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## Breath of Fresh Air: A Discussion of National Ambient Air Quality Standards for Ozone

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# BREATH OF FRESH AIR: A DISCUSSION OF NATIONAL AMBIENT AIR QUALITY STANDARDS FOR OZONE

WILLIAM C. MAZZOTA & LUKE P. IHNEN<sup>1</sup>

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## I. INTRODUCTION

The Clean Air Act (“CAA”) requires the Environmental Protection Agency (the “EPA”) to set National Ambient Air Quality Standards (“NAAQS”) for ozone and five other pollutants considered harmful to public health and the environment.<sup>2</sup> The law also requires the EPA to periodically review the standards to ensure that they provide adequate health and environmental protection, and to update those standards as necessary. On October 1, 2015, the EPA issued its final rule for NAAQS primary and secondary ambient ozone pollution. This rule is the result of years of challenges in the courts and input from all sides of the debate.

Even after extensive review and consideration, the EPA is poised to face a series of challenges to the new rule. Industry groups

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<sup>1</sup> J.D. Candidates, The University of Tennessee College of Law, May 2016. The authors would like to thank Professor Dean H. Rivkin for providing the inspiration for this article. The authors would also like to thank the editors of The Forum for selecting this article for publication.

<sup>2</sup> 40 C.F.R. § 50 *et seq.* The other pollutants include particulate matter, nitrogen oxides, carbon monoxide, sulfur dioxide and lead.

and some states are already challenging the rule in the United States Court of Appeals for the District of Columbia Circuit.<sup>3</sup> They allege that the EPA unreasonably drew conclusions from uncertain scientific findings, and that the rule is unduly burdensome and costly on industry.<sup>4</sup> Despite the challengers' allegations, the EPA noted that its 2015 rule could cost industry \$3.9 billion per year, but result in \$6.4 to \$13 billion of benefits per year.<sup>5</sup>

In his 1970 State of the Union address President Richard Nixon proclaimed, “[c]lean air, clean water, open spaces – these should once again be the birthright of every American . . . We still think of air as free. But clean air is not free, and neither is clean water . . . Through carelessness we incurred a debt to nature, and now that debt is being called.”<sup>6</sup> Four decades after a Republican President and a Democrat-controlled Congress ushered in the “environmental decade,” the insertion of politics into NAAQS ozone rulemaking has muddled the science and reduced the perceived effectiveness of the standard for the public and lawmakers.

In this article, we argue that politicizing the ozone rulemaking process sets a dangerous precedent. Moreover, without credible science, the effectiveness of the rule is weakened in the eyes of the public. We begin by providing background information on the rulemaking process, including the challenges the rule has faced in the federal court system since it was first promulgated. We follow this with a discussion of the politics involved, including the views of advocates from both sides of the aisle, and industry and environmental groups. Next, we present credible scientific evidence that shows, despite the rhetoric from industry groups and conservative lawmakers, the benefits of a tighter standard far outweigh any costs. In Part IV, we discuss the final rule and the tough policy decisions made by the EPA. We close with some speculation on the future of the rule. The insertion of politics into ozone rulemaking has handicapped the process. It has clouded the science and reduced the perceived effectiveness of the standard. We may all be breathing easier, but we are worse off for it.

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<sup>3</sup> Devin Henry, *Five States Sue Over Ozone Rule*, THE HILL (Oct. 28, 2015, 9:50 PM), <http://thehill.com/policy/energy-environment/258343-five-states-sue-over-ozone-rule>.

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

<sup>6</sup> President Richard Nixon, Annual Message to the Congress on the State of the Union (January 22, 1970).

## II. BACKGROUND

Ozone is a photochemical oxide pollutant that is formed by air emissions from various sources, including the manufacture of chemicals, energy producers, farm operations, automobiles, and other sources that emit nitrogen dioxide and volatile organic compounds. It also includes "background ozone," or the ozone that would exist in the absence of any manmade emissions inside the U.S. from wildfires and pollution "drift" from Asia. Before the advent of the industrial revolution, naturally occurring ozone occurred at levels around 5 - 30 parts per billion ("ppb").<sup>7</sup> Presently, some urban areas exceed ozone levels of 75 ppb.<sup>8</sup>

Prior to 1970 the federal government took efforts to regulate air emissions, but with limited reach and enforcement power.<sup>9</sup> The passage of the CAA marked the beginning of the federal government's aggressive effort to clean up the nation's heavily polluted air. The legislation called for enforcement and monitoring of stationary and mobile sources of air pollution.<sup>10</sup> As part of this massive expansion of federal regulatory power, Congress established the NAAQS program which directs the EPA to set limits on pollutants deemed "to endanger public health or welfare."<sup>11</sup>

Ozone poses a large threat to respiratory health. In particular, children and asthmatics are susceptible to serious episodes of respiratory issues from long-term exposure to high levels of ambient ozone.<sup>12</sup> Public welfare considers additional values beyond human health, including ecological health. For example, ozone also threatens

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<sup>7</sup> Philip S. Stevens, *New Ozone Regulations Are Easily Met and Will Protect Millions*, KNOXVILLE NEWS SENTINEL (Oct. 24, 2015), <http://www.knoxnews.com/opinion/columnists/philip-s-stevens-new-ozone-regulations-are-easily-met-and-will-protect-millions-ep-1333439971-353342641.html>.

<sup>8</sup> *Id.*

<sup>9</sup> See EPA, EPA History: History of the Clean Air Act of 1970, <http://www.epa.gov/aboutepa/epa-history-clean-air-act-1970> (last visited Jan. 30, 2016).

<sup>10</sup> See generally 42 U.S.C. §§ 7401-431.

<sup>11</sup> 42 U.S.C. § 7408(a)(1)(A) (1998).

<sup>12</sup> National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. 65,292, 65,294 (October 26, 2015) (to be codified at 40 C.F.R. pts. 50, 51, 52, 53, and 58).

public welfare by visibly damaging foliage and decreasing biomass uptake in vegetation, which disrupts natural ecological processes.<sup>13</sup>

Under the CAA these emissions are subject to indirect regulation and are measured not from their sources, but on county-level jurisdictions.<sup>14</sup> NAAQS do not directly impose emission controls on industry or other pollution sources, but they do set in motion a process where states identify areas of nonattainment and submit plans to the EPA to demonstrate how they will bring those areas into compliance.<sup>15</sup> If an area has readings higher than the ozone NAAQS averaged over a period of three years, the area is in “nonattainment” of the standard.<sup>16</sup> Jurisdictions that are out of compliance with ambient ozone standards are often forced to use less harmful fuel and eliminate problematic sources of ozone emissions.<sup>17</sup> Even before the 2015 rulemaking, the vast majority of counties had ambient ozone levels below the new NAAQS levels.<sup>18</sup>

Primary ambient air quality standards are set to “protect the public health” within “an adequate margin of safety.”<sup>19</sup> Secondary ambient air quality standards are based on the protection of public welfare, which includes the natural environment.<sup>20</sup> The CAA directs the EPA to review NAAQS standards on at least a five-year basis.<sup>21</sup> Researchers and doctors have long warned that the ozone standard is too lenient, and harmful to vulnerable populations and the environment.<sup>22</sup>

Prompted by the CAA, the EPA set the first national ozone standard at 80 ppb.<sup>23</sup> In response, automakers released cars with

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<sup>13</sup> *Id.* at 65,371.

