ORAL ARGUMENT NOT YET SCHEDULED

No. 19-1230

Consolidated with Nos. 19-1239, 19-1241, 19-1242, 19-1243, 19-1245, 19-1246, 19-1249, 20-1175, and 20-1178

IN THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

UNION OF CONCERNED SCIENTISTS, et al.,
Petitioners,

v.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION,
Respondent,

COALITION FOR SUSTAINABLE AUTOMOTIVE REGULATION, et al.,
Intervenors-Respondents,

On Petition for Review of Final Action by the United States Environmental Protection Agency and National Highway Traffic Safety Administration 84 Fed. Reg. 51,310 (Sept. 27, 2019)

BRIEF *AMICI CURIAE* OF THE AMERICAN THORACIC SOCIETY, AMERICAN LUNG ASSOCIATION, AMERICAN MEDICAL ASSOCIATION, AMERICAN PUBLIC HEALTH ASSOCIATION, AND CALIFORNIA MEDICAL ASSOCIATION IN SUPPORT OF PUBLIC INTEREST ORGANIZATION PETITIONERS

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Dated: July 2, 2020

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CERTIFICATE AS TO PARTIES, RULINGS UNDER REVIEW, AND RELATED CASES

Pursuant to Circuit Rule 28(a)(1), *amici curiae* the American Thoracic Society, American Lung Association, American Medical Association, American Public Health Association, and California Medical Association, through undersigned counsel, hereby certifies as follows:

(A) **Parties and Amici.** All parties, intervenors, and amici appearing in this Court are listed in the Brief for State and Local Government Petitioners and Public Interest Petitioners, Dkt. No. 19-1230, Doc. No. 1849316 (June 29, 2020) and Brief for Petitioners National Coalition for Advanced Transportation, Calpine Corporation, Consolidated Edison, Inc., National Grid USA, New York Power Authority, Power Companies Climate Coalition, and Advanced Energy Economy, Dkt. No. 19-1230, Doc. No. 1849201 (June 26, 2020).

(B) **Rulings Under Review.** By Orders on November 19, 2019, November 20, 2019, November 25, 2019, November 27, 2019, December 2, 2019, and June 3, 2020, this Court consolidated cases Nos. 19-1239, 19-1241, 19-1242, 19-1243, 19-1245, 19-1246, 19-1249, 20-1175, and 20-1178 into Lead No. 19-1230. The consolidated petitions before the Court challenge actions of the U.S. Environmental Protection Agency and National Highway Traffic Safety Administration, jointly published as "The Safer Affordable Fuel-Efficient (SAFE)

Vehicles Rule Part One: One National Program," published at 84 Fed. Reg. 51,310 (Sept. 27, 2019).

(C) **Related Cases.** The United States District Court for the District of Columbia has consolidated and stayed three cases which challenged the same action of the National Highway Traffic Safety Administration that is at issue here. *California et al., v. Chao*, 1:19-cv-02826-KBJ (filed Sept. 20, 2019) (consolidated with Nos. 1:19-cv-02907-KBJ and 1:19-cv-03436-KBJ). *Amici curiae* are not aware of any related cases other than those aforementioned and the consolidated cases before the Court.

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CORPORATE DISCLOSURE STATEMENT

Pursuant to Circuit Rule 26.1 and Federal Rule of Appellate Procedure 26.1, undersigned counsel certifies that the American Thoracic Society, American Lung Association, American Medical Association, American Public Health Association, and California Medical Association are not-for-profit public health and scientific organizations. *Amici curiae* the American Thoracic Society, American Lung Association, American Medical Association, American Public Health Association, and California Medical Association do not have parent corporations and no publicly held corporation has ownership of 10 percent or greater in the American Thoracic Society, American Lung Association, American Medical Association, American Public Health Association, or California Medical Association. The American Thoracic Society, American Lung Association, American Medical Association, American Public Health Association, and California Medical Association do not have any members who have issued shares or debt securities to the public.

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D.C. CIRCUIT RULE 29(d) STATEMENT

Counsel for *amici curiae* the American Thoracic Society, American Lung Association, American Medical Association, American Public Health Association, and California Medical Association certifies, pursuant to Circuit Rule 29(d), that a separate brief is necessary to provide the Court with the perspective and expertise of public health professionals which *amici curiae* represents. In addition, the narrow focus of the American Thoracic Society, American Lung Association, American Medical Association, American Public Health Association, and California Medical Association on respiratory and public health is uniquely relevant to the agency action at issue. Accordingly, *amici curiae*, through counsel, certifies that filing a joint brief would not be practicable.

Dated: July 2, 2020

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GLOSSARY OF ABBREVIATIONS

ACC	Advanced Clean Cars
ALA	American Lung Association
AMA	American Medical Association
APHA	American Public Health Association
ATS	American Thoracic Society
CAA	Clean Air Act
CARB	California Air Resources Board
CMA	California Medical Association
DOT	Department of Transportation
EPA	Environmental Protection Agency
GHG	Greenhouse Gas
LEV	Low Emission Vehicle
MMT	Million Metric Tons
MYs	Model Years
NAAQS	National Ambient Air Quality Standards
NHTSA	National Highway Traffic Safety Administration
NO_x	Nitrogen oxides, oxides of Nitrogen
PM	Particulate Matter
$PM_{2.5}$	Particulate matter less than 2.5 micrometers in aerodynamic diameter

GLOSSARY OF ABBREVIATIONS
(continued)

PM_{10}	Particulate matter less than 10 micrometers in aerodynamic diameter
PPB	Parts Per Billion
ZEV	Zero-Emission Vehicle

STATUTES AND REGULATIONS

Pertinent statutes and regulations are contained in the addenda to Brief for State and Local Government Petitioners and Public Interest Petitioners, Dkt. No. 19-1230, Doc. No. 1849316 (June 29, 2020) and Brief for Petitioners National Coalition for Advanced Transportation, Calpine Corporation, Consolidated Edison, Inc., National Grid USA, New York Power Authority, Power Companies Climate Coalition, and Advanced Energy Economy, Dkt. No. 19-1230, Doc. No. 1849201 (June 26, 2020).

