

ORAL ARGUMENT NOT YET SCHEDULED

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

WESTERN STATES TRUCKING ASSOCIATION,  
INC., et al.,

*Petitioners,*

v.

UNITED STATES ENVIRONMENTAL  
PROTECTION AGENCY, et al.,

*Respondents.*

No. 23-1143  
& consol. cases

**MOTION OF PUBLIC INTEREST ORGANIZATIONS  
FOR LEAVE TO INTERVENE IN SUPPORT OF RESPONDENTS**

Pursuant to Federal Rule of Appellate Procedure 15(d) and Circuit Rule 15(b), Center for Biological Diversity, Environmental Defense Fund, Natural Resources Defense Council, and Sierra Club move for leave to intervene in support of Respondents in Case No. 23-1143 and all consolidated petitions for review of final actions of the U.S. Environmental Protection Agency (EPA) published as *California State Motor Vehicle and Engine Pollution Control Standards; Heavy-Duty Vehicle and Engine Emission Warranty and Maintenance Provisions; Advanced Clean Trucks; Zero Emission Airport Shuttle; Zero-Emission Power Train Certification; Waiver of Preemption; Notice of Decision*, 88 Fed. Reg. 20,688 (Apr. 6, 2023) (“Waiver Decision”).

As explained below, this Court should grant leave to intervene. First, Movants' request is timely because it is submitted within 30 days of the filing of the above-captioned petition. Fed. R. App. P. 15(d). Second, Movants possess legally protectable interests in the dispositions of any petitions for review of the Waiver Decision, which may as a practical matter impair those interests. *Cf.* Fed. R. Civ. P. 24(a)(2). Third, no existing party adequately represents Movants' interests in this litigation. *Cf. id.*

Respondents in these consolidated cases and Petitioners in Case Nos. 23-1145 and 23-1146 take no position on this motion. Petitioners in Case No. 23-1143 take no position on this motion but reserve the right to file a response. Petitioners in Case Nos. 23-1144, 23-1147, and 23-1148; State Movant-Intervenors; and Environmental Justice Movant-Intervenors in these consolidated cases do not oppose this motion.

## **BACKGROUND**

### **A. Legal Background**

In the Clean Air Act, Congress constructed a regulatory framework that harnesses two sets of emission standards to drive technological innovation and reduce dangerous pollution from new motor vehicles, including medium- and heavy-duty trucks. *See Motor & Equip. Mfrs. Ass'n v. EPA*, 627 F.2d 1095, 1109–10 (D.C. Cir. 1979) (*MEMA*). Under this framework, EPA must establish emission

standards for air pollutants from new trucks and truck engines that it has found “cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.” 42 U.S.C. § 7521(a)(1). The Clean Air Act generally preempts States and localities from enforcing their own emission standards for new motor vehicles. *Id.* § 7543(a). But EPA “shall,” subject to limited conditions, “waive application of” that prohibition to California, which had regulated vehicle emissions before the federal government. *Id.* § 7543(b)(1). That provision reflects Congress’ recognition of the “harsh reality” of California’s air-pollution problems, the substantial contributions motor vehicles make to those problems, and that State’s experience and expertise in regulating vehicular emissions. H.R. Rep. No. 90-728, at 96–97 (1967); *see also* S. Rep. No. 90-403, at 33 (1967). Congress recognized the “benefits for the Nation” from “new control systems” developed in response to California’s technology-forcing standards, as well as the “benefits for the people of California ... from letting that State improve on its already excellent program of emissions control.” *MEMA*, 627 F.2d at 1109–10 (internal quotation marks omitted). EPA, in turn, “has drawn heavily on the California experience to fashion and to improve the national efforts at emissions control.” *Id.* at 1110.

In Section 177 of the Clean Air Act, Congress also granted other States the option to adopt and enforce vehicular emission standards “identical to the

California standards for which a waiver has been granted.” 42 U.S.C. § 7507.