<sup>14</sup> 42 U.S.C. § 7407(a) (2004).

<sup>15</sup> National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. 65,296.

<sup>16</sup> *Id.*

<sup>17</sup> See Katie Valentine, *The EPA Is Set to Issue Rule Curbing a Dangerous Form of Air Pollution*, THINKPROGRESS (Sep. 29, 2015, 8:00 AM), <http://thinkprogress.org/climate/2015/09/29/3706306/ozone-rule-coming-soon/>.

<sup>18</sup> See Ozone Air Quality Standards, EPA, [http://ozoneairqualitystandards.epa.gov/OAR\\_OAQPS/OzoneSliderApp/index.html](http://ozoneairqualitystandards.epa.gov/OAR_OAQPS/OzoneSliderApp/index.html).

<sup>19</sup> 42 U.S.C. § 7409(b)(1).

<sup>20</sup> *Id.* at § 7409(b)(2).

<sup>21</sup> *Id.* at § 7409(d)(1).

<sup>22</sup> Jamie Smith Hopkins, *Clean-Air Advocates Upset with EPA Ozone Decision*, THE CENTER FOR PUBLIC INTEGRITY, Oct. 01, 2015, <http://www.publicintegrity.org/2015/10/01/18097/clean-air-advocates-upset-epa-ozone-decision>.

<sup>23</sup> Jamie Smith Hopkins, *From Rural Utah to Dallas and L.A.: Smog Besets Communities across U.S.*, THE CENTER FOR PUBLIC INTEGRITY, Mar. 12, 2015,

catalytic converters to reduce exhaust pollution substantially.<sup>24</sup> In 1979, in the face of inflation and the OPEC oil crisis, President Jimmy Carter and advisors looked to the regulation as a costly burden on industry and the EPA raised the ozone standard to 120 ppb.<sup>25</sup> In 1997, the EPA dramatically overhauled its ozone ambient air quality standard back to 80 ppb despite industry warnings that the standard would cause barbecues and lawnmowers to be banned.<sup>26</sup>

Several industry groups and the States of Michigan, Ohio and West Virginia challenged the 1997 revised standard in federal court.<sup>27</sup> In a 2001 opinion, the United States Supreme Court dealt a blow to industry, ruling that the EPA could not consider costs when it sets the ozone standard.<sup>28</sup> The court held that the CAA contains no explicit language for the EPA to consider implementation costs in setting ozone NAAQS.<sup>29</sup> Thus, the EPA may only set primary NAAQS “which... are requisite to protect the public health with an adequate margin of safety.”<sup>30</sup>

In 2005, as part of its scheduled review of ozone ambient air quality standards, the EPA announced its intention to review the 1997 standard.<sup>31</sup> The EPA solicited the input of the public and the Clean Air Scientific Advisory Committee (“CASAC” or the “Committee”), an independent scientific advisory committee of 20 doctors and scientists from the nation’s best universities.<sup>32</sup> In 2006, the Committee reported that there was “no scientific justification for retaining the current [standard] of [80 ppb],”<sup>33</sup> and “unanimously recommend[ed] a range of [60 ppb to 70 ppb]” to President George

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<http://www.publicintegrity.org/2015/03/12/16857/rural-utah-dallas-and-la-smog-besets-communities-across-us>.

<sup>24</sup> *Id.*

<sup>25</sup> *See generally id.*

<sup>26</sup> *See generally id.*

<sup>27</sup> *Whitman v. Am. Trucking Ass’n*, 531 U.S. 457, 463 (2001).

<sup>28</sup> *Id.*

<sup>29</sup> *Id.* at 466-70.

<sup>30</sup> *Id.* at 465 (citing 42 U.S.C. § 7409(b)(1)).

<sup>31</sup> National Ambient Air Quality Standards for Ozone, 72 Fed. Reg. 37,818, 37,822 (Jul. 11, 2007) (to be codified at 40 C.F.R. pt. 50).

<sup>32</sup> *Id.*

<sup>33</sup> U.S. ENVTL. PROT. AGENCY, CLEAN AIR SCIENTIFIC ADVISORY COMMITTEE, EPA-CASAC-07-001, PEER REVIEW OF THE AGENCY’S 2<sup>ND</sup> DRAFT OZONE STAFF PAPER (2006).

W. Bush.<sup>34</sup> After a series of public comments, scientific studies, staff papers, and a draft exposure analysis and risk assessment, the EPA published a proposed rule in 2007 that indicated support for lowering the 1997 primary standard to somewhere between 70 ppb and 75 ppb.<sup>35</sup>

After public comment and review from numerous environmental, and medical and public health organizations for a lower standard, the EPA published a final rule in 2008 that called for lowering the level to 75 ppb and maintaining the eight-hour measure for both the primary and secondary standards.<sup>36</sup> This marked the first time since 1997 the standard was updated. In an advisory letter, the Committee repeated their recommendation of 60 ppb to 70 ppb, and warned that the threshold of 75 ppb was not “sufficiently protective of public health.”<sup>37</sup> The Committee noted their “consensus scientific opinion” that the standard “fail[ed] to satisfy the explicit stipulations of [the CAA] that [the EPA] ensure an adequate margin of safety for all individuals, including sensitive populations.”<sup>38</sup>

Without fail, litigation ensued from both directions. The State of Mississippi and industry groups sued the EPA arguing that the standard was set unreasonably high.<sup>39</sup> They alleged that the EPA conveniently selected scientific findings to support its lower standard.<sup>40</sup> Several other states and environmental groups sued the agency contending that the final rule did not go *far enough* to protect public health and welfare.<sup>41</sup> Specifically, that the new standard would continue to endanger vulnerable populations such as children and the elderly.<sup>42</sup>

In January 2010, the Obama EPA revisited the ozone standard.<sup>43</sup> The agency recommended a “lower level within the range of [60 ppb to 70 ppb] to provide increased protection for children and

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<sup>34</sup> *Id.*

<sup>35</sup> National Ambient Air Quality Standards for Ozone, 72 Fed. Reg. 37,818

<sup>36</sup> *See* National Ambient Air Quality Standards for Ozone, 73 Fed. Reg. 16,436 (Mar. 27, 2008) (to be codified at 40 C.F.R. pts. 50 and 58).

<sup>37</sup> U.S. ENVTL. PROT. AGENCY, CLEAN AIR SCIENTIFIC ADVISORY COMMITTEE, EPA-CASAC-08-009, PEER REVIEW OF THE AGENCY’S 2<sup>ND</sup> DRAFT OZONE STAFF PAPER (2008).

<sup>38</sup> *Id.*

<sup>39</sup> National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. at 65,297; *Mississippi v. E.P.A.*, 744 F.3d 1334, 1342 (D.C. Cir. 2013).

