



October 5, 2017

The Honorable E. Scott Pruitt  
 Administrator  
 U.S. Environmental Protection Agency  
 Attention Docket No. EPA-HQ- OAR-2015-0827  
 1200 Pennsylvania Avenue, NW.  
 Washington, DC 20460

The Honorable Jack Danielson  
 Acting Deputy Administrator  
 National Highway Traffic Safety Administration  
 U.S. Department of Transportation  
 1200 New Jersey Avenue, SE.  
 Washington, DC 20590

Dear EPA Administrator Pruitt and NHTSA Acting Deputy Administrator Danielson:

As members of the medical and public health community, our organizations appreciate the opportunity to provide comments on the reconsideration of the final determination of the mid-term evaluation of greenhouse gas (GHG) emissions standards for model year 2022-2025 light-duty vehicles as well as the model year 2021 GHG emissions standards. This reconsideration is unnecessary. Clear and convincing evidence from the review completed earlier this year demonstrates that the standards can easily be achieved and should be retained due to the benefits for human health and climate change.

Federal and state vehicle emissions and efficiency standards adopted in 2012 were carefully researched, negotiated and are being achieved ahead of schedule.<sup>1</sup> These standards reflect the urgent action needed to protect public health against climate change. The U.S. Environmental Protection Agency (EPA) and the National Highway Traffic Safety Administration (NHTSA) should retain the existing 2021 standards as well. Since the adopted standards are well within reach, no reason exists to alter them.

**Climate change poses grave threats to public health.** To protect our communities and the public, the United States must significantly reduce greenhouse gases from all sources. The changing climate threatens the health of Americans alive now and in future generations. Growing evidence over the past few years has demonstrated the multiple, profound risks that imperil the lives and health of millions. Consequently, the nation has a short window to act to reduce those threats.

Released in 2016, the *Impacts of Climate Change on Human Health in the United States: A Scientific Assessment* provided the most recent summary of the research outlining these risks to the United States. This grim summary of risks to human health launches the report:

Climate change is a significant threat to the health of the American people. The impacts of human-induced climate change are increasing nationwide. Rising greenhouse gas concentrations result in increases in temperature, changes in precipitation, increases in the frequency and intensity of some extreme weather events, and rising sea levels. These climate change impacts endanger our health by affecting our food and water sources, the air we breathe, the weather we experience, and our interactions with the built and natural environments. As the climate continues to change, the risks to human health continue to grow.<sup>2</sup>

This review echoed reports previously produced by several public health and medical organizations, including the Asthma and Allergy Foundation of America's *Extreme Allergies and Global Warming*, issued with the National Wildlife Foundation in 2010<sup>3</sup>; the American Public Health Association's *Climate Change: Mastering the Public Health Role*, in April 2011<sup>4</sup>; and the American Thoracic Society's workshop on Climate Change and Human Health published in 2012<sup>5</sup>.

**Millions of Americans suffer greater vulnerability to these threats.** Many people face greater risk or exposure, as documented in the large air pollution science assessments EPA has repeatedly completed. Children court special risks because their bodies are growing and because they are so active.<sup>6</sup> Older adults are more likely to die during high heat events.<sup>7</sup> People with chronic respiratory diseases like asthma and chronic obstructive pulmonary disease, people with cardiovascular diseases and people with diabetes also risk greater harm from increased pollution.<sup>8</sup> Even healthy adults can be affected by increased air pollution especially if their work requires them to be outdoors, as the study of lifeguards in Galveston, Texas demonstrated.<sup>9</sup>

Low income people and some racial and ethnic groups are among those who often confront higher exposure to pollutants and who may experience greater responses to such pollution. Many studies have explored the differences in harm from air pollution to racial or ethnic groups and people who are in a low socioeconomic position, have less education, or live nearer to major sources, including highways.<sup>10</sup> A 2013 study looked at census data and estimated that 19 percent of the population lives near highways with high traffic volumes, with higher proportion being low income people and communities of color.<sup>11</sup>

Many different vulnerable groups and disadvantaged communities, including seniors, children and those with disabilities, will have a harder time responding to the threats, especially if electricity is lost or relocation or evacuation is required.<sup>12</sup> Hurricanes Harvey, Irma, and Maria this summer demonstrated that many people in these groups had difficulty evacuating and relocating after a major weather event. Native American and other tribal communities may face threats to food supplies and difficulty relocating due to tribal land locations.<sup>13</sup>

**Reducing GHG emissions from vehicles is critical in the fight against climate change.** Transportation sources produced more than one quarter of the nation's greenhouse gas emissions (27 percent) in 2015.