STATEMENT OF IDENTITY, INTEREST IN CASE, AND SOURCE OF AUTHORITY TO FILE OF *AMICI CURIAE*[1]

The American Thoracic Society ("ATS") is an international non-profit organization of more than 16,000 physicians, scientists, nurses, and healthcare professionals dedicated to the detection, prevention, treatment, and cure of respiratory disease, critical care illnesses, and sleep-disordered breathing. ATS accomplishes this through research, clinical care, education, and the development of guidelines regarding respiratory health and air pollution. Through three peer-reviewed journals, ATS supports the dissemination of cutting-edge research and information relevant to adult and pediatric pulmonology.

The American Lung Association ("ALA"), a nonprofit organization founded in 1904, is one of the nation's oldest voluntary health organizations. ALA's mission is to save lives by improving lung health and preventing lung disease. ALA engages in research, public education, and advocacy to reduce air pollution and its accompanying threats to lung health. ALA has published many reports on air pollution, most notably the annual "State of the Air" report. Through its advocacy, ALA has worked to support and enforce laws and regulations related to lung health at the national, state, and local levels, including in the passage of the Clean Air Act Amendments of 1970, 1977, and 1990.

[1] *Amici curiae* ATS, ALA, AMA, APHA, and CMA submit this brief with the consent of all parties. *See* Dkt. No. 19-1230, Doc. No. 1844268 (May 26, 2020).

The American Medical Association ("AMA") is the largest professional association of physicians, residents, and medical students in the United States. Through state and specialty medical societies and other physician groups seated in its House of Delegates, substantially all United States physicians, residents, and medical students are represented in the AMA's policymaking process. The AMA was founded in 1847 to promote the science and art of medicine and the betterment of public health, and these remain its core purposes. AMA members practice in every state, including California, and in every medical specialty.

The American Public Health Association ("APHA") champions the health of all people and all communities, strengthens the profession of public health, shares the latest research and information, promotes best practices, and advocates for public health policies grounded in research. APHA represents over 20,000 individual members and is the only organization that combines a nearly 150-year perspective and a broad-based member community with an interest in improving the public's health.

The California Medical Association ("CMA") is a nonprofit incorporated professional association of more than 44,000 member physicians practicing in California, in all specialties. For more than 160 years, CMA has pursued its mission to promote the science and art of medicine, protection of public health and the betterment of the medical profession.

The AMA and CMA appear on their own behalves and as representatives of the AMA Litigation Center. The AMA Litigation Center is a coalition among the AMA and the medical societies of every state. The AMA Litigation Center is the voice of America's medical profession in legal proceedings across the country. The mission of the AMA Litigation Center is to represent the interests of the medical profession in the courts. It brings lawsuits, files *amicus* briefs, and otherwise provides support or becomes actively involved in litigation of general importance to physicians.

Together, *amici curiae* ATS, ALA, AMA, APHA, and CMA represent hundreds of thousands of doctors in California and across the nation. *Amici curiae* ATS, ALA, AMA, APHA, and CMA support public interest organization Petitioners because the Environmental Protection Agency's ("EPA") final adjudication "The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program,"[2] (the "Adjudication") will have wide-reaching and significant adverse public health impacts. The collective medical, scientific, and clinical expertise of *amici curiae* leads them to participate in this action to demonstrate the severe effects the Adjudication will have on California's air quality and public health.

[2] 84 Fed. Reg. 51,310 (Sept. 27, 2019).

STATEMENT OF AUTHORSHIP AND FINANCIAL CONTRIBUTION PURSUANT TO FEDERAL RULE OF APPELLATE PROCEDURE 29(a)(4)(E)

In compliance with Federal Rule of Appellate Procedure 29(a)(4)(E), counsel for *amici curiae* ATS, ALA, AMA, APHA, and CMA hereby states that no counsel for any party to this litigation authored this brief in whole or in party; no party or party's counsel contributed money that was intended to fund, or did fund, the preparation or submission of this brief; and no person, other than *amici curiae*, contributed money that was intended to fund, or did fund, the preparation or submission of this brief.

BACKGROUND

Section 209(a) of the Clean Air Act ("CAA") generally preempts states from "adopt[ing] or attempt[ing] to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines."[3] Section 209(b), however, requires the EPA Administrator to waive this preemption as to California, and permits the state to adopt its own emission standards, so long as those standards "will be, in the aggregate, at least as protective of the public health and welfare as applicable Federal standards."[4]

[3] 42 U.S.C. § 7543(a) (2018).
[4] *Id*. § 7543(b)(1) ("[t]he Administrator *shall*, after notice and opportunity for public hearing, waive application of this section to any State which has adopted standards (other than crankcase emission standards) for the control of emissions from new motor vehicles or new motor vehicle engines prior to March 30, 1966, if the State determines that the State standards will be, in the

In 2012, the California Air Resources Board ("CARB") requested that EPA grant a waiver of preemption for a package of regulations named the Advanced Clean Cars ("ACC") program.[5] Developed in collaboration with the EPA and the National Highway Traffic Safety Administration ("NHTSA"), the ACC program has three components: a low-emissions vehicle ("LEV") regulation for criteria pollutants, a LEV regulation for GHG emissions, and a technology-forcing zero vehicle-emission vehicle ("ZEV") regulation.[6] On January 9, 2013, EPA granted California's request for a waiver of preemption for the ACC program.[7]

In August 2018, more than five years after the waiver was originally granted, EPA and NHTSA jointly issued a proposed rule that proposed significant amendments to the existing regulatory scheme.[8] Among other things, EPA proposed to revoke California's existing GHG and ZEV waivers, and NHTSA proposed new regulations declaring California's GHG and ZEV regulations

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aggregate, at least as protective of public health and welfare as applicable Federal standards.") (emphasis added).

[5] *See* CAL. CODE REGS. tit. 13 § 1900 *et seq.* (2020); 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards, 77 Fed. Reg. 62,624 (Oct. 15, 2012).

[6] CARB, Cal. EPA, *Advanced Clean Cars Program - About*, STATE OF CALIFORNIA (n.d.), https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about (last visited Mar. 2, 2019).

[7] California State Motor Vehicle Pollution Control Standards; Notice of Decision Granting a Waiver of Clean Air Act Preemption for California's Advanced Clean Car Program and a Within the Scope Confirmation for California's Zero Emission Vehicle Amendments for 2017 and Earlier Model Years, 78 Fed. Reg. 2,112 (Jan. 9, 2013).