<sup>40</sup> *Mississippi*, 744 F.3d at 1342.

<sup>41</sup> *Id.*

<sup>42</sup> *Id.* at 1353-1354.

<sup>43</sup> National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. at 65,297.

other ‘at risk’ populations against an array of [ozone]-related adverse health effects . . . .”<sup>44</sup> After several public hearings, the EPA issued a proposed rule that would have decreased allowable ozone levels for the primary standard and changed the secondary standard.<sup>45</sup> In March 2010, the Committee reaffirmed its recommendation, stating that the evidence from controlled human and epidemiological studies strongly supports the selection for a new primary ozone standard within the 60-70 ppb range.

In September 2011, with the Democrats facing tough contests down the ballot, and with intense lobbying from states and industry, President Obama instructed the EPA to withdraw the draft standard.<sup>46</sup> In a statement released by the White House, the President said that he didn’t support a change because the standard was due for reconsideration in 2013.<sup>47</sup> The President also emphasized “the importance of reducing regulatory burdens and regulatory uncertainty, particularly as [the] economy continu[ed] to recover.”<sup>48</sup>

In 2013 the D.C. Circuit issued its opinion on the 2008 ozone rule challenge in *Mississippi v. EPA*.<sup>49</sup> The court rejected many of the state of Mississippi’s and industry advocates’ arguments, as well as the arguments from the environmental and governmental groups.<sup>50</sup> Although the court upheld the primary standard in the 2008 rule, it ruled that the EPA did not provide adequate justification in the rulemaking process to uphold the secondary standard.<sup>51</sup>

In June 2013, with no movement by the EPA, the American Lung Association, the Sierra Club, the Environmental Defense Fund, and the Natural Resources Defense Council sued the agency to force action.<sup>52</sup> In October 2013, the District Court for the Northern District

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<sup>44</sup> National Ambient Air Quality Standards for Ozone, 75 Fed. Reg. 2938 (Jan. 19, 2010) (to be codified at 40 C.F.R. pts. 50 & 58).

<sup>45</sup> National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. at 65,297.

<sup>46</sup> Press Release, The White House, Office of the Press Sec’y, Statement by the President on the Ozone National Ambient Air Quality Standards (Sept. 02, 2011) (on file with authors).

<sup>47</sup> *Id.*

<sup>48</sup> *Id.*

<sup>49</sup> *See Mississippi*, 744 F.3d 1334.

<sup>50</sup> *See generally id.*

<sup>51</sup> *Id.* at 1361-1362.

<sup>52</sup> *See* Complaint, Sierra Club, Am. Lung Ass’n, Env’tl. Def. Fund, Natural Res. Def. Council v. U.S. Env’tl. Prot. Agency, No. C-13-2809 (N.D. Cal. Jun. 10, 2013).



of California denied a motion by the National Association of Manufacturers and other industry groups<sup>53</sup> to intervene because of the “substantial economic and procedural interests in both the outcome of the ongoing review and in ensuring [the industry groups had] adequate time to develop and present to the EPA information concerning the ozone NAAQS.”<sup>54</sup> The court found that the National Association of Manufacturers and the other industry groups failed to meet the requirements to intervene under the Federal Rules of Civil Procedure, and failed to establish that they should be allowed “permissive intervention . . . under the circumstances . . . .”<sup>55</sup>

In April 2014, the District Court entered an order for summary judgment for the environmental group plaintiffs.<sup>56</sup> The court found that the “EPA failed to identify a detailed project plan, with internal deadlines and clearly identified deliverables, to justify [the additional time it needed to propose NAAQS] . . . .”<sup>57</sup> Further, that the “EPA’s gross generalities simply [did] not establish that the deadlines it propos[ed] constitute the most expeditious timetable for final action under the circumstances.”<sup>58</sup> Accordingly, the court ordered the EPA to issue a proposed rule for ozone NAAQS no later than December 1, 2014, and issue a final rule no later than October 1, 2015.<sup>59</sup>

In November 2014, the EPA proposed strengthening the NAAQS ozone standards to within a range of 65-70 ppb to “better protect Americans’ health and the environment . . . .”<sup>60</sup> The agency sought comments on both setting the primary and secondary

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<sup>53</sup> Other “proposed Defendant-Intervenors” were the American Forest & Paper Association, American Fuel and Petrochemical Manufacturers, American Iron and Steel Institute, American Petroleum Institute, American Wood Council, Automotive Aftermarket Industry Association, Brick Industry Association, Council of Industrial Boiler Owners, Independent Petroleum Association of America, National Mining Association, Treated Wood Council, and the Utility Air Regulator Group.

<sup>54</sup> See *Sierra Club, Am. Lung Ass’n, Env’tl. Def. Fund, Natural Res. Def. Council v. U.S. Env’tl. Prot. Agency*, No. 13-CV-2809-YGR, 2013 WL 5568253, at \*1 (N.D. Cal. Oct. 09, 2013).

<sup>55</sup> *Id.*

<sup>56</sup> Order, *Sierra Club, Am. Lung Ass’n, Env’tl. Def. Fund, Natural Res. Def. Council v. U.S. Env’tl. Prot. Agency*, No. 13-cv-2809-YGR, at \*1-2 (N.D. Cal. Apr. 30, 2014).

<sup>57</sup> *Id.* at \*1

<sup>58</sup> *Id.* at \*2

<sup>59</sup> Plaintiff’s Reply in Support of Motion for Summary Judgment, *Sierra Club and Wildearth Guardians v. Gina McCarthy*, 2015 WL 9244465, No. 4:14-cv-5091-YGR, at \*3 (N.D. Cal. Feb. 25, 2015).

<sup>60</sup> Press Release, U.S. Env’tl. Prot. Agency, EPA Proposes Smog Standards to Safeguard Americans from Air Pollution (Nov. 26, 2014) (on file with authors).

standards between 65 ppb and 70 ppb, and changing the measuring frame for the secondary standard from the old eight-hour measure to a new cumulative, seasonal average. After public comment and review, the EPA issued its final rule for NAAQS ozone standards on October 1, 2015 “to 70 [ppb], based on extensive scientific evidence about ozone’s effects on public health and welfare.”<sup>61</sup> According to the agency, “[t]he updated standards will improve public health protection, particularly for at-risk groups including children, older adults, people of all ages who have lung diseases such as asthma, and people who are active outdoors, especially outdoor workers. They also will improve the health of trees, plants and ecosystems.”<sup>62</sup> Industry and the United States Chamber of Commerce disagree. The same day that the EPA announced the revised final standard, the U.S. Chamber announced its disappointment in the Obama administration’s “endless regulatory overreach.”<sup>63</sup>

### III. THE POLITICS OF OZONE

The NAAQS ozone rulemaking process has been fraught with politics since the enactment of the CAA in 1970. The bill itself was met with intense industry lobbying and objections from the auto industry.<sup>64</sup> As recent efforts have intensified, the science has become clouded. Of the fourteen companies and groups that consistently lobby Congress, the EPA, or both during NAAQS ozone rulemaking, only two, the American Lung Association and the League of Conservation Voters are currently for a tighter standard.<sup>65</sup> Industry’s

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<sup>61</sup> Overview of EPA’s Updates to the Air Quality Standards for Ground-Level Ozone, Env’tl. Prot. Agency, [https://www.epa.gov/sites/production/files/2015-10/documents/overview\\_of\\_2015\\_rule.pdf](https://www.epa.gov/sites/production/files/2015-10/documents/overview_of_2015_rule.pdf).