The transportation sector increased those emissions more since 1990 than any other sector, according to EPA.<sup>14</sup> Because of this, vehicle standards should be appropriately recognized as key steps to protect the health of all Americans, recognizing that the severe harms caused by traffic pollution<sup>15</sup> are not borne equally across the nation<sup>16</sup>.

**The evidence supports EPA maintaining the required reductions in GHG emissions going forward to adequately respond to the full nature of climate and air pollution health threats.** The evidence to date shows that the industry can reach the goals in the 2021 fleet and beyond. As the January 2017 Final Determination concludes, manufacturers can build a nationwide fleet of vehicles that reduce GHG emissions and meet the fuel efficiency standards for consumers as proposed in 2012.<sup>17</sup> By keeping the established GHG standards intact EPA and NHTSA provide the continuity and certainty the industry routinely requests for their businesses.

**As EPA noted in the analyses, meeting the current standards will also provide direct human health benefits to our patients and our communities.** EPA estimated the economic value per ton of reduced fine particulate matter (PM<sub>2.5</sub>) from some recent analyses using well-established modeling. Those rough estimates document the substantial economic benefits from lives saved as well as from asthma attacks, heart attacks, hospital admissions and emergency room visits avoided. These benefits come not only from reductions in emissions from on-road sources, but from upstream sources as well.<sup>18</sup>

**The actual benefits to human health, and the estimated value of those benefits, will likely be much higher than the 2016 EPA assessment.** EPA acknowledged then that they provided a cursory estimate for the economic benefits, and we agreed. EPA derived all estimates solely from the reduced primary and secondary PM<sub>2.5</sub>. None came from the recognized benefits from reduced ozone pollution that would also occur, due to the complexity of the modeling, as EPA explained. However, those benefits exist and will also come from reduced on-road and upstream emissions as well.

**Furthermore, many direct benefits from lower pollution levels cannot yet be quantified.** The available BenMAP modeling uses many peer-reviewed studies to examine key health outcomes, but some significant benefits cannot now be modeled. One is the impact of reduced PM<sub>2.5</sub> on lung cancer deaths. In 2013, the International Agency for Research on Cancer determined that particulate matter caused lung cancer.<sup>19</sup> However, no studies are included in the BenMAP model to assess the benefits of reducing PM<sub>2.5</sub> on lung cancer outcomes. BenMAP cannot currently estimate benefits from reduced NO<sub>x</sub> emissions as a direct pollutant, rather than in its role as a precursor to PM<sub>2.5</sub> or ozone. Missing, too, are estimates of the impacts of reductions in other criteria or toxic air pollutants that also cannot yet be quantified in these models.

**The existing EPA emission standards for 2025 should serve as the basis for proposed action analyzed in the NHTSA EIS to establish final 2025 fuel economy standards.** Harmony within the standards should remain as the goal of the original 2012 partnership between EPA, NHTSA and the California Air Resources Board (CARB). Weakened GHG standards and fuel economy targets would be at cross purposes with public health.