[8] The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, 83 Fed. Reg. 42,986 (proposed Aug. 24, 2018).

preempted under the Energy Policy Conservation Act.[9] The agencies finalized their action on September 27, 2019. Specifically, EPA finalized its decision to revoke its January 2013 grant of a waiver of CAA preemption to California's GHG and ZEV regulations.[10] In pertinent part, EPA justified its partial revocation of California's waiver on a new interpretation of Section 209(b)(1)(B), stating that California "does not need [those] standards to meet compelling and extraordinary conditions."[11]

SUMMARY OF THE ARGUMENT

Revoking the CAA waiver as to California's GHG and ZEV regulations will have drastic, adverse impacts on Californian's public health. This Court should vacate EPA's partial revocation of California's 2013 Section 209(b) waiver as arbitrary and capricious, an abuse of discretion, and not in accordance with law for two reasons.

First, California's GHG and ZEV regulations are necessary elements of the State's plan to address local criteria pollutant concerns and bring air quality regions into attainment with federal regulations—aims which EPA concedes are at the heart of Section 209(b)'s rationale.[12] California's GHG and ZEV regulations

[9] 83 Fed. Reg. at 42,999.
[10] 84 Fed. Reg. at 51,328.
[11] *Id.* In the same action, NHTSA further finalized regulatory text which interpreted the Energy Policy Conservation Act to preempt state programs that regulate tailpipe GHG emissions or establish ZEV mandates. *Id.* at 51,310.
[12] *See id*. at 51,339.

work together along with other pollutant standards to control traditional criteria pollutants (more specifically ozone and PM). Additionally, the formation of these pollutants is exacerbated by climate change in multiple ways, including the impact of rising temperatures on increased ozone formation.[13]

Second, EPA's argument that the impacts of climate change do not constitute "compelling and extraordinary conditions" within the meaning of Section 209(b)(1)(B) because "the health and welfare effects of climate change impacts on California are not extraordinary to that state and to its particular characteristics,"[14] simply does not square with existing evidence and future projections. Climate change poses severe health and welfare impacts to California that are unique in both nature and degree from other states and from the United States as a whole. These include increased heat-related morbidity and mortality, increased formation of ambient air pollution, and greater wildfire frequency. These impacts will increasingly harm Californians' respiratory health and will disproportionately affect vulnerable populations.

[13] U.S. GLOBAL CHANGE RESEARCH PROGRAM, FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II: IMPACTS, RISKS, AND ADAPTATION IN THE UNITED STATES 56 DOI: 10.7930/NCA4.2018, 525 (2018).

[14] 84 Fed. Reg. at 51,339. It should be noted that nothing in the text of Section 209(b) suggests that EPA can revoke a waiver once granted. The criteria set forth in Section 209(b)(1)(A)-(C) only set forth the standards upon which EPA can deny a waiver application. *See* 42 U.S.C. § 7543(b)(1).

Amici curiae ATS, ALA, AMA, APHA, and CMA submit this brief to assist the Court in understanding the serious public health implications that stem from EPA's partial revocation of California's 2013 Section 209(b) waiver.

ARGUMENT

I. THE GHG AND ZEV REGULATIONS ARE CRUCIAL TO CALIFORNIA'S OVERALL COMPLIANCE WITH THE CLEAN AIR ACT.

The relationship between local air quality and climate is widely recognized—temperature, precipitation, and wind patterns all affect the formation and concentration of air pollutants. Nowhere in this country is that relationship more palpable than in California, with its unique combination of wind and ocean currents, topography, and densely populated, automobile-dependent cities. California's efforts to address these difficult challenges at the state level through automobile standards predates the CAA itself, and is precisely why Congress carved out an exception to the federal government's exclusive regulation of automobile emissions regulations under Section 209(b).[15]

[15] 42 U.S.C. § 7543(b)(1) (this exception applies only to California because California was the only state to have "adopted standards (other than crankcase emission standards) for the control of emissions from new motor vehicles or motor vehicle engines prior to March 30, 1966."); *see Motor & Equip. Mfrs. Ass'n, Inc. v. EPA*, 627 F.2d 1095, 1109-10 (D.C. Cir. 1979).

California's waiver has allowed it to serve as a laboratory for ambitious air pollution control technologies, such as the catalytic converter.[16] Continuing this trend, the ACC program promises to bring innovative low- or zero-pollution technologies necessary to address climate change and criteria emissions to state, national, and international automobile markets. Without the innovative GHG and ZEV regulations, California may not be able to achieve compliance with various ambient air quality standards, endangering the health of its citizens and continuing to put it in violation of CAA requirements.

A. The Adverse Impacts of Automobile Emissions on Public Health in California are Overwhelmingly Clear.

Automobile emissions are composed of criteria pollutants and non-criteria pollutants, such as carbon dioxide ("CO_2"). Pollutants from automobile emissions include: nitrogen oxides (NO_x), volatile organic compounds ("VOCs"), carbon monoxide ("CO"), and particulate matter less than ten microns ("PM_{10}") and less than 2.5 microns ("$PM_{2.5}$").[17] Automobile emissions are one of the primary sources of the precursors of ground-level (or tropospheric) ozone, an important criteria pollutant affecting human health.[18]

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[16] Matthew L. Wald, *California's Pied Piper of Clean Air*, N.Y. TIMES, (Sept. 13, 1992), at § 1, p. 1, *available at* https://www.nytimes.com/1992/09/13/business/california-s-pied-piper-of-clean-air.html.

[17] S.L. Winkler et al., *Vehicle criteria pollutant (PM, NOx, CO, HCs) emissions: how low should we go?*, 1 NPJ – CLIMATE AND ATMOSPHERIC SCIENCE 1 (2018).