<sup>62</sup> FY 2017 EPA Budget in Brief, ENVTL. PROT. AGENCY, 16 (Feb. 2016), <https://www.epa.gov/sites/production/files/2016-02/documents/fy17-budget-in-brief.pdf>.

<sup>63</sup> Press Release, U.S. Chamber of Commerce, EPA’s Tightened Ozone Standard Will Harm America’s Economic Growth (Oct. 01, 2015) (on file with authors).

<sup>64</sup> Letter from Thomas C. Mann, President, Auto. Mfrs. Ass’n, to Sec. Elliot L. Richardson, Health, Educ. & Welfare, Dep’t Health, Educ. & Welfare (Aug. 27, 1970) (on file with authors).

<sup>65</sup> Hopkins, *supra* note 23.

argument for a lower standard comes at the expense of credible science.

In 1979 when the Carter administration raised the standard to 120 ppb, industry groups had been lobbying for the standard to be 160 ppb or higher.<sup>66</sup> The American Petroleum Institute argued that a standard of 120 ppb would prompt “extensive social and economic disruption.”<sup>67</sup> The Institute sued the EPA for substantive and procedural challenges to the ozone standard promulgated in 1979.<sup>68</sup> One of the Institute’s arguments, that the EPA excluded from the record research showing the main source of smog was natural vegetation, was summarily dismissed.<sup>69</sup>

Nevertheless, the Institute and other industry groups planted replica articles in hundreds of newspapers and magazines manipulating the research, saying: “Trees emit so much pollution, we can’t possibly control ozone, and the standards should be higher.”<sup>70</sup> That was enough for President Ronald Reagan, who stated that “[t]rees cause more pollution than automobiles do” – his “killer trees” moment.<sup>71</sup> Scientists unanimously agreed the statement was misleading and only partially accurate.

Both advocates and opponents have used advertising to sway public opinion and political will for change. The Lung Association ran ads in Washington D.C. for “low six figures,” while industry and the National Association of Manufacturers ran ads in Washington D.C. and eight other states that cost the association millions of dollars. Industry ads try to confuse the issue by focusing on the background ozone pollutants traveling from China to the western United States. “Tighter ozone standards won’t hurt China,” the announcer says, “but they could cost our country more than a trillion dollars and kill more than a million jobs per year.”<sup>72</sup> The National Association of Manufacturers estimates the cost of the lower standard to be more than a trillion dollars after tallying up the effect through 2040.<sup>73</sup>

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<sup>66</sup> *Id.*

<sup>67</sup> *Id.*

<sup>68</sup> *Am. Petroleum Inst. v. Costle*, 665 F.2d 1176 (D.C. Cir. 1981).

<sup>69</sup> *Id.* at 1190.

<sup>70</sup> Hopkins, *supra* note 23.

<sup>71</sup> *Id.*

<sup>72</sup> Hopkins, *supra* note 22.

<sup>73</sup> National Association of Manufacturers, *New NAM Analysis Confirms: Federal Ozone Regulation Could Be Costliest in U.S. History*, <http://www.nam.org/Issues/Energy-and-Environment/Ozone/Economic-Impact-of-Proposed-EPA-Regulation-2015.pdf>.

The EPA's final rule contends that there were two major competing interests from the rulemaking process, those wanting a lax standard versus those wanting a strict standard. They include public health and environmental advocates, and industry advocates.

#### A. PUBLIC INTEREST GROUPS

Many groups called upon the EPA to strengthen its ozone standard to provide greater protection for public health and welfare, "especially the health of sensitive groups, with an adequate margin of safety."<sup>74</sup> These groups fell into a few major categories: medical health organizations who sought a stricter primary standard (such as the American Medical Association and the American Lung Association), environmental organizations (including the Sierra Club, Earthjustice, and the Natural Resources Defense Council), many state and local governmental entities (partially consisting of Tennessee, New York, California, North Dakota, and Oregon), and several national, interstate, and tribal associations (such as the National Association of County and City Health Officials, National Tribal Air Association, and the Ozone Transport Commission).<sup>75</sup>

Advocates for a lower standard argue that industry's efforts run counter to credible science. They include the American Lung Association, who was a part of the 2013 suit, the American Academy of Pediatrics, and the American Medical Association. The groups point to studies that have found that as ozone levels rise asthma attacks and respiratory-driven hospital visits increase.<sup>76</sup> There's also evidence that ozone can affect the heart and increase the risk of cardiac arrest.<sup>77</sup> The American Academy of Pediatrics warns that children are especially susceptible to the hazardous effects of ozone because of the developmental nature of their bodies.<sup>78</sup>

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<sup>74</sup> National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. 65,292, 65,326 (October 26, 2015) (to be codified at 40 CFR Parts 50, 51, 52, 53, and 58).

<sup>75</sup> *Id.*

<sup>76</sup> Hopkins, *supra* note 23.

<sup>77</sup> *Id.*

<sup>78</sup> *Id.*

Advocates also point to the benefits associated with lower medical bills, fewer lost work days and shortened lives – all of which they argue reduces the costs of ozone.<sup>79</sup> The EPA echoes those arguments estimating the medical and economic benefits of a 65 ppb standard at \$19 billion to \$38 billion a year beginning in 2025, when most of the country would meet the higher threshold, compared to an estimated \$15 billion in annual costs.<sup>80</sup>

Many of the public interest group comments strongly supported the findings of the CASAC, and urged the EPA to adopt a primary standard that reflected the Committee’s report.<sup>81</sup> They noted in their comments that the body of scientific literature on ozone exposure grew significantly since the 2008 rule.<sup>82</sup> Specifically, the groups asserted that the current science on ozone exposure removed many of the uncertainties that the EPA used, in part, for its justification of the relatively conservative 75 ppb standard.<sup>83</sup> Many groups cited the EPA’s own data to support lowering the standard to 60 ppb.<sup>84</sup> They noted significant improvements to public health with a 60 ppb standard.<sup>85</sup> For instance, even a 5 ppb decrease in allowable ozone, compared to a 70 ppb standard, would decrease premature deaths, lost school days, respiratory hospital admissions, and non-fatal heart attacks by almost threefold in each instance.<sup>86</sup>

#### B. INDUSTRY ADVOCATES

Since the Supreme Court ruled in *Whitman* that the EPA could not consider costs when setting the ozone standard – only the effect on public health, industry groups have been trying to influence the process through media, lobbying and advocacy efforts. The groups argue that tightening the standard by even 5 ppb could cost billions of dollars a year.<sup>87</sup> In 2014, Republican Senator James Inhofe, Chairman of the Senate Committee on Environment and Public Works, promised “rigorous oversight” over the EPA proposal

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<sup>79</sup> Hopkins, *supra* note 22.