Seventeen other States have exercised their authority to adopt some or all of California’s vehicular emission standards and are colloquially known as “Section 177 States.” In particular, seven States have adopted California’s Advanced Clean Trucks regulation, requiring vehicle manufacturers to sell in their State increasing percentages of medium- and heavy-duty vehicles that emit no tailpipe pollution.<sup>1</sup> Several other States, including Maine, Maryland, and Rhode Island, are considering adopting the Advanced Clean Trucks regulation.

In the 55 years since Congress enacted the waiver provision, California has “expand[ed] its pioneering efforts” to reduce motor vehicle pollution. *MEMA*, 627 F.2d at 1111. Under the deferential review standard the Clean Air Act prescribes, EPA has granted California almost every waiver determination the State has sought—numbering more than 75 waiver determinations.

## **B. Waiver Decision**

On December 20, 2021, California requested that EPA grant waivers of preemption for its Advanced Clean Trucks, Zero Emission Airport Shuttle Bus, and Zero Emission Powertrain Certification regulations. *See* 87 Fed. Reg. 35,768,

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<sup>1</sup> *See* 5 Colo. Code Regs. § 1001-24; 310 Mass. Code Regs. § 7.40; N.J. Admin. Code §§ 7:27-31 & 33; N.Y. Comp. Codes R. & Regs. tit. 6, §§ 218-1.1, 218-2.1, 218-4.1, 218-4.2; Or. Admin. R. 340-257-0050; Vt. Code R. 12.030-040:40-103(b); Wash. Admin. Code §§ 173-423-010 *et seq.*

35,769 (June 13, 2022). The Advanced Clean Trucks regulation requires manufacturers to sell increasing percentages of zero emission trucks in California beginning in model year 2024. *See* 88 Fed. Reg. at 20,689. The Zero Emission Airport Shuttle Bus regulation requires that an increasing portion of the airport shuttle fleets that service the thirteen largest California airports be composed of zero emission shuttles. *See id.* And the Zero Emission Powertrain Certification regulation sets certification requirements for 2021 and subsequent model year medium- and heavy-duty zero emission vehicles. *See id.*

Separately, California requested that EPA confirm its 2018 Amendments to Warranty and Maintenance Provisions for Heavy-Duty Vehicles (“Warranty Amendments”) fall within the scope of a previously granted waiver, 70 Fed. Reg. 50,3222 (Aug. 26, 2005), or alternatively, grant a new waiver for the Amendments. *See* 87 Fed. Reg. 35,760, 35,761 (June 13, 2022). The Warranty Amendments extend the period during which manufacturers must guarantee that new, on-road heavy-duty diesel engines and vehicles comply with applicable emission standards. *See* 88 Fed. Reg. at 20,688.

EPA published notices of opportunity for public hearing and comment on June 13, 2022. 87 Fed. Reg. 35,768; 87 Fed. Reg. 35,760. In response to the

notices, Movants provided comments urging EPA to grant the requested waivers.<sup>2</sup>

On April 6, 2023, EPA published in the Federal Register a notice of its final actions granting the four requested waivers. Waiver Decision, 88 Fed. Reg. 20,688.

On June 5, 2023, six petitions for review to this Court were filed by Western States Trucking Association, Inc. and Construction Industry Air Quality Coalition, Inc. (Case No. 23-1143); the State of Iowa and other States (Case No. 23-1144); the Illinois Soybean Association et al. (Case No. 23-1145); American Fuel & Petrochemical Manufacturers et al. (Case No. 23-1146); The 200 for Homeownership et al. (Case No. 23-1147); and the Owner-Operator Independent Drivers Association, Inc. (Case No. 23-1148) (collectively “Petitioners”). In these lawsuits, Petitioners seek to vacate the Waiver Decision and prevent California from enforcing its Advanced Clean Trucks, Zero Emission Airport Shuttle Bus, and Zero Emission Powertrain Certification regulations and the Warranty Amendments. If Petitioners were to succeed in their challenges and the Waiver Decision were vacated, any Section 177 State that has adopted California’s Advanced Clean Trucks regulation also would be prevented from enforcing its regulations. Movants seek to ensure that California and other States can enforce their emission standards for medium- and heavy-duty vehicles, to preserve the

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<sup>2</sup> Comments of Environmental and Public Health Organizations in Support of California’s Waiver Requests (Aug. 2, 2022), Docket ID Nos. EPA-HQ-OAR-2022-0331-0099 & EPA-HQ-OAR-2022-0330-0066.

important health, environmental, and economic benefits of those standards, and to protect the regulatory framework carefully constructed by Congress to reduce dangerous pollution from motor vehicles.