[18] *See Criteria Air Pollutants,* U.S. EPA (Mar. 8, 2018), https://www.epa.gov/criteria-air-pollutants; *Basic Information about NO_2*, U.S. EPA (Sept. 8, 2016), https://www.epa.gov/no2-

Ozone Pollution and Health

Ozone pollution is a longstanding threat to public health in California. Epidemiological studies consistently report significant correlations between long-term exposure to ozone and reduced airway function,[19] even in healthy young adults.[20] Ozone pollution both aggravates symptoms in asthma-sufferers and causes lung inflammation that leads to asthma development.[21] Lung inflammation can cause shortness of breath, coughing, aggravation of emphysema and chronic bronchitis, and chronic obstructive pulmonary disease ("COPD").[22]

California is home to the three cities that consistently suffer the worst air pollution in the nation—Los Angeles, Bakersfield, and Fresno.[23] California is home to sixteen regions classified by EPA as ozone nonattainment areas—more than any other state.[24] The only "extreme" or "severe" ozone nonattainment areas

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pollution/basic-information-about-no2#What%20is%20NO2 (Ozone is formed when sunlight strikes NOx, which are emitted into ambient air when fossil fuels are burned).

[19] Daniela Nuvolone et al., *The Effects of Ozone on Human Health*, 25 ENVTL. SCI. & POLLUTION RES. 8074, 8078 (2017). *See also* Rob McConnell et al., *Asthma in exercising children exposed to ozone: a cohort story*, 359 LANCET 386-91 (2002).

[20] Ira B. Tager et al., *Chronic Exposure to Ambient Ozone and Lung Function in Young Adults*, 16 EPIDEMIOLOGY 751, 751-59 (2005).

[21] EPA, *Ground-level Ozone: Health Effects of Ozone Pollution*, EPA: ENVIRONMENTAL TOPICS – AIR (July 30, 2019), https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution.

[22] *Id.*

[23] AMERICAN LUNG ASS'N, STATE OF THE AIR 2020 5 (2020 ed.).

[24] *See* EPA, *Summary Nonattainment Area Report*, EPA: GREEN BOOK (Jan. 31, 2020), https://www3.epa.gov/airquality/greenbook/popexp.html#Notes.

in the country are in California.[25] These regions are also among the most densely populated nonattainment areas in the U.S.[26] In 2015, nearly 35 million Californians were exposed to ozone levels exceeding federal health standards.[27]

PM Pollution and Health

Two California cities top the list for annual and 24-hour $PM_{2.5}$ pollution in the US.[28] $PM_{2.5}$ comes from a variety of sources (e.g., mobile, point and area sources) with a large fraction attributable to gasoline or diesel-powered automobiles. The adverse cardiovascular health impacts of elevated PM exposures has been understood for some time.[29] Impacts of long-term PM exposure has been observed for various blood markers of cardiovascular risk, subclinical chronic inflammatory lung injury, and subclinical atherosclerosis; while short-term PM exposure has been demonstrated to be associated with cardiovascular mortality and hospital admissions, stroke mortality and hospital admissions, altered cardiac autonomic function, and more.[30] A newer generation of studies continues to find

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[25] *See* EPA, *8-Hour Ozone (2015) Nonattainment Areas*, EPA: GREEN BOOK (Jan. 31, 2020), https://www3.epa.gov/airquality/greenbook/jnc.html; EPA, *Ozone Designation and Classification*, EPA: GREEN BOOK (Sept. 17, 2018), https://www.epa.gov/green-book/ozone-designation-and-classification-information (last visited Feb. 26, 2020).
[26] *See* EPA, *Summary Nonattainment Area Report*, *supra* note 24.
[27] *Id.*
[28] STATE OF THE AIR 2020, *supra* note 23, at 5 (Fresno-Madera-Hanford is the most-polluted for year-round PM pollution and Bakersfield has the worst short-term PM pollution.).
[29] C. ARDEN POPE III & DOUGLAS W. DOCKERY, HEALTH EFFECTS OF FINE PARTICULATE AIR POLLUTION: LINES THAT CONNECT, 56 J. AIR & WASTE MGMT. ASS'N 722, 710 (2006).
[30] *Id.* at 731.

adverse cardiovascular health risks as well as broad adverse effects implicating the respiratory system, nervous system, cancer risk and mortality risks.[31]

B. The GHG and ZEV Regulations Address Traditional Criteria Pollutants, Such as Ozone and Particulate Matter.

The GHG and ZEV regulations put in place by California work in concert with California's LEV III criteria pollutant emission standards. Taken together as a whole, the standards in California's ACC program not only reduce tailpipe emissions from automobiles, but also reduce emissions from upstream sources including the extraction, transportation, and refining of fuels used in automobiles. In addition to any air quality benefits from reducing emissions of precursors for PM and ozone, the mitigation of GHG emissions through California's GHG and ZEV regulations is intended to mitigate climate impacts, which otherwise exacerbates the generation and formation of criteria pollutants such as PM and ozone.[32]

Furthermore, population trends amplify the problems with ambient air pollution in California. California's population tripled during the last half of the Twentieth Century.[33] Over the last sixty years, Statewide vehicle ownership and

[31] *See* EPA, EPA/600/R-19/199, INTEGRATED SCIENCE ASSESSMENT FOR PARTICULATE MATTER, 1-21 – 1-31 (Dec. 2019).
[32] *See* FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II, *supra* note 13, at 514.
[33] Hans Johnson, *California's Population*, PUBLIC POLICY INSTITUTE OF CALIFORNIA: JUST THE FACTS (Mar. 2017), https://www.ppic.org/publication/californias-population/.

the number of miles driven have increased.[34] Unsurprisingly, the transportation sector is now both the largest contributor of the State's GHG emissions and the leading cause of air pollution and ozone-forming emissions.[35]

Additionally, wildfires and prescribed burns contribute to ozone formation and are a major source of PM, contributing approximately forty percent of direct $PM_{2.5}$ emissions nationwide.[36] This figure is expected to grow as climate change extends the frequency and intensity of wildfires and the length of the wildfire season, particularly in the Western US.[37] Wildfires shifted some of California's cleanest cities for short-term PM pollution to the nation's top twenty-five most polluted.[38] Given the demonstrated impacts of ozone and particulate matter on respiratory health and the fact that climate change will exacerbate localized air pollution in California, it is imperative that the state retain its GHG and ZEV regulations.

C. California's Automobile Regulations Have Significantly Improved the State's Air Quality, Greatly Benefiting Public Health.

