; and why EPA should revert to the former, 2008-set NAAQS for ozone.

## EPA’s Mandate & the Coatings Industry’s Progress

Under the Clean Air Act, EPA is required to set health-based NAAQS for specific pollutants, including ozone. This standard must be reviewed every five years, and EPA cannot consider implementation costs when setting NAAQS.<sup>3</sup>

NAAQS are standards for outdoor ambient air that are intended to protect public health and welfare from pollution. “NAAQS do not directly limit emissions of a pollutant; rather, they set in motion a long process in which states and EPA identify areas that do not meet the standards, and states prepare implementation plans to demonstrate how emissions will be lowered sufficiently to reach attainment.”<sup>4</sup> States are tasked with enacting pollution control regulations to meet the national standards by updating their SIPs with more restrictive VOC standards. This process is very mature and, for several decades now, federal, state and local regulations have limited VOCs in coatings and how these products are applied and used.

**Since the late 1970’s, the paint and coatings industry has significantly reduced its emissions of VOCs and hazardous air pollutants (HAPs), and this trend continues.** Market forces have played a role as the industry has become more service-oriented, providing just-in-time orders, smaller batch sizes,

## Non-Attainment Areas Under the 2015 8-Hour Ozone Standard Based on State Recommendations



State recommendations for non-attainment areas. Some countries are shaded in their entirety even if the state indicated only part of the country is in non-attainment under the 2015 ozone standard.

Highlighted states are those that did not have non-attainment areas under the 2008 ozone standard, but that submitted non-attainment area under the 2015 ozone standard (“new states”).

ACA developed this map using information from 2015 Ozone Standards - State Recommendations, EPA responses, and Technical Support Documents [www.epa.gov/ozone-designations/2015-ozone-standards-state-recommendations-epa-responses-and-technical-support](http://www.epa.gov/ozone-designations/2015-ozone-standards-state-recommendations-epa-responses-and-technical-support)

more waterborne and low-VOC coatings, and better transfer technology. VOC emissions from architectural coatings have drastically decreased over the last few decades as industry has moved towards low-VOC waterborne technologies, even while the use of architectural coatings has increased over the same period nationwide.

For instance, VOCs from architectural paint and coatings in the Los Angeles, Calif. area — the air basin with the most severe air quality issues in the country — have decreased by over 75 percent over the course of the last decade, from 2002 to 2013, according to the local air district.<sup>5</sup> More than 90 percent of architectural coatings sales in the United States are now for environmentally preferable water-based paint<sup>6</sup> and many manufacturers are developing very low VOC paint products specifically for vulnerable populations. In addition, modern aerosol coatings formulas are being developed with very low reactive solvents, resulting in significantly less potential for ozone formation. Since 1980, total emissions of the six principal air pollutants have dropped by 67 percent<sup>7</sup>, and ozone levels have declined by 33 percent<sup>8</sup>. Furthermore, the National Association of Manufacturers (NAM) and NERA Economic Consulting released a study citing that ozone-forming emissions have been cut in half since 1980, and the regulations already in place will continue to cut emissions by another 36 percent from current levels.<sup>9</sup>

ACA believes that emphasizing market-driven innovations and existing policies to improve fuel economy, increase energy efficiency, and reduce air pollution from cars, facilities, and

products will drive further air quality improvements over the next decade. However, EPA’s revised ozone standard has raised serious concerns about whether lowering VOC content in consumer and commercial products is technically feasible now, or worth the time and resources spent by manufacturers to comply with little return on investment in terms of improved air quality.

### The Economic Impact of the Lower Ozone Standard

The ozone NAAQS are among EPA’s most far-reaching standards. In June 2017, EPA estimated that, at the 2008-implemented 75 ppb standard, there were 39 non-attainment areas spread out over 177 counties in 18 states and the District of Columbia. Of the 39 areas, 16 now have ozone readings that indicate they have attained the standard, which would leave 23 areas (115 counties) with a combined population of 85 million not attaining the standard.<sup>10</sup> On March 1, 2018, EPA released its belated system for classifying areas that don’t meet the 2015 national ozone standards by the severity of the air pollution; but at this writing, EPA had yet to make actual non-attainment designations under the 75-ppb standard, though the agency will most likely base those determinations on 2014-2016 or later monitoring data.

EPA claims the cost of implementing an ozone standard of 70 ppb in all states except California would be \$1.4 billion annually, beginning in 2025.<sup>11</sup> However, industry believes that EPA’s estimates do not consider additional costs, including those to the

economy, and that the costs are significantly higher — closer to estimates cited by a study conducted by NAM and NERA Economic Consulting.<sup>12</sup>

EPA's national ozone standard produces a powerful trickle-down effect on states and local areas, and a lower ozone standard will have a significantly negative impact on the country's economic competitiveness and job growth, while driving up compliance costs. States that are in non-attainment are required to impose an extensive range of regulations to achieve the standard, forcing companies to limit activity, change their manufacturing processes, or install costly pollution control devices.