### STANDARD FOR INTERVENTION

Federal Rule of Appellate Procedure 15(d) states that a motion to intervene in defense of an agency action “must contain a concise statement of the interest of the moving party and the grounds for intervention.” That rule does not specify any standard for intervention, but because “the policies underlying intervention” in district courts “may be applicable in appellate courts,” *Int’l Union v. Scofield*, 382 U.S. 205, 216 n.10 (1965), this Court may look to Federal Rule of Civil Procedure 24 for guidance, *cf. Mass. Sch. of Law at Andover, Inc. v. United States*, 118 F.3d 776, 779 (D.C. Cir. 1997). Rule 24 provides that leave to intervene be granted to a movant who timely “claims an interest relating to the ... transaction that is the subject of the action, and is so situated that disposing of the action may as a practical matter impair or impede the movant’s ability to protect its interest, unless existing parties adequately represent that interest.” Fed. R. Civ. P. 24(a)(2). A court may also grant leave to intervene to anyone who makes a “timely motion”

and who has “a claim or defense that shares with the main action a common question of law or fact.” Fed. R. Civ. Proc. 24(b)(1).

This Court additionally requires a showing of Article III standing by putative intervenors seeking to defend agency actions against petitions for review. *See Nat. Res. Def. Council v. EPA*, 896 F.3d 459, 462–63 (D.C. Cir. 2018). Standing is regularly shown “where a party benefits from agency action, the action is then challenged in court, and an unfavorable decision would remove the party’s benefit.” *Crossroads Grassroots Policy Strategies v. Fed. Election Comm’n*, 788 F.3d 312, 317 (D.C. Cir. 2015). An organization may defend agency action on its members’ behalf when: “(1) at least one of its members would have standing to [defend] in his or her own right; (2) the interests it seeks to protect are germane to the organization’s purpose; and (3) neither the [defense] asserted nor the relief requested requires the participation of individual members in the lawsuit.” *Hearth, Patio & Barbecue Ass’n v. EPA*, 11 F.4th 791, 802 (D.C. Cir. 2021) (cleaned up).

### STATEMENT OF INTEREST AND STANDING

Movants are nonprofit, public-interest organizations committed to protecting their members from the effects of harmful air pollution, including effects traceable to climate change.<sup>3</sup> Movants have long advocated for reducing emissions of oxides

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<sup>3</sup> *See* Decl. of Kassia R. Siegel ¶¶ 2–3 (Center for Biological Diversity); Decl. of John Stith ¶¶ 4–5, 10–11 (Environmental Defense Fund); Decl. of Gina Trujillo

of nitrogen (“NOx”), fine particulate matter (“PM”), greenhouse gases, and other harmful pollutants from the transportation sector.<sup>4</sup> Movants have protectable interests in shielding their members from harms that would result if EPA’s Waiver Decision were vacated.

Movants likewise have standing to intervene. As described in more detail below, Movants’ members would be injured if the Waiver Decision were vacated and accordingly would have standing to defend the Waiver Decision in their own rights. Movants’ members include people who live, work, and recreate near locations where California’s regulations and identical Section 177 State emission standards will most directly affect air-pollution levels,<sup>5</sup> as well as people who live, work, recreate, and own property in areas that experience the effects of climate change.<sup>6</sup>

If this Court were to vacate the Waiver Decision, Movants’ members would suffer economic, health, recreational, and aesthetic injuries from increased air

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¶¶ 3, 6 (Natural Resources Defense Council); Decl. of Katherine Garcia ¶¶ 3–6 (Sierra Club).

<sup>4</sup> See Siegel Decl. ¶¶ 6–10; Stith Decl. ¶¶ 11–12; Trujillo Decl. ¶ 6; Garcia Decl. ¶ 6.