California's automobile regulations have enabled the State to reduce the growth rate of GHG and criteria pollutant emissions. In 2015, GHG emissions in California were two percent higher than 1990 levels, but emissions per capita had

[34] CAL. ENERGY COMM'N, FINAL 2019 INTEGRATED ENERGY POLICY REPORT 219 (2019).
[35] *Id.*
[36] FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II, *supra* note 13, at 521.
[37] *Id.*
[38] STATE OF THE AIR 2020, *supra* note 23, at 8.

declined by twenty-two percent while emissions per dollar of Gross Domestic Product declined by forty-six percent.[39] California achieved these reductions despite the State's population increasing by approximately 10 million people from 1990 to 2019.[40]

Before CARB began regulating automobile emissions in the 1960s, one-hour ozone averages in the South Coast Air Basin exceeded 600 ppb and eight-hour averages approached 400 ppb.[41] Since 1998, neither the one- or eight-hour ozone averages has exceeded 200 ppb.[42] Although $PM_{2.5}$ concentration measurements only began in 1999, studies on PM_{10} concentrations—which include $PM_{2.5}$—indicate that those concentrations have also decreased significantly.[43]

These air quality improvements have measurably improved the health of Californians. In 2015, doctors and medical scientists evaluating the effect of declining levels of ambient NO_x and PM reported that such long-term air quality

[39] OFFICE OF ENVTL. HEALTH HAZARD ASSESSMENT, CALIFORNIA ENVTL. PROTECTION AGENCY, INDICATORS OF CLIMATE CHANGE IN CALIFORNIA 10 (May 2018), *available at* https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf.
[40] *Compare* U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census, 1990 CH-1-6, 1990 Census of Housing – General Housing Characteristics, California, Table 13 (June 1992), https://www2.census.gov/library/publications/decennial/1990/ch-1/ch-1-6.pdf (listing California's total population at 29,760,021) *with* U.S. Census Bureau, *Quick Facts – California*, https://www.census.gov/quickfacts/CA (listing California's estimated July 1, 2019 population at 39,512,223).
[41] David D. Parrish et al, *Air quality improvement in Los Angeles—perspectives for developing cities*, FRONTIER ENVTL. SCI. ENG., (Aug. 9, 2016) at 2.
[42] *Id.*
[43] *Id.* at 5.

improvements were associated with statistically and clinically significant positive effects on lung function and growth in children.[44] This study demonstrated significant lung function and development improvements in response to declining levels of NO_x, $PM_{2.5}$, and PM_{10} in children both with and without asthma.[45] Additionally, in a separate analysis it was demonstrated that lower asthma incidence was shown to be associated with decreases in ambient NO_2 and $PM_{2.5}$ in Southern California.[46]

D. California Will be Less Able to Meet National Ambient Air Quality Standards Without its GHG and ZEV Regulations.

Air pollution and climate change have an inter-related relationship with one another. Therefore, despite ongoing efforts to reduce emissions of criteria pollutants and their precursors, the ambient concentrations of these pollutants will continue to be difficult to control in the face of changing climatic conditions. The direct connection between worsening climate change and worsening ambient air quality underscores the importance of California's GHG and ZEV regulations as part of the State's longstanding efforts to achieve compliance with the CAA's National Ambient Air Quality Standards ("NAAQS").[47]

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[44] W. James Gauderman et al., *Association of Improved Air Quality with Lung Development in Children*, 372 N. ENGLAND J MED. 905 (2015).
[45] *Id.*
[46] Erika Garcia et al., *Association of Changes in Air Quality with Incident Asthma in Children in California*, *1993-2014*, 321 JAMA 1,907, 1,909-14 (2019).
[47] CARB, ANALYSIS IN SUPPORT OF COMMENTS OF THE CALIFORNIA AIR RESOURCES BOARD ON THE SAFER AFFORDABLE FUEL-EFFICIENT (SAFE) VEHICLES RULE FOR MODEL YEARS 2021-2026

Multiple climatic factors (including precipitation, temperature, and circulation patterns) impact the formation, transportation and ambient concentrations of both PM and ozone. California continues to have the most severe ozone and $PM_{2.5}$ problems in the nation. Notably, California cities dominate the American Lung Association's State of the Air most polluted cities list.[48] Climate change will only exacerbate local ambient air pollution levels in these cities because changes in temperature and precipitation further increase the formation and build up of ambient concentrations of $PM_{2.5}$ and ozone.[49]

II. CALIFORNIA'S GHG AND ZEV REGULATIONS ADDRESS THE COMPELLING AND EXTRAORDINARY CONDITIONS PRESENTED BY CLIMATE CHANGE.

In pertinent part, EPA has revoked its waiver of California's GHG and ZEV regulations pursuant to Section 209(b)(1)(B) because "the health and welfare

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PASSENGER CARS AND LIGHT TRUCKS, DOCKET ID EPA-HQ-OAR-2018-0283; NHTSA-2018-0067; NHTSA-2017-0069, 373 (Oct. 26, 2018) ("Further, as CARB has consistently explained, California needs its Advanced Clean Cars program, and specifically its GHG and ZEV standards, now to increase adoption of technologies that will allow for greater emissions reductions required in future years. . . . As part of this integrated program, the ZEV standards provide a crucial technology-forcing piece . . . by requiring manufacturers to produce increasing numbers of pure ZEVs and plug-in hybrid electric vehicles in the 2018-2025 model years. This increasing ZEV deployment is critical to achieving the statewide 2030 and 2045 GHG requirements and 2031 South Coast SIP commitments (the 2016 State SIP Strategy identified the need for light-duty vehicles to reduce NOx emissions by over 85 percent by 2031 to meet federal standards).") (quotation marks omitted).

[48] STATE OF THE AIR 2020, *supra* note 23, at 7.

[49] *Id. See also* FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II, *supra* note 13, at 56.

effects of climate change impacts on California are not extraordinary to that state and to its particular characteristics."[50]

EPA's assertion is incorrect. Climate change is undeniably a "compelling and extraordinary condition[]" which necessitates State standards—such as the GHG and ZEV regulations—to address. GHG emissions "from the tailpipes of the California motor vehicle fleet" contribute to local air pollution in levels in excess of ambient levels.[51] These emissions adversely affect health and welfare by worsening climate change and criteria pollution, which are already "extraordinarily aggravated in California as compared to other parts of the country" due to "California's peculiar characteristics."[52] Given the outsized influence of California's transportation sector on the state's overall GHG emissions,[53] and the evidence linking GHG emissions to climate change and worsening air quality,[54] California undoubtedly "needs" the GHG and ZEV regulations to meet the compelling and extraordinary conditions posed by climate change.