<sup>80</sup> Hopkins, *supra* note 23.

<sup>81</sup> National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. at 65,329.

<sup>82</sup> *Id.*

<sup>83</sup> *Id.*

<sup>84</sup> Valentine, *supra* note 17.

<sup>85</sup> *Id.*

<sup>86</sup> *Id.*

<sup>87</sup> *Id.*

to lower the ozone standard.<sup>88</sup> Inhofe stated that the proposed standard would “lower our nation’s economic competitiveness and stifle job creation for decades.”<sup>89</sup>

Republicans in Congress have sought to change the *Whitman* mandate. The “Clean Air, Strong Economies Act” was supported by industry, and would have required “better scientific data, more transparency, and considerations of feasibility and economic impact.”<sup>90</sup> The bill would have also “[p]revented the] EPA from updating the ozone NAAQS until at least 85% of any counties in ‘nonattainment,’ or not in compliance with the current standard, achieve such compliance.”<sup>91</sup> Republican Senator John Thune, South Dakota and Republican Representative Pete Olson, Texas sponsored companion bills that were referred to committees. The bills will likely face renewed interest after the announcement of the final standard.<sup>92</sup>

In February 2015 the National Association of Manufacturers, one of the groups lobbying hardest against the EPA, said that the lower standard “would cost the U.S. economy \$140 billion a year,” a figure that includes higher compliance costs, loss of jobs, and higher electricity costs.<sup>93</sup> When the EPA released its final rule in October 2015, the Manufacturers called it a “punch in the gut” because of the cost and economic effects its members fear from tighter pollution controls.<sup>94</sup> The industry group’s President and CEO said that the new standard would “[i]nfllict pain on companies that build things in America – and destroy job opportunities for American workers.”<sup>95</sup> Economic consulting groups and Earthjustice dispute their math. They attribute it to a \$70 billion “math error” that also ignores the economic value of better health.<sup>96</sup>

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<sup>88</sup> Press Release, Sen. James Inhofe, Inhofe Promises Rigorous Oversight of Proposed Ozone Standard (Nov. 26, 2014) (on file with authors).

<sup>89</sup> *Id.*

<sup>90</sup> Letter from R. Bruce Josten, Exec. Vice President, to John Thune, Senator & Pete Olson, Representative (Sept. 17, 2014) (on file with authors).

<sup>91</sup> *Id.*

<sup>92</sup> Hopkins, *supra* note 23.

<sup>93</sup> *Id.*

<sup>94</sup> Hopkins, *supra* note 22.

<sup>95</sup> *Id.*

<sup>96</sup> *Id.*

Industry groups requested that the EPA retain the primary standard.<sup>97</sup> They argue that the then-present standard adequately set ozone pollution levels to promote public health.<sup>98</sup> Among those advocating for retention of the old standard included the states of Mississippi, Texas, Kansas, and West Virginia, and industry groups, partially consisting of the Utility Air Regulatory Group, the National Mining Association, the National Association of Manufacturers, Dow Chemical Company, and the American Petroleum Institute.<sup>99</sup>

Interestingly, the industry advocates cited many of the same studies from the CASAC report in their comments.<sup>100</sup> Industry proponents noted that many of the studies contained fatal flaws, varied too much, and thus, should not be considered in the EPA's rulemaking.<sup>101</sup> Further, they do not accept the premise that the published scientific literature on ozone exposure evolved since 2008 to reflect new findings, especially to any extent that would call for a stricter standard.<sup>102</sup> Additionally, the groups contend that there remains a degree of uncertainty regarding ozone exposure that does not call for a revised primary standard.<sup>103</sup>

Unsurprisingly, industry groups also oppose a more stringent ozone secondary standard.<sup>104</sup> They point to the body of evidence on ozone's effects on public welfare and conclude that a lower standard is unjustified due to the abundance of continued uncertainty.<sup>105</sup> Further, they explained that even if the studies used by the EPA were reliable, the studies showed little actual improvement to public welfare with decreased ozone levels.<sup>106</sup>

## V. THE EVIDENCE

Ultimately, the EPA Administrator justified her new primary and secondary standards by considering the CASAC findings, public comments, and other scientific findings on ozone exposure.<sup>107</sup>

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<sup>97</sup> National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. at 65,326.

<sup>98</sup> *Id.*

<sup>99</sup> *Id.* at 65,326-27.

<sup>100</sup> *Id.* at 65,329.

<sup>101</sup> *Id.*

<sup>102</sup> *Id.*

<sup>103</sup> *Id.*

<sup>104</sup> *Id.* at 65,383.

<sup>105</sup> *Id.*

<sup>106</sup> *Id.*

<sup>107</sup> *Id.* at 65,342; *id.* at 65,379.

Specifically, for the primary standard, the EPA's final rule relied on the National Center for Environmental Assessment's Integrated Science Assessment for Ozone and Related Photochemical Oxidants ("ISA") for scientific studies on public health.<sup>108</sup> The EPA also considered the Office of Air Quality Planning and Standards' Health Risk and Exposure Assessment for Ozone ("HREA") for information on risk and exposure.<sup>109</sup> Additionally, the EPA assessed the Office of Air Quality Planning and Standards' policy assessment, which laid out some of the EPA's choices for rulemaking, and accounted for the public's input and the advice given by the CASAC.<sup>110</sup>

At the outset, this set of data proved sufficient for the Administrator to conclude that there was enough support for at least maintaining the ozone NAAQS primary standard at 75 ppb and possibly decreasing the standard.<sup>111</sup> Importantly, the EPA justified its decision to lower the standard from 75 ppb by reviewing evidence from the policy assessment.<sup>112</sup> This evidence showed that even in jurisdictions that attained the 75 ppb ozone NAAQS, these areas still experienced hospital admissions for health complications due to short-term ozone exposure.<sup>113</sup>

The Administrator then considered the data with the highest levels of causality: (1) short-term ozone exposure and respiratory disease, and (2) long-term ozone exposure and respiratory disease.<sup>114</sup> The EPA noted that the ISA reported a strong causal relationship for these data sets.<sup>115</sup> This body of science marks significant developments and improvements from the reports relied on in the 2008 rulemaking, indicating support for the notion that the uncertainty relied on in the 2008 conservative approach had since cleared up.<sup>116</sup>

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<sup>108</sup> *Id.* at 65,342.

<sup>109</sup> *Id.*

<sup>110</sup> *Id.*

<sup>111</sup> *Id.* at 65,344.

<sup>112</sup> *Id.*

<sup>113</sup> *Id.*

<sup>114</sup> *Id.* at 65,342.

<sup>115</sup> *Id.* at 65,342-43.

<sup>116</sup> *Id.* at 65,342.