<sup>5</sup> See Decl. of Sylvia Arredondo ¶ 4 (Center for Biological Diversity); Decl. of Eric Knauff ¶¶ 4, 11 (Environmental Defense Fund); Stith Decl. ¶¶ 7–8, 14; Trujillo Decl. ¶ 4; Decl. of Kathleen Woodfield ¶¶ 2, 9–12 (Natural Resources Defense Council); Garcia Decl. ¶ 4; Declaration of Bobbi Jo Chavarria ¶¶ 4–8 (Sierra Club); Decl. of Mary Ann Ruiz ¶¶ 2–5 (Sierra Club).

<sup>6</sup> See Arredondo Decl. ¶ 16; Siegel Decl. ¶ 12; Knauff Decl. ¶¶ 4, 8; Stith Decl. ¶¶ 9, 14; Garcia Decl. ¶ 4.

pollution and worsened effects of climate change. *See infra* Sections A–B.

Movants’ members therefore satisfy the injury-in-fact, causation, and redressability requirements of Article III standing. *Cf. Nat. Res. Def. Council v. Wheeler*, 955 F.3d 68, 76–77 (D.C. Cir. 2020) (finding that movant organization had standing to challenge EPA action based on increased greenhouse gas emissions and effects of climate change on a member’s property).

Movants also satisfy the remaining requirements of associational standing. The interests they seek to protect by participating in this case are germane to their organizational purposes of advocating for reductions of harmful air pollutants from the transportation sector. *See Nat’l Lime Ass’n v. EPA*, 233 F.3d 625, 636 (D.C. Cir. 2000) (characterizing germaneness requirement as “undemanding; mere pertinence between litigation subject and organizational purpose is sufficient” (cleaned up)). Movants’ defense does not require participation of their members because Petitioners will raise questions of law or fact that will be resolved on the administrative record without consideration of those members’ individual circumstances. *See Ctr. for Sustainable Econ. v. Jewell*, 779 F.3d 588, 597–98 (D.C. Cir. 2015).

This Court has often held that Movants and similarly situated organizations have standing to protect their members from pollution that adversely affects those

members. *See, e.g., Nat. Res. Def. Council v. EPA*, 755 F.3d 1010, 1016–17 (D.C. Cir. 2014). The same reasoning applies here.

### **A. Air Pollution Injuries**

If the Waiver Decision were vacated, Movants’ members would suffer from increased exposure to harmful emissions of air pollutants such as NO<sub>x</sub> and PM. For instance, by 2040 in California, the Advanced Clean Trucks regulation will reduce NO<sub>x</sub> by 27.9 tons per day and PM by 0.85 tons per day, and the Zero Emission Airport Shuttle Bus regulation will reduce NO<sub>x</sub> by 9.99 tons per year and PM by 1.7 tons per year.<sup>7</sup> Additionally, the Warranty Amendments will reduce NO<sub>x</sub> and PM emissions by 0.75 tons per day and 0.008 tons per day respectively in California by 2030.<sup>8</sup> Vacating the Waiver Decision would jeopardize those significant emissions reductions.

NO<sub>x</sub> emissions from medium- and heavy-duty vehicles are precursors to ground-level ozone, or smog. Exposure to ground-level ozone is associated with significant public health effects, including decreased lung function, respiratory-

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<sup>7</sup> Advanced Clean Trucks, Zero Emission Airport Shuttle Bus, and Zero Emission Powertrain Certification Regulations Waiver Support Document 2–3 (Dec. 20, 2021), Docket ID No. EPA-HQ-OAR-2022-0331-0003. Those projected emission reductions also reflect the benefits of the Zero Emission Powertrain Certification regulation, as the Advanced Clean Trucks and Zero Emission Airport Shuttle Bus regulations require affected vehicles to be powered by powertrains that are certified in accordance with its requirements. *See id.* at 3.