**Through detailed review by state and federal agencies, the existing standards have been found to be appropriate, cost-effective and readily achievable:**

National Research Council report issued in 2015: *“The committee found the analysis conducted by NHTSA and EPA in their development of the 2017-2025 standards to be thorough and of high caliber on the whole.”*<sup>20</sup>

Final Determination issued by U.S. EPA in January 2017: *“the standards are also projected to be achievable through multiple feasible technology pathways at reasonable cost -- less than projected in the 2012 rulemaking -- and with significant direct benefit to consumers in the form of net savings due to purchasing less fuel.”*<sup>21</sup>

Mid-Term Review report issued by CARB in January 2017: *“Consistent with the draft 2016 [Technical Assessment Report] and Final Determination, updated analysis confirmed that the technology is available to readily meet, if not exceed, the current 2022 through 2025 model year national GHG emission standards at the same or lower cost than originally projected when the standards were adopted in 2012, predominantly with advanced gasoline engines and transmissions.”*<sup>22</sup>

**In conclusion, EPA and NHTSA should retain the existing greenhouse gas (GHG) emissions standards for model year 2022-2025 light-duty vehicles as well as the model year 2021 GHG emissions standards.** The standards can be achieved and should be retained due to the benefits for human health and the fight against climate change.

Sincerely,

Allergy & Asthma Network  
Alliance of Nurses for Healthy Environments  
American Lung Association  
American Public Health Association  
American Thoracic Society  
Asthma and Allergy Foundation of America  
Center for Climate Change and Health  
Health Care Without Harm  
Health Officers Association of California  
National Association of County and City Health Officials  
National Environmental Health Association  
National Medical Association  
Trust for America’s Health

---

<sup>1</sup> U.S. Environmental Protection Agency. 2016. Light-Duty Automotive Technology, Carbon Dioxide Emissions and Fuel Economy Trends: 1975 Through 2016. EPA-420-S-16-001; Union of Concerned Scientists. 2015. Tomorrow’s Clean Vehicles Today. Available at <http://ucsusa.org/cleanvehiclestoday>.