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[50] 84 Fed. Reg. at 51,339.
[51] *Id*.
[52] *Id.*
[53] CARB, CALIFORNIA GREENHOUSE GAS EMISSIONS FOR 2000 TO 2017: TRENDS OF EMISSIONS AND OTHER INDICATORS 6 (2019 ed.). *See also* U.S. Energy Information Administration, Energy-Related Carbon Dioxide Emissions by State, 2006-2016 (Feb. 27, 2019), https://www.eia.gov/environment/emissions/state/analysis/ ("Table 4. 2016 state energy-related carbon dioxide emissions by sector" indicates that California's transportation sector accounted for 59% of the state's overall CO_2 emissions).
[54] *See, e.g.*, FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II, *supra* note 13, at 1102-46.

A. Automobile Emissions are a Significant Source of GHG Emissions Driving Climate Change.

Transportation is the largest source of GHG emissions in California, accounting for forty percent of GHG emissions in 2017.[55] Personal vehicles alone are responsible for twenty-eight percent of California's total GHG emissions.[56] Nationally, the transportation sector accounted for nearly thirty-six percent of the CO_2 generated from fossil fuel combustion in 2018.[57] Globally, over seventy-two percent of CO_2 emissions from the transportation sector are from road vehicles.[58]

The share of GHG emissions emitted by California automobiles is likely to grow. Today, California is home to roughly 30 million registered automobiles.[59] As California's economy has grown, so has the number of "mega-commuters" who travel ninety miles or more to work.[60] More workers rely upon single-occupant vehicles to commute, and workers are spending more time commuting.[61] Although

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[55] CARB, CALIFORNIA GREENHOUSE GAS EMISSIONS FOR 2000 TO 2017, *supra* note 53, at 1. *See also* CAL. ENERGY COMM'N, FINAL 2019 INTEGRATED ENERGY POLICY REPORT, *supra* note 34, at 219.
[56] CARB, CALIFORNIA GREENHOUSE GAS EMISSIONS FOR 2000 TO 2017, *supra* note 53, at 6.
[57] U.S. EPA, EPA 430 P-20-001, DRAFT INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2018 (Feb. 12, 2020).
[58] SIMS R. ET AL., WORKING GROUP III TO THE FIFTH ASSESSMENT REPORT OF THE IPCC, *2014: Transport*, *in* CLIMATE CHANGE 2014: MITIGATION OF CLIMATE CHANGE 606. (2014), *available at* https://www.ipcc.ch/site/assets /uploads/2018/02/ipcc_wg3_ar5_chapter8.pdf.
[59] CAL. ENERGY COMM'N, *supra* note 34, at 219.
[60] The Times Editorial Board, *California finally acted on the housing crisis; will 2020 be even better?*, LOS ANGELES TIMES: EDITORIALS (Dec. 29, 2019), https://www.latimes.com/opinion/story/2019-12-29/2019-housing-newsom-review.
[61] *California Commuters Continue to Choose Single Occupant Vehicles*, CALIFORNIA CENTER FOR JOBS & THE ECONOMY: REPORTS (Mar. 2016), https://centerforjobs.org/ca/special-

Statewide transportation emissions declined from 2007 to 2013, total Statewide GHG emissions increased by 9.0 million metric tons of CO_2e for the years 2013 to 2017.[62]

Climate experts insist that regulation of transportation sector emissions is an essential element of climate change mitigation. Without implementation of aggressive and sustained mitigation policies, transportation sector emissions could increase at a faster rate than emissions from the other energy end-use sectors,[63] in part because light-duty vehicle ownership is expected to double over the coming decades.[64] Scientists are highly confident that the proliferation of improved vehicle and engine performance technologies and low-carbon fuels offer high GHG mitigation potential.[65]

Revoking California's waiver will increase GHG emissions in California, thereby exacerbating the serious impacts climate change will have within the State. According to one estimate, revoking California's waiver and rolling back EPA's emissions standards will increase GHG emissions by 1,055 to 1,317 million metric tons ("MMT").[66] By 2025, CARB estimates that the ACC program would reduce

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reports/california-commuters-continue-to-choose-single-occupant-vehicles (last visited Feb. 10, 2020).

[62] CARB, CALIFORNIA GREENHOUSE GAS EMISSIONS FOR 2000 TO 2017, *supra* note 53, at 8.

[63] SIMS R. ET AL., *supra* note 58, at 603.

[64] *Id.* at 610.

[65] *Id.* at 603.

[66] EMILY WIMBERGER & HANNAH PITT, RHODIUM GROUP - U.S. CLIMATE SERVICE, COME AND TAKE IT: REVOKING THE CALIFORNIA WAIVER 2-3 (Oct. 28, 2019).

CO_2 emissions by almost 14 MMT per year (twelve percent from 1990 baseline levels).[67] CARB further estimates that its GHG standards for MYs 2017 – 2025 will "reduce fleet average CO_2 levels by about 34 percent from MY 2016 levels".[68] If left intact, the ACC program would achieve cumulative GHG emissions reductions of 850 MMT CO_2e over 2017 – 2050.[69]

The ZEV regulation complements these reductions by encouraging the entry of the cleanest cars to the California market.[70] Under California's ACC program, ZEVs and plug-in hybrids would comprise about fifteen percent of California automobile sales in 2025.[71] ZEVs comprised 7.6 percent of the California market share as of late 2019.[72] California has been the world's largest ZEV market for decades.[73] Nevertheless, ZEV market penetration must continue to grow in order to adequately address climate change.

B. California Will Face Public Health Impacts From Climate Change That are Unique in Nature and Degree from Other States and From the United States as a Whole.