<sup>8</sup> Warranty Amendments Waiver Support Document 2 (Oct. 22, 2021), Docket ID No. EPA-HQ-OAR-2022-0330-0004.

related hospitalizations, cardiac arrest, and premature death, especially for vulnerable populations such as children, older people, people who work and recreate outdoors, and people with underlying respiratory conditions.<sup>9</sup>

Fine PM, often called “soot,” is associated with a host of adverse health effects, including decreased lung function, allergic responses, chronic obstructive pulmonary disease, lung cancer, and both acute and chronic cardiovascular conditions.<sup>10</sup> Children, whose lungs are still developing, and older people are among those at highest risk from PM pollution.<sup>11</sup> Notably, people of color have higher rates of exposure to harmful PM pollution.<sup>12</sup>

Movants have members who live or spend significant time in ozone nonattainment areas and other high-ozone areas,<sup>13</sup> and some of these members and their families are in vulnerable populations.<sup>14</sup> Movants also have members who use California’s thirteen largest airports for travel.<sup>15</sup> Movants’ members already experience ozone- and PM-related health impacts and financial impacts, and those

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<sup>9</sup> See Decl. of Elena Craft ¶¶ 6–20 (Environmental Defense Fund).

<sup>10</sup> See *id.* ¶¶ 21, 24–29.

<sup>11</sup> See *id.* ¶ 21.

<sup>12</sup> See *id.* ¶ 25.

<sup>13</sup> See Arredondo Decl. ¶¶ 3–5, 9–10; Knauft Decl. ¶¶ 4–5; Woodfield Decl. ¶ 3; Chavarria Decl. ¶¶ 4–5; Ruiz Decl. ¶¶ 2, 4.

<sup>14</sup> See Arredondo Decl. ¶ 10; Craft Decl. ¶¶ 17–18 (describing vulnerable populations); Knauft Decl. ¶¶ 4, 16; Woodfield Decl. ¶ 6; Chavarria Decl. ¶¶ 2, 6; Ruiz Decl. ¶ 6.

<sup>15</sup> See Woodfield Decl. ¶ 10.

impacts will worsen absent enforcement of the Warranty Amendments, the Advanced Clean Trucks, Zero Emission Airport Shuttle Bus, and Zero Emission Powertrain Certification regulations, and identical Section 177 State emission standards.<sup>16</sup> Some members are forced to limit their work, recreation, and other outdoor activities due to their concern about ozone- and PM-related health hazards, and these concerns and limitations would likewise increase absent enforcement of those state emission standards.<sup>17</sup>

Vacating the Waiver Decision would also harm Movants' members by worsening pollution near roadways in California. Harmful emissions from trucks contribute significantly to near-roadway pollution.<sup>18</sup> Movants have members who live and work, and whose children attend school, near freeways, warehouses, airports, seaports, and other heavily trafficked freight corridors.<sup>19</sup> Levels of NOx, PM, volatile organic compounds, sulfur oxides, and hazardous air pollutants are typically elevated in nearby areas, causing harm to those living, working, and attending school nearby.<sup>20</sup> This is especially true for people of color and people with low incomes, who are more likely to be living near roadways and who are

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<sup>16</sup> See Arredondo Decl. ¶¶ 6–8; Siegel Decl. ¶ 12; Woodfield Decl. ¶ 6; Chavarria Decl. ¶¶ 6–8.

<sup>17</sup> See Knauff Decl. ¶ 16; Chavarria Decl. ¶¶ 6–8; Ruiz Decl. ¶¶ 6–8.

<sup>18</sup> See Siegel Decl. ¶ 11; Craft Decl. ¶¶ 38–42, 44–48.

<sup>19</sup> See Arredondo Decl. ¶¶ 3, 4, 10; Knauff Decl. ¶¶ 6–7; Woodfield Decl. ¶¶ 4–5, 10; Chavarria Decl. ¶¶ 4–5; Ruiz Decl. ¶¶ 5–6.