The EPA also concluded that the data definitively illustrated that vulnerable populations, including children, the elderly, asthmatics, and outdoor laborers, are more heavily impacted by ozone exposure.<sup>117</sup> The Administrator relied on human exposure studies to draw these conclusions.<sup>118</sup> The epidemiological studies that the EPA considered observed health impacts at ozone levels ranging from 60 ppb to 80 ppb.<sup>119</sup> The Administrator, however, noted a degree of uncertainty when examining the results of the studies looking at levels at or close to 60 ppb.<sup>120</sup>

Next, the Administrator considered the HREA, which again assessed a variety of human exposure epidemiological studies. The Administrator noted that, although ozone affected adults and healthy children in the same manner, children were at higher risk of ozone-related health consequences because children generally spend more time outside than adults doing physical activity.<sup>121</sup> This risk factor relates directly to the Administrator's view of the evidence that indicates the greatest source of ozone health impact derives from the number of exposures, especially when ozone levels are 70 ppb and above.<sup>122</sup> Following the strong conclusion of the CASAC, the EPA concluded that the old primary standard was "not requisite to protect public health with an adequate margin of safety,"<sup>123</sup> and, thus, did not comply with NAAQS statutory requirements.<sup>124</sup> Importantly, the Administrator did not set the primary standard lower than 70-ppb because there is significantly less information documenting the risk to public health at ozone levels less than 75 ppb, prior to this rule.<sup>125</sup>

The EPA studied many of the same sources of information for its secondary standard rulemaking, especially the recommendations from the CASAC. The Administrator examined studies that measured ozone effects on ecological measures, such as tree growth<sup>126</sup> One study, looking at twelve different public lands across various ecological characteristics, received special consideration by the EPA because public lands receive special designation and protection under

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<sup>117</sup> *Id.* at 65,343.

<sup>118</sup> *Id.*

<sup>119</sup> *Id.*

<sup>120</sup> *Id.*

<sup>121</sup> *Id.* at 65,345.

<sup>122</sup> *Id.* at 65,346.

<sup>123</sup> *Id.*

<sup>124</sup> *Id.*

<sup>125</sup> *Id.*

<sup>126</sup> *Id.* at 65,389-90.

the CAA.<sup>127</sup> The study found that ozone reduces a tree's biomass and disrupts ecological processes.<sup>128</sup> The CASAC found this especially concerning,<sup>129</sup> and the Administrator adopted their view that the old secondary standard left ambient ozone at levels that did not protect public welfare.<sup>130</sup>

The Administrator largely rejected the use of studies that measured ozone effects through visible foliar injury because of the unreliability of such studies.<sup>131</sup> Instead, the Administrator considered biomass to offer more quantifiable and reliable scientific findings.<sup>132</sup> Interestingly, although not used in the EPA's rulemaking, a recent study conducted by NASA showed "that only a quarter of the ozone in California and Nevada in the summer of 2008, a period rife with wildfires, was both local and man-made."<sup>133</sup>

## VI. THE FINAL RULE

After considering the evidence from the policy assessment, ISA, HREA, the recommendations from the CASAC, and public comments, the EPA concluded that both the primary and secondary standards set in the 2008 must be revised to properly protect public health and welfare within an adequate margin of risk.<sup>134</sup> While the primary standard only received an adjustment to its level,<sup>135</sup> the EPA changed the fundamental nature of the secondary standard.<sup>136</sup>

### A. THE PRIMARY STANDARD

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<sup>127</sup> *Id.*

<sup>128</sup> *Id.*

<sup>129</sup> *Id.*

<sup>130</sup> *Id.*

<sup>131</sup> *Id.*

<sup>132</sup> *Id.*

<sup>133</sup> Hopkins, *supra* note 22.

<sup>134</sup> National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. at 65,342; *id.* at 65,390.

<sup>135</sup> *Id.* at 65,365-66.

<sup>136</sup> *Id.* at 65,365-66; *id.* at 65,410.

The final rule broke the primary standard into four components: (1) indicator,<sup>137</sup> (2) averaging time,<sup>138</sup> (3) form,<sup>139</sup> and (4) level.<sup>140</sup> As an initial matter, the EPA concluded that the best way to measure ambient photochemical oxidants, as required under the CAA, was to use ozone as the indicator pollutant.<sup>141</sup> The EPA noted that, although other ambient photochemical oxidants can be measured, such as nitrogen dioxide, ozone was the best indicator for this category because it is regularly monitored and studied.<sup>142</sup> In other words, not as much is known about other photochemical oxidants that could serve as an indicator for setting the photochemical oxidant NAAQS. The prevalence of ozone should correspond with relative causality to the presence of other photochemical oxidants.<sup>143</sup> Moreover, public health is similarly impacted by ozone compared to other photochemical oxidants.<sup>144</sup>

Perhaps the most complicated portion of the ozone rulemaking involves how exposure over time to ozone ought to be measured. The EPA maintained the averaging time it developed in the 1997 NAAQS rulemaking.<sup>145</sup> This measure is used in combination with the form and level to set allowable ozone exposure.<sup>146</sup> The averaging time set by the EPA measures ozone over eight-hour periods, then averages the ozone for that period.<sup>147</sup> Although medical and environmental interests claimed that a shortened averaging time would disguise spikes in ambient ozone,<sup>148</sup> the EPA chose an eight-hour averaging period because the health evidence suggests that ozone health consequences are not accurately evaluated when exposure is examined in a shorter time frame.<sup>149</sup> The EPA further justified its decision to maintain the 8-hour averaging time for the primary standard based on the recommendation of the CASAC.<sup>150</sup>

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<sup>137</sup> *Id.* at 65,347.

<sup>138</sup> *Id.*

<sup>139</sup> *Id.* at 65,350.

<sup>140</sup> *See generally id.* at 65,347-66.

<sup>141</sup> *Id.* at 65,347.

<sup>142</sup> *Id.*

<sup>143</sup> *Id.*

<sup>144</sup> *Id.*

<sup>145</sup> *Id.* at 65,350.

<sup>146</sup> *Id.*

<sup>147</sup> *See id.* at 65,347-49.

<sup>148</sup> *Id.* at 65,349.

<sup>149</sup> *Id.*

<sup>150</sup> *Id.* at 65,350.

The EPA chose to retain the 2008 NAAQS form for the primary standard, which takes the average over three years of the fourth-highest eight-hour average over the course of a year.<sup>151</sup> The EPA noted that there is not clear epidemiological data or conclusions on where or how to establish form.<sup>152</sup> As a result, the Administrator reasoned that selecting the retained form would adequately account for extraneous circumstances, such as unusual weather events.<sup>153</sup> In a sense, this allows jurisdictions to remain in compliance with NAAQS despite having three yearly 8-hour averages of ozone exposure that exceed already established health recommendations. The EPA justifies this allowance by asserting it promotes stability for jurisdictions.<sup>154</sup>

Finally, and probably most contentiously, the EPA set the primary standard at 70 ppb, in light of scientific and policy considerations.<sup>155</sup> This standard represents the desired maximum ambient ozone concentration when considering the impact of ozone on human health.<sup>156</sup> In its proposed rule, the EPA pointed to a growing body of scientific literature that indicated that the 2008 NAAQS standard did not adequately protect public health, especially for vulnerable populations.<sup>157</sup> As required from the *Mississippi* decision, the Administrator also depended on public comments, risk analyses, and the suggestions of the CASAC.<sup>158</sup> Additionally, the EPA inserted policy judgments on the extent to which it should lower the NAAQS primary standard based on "the nature and severity of the health effects, the size of sensitive population(s) at risk, and the kind and degree of the uncertainties present."<sup>159</sup>

## B. THE SECONDARY STANDARD

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<sup>151</sup> *Id.* at 65,352.