For the paint and coatings industry, location in a non-attainment area often results in increased operating costs, added recordkeeping, and other regulatory burdens, such as permitting delays and restrictions on expansions. These regulations require controls on everything from the search for raw materials, product formulation, use, and sale, to manufacturing operations, creating barriers to business development. New permits could include new requirements on the use of solvents, process tank covers and add-on controls that add complexity, reporting and additional costs to facilities. The national ozone standard impacts nearly every product the industry's manufacturers sell, because states in non-attainment areas establish stringent limits on the VOCs on paint, adhesives, sealants, automotive refinish products, aerospace coatings, and marine coatings.

In addition, the trickle-down effect on states and localities means that there will be different ozone standards in different parts of the country for the same coatings category, presenting a compliance nightmare for manufacturers. In California alone, there are three different VOC limits for floor coatings that range between 250 grams per liter to 50 grams per liter. This is magnified in the rest of country where there can be anywhere from three to four different standards for a specific coating category enforced by state environmental agencies — all because the NAAQS has been adjusted over the years. The coatings industry already spends significant time and resources monitoring, tracking and ensuring compliance with this complex network of VOC regulations.

So, what can be done?

## A Legislative Solution

The paint and coatings industry and many others have worked hard to reduce ozone levels and improve air quality; but states need better tools to meet air quality goals efficiently. This progress can keep moving forward with the legislation to provide enhanced flexibility so that states and localities can adequately achieve new, lower standards with time for compliance.

ACA strongly believes that EPA should revert to the 2008 standard of 75 ppb and fully implement it, so that the forward progress already achieved by industry and the states can be extended without unnecessarily burdening either.

Additionally, ACA supports amending the Clean Air Act regulations to extend the time for review of the ozone standard to every 10 years. Currently, the Act requires review every five years. Extending the review of the ozone standard to every 10 years will allow for more stability in the marketplace for formulators, while still protecting human health and the environment, and allowing states to meet their air quality goals.

Notably, there is federal legislation pending that that would do just that. **H.R. 806, the Ozone Standards Implementation Act of 2017** — which passed the House in July 2017 — and a related measure, **S. 263**, would delay implementation of the 2015-set national ozone standards to 2025. The bills would give EPA an additional eight years to determine which areas of the country do not meet the 70 ppb ozone standards set in 2015; as well as extend from every five years to every 10 years the requirement for EPA to review and, if necessary, update the NAAQS for ozone and other pollutants.

In that time, manufacturers will continue creating the products and solutions that will allow for even lower emissions and better air quality in the future. But this depends on a reasonable approach to ozone regulations.

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<sup>1</sup> EPA webinar on "Proposed Revisions to National Ambient Air Quality Standards for Ozone, December 2014"

<sup>2</sup> EPA, "National Trends in Ozone Levels," <https://www.epa.gov/air-trends/ozone-trends>

<sup>3</sup> *Whitman v. American Trucking Assns, Inc.*, 531 U.S. 457 (2001).

<sup>4</sup> Congressional Research Service, "EPA's 2015 Ozone Air Quality Standards," August 15, 2017 <https://fas.org/sgp/crs/misc/R43092.pdf>

<sup>5</sup> South Coast Air Quality Management District 2007 Air Quality Management Plan, Appendix III; South Coast Air Quality Management District Par 1113 Working Group Meeting Presentation, June 17, 2015

<sup>6</sup> *ACA Industry Market Analysis, 9th Edition (2014-2019)*

<sup>7</sup> EPA, "Air Quality - National Summary," <https://www.epa.gov/air-trends/air-quality-national-summary>

<sup>8</sup> EPA, "National Trends in Ozone Levels," <https://www.epa.gov/air-trends/ozone-trends>

<sup>9</sup> NERA/NAM Study, <http://www.nera.com/publications/archive/2014/assessing-economic-impacts-of-a-stricter-national-ambient-air-qu.html>

<sup>10</sup> EPA Green Book, <https://www.epa.gov/green-book>

<sup>11</sup> Congressional Research Service, "EPA's 2015 Ozone Air Quality Standards," August 15, 2017 <https://fas.org/sgp/crs/misc/R43092.pdf>

<sup>12</sup> NERA/NAM Study, <http://www.nera.com/publications/archive/2014/assessing-economic-impacts-of-a-stricter-national-ambient-air-qu.html>