<sup>20</sup> See Siegel Decl. ¶ 11; Craft Decl. ¶¶ 31–42, 44, 48.

disparately impacted by near-roadway pollution.<sup>21</sup> Absent enforcement of the Warranty Amendments and the Advanced Clean Trucks, Zero Emission Airport Shuttle Bus, and Zero Emission Powertrain Certification regulations, increased near-roadway pollution would interfere with members' activities and harm the health of members and their families, especially those in the most vulnerable populations.<sup>22</sup>

### **B. Climate Change Injuries**

Movants' members would also suffer injuries related to climate change if the Waiver Decision were vacated. Medium- and heavy-duty trucks emit over one-quarter of the transportation sector's greenhouse gas pollution.<sup>23</sup> The Advanced Clean Trucks regulation is projected to reduce carbon dioxide equivalent emissions by 2.9 million metric tons per year by 2040. Advanced Clean Trucks, Zero Emission Airport Shuttle Bus, and Zero Emission Powertrain Certification Regulations Waiver Support Document, *supra*, at 2–3. The Zero Emission Airport

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<sup>21</sup> See Craft Decl. ¶¶ 44–48.

<sup>22</sup> See Arredondo Decl. ¶¶ 11, 15; Craft Decl. ¶¶ 17, 44, 48; Knauft Decl. ¶¶ 11–12, 15–16.

<sup>23</sup> See Siegel Decl. ¶ 11.

Shuttle Bus regulation is also projected to reduce greenhouse gas emissions. *Id.* at

3. Vacating the Waiver Decision would jeopardize those emissions reductions.

Increased greenhouse gas emissions would harm Movants' members. Climate change contributes to higher levels of unhealthy smog, because smog formation is influenced by air temperature and solar radiation level.<sup>24</sup> Climate change also increases the frequency and severity of wildfires near where many members live, by creating hotter, drier conditions more conducive to starting and exacerbating large fires. Those conditions expose Movants' members to health-harming and dangerous fire, smoke, and ash; and force them to limit recreation, travel, and other outdoor activities, and to take other costly and burdensome precautions.<sup>25</sup>

In addition, climate change heightens the frequency and intensity of extreme weather events, such as heat waves, storms and heavy downpours, floods, and droughts.<sup>26</sup> Those events harm Movants' members in many ways: by increasing risk of injury, death, or property damage; decreasing property values; and limiting members' activities to avoid these and related hazards.<sup>27</sup>

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<sup>24</sup> See Arredondo Decl. ¶ 16.

<sup>25</sup> See Knauft Decl. ¶¶ 16–17.

<sup>26</sup> See Siegel Decl. ¶ 12; Knauft Decl. ¶ 8.

<sup>27</sup> See Siegel Decl. ¶ 12; Arredondo Decl. ¶ 16.

An increase in climate-destabilizing pollution due to vacatur of the Waiver Decision also would impair the ability of Movants' members to recreate outdoors and appreciate and study nature. Climate change limits members' opportunities to travel and recreate outdoors by exacerbating air pollution and wildfires.<sup>28</sup> And it is increasingly limiting members' ability to visit, study, and appreciate natural ecosystems and threatened and endangered species impacted by climate change.<sup>29</sup>

### GROUNDS FOR INTERVENTION

The Court should permit Movants to intervene in all petitions for review of the Waiver Decision. For the reasons stated above, Movants have interests in upholding the Waiver Decision, and the disposition of those petitions “may as a practical matter impair or impede [Movants'] ability to protect [their] interest[s].” Fed. R. Civ. P. 24(a)(2). Further, Respondents may not “adequately represent” Movants' interests. *Id.*; see also *Fund for Animals, Inc. v. Norton*, 322 F.3d 728, 735 (D.C. Cir. 2003) (explaining that this “minimal” requirement is “not onerous” (cleaned up)). Movants can make the requisite “minimal” showing, *In re Brewer*, 863 F.3d 861, 873 (D.C. Cir. 2017), “that the representation of [their] interest *may* be inadequate,” *SEC v. Dresser Indus., Inc.*, 628 F.2d 1368, 1390 (D.C. Cir. 1980) (emphasis added). As this Court “often conclude[s],” “governmental entities do not

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<sup>28</sup> See Knauft Decl. ¶ 16.