<sup>152</sup> *Id.*

<sup>153</sup> *Id.*

<sup>154</sup> *Id.*

<sup>155</sup> *Id.*

<sup>156</sup> *See id.* at 65,355.

<sup>157</sup> *Id.* at 65,352.

<sup>158</sup> *Id.*

<sup>159</sup> *Id.*

Attempting to comply with the D.C. Circuit's *Mississippi* decision, the EPA designed the NAAQS secondary standard for ambient ozone, while taking steps to fully justify their reasons for adopting the secondary standard.<sup>160</sup> The Administrator considered the same sources of information as the primary standard, including public comments and the various internal EPA reports and recommendations, but in the context of public welfare, not health.<sup>161</sup> Again, the EPA retained ozone as the indicator pollutant for photochemical oxides because there lacks a viable alternative for monitoring.<sup>162</sup>

In the proposed rulemaking, the Administrator proposed two alternatives for a form and averaging time measure: maintaining the mirrored 8-hour, four-highest measure from the primary standard, or implementing a cumulative seasonal exposure index.<sup>163</sup> The ISA, policy assessment, and CASAC all concurred in the judgment that a cumulative seasonal exposure index for averaging time and form was most appropriate for measuring the impact to ecological health, including vegetation, from ambient ozone exposure.<sup>164</sup> As another policy judgment, the EPA adopted a three year average to ensure that one unusual weather, environmental, or artificial event did not unduly affect compliance potential.<sup>165</sup> Lastly, the Administrator adopted a new level to accompany the cumulative seasonal average index, which the EPA set at 70 ppb.<sup>166</sup> The Administrator justified the level adjustment by citing studies, endorsed by CASAC, that show a large public welfare benefit from a 70 ppb secondary standard.<sup>167</sup> Public welfare improvements from the new secondary standard are expected in the form of increased crop yields, vegetation growth, and ecological value.<sup>168</sup>

## VII. THE FUTURE OF OZONE NAAQS

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<sup>160</sup> *See id.* at 65,402.

<sup>161</sup> *Id.* at 65,403.

<sup>162</sup> *Id.*

<sup>163</sup> *Id.*

<sup>164</sup> *Id.*

<sup>165</sup> *Id.* at 65,404.

<sup>166</sup> *Id.* at 65,409.

<sup>167</sup> *Id.* at 65,409-10.

<sup>168</sup> *Id.*

Both the public health and environmental advocates, and the industry groups want changes to the rule. The head of the American Lung Association publicly condemned the EPA's final rule as not in line with scientific consensus and stated that a standard at 60 ppb would have been more appropriate.<sup>169</sup> Notably, the Seattle Times reported that "[a]t least one environmental group vowed to challenge the new standard in court."<sup>170</sup> In addition, Clean Air Watch, an environmental organization, condemned the rule as a win for industry interests.<sup>171</sup> A potential challenge from public interests groups claiming that the standards set by the EPA are too high is also likely to fail. The court is likely to defer to the EPA on where to set the standard because it is not the role of the courts to arbitrate scientific findings, rather to judge whether the EPA acted rationally in its consideration of the science. Since the EPA's final rule set the standard within the recommendation of the CASAC, the EPA rationally considered the scientific findings, while balancing policy considerations, such as attainability.

Industry groups argue that a stricter ozone standard will stifle economic development, which would be particularly harmful in the current economic climate.<sup>172</sup> This claim fails to accurately portray the reality of the impacts of the new rule. Visceral and outright rejection of new air pollution regulations, or any environmental regulation, is a regular complaint of industry advocates and should not come as a surprise. Environmental regulations of this sort typically require costly pollution abatement technologies and cause a dent in the bottom line. However, this fact does not justify demands for halting progress in the national pollution reduction regulatory scheme. Presumably, much of the costs associated with reaching attainment will fall on the shoulders of industry — \$1.4 billion annually, in

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<sup>169</sup> *Id.*

<sup>170</sup> Matthew Daly, *EPA Sets New Ozone Standard, Disappointing All Sides*, THE SEATTLE TIMES (Oct. 1, 2015, 4:27 PM), <http://www.seattletimes.com/nation-world/ap-sources-epa-tightening-limits-on-smog-causing-ozone/>.

<sup>171</sup> Coral Davenport, *New Limit for Smog-Causing Emissions Isn't as Strict as Many Had Expected*, THE NEW YORK TIMES (Oct. 1, 2015), <http://www.nytimes.com/2015/10/02/us/politics/epa-to-unveil-new-limit-for-smog-causing-ozone-emissions.html>

<sup>172</sup> See Henry, *supra* note 3.

fact.<sup>173</sup> However, the EPA estimates that benefits to public health will amount in the figure of \$2.9 billion to as much as \$5.9 billion.<sup>174</sup>

Additionally, industry groups have attempted to cast the new rule as absurd by contending that even some of America's most pristine areas, Yellowstone National Park and Rocky Mountain National Park, may fail to meet the stricter standards.<sup>175</sup> This fails to fully understand the purpose of ozone abatement. Rather, the purpose of the new rule is to protect the public health and welfare from harmful ambient ozone, to accomplish what is possible where it is possible. Further, the NAAQS ozone standards have decreased incrementally for decades and, therefore, should not shock the expectations of anyone involved to see a lower standard.

Despite all of this, Murray Coal Company and five states, including Arkansas, Arizona, North Dakota, Oklahoma, and New Mexico, are currently challenging the EPA's final rule in the United States Court of Appeals for the District of Columbia Circuit.<sup>176</sup> In November, the D.C. Circuit consolidated the suits to be heard for review.<sup>177</sup>

After the EPA published its final rule, the House of Representatives convened a panel to testify before the House Committee on Science, Space, and Technology.<sup>178</sup> Many of the committee's witnesses testified that the EPA's new standard would choke business.<sup>179</sup> They received pushback by some of the committee's Democrats who were quick to point out industry's long history of claiming economic catastrophe in the face of new regulations.<sup>180</sup> One regulator from California testified that compliance with the new rule would be difficult to achieve and unfair because much of the ambient ozone in the San Joaquin Valley flows there

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<sup>173</sup> Stevens, *supra* note 7.

<sup>174</sup> *Id.*

<sup>175</sup> Jack Gerard, *Rules Won't Help Public Health but Will Sabotage Recovery*, KNOXVILLE NEWS SENTINEL (Oct. 24, 2015), <http://www.knoxnews.com/opinion/columnists/jack-gerard-rules-wont-help-public-health-but-will-sabotage-recovery-ep-1333439824-353342631.html>.