- <sup>2</sup> US GCRP, 2016. The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment. Crimmins A, Balbus J, Gamble JL, Beard CB, et al. Eds. U.S. Global Change Research Program, Washington DC. <http://dx.doi.org/10.7930/JOR49NQX>
- <sup>3</sup> National Wildlife Federation and Asthma and Allergy Foundation of America. *Extreme Allergies and Global Warming*. National Wildlife Foundation, 2010. Accessed at [http://www.nwf.org/pdf/Reports/NWF\\_AllergiesFinal.pdf](http://www.nwf.org/pdf/Reports/NWF_AllergiesFinal.pdf).
- <sup>4</sup> American Public Health Association. *Climate Change: Mastering the Public Health Role. A Practical Guidebook*. April 2011. Accessed at <http://www.apha-environment.org/ClimateandHealth.aspx>.
- <sup>5</sup> Pinkerton KE et al., An Official American Thoracic Society Workshop Report: Climate change and Human Health. *Proceedings American Thoracic Society* 2012; 9: 1: 3-8.
- <sup>6</sup> Shea KM and the Committee on Environmental Health. Global Climate Change and Children's Health. *Pediatrics*, 2007. ; 120; e1359; American Academy of Pediatrics Committee on Environmental Health, Ambient Air Pollution: health hazards to children. *Pediatrics*. 2004; 114: 1699-1707. Statement was reaffirmed in 2010.
- <sup>7</sup> Zanobetti A, et al. Summer temperature variability and long-term survival among elderly people with chronic disease. *Proceedings of the National Academy of Sciences*, 2012. 109: 6608-6613.
- <sup>8</sup> U.S. EPA. *Integrated Science Assessment for Particulate Matter (Final Report)*. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-08/139F, 2009; U.S. Environmental Protection Agency. *Integrated Science Assessment of Ozone and Related Photochemical Oxidants (Final Report)*. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-10/076F, 2013.
- <sup>9</sup> Thaller EI, Petronell SA, Hochman D, Howard S, Chhikara RS, Brooks EG. Moderate Increases in Ambient PM 2.5 and Ozone Are Associated With Lung Function Decreases in Beach Lifeguards. *J Occup Environ Med*. 2008; 50: 202-211
- <sup>10</sup> Institute of Medicine. *Toward Environmental Justice: Research, Education, and Health Policy Needs*. Washington, DC: National Academy Press, 1999; O'Neill MS, Jerrett M, Kawachi I, Levy JI, Cohen AJ, Gouveia N, Wilkinson P, Fletcher T, Cifuentes L, Schwartz J et al. Health, Wealth, and Air Pollution: Advancing Theory and Methods. *Environ Health Perspect*. 2003; 111: 1861-1870; Finkelstein MM; Jerrett M; DeLuca P; Finkelstein N; Verma DK, Chapman K, Sears MR. Relation Between Income, Air Pollution And Mortality: A Cohort Study. *CMAJ*. 2003; 169: 397-402; Ostro B, Broadwin R, Green S, Feng W, Lipsett M. Fine Particulate Air Pollution and Mortality in Nine California Counties: Results from CALFINE. *Environ Health Perspect*. 2005; 114: 29-33; Zeka A, Zanobetti A, Schwartz J. Short term effects of particulate matter on cause specific mortality: effects of lags and modification by city characteristics. *Occup Environ Med*. 2006; 62: 718-725.
- <sup>11</sup> Rowangould GM. A census of the US near-roadway population: Public health and environmental justice considerations. *Transportation Research Part D: Transport and Environment*. 2013. 25:59-67.
- <sup>12</sup> US GCRP, 2016; APHA, 2011.
- <sup>13</sup> US GCRP, 2016.
- <sup>14</sup> U.S. EPA. 2017. Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990-2015. EPA 430-P-17-001. Accessed at <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2015>
- <sup>15</sup> HEI Panel on the Health Effects of Traffic Related Air Pollution. 2010. Traffic Related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects. HEI Special Report 17. Health Effects Institute, Boston, MA.
- <sup>16</sup> Institute of Medicine. *Toward Environmental Justice: Research, Education, and Health Policy Needs*. Washington, DC: National Academy Press, 1999; O'Neill MS, Jerrett M, Kawachi I, Levy JI, Cohen AJ, Gouveia N, Wilkinson P, Fletcher T, Cifuentes L, Schwartz J et al. Health, Wealth, and Air Pollution: Advancing Theory and Methods. *Environ Health Perspect*. 2003; 111: 1861-1870; Finkelstein MM; Jerrett M; DeLuca P; Finkelstein N; Verma DK, Chapman K, Sears MR. Relation Between Income, Air Pollution And Mortality: A Cohort Study. *CMAJ*. 2003; 169: 397-402; Ostro B, Broadwin R, Green S, Feng W, Lipsett M. Fine Particulate Air Pollution and Mortality in Nine California Counties: Results from CALFINE. *Environ Health Perspect*. 2005; 114: 29-33; Zeka A, Zanobetti A, Schwartz J. Short term effects of particulate matter on cause specific mortality: effects of lags and modification by city characteristics. *Occup Environ Med*. 2006; 62: 718-725.
- <sup>17</sup> U.S. EPA. 2017. Final Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation. EPA-420-R-17-001. Page 1. Available at <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100QQ91.pdf>.
- <sup>18</sup> U.S. EPA 2016. Proposed Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation: Technical Support Document. EPA-420-R-16-021. November 2016.
- <sup>19</sup> Hamra GB, Guha N, Cohen A, Laden F, Raaschou-Nielsen O, Samet JM, Vineis P, Forastiere F, Saldiva P, Yorifuji T, and Loomis D. Outdoor particulate matter exposure and lung cancer: A systematic review and meta-analysis. *Environmental Health Perspective*. 2014; 122: 906-911.
- <sup>20</sup> National Research Council for the National Academies, 2015. Cost, Effectiveness and Deployment of Fuel Economy Technologies for Light-Duty Vehicles. ISBN 978-0-309-37388-3. Available at <http://www.nap.edu/21744>.
- <sup>21</sup> U.S. EPA. Final Determination 2017, page 13.
- <sup>22</sup> California Air Resources Board. 2017. California's Advanced Clean Cars Midterm Review: Summary Report for the Technical Analysis of the Light Duty Vehicle Standards. Page ES-61. Available at [https://www.arb.ca.gov/msprog/acc/mtr/acc\\_mtr\\_finalreport\\_full.pdf](https://www.arb.ca.gov/msprog/acc/mtr/acc_mtr_finalreport_full.pdf)