<sup>29</sup> See Siegel Decl. ¶ 12.

adequately represent the interests of aspiring intervenors.” *Fund for Animals*, 322 F.3d at 736; *see also id.* at 736 n.9 (collecting cases); *Crossroads*, 788 F.3d at 321.

Whereas Respondents’ “obligation is to represent the interests of the American people,” *Fund for Animals*, 322 F.3d at 736, including the trucking and vehicle-fuel industries, Movants represent the more specific interests of their members in avoiding dangerous air pollution. Movants also represent interests different from State Movant-Intervenors. Thus, “examined from the perspective of [governmental parties’] responsibilities,” Movants’ interests are not adequately represented. *Id.* at 737.<sup>30</sup>

This Court has permitted Movants to intervene in support of respondent agencies in many previous actions seeking to invalidate emission standards. *See, e.g.,* Order, *Ohio v. EPA*, No. 22-1081 (June 30, 2022), ECF No. 1952922 (granting intervention with respect to petition for review of, *inter alia*, reinstatement of portions of 2013 waiver of preemption for California light-duty

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<sup>30</sup> In the alternative, Movants would readily meet the requirements for permissive intervention if they were applied here because: 1) Movants will not bring new claims but rather intend to offer defensive arguments, all of which necessarily share questions of law and fact with the underlying challenges; and 2) these cases are at a preliminary stage and no briefing schedule has been set, so this timely motion will not unduly delay or prejudice any other party. *Cf.* Fed. R. Civ. Proc. 24(b)(1)(B). Furthermore, Movants have a long history of advocating for strong state and federal standards to control pollution from medium- and heavy-duty vehicles and respectfully submit that the Court will benefit from their participation here.

vehicle standards); Order, *Texas v. EPA*, No. 22-1031 (Apr. 20, 2022), ECF No. 1943675 (granting intervention with respect to petition for review of greenhouse gas standards for light duty vehicles); Order, *Truck Trailer Mfrs. Ass'n, Inc. v. EPA*, No. 16-1430 (Mar. 10, 2017), ECF No. 1665427 (granting intervention with respect to petition for review of, *inter alia*, greenhouse-gas standards for heavy-duty trailers). This motion likewise should be granted.

### CONCLUSION

This Court should grant Movants leave to intervene in support of Respondents in these consolidated cases.

Respectfully submitted,

June 29, 2023

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## **CIRCUIT RULE 26.1 DISCLOSURE STATEMENT**

Movants state as follows in accordance with Circuit Rule 26.1:

1. Center for Biological Diversity is a nonstock corporation that does not issue shares or debt securities, and it has no parent companies. The Center is a 501(c)(3), nongovernmental organization incorporated in California and headquartered in Tucson, Arizona, and that maintains offices across the country. Combining conservation biology with litigation, policy advocacy, creative communications and strategic vision, the Center is working to protect the lands, water, air, and climate that all living species need to survive.

2. Environmental Defense Fund is a nonstock corporation that does not issue shares or debt securities, and it has no parent companies. Environmental Defense Fund is a national non-profit organization that links science, economics, and law to create innovative, equitable, and cost-effective solutions to urgent environmental problems. Environmental Defense Fund is organized under the laws of the State of New York with its headquarters in New York City.

3. Natural Resources Defense Council, Inc., is a nonstock corporation that does not issue shares or debt securities, and it has no parent companies. Natural Resources Defense Council is a nongovernmental corporation that engages in research, advocacy, public education, and litigation to protect public health and the environment. Natural Resources Defense Council is a tax-exempt organization

incorporated under the laws of the State of New York, with headquarters in New York City.

4. Sierra Club is a nonstock corporation that does not issue shares or debt securities, and it has no parent companies. Sierra Club is a nongovernmental corporation whose mission is to explore, enjoy, and protect the wild places of the Earth; to practice and promote the responsible use of the Earth's resources and ecosystems; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives. Sierra Club is incorporated under the laws of the State of California, with its principal place of business in Oakland, California.

Dated: June 29, 2023

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## CERTIFICATE OF PARTIES

Pursuant to Circuit Rules 27(a)(4) and 28(a)(1)(A), I certify that the parties are set forth below.