<sup>176</sup> Henry, *supra* note 3.

<sup>177</sup> John Kennedy, *D.C. Circ. Links Challenges to EPA's Stricter Ozone Standards*, LAW360 (Nov. 4, 2015, 8:00 PM), <http://www.law360.com/articles/722953/dc-circ-links-challenges-to-epa-s-stricter-ozone-standards>.

<sup>178</sup> John Kennedy, *House Panel Hears Concerns Over EPA's New Ozone Standard*, LAW360 (Oct. 22, 2015), <http://www.law360.com/articles/717169/house-panel-hears-concerns-over-epa-s-new-ozone-standard>.

<sup>179</sup> *Id.*

<sup>180</sup> *Id.*

from other sources.<sup>181</sup> In rebuttal, a scientist with the Environmental Defense Fund testified that the new standard would help lower ozone levels in other areas and thereby decrease the issue of foreign ozone pollution in the San Joaquin Valley.<sup>182</sup>

The best source to predict the ruling of the D.C. Circuit on the new ozone standard is to look to its past decisions on old ozone standards and other NAAQS challenges. The courts have consistently upheld the ozone primary standard, while remanding the secondary standard.<sup>183</sup> Considering the 2015 rule, the EPA underwent similar review of the evidence, recommendations, and comments for the primary standard as it did in 2008. Importantly, the EPA offered extensive explanation of the new secondary standard, including its decision to switch to a cumulative, seasonal averaging index.<sup>184</sup>

In the present challenges, petitioners alleged that the EPA's rule should be struck down because it sets a standard that is unattainable for some jurisdictions and too costly to the economy and industry.<sup>185</sup> Both contentions are likely to fail. First, although this new standard does put some additional jurisdictions out of compliance, the vast majority of jurisdictions are already in compliance.<sup>186</sup> The EPA's data shows that many jurisdictions have managed to come into compliance over the decades, despite continually stricter standards.<sup>187</sup> Second, the EPA can not consider costs in NAAQS rulemaking.<sup>188</sup> Nonetheless, the EPA's cost-benefit analysis shows billions of dollars in benefits over costs.<sup>189</sup>

Since the implementation of the CAA, the United States and its industrial sector have successfully reduced air pollution by 70 percent.<sup>190</sup> During this same time period, the nation's gross domestic product, adjusted for inflation, has increased by more than three

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<sup>181</sup> *Id.*

<sup>182</sup> *Id.*

<sup>183</sup> *See generally Mississippi*, 744 F.3d at 1334.

<sup>184</sup> National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. at 65,403-10 (October 26, 2015).

<sup>185</sup> Gerard, *supra* note 175.

<sup>186</sup> Stevens, *supra* note 7.

<sup>187</sup> *Id.*

<sup>188</sup> *Whitman*, 531 U.S. at 463.

<sup>189</sup> Stevens, *supra* note 7.

<sup>190</sup> *Id.*



times, despite the implementation of environmental regulations, including the current ozone NAAQS rule.<sup>191</sup> The public now enjoys air quality that better protects public health, especially populations most at risk for pollution induced health consequences, such as asthmatics and children. Areas with special ecological and cultural significance, such as Class 1 lands, are better protected against the adverse impact of human induced pollution. Despite appreciable benefits to public health and welfare through environmental regulation, the American economy continues to flourish and remain competitive in a global context.

The CAA's NAAQS program accomplishes better ambient air quality not through traditional direct regulation of polluters, but through indirect attainment standards. This method of regulation ensures that the burden of attainment is not born on any one source, instead innovative solutions must come from all sectors responsible for pollution emitting activity, including municipalities, states, and industry.

The EPA should continue its trend of reasonable reductions in ambient ozone to reasonably ensure that jurisdictions have time to develop strategies and technologies that meet ever stricter standards. The 2015 ozone NAAQS rulemaking accomplishes this goal. The ultimate role of the EPA is not to act purely on the recommendations of our leading scientists, but to also act as an administrative agency that makes policy judgments as to how to achieve what's best for public health and the environment.

The EPA's 178-page rule for its new ambient ozone standards illustrate its commitment to seeking out the best possible standard for the present day. The final rule should result in greater protection to public health and welfare. Fewer incidents of respiratory disease, asthmatic episodes, and smoggy conditions benefit all of society. Industry should continue to do its part to comply with reasonable pollution reduction that it has been subject to for over four decades. It is the responsibility of the federal government to act in the best interest of all Americans. Although the public can spar over what exactly is in its best interest, the EPA acted reasonably, rationally, and responsibly by issuing its new ozone rule.

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<sup>191</sup> *Id.*

## VIII: CONCLUSION

The insertion of politics into issues of environmental importance raises a number of problems. That is not the exception in the NAAQS ozone rulemaking process. Industry advocacy and lobbying have clouded the science, and created false realities for the American public. Both political parties have used NAAQS ozone rulemaking as a political football. Republican intransigence is rooted in the deep pockets of their industry donors and constituents. The Republican electorate has been lead to believe that the science of climate change is part of a larger conspiracy of government overreach against personal liberty, even though a lower standard affects industry more than any other group. For their part, Democrats have punted on major issues, arguing for stronger standards when politically expedient and for no change to the standards when it could result in electoral or fundraising losses. Despite the unanimous recommendation from the CASAC, President Obama provided political cover to himself and his party in an election year.

The uniqueness of the American political system has created an environment where money, lobbying and advertising can sway public opinion and cloud reputable science. Advocates are aware of the affect industry advocacy has on the science. Polling done by the Lung Association shows that more Americans want stricter standards.<sup>192</sup> The National Association of Manufacturers argue that their coalition against the standard includes a bipartisan group of governors, business associations, unions and public officials.<sup>193</sup> Paul Billings disagrees. The Senior Vice President for Advocacy and Education at the Lung Association argues, “[w]e have the law on our side, we have the science on our side and we have the credibility of health and medical leaders supporting a much more protecting standard. What industry is left with is distractions.”<sup>194</sup>

Four decades ago President Nixon declared “[t]hrough carelessness we incurred a debt to nature, and now that debt is being

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<sup>192</sup> Press Release, Am. Lung Ass’n, Americans Want Stricter Smog Standards: A Special Message from Harold P. Wimmer, National President and CEO (Sep. 16, 2015) (on file with authors).

<sup>193</sup> *Id.*

<sup>194</sup> *Id.*

called.”<sup>195</sup> The Republican President, whether through political opportunism or genuine concern for the environment, worked with a Democrat-controlled Congress to usher in the “environmental decade.” Today, neither party seems to have the will to affect meaningful change for the American public. The EPA’s 2015 NAAQS ozone final rule is a small, but important step in the right direction. If the rule survives challenges, the United States will enjoy cleaner, healthier, and clearer air. After years of rulemaking and court challenges, the EPA took a rational and prudent approach towards issuing a safer ozone standard. We can now sit back and take in a breath of fresh air.

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<sup>195</sup> President Richard Nixon, Annual Message to the Congress on the State of the Union (January 22, 1970).