EPA's contention that "the health and welfare effects on California are not

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[67] 78 Fed. Reg. at 2,122.
[68] *Id*. at 2,135.
[69] 84 Fed. Reg. at 51,329, n. 210 (quoting 78 Fed. Reg. at 2,114. CARB Resolution 12-11, at 19, (Jan. 26, 2012)).
[70] 78 Fed. Reg. at 2,137.
[71] *Id*. at 2,119.
[72] CALIFORNIA CENTER FOR JOBS & THE ECONOMY, STATE'S PROGRESS ON 5 MILLION ZERO EMISSION VEHICLES (ZEV) BY 2030: Q4 2019 RESULTS 3(2020).
[73] INDICATORS OF CLIMATE CHANGE IN CALIFORNIA, *supra* note 39, at 15.

extraordinary to that State and to its particular characteristics"[74] is at odds with existing scientific literature and future projections. California undoubtedly faces compelling and extraordinary conditions as a result of climate change and is poised to suffer impacts that are extremely severe. Warmer temperatures and changes in precipitation will exacerbate existing air quality problems across the State, increasing ozone and PM morbidity and mortality and heat-related illness. Additionally, increased intensity and frequency of wildfires in California threaten to further undercut the progress the state has made in improving air quality. These impacts will affect the public health of Californians and will disproportionately impact the State's most vulnerable citizens.

The sheer size and scope of California's population and economy make it particularly vulnerable to climate change's myriad impacts. California is the most populous State in the nation,[75] and is home to three of the ten largest cities in the U.S.—Los Angeles, San Diego, and San Jose.[76] California is charged with ensuring the public health and safety of one out of eight U.S. residents.[77] California has the fifth largest economy in the world and the largest in the U.S.—constituting fifteen

[74] 84 Fed. Reg. at 51,339.
[75] Johnson, *California's Population*, *supra* note 33; GREG DE NEVERS ET AL., THE CALIFORNIA NATURALIST HANDBOOK 5 (U.C. Press 2013).
[76] DE NEVERS, *supra* note 75, at 5.
[77] Johnson, *supra* note 33.

percent of the U.S. economy.[78] California grows close to half of the country's fruit, vegetables, and nuts, as well as most of the nation's wine grapes, strawberries, and lettuce.[79] The State's irrigation-dependent agricultural industry is especially vulnerable to climate change.[80]

Exacerbation of Air Pollution

Rising temperatures caused by climate change will exacerbate existing air pollution problems in California.[81] For example, climate change will worsen California's ozone nonattainment problem. One study indicates that the largest increases in ground-level ozone will be in California and the central U.S.[82] Researchers estimate that the economic cost of ozone-related health effects of climate change in 2030 will amount to hundreds of millions of U.S. dollars under the high-emission scenarios.[83] Accordingly, California's "efforts to reduce climate change by reducing GHG emissions [via the GHG and ZEV regulations] are

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[78] *Best States for Business: California*, FORBES: PLACES (Dec. 2019), https://www.forbes.com/places/ca/; DE NEVERS ET AL., *supra* note 75, at 5.
[79] FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II, *supra* note 13, at 1105.
[80] *Id*. at 1107.
[81] CARB, ANALYSIS IN SUPPORT OF COMMENTS OF THE CALIFORNIA AIR RESOURCES BOARD ON THE SAFER AFFORDABLE FUEL-EFFICIENT (SAFE) VEHICLES RULE FOR MODEL YEARS 2021-2026 PASSENGER CARS AND LIGHT TRUCKS, *supra* note 47 at 371-72.
[82] Neal Fann et al., *The geographic distribution and economic value of climate change-related ozone health impacts in the United States in 2030*, 65 J. AIR & WASTE MGMT. ASS'N. 570, 574 (2015).
[83] *Id*. at 574-75.

important as part of California's broader efforts to reduce ozone [and other pollutant] levels in the State."[84]

The chronic air quality issues and regularly occurring low-level inversions, which, in part, spurred Congress to enact the CAA's waiver provision,[85] are products of California's location and climate.[86] Temperature inversions concentrate ambient air pollutants, exposing the public in the affected region to elevated levels of air pollution. California's unique topographic profile—a "bathtub shape" with sides of uneven height because of the way the mountain ranges enclose the Central Valley—create ideal conditions for temperature inversions.[87] Temperature inversions cause acute health problems by limiting the diffusion of dust, smoke, and other air pollutants to the portion of the troposphere below the inversion, concentrating pollutants where people live and breathe.[88] Rising temperatures increase sea-breeze circulation, which is linked to increased magnitude and frequency of persistent inversion episodes.[89]

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[84] CARB, ANALYSIS IN SUPPORT OF COMMENTS OF THE CALIFORNIA AIR RESOURCES BOARD ON THE SAFER AFFORDABLE FUEL-EFFICIENT (SAFE) VEHICLES RULE FOR MODEL YEARS 2021-2026 PASSENGER CARS AND LIGHT TRUCKS, *supra* note 47 at 372.
[85] *See* 113 Cong. Rec. 1,067 (Jan. 19, 1967) (noting that the reason Los Angeles suffers from carbon monoxide pollution is, in part, "because of Los Angeles' peculiar geography.").
[86] SAM IACOBELLIS ET AL., FINAL REPORT TO THE CAL. AIR RES. BD. PROJECT 06-319, IMPACT OF CLIMATE CHANGE ON THE FREQUENCY AND INTENSITY OF LOW-LEVEL TEMPERATURE INVERSIONS IN CALIFORNIA 25 (July 2010).
[87] DE NEVERS ET AL., *supra* note 75, at 27.
[88] *Temperature inversion*, ENCYCLOPÆDIA BRITANNICA (last updated May 21, 2020), https://www.britannica.com/science/temperature-inversion.
[89] SAM IACOBELLIS ET AL., *supra* note 86, at 20-21.

Inversions are already present nearly every day during summer and sixty-five percent of winter days in California.[90] Scientists estimate that inversion strength[91] will grow over the century, and that increases in inversion strength will decrease air quality in the San Joaquin and South Coast Air Basins.[92]

Heat-Related Morbidity and Mortality

Climate change will increase heat-related morbidity. Consistent with global and national trends, temperatures in California have continuously risen since 1895.[93] California's four warmest years on record have all been within a recent five-year period (2014, 2015, 2017, and 2016).[94] Extreme heat episodes most acutely impact society's vulnerable populations—young children and the elderly, pregnant women, outdoor workers, and the homeless.[95]

Extreme heat is already a public health threat in California, and California is home to many demographics that are especially vulnerable to such conditions. For example, over eighty percent of the heat-related strokes in California during the

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[90] *Id.* at 25.
[91] Inversions vary in strength, which is measured as the temperature difference between the top and base of the inversion, with strong inversions being thicker and weak inversions being thinner vertically. *Id.* at 20.
[92] *Id.* at 23.
[93] INDICATORS OF CLIMATE CHANGE IN CALIFORNIA, *supra* note 39, at S-4.
[94] *Id.*
[95] *See* FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II, *supra* note 13, at 1108. *See also* Marie S. O'Neill et al., *Preventing heat-related morbidity and mortality: New approaches in a changing climate*, 64 MATURITAS 98-103 (2009).

2006 heat wave occurred in the State's agricultural centers.[96] Most regions of California will have mortality increases for those older than sixty-five that are well in excess of historical values by a factor of ten or more by the 2090s.[97] Under a high-emissions scenario, heat-related deaths across all age groups in Los Angeles are predicted to increase seven-fold by the end of the century.[98]

Wildfires

Extreme weather and drought will increase the frequency and intensity of wildfires, imposing enormous economic costs on California and its residents.[99] Hotter temperatures also increase the incidence of "megadroughts" lasting more than a decade.[100] Under high emissions scenarios, California is predicted to experience a thirty-six to seventy-four percent increase in area burned by 2085.[101] California wildfires simultaneously aggravate the impact and warming effect of climate change and are themselves fueled by climate change. Increased frequency and intensity of wildfires introduce ozone and particulate matter pollution, which,

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[96] Sumi Hoshiko et al., *A simple method for estimating excess mortality due to heat waves, as applied to the 2006 California heat wave*, 55 INT'L J. OF PUB. HEALTH 133, 134 (2010).
[97] Scott C. Sheridan et al., *Future heath vulnerability in California Part II: projecting future heat-related mortality*, 115 CLIMATIC CHANGE 311, 311 (2011).
[98] LOUISE BEDSWORTH, PUBLIC POLICY INSTITUTE OF CALIFORNIA CLIMATE CHANGE AND CALIFORNIA'S PUBLIC HEALTH INSTITUTIONS 4 (Nov. 2008), *available at* https://www.ppic.org/content/pubs/report/R_1108LB3R.pdf.
[99] PETER HOWARD, COST OF CARBON, FLAMMABLE PLANET: WILDFIRES AND THE SOCIAL COST OF CARBON 7-8 (2014), https://costofcarbon.org/files/Flammable_Planet__Wildfires_and_Social_Cost_of_Carbon.pdf.
[100] FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II, *supra* note 13, at 1109.
[101] HOWARD, *supra* note 99, at 8 (*citing* A. L. Westerling et al., *Climate change and growth scenarios for California wildfire*, 109 (Supplement 1) CLIMATIC CHANGE S446 (2011)).

in turn, increase the risk of respiratory disease and mortality, with immense public health costs.[102] In 2018, California exhausted its annual budget of $442.8 million, and required an additional $234 million to continue combatting wildfires.[103] Economic studies document three to sixteen percent declines in local property values nearby recently burned areas in California.[104] These damages are generally underestimated.[105] In fact, economists estimate that people are willing to pay between $89.87 to $95.03 for a reduction in one wildfire symptom day.[106]

CONCLUSION

In light of the overwhelming evidence that California needs its GHG and ZEV regulations in order to address pressing public health impacts from criteria pollution and climate change, *amici curiae* ATS, ALA, AMA, APHA, and CMA urge this Court to vacate EPA's partial revocation of California's 2013 Section 209(b) waiver.

Dated: July 2, 2020 Respectfully Submitted,

/s/ Hope M. Babcock
Hope M. Babcock

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[102] FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II, *supra* note 13, at 521 ("Wildfire and prescribed fires … together compris[e] about 40% of directly emitted $PM_{2.5}$ in the United States in 2011.").
[103] Brittany Shoot, *California's $442 Million Budget Is Exhausted—and Needs $234 Million More to Keep Fighting*, FORTUNE (Sept. 6, 2018), https://fortune.com/2018/09/06/california-fire-2018-cost-insurance-claims/.
[104] DAVID BATKER ET AL., EARTH ECONOMICS, THE ECONOMIC IMPACT OF THE 2013 RIM FIRE ON NATURAL LANDS: PRELIMINARY ASSESSMENT 24 (Report Version 1.1 ed., 2013).
[105] Leslie Richardson et al., *Valuing Morbidity from Wildfire Smoke Exposure: A Comparison of Revealed and Stated Preference Techniques*, 89 LAND ECON. 96 (2013).
[106] *Id.*

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CERTIFICATE OF COMPLIANCE

I certify that pursuant to Federal Rule of Appellate Procedure 32(a)(7), the attached Brief of *Amici Curiae* the American Thoracic Society, American Lung Association, American Medical Association, American Public Health Association, and California Medical Association is proportionally spaced, has a typeface of 14-point Times New Roman, and contains 6,180 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(f).

I further certify that this brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed. R. App. P. 32(a)(6) because it was prepared using Microsoft Office Word 2020 and uses a proportionally spaced typeface, Times New Roman, in 14-point type for body text and 12-point type for footnotes.

I further certify that all privacy redactions have been made.

I further certify that all paper copies submitted to this Court are exact copies of this version, which is being submitted electronically via the Court's CM/ECF system. I further certify that the electronic submission was scanned for viruses with the most recent version of a commercial virus scanning program and is free of viruses.

/s/ Hope M. Babcock Dated: July 2, 2020
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CERTIFICATE OF SERVICE

I hereby certify that on July 2, 2020, I electronically filed the foregoing Brief of *Amici Curiae*, the American Thoracic Society, American Lung Association, American Medical Association, American Public Health Association, and California Medical Association with the Clerk of the Court for the United States Court of Appeals for the District of Columbia Circuit by using the Court's CM/ECF system. I further certify that all parties are represented by counsel registered with the CM/ECF system, so that service will be accomplished by the CM/ECF system.

/s/ Hope M. Babcock Dated: July 2, 2020
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