Petitioners: Petitioners in Case No. 23-1143 are Western States Trucking Association, Inc. and Construction Industry Air Quality Coalition, Inc.

Petitioners in Case No. 23-1144 are the States of Alabama, Arkansas, Georgia, Indiana, Iowa, Kansas, Louisiana, Mississippi, Missouri, Montana, Nebraska, North Dakota, Ohio, Oklahoma, South Carolina, Utah, West Virginia, and Wyoming; and the Commonwealth of Kentucky.

Petitioners in Case No. 23-1145 are Illinois Soybean Association, Iowa Soybean Association, Minnesota Soybean Growers Association, North Dakota Soybean Growers Association, Ohio Soybean Association, South Dakota Soybean Association, Clean Fuels Development Coalition, ICM, Inc., and Diamond Alternative Energy, LLC.

Petitioners in Case No. 23-1146 are American Fuel & Petrochemical Manufacturers, Agricultural Retailers Association, American Petroleum Institute, American Royalty Council, California Asphalt Pavement Association, California Manufacturers & Technology Association, Consumer Energy Alliance, Domestic Energy Producers Alliance, Energy Marketers of America, Louisiana Mid-Continent Oil & Gas Association, National Association of Convenience Stores,

Nevada Petroleum Marketers & Convenience Store Association, The Petroleum Alliance of Oklahoma, Texas Association of Manufacturers, Texas Oil & Gas Association, Texas Royalty Council, and Western States Petroleum Association.

Petitioners in Case No. 23-1147 are The 200 for Homeownership, The 60 Plus Association, Orange County Water District, and Mesa Water District.

Petitioner in Case No. 23-1148 is Owner-Operator Independent Drivers Association, Inc.

Respondents: Respondents are the United States Environmental Protection Agency and (in Case Nos. 23-1143 and 23-1144) its Administrator, Michael S. Regan, in his official capacity.

Intervenors: The States of California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Maine, Maryland, Minnesota, New Jersey, New York, North Carolina, Oregon, Rhode Island, Vermont, and Washington; the Commonwealths of Massachusetts and Pennsylvania; the District of Columbia; the Cities of Los Angeles and New York; East Yard Communities for Environmental Justice; and People's Collective for Environmental Justice have moved for leave to intervene in support of Respondents in these consolidated cases.

Amici Curiae: There are no amici curiae at the time of this filing.

Dated: June 29, 2023

/s/ Megan M. Herzog  
Megan M. Herzog

**CERTIFICATE OF COMPLIANCE**

I hereby certify that the foregoing Motion to Intervene contains 3,706 words and was composed in Times New Roman font, 14-point. The motion complies with applicable type-volume and typeface requirements.

Dated: June 29, 2023

/s/ Megan M. Herzog  
Megan M. Herzog

**CERTIFICATE OF SERVICE**

I hereby certify that on June 29, 2023, I have served the foregoing Motion to Intervene and attachments on all registered parties through the Court's electronic case filing (CM/ECF) system.

/s/ Megan M. Herzog  
Megan M. Herzog

# **ATTACHMENTS**

**DECLARATION OF SYLVIA ARREDONDO**  
**FOR THE CENTER FOR BIOLOGICAL DIVERSITY**

I, Sylvia Arredondo, state and declare as follows:

1. I am over 18 years of age and competent to give this declaration. I have personal knowledge of the following facts, and if called as a witness could and would testify competently to them. As to those matters which reflect an opinion, they reflect my personal opinion and judgment on the matter.

2. I have been a member of the Center for Biological Diversity (the “Center”) since 2015, and I rely upon the Center to represent my interests in protecting our air quality and our environment by gathering and disseminating information about air pollution, advocating for the remediation of that pollution, and enforcing our environmental laws in the courts.

3. I grew up in Wilmington, in the city of Los Angeles, and lived about a mile from a refinery and directly across the street from oil wells and drilling installations, with truck traffic going to and from the sites, and train switching stations. As a child, I was diagnosed with mild asthma and, on one occasion, I have developed bronchitis because of it. I lived in Wilmington until I moved away to the Bay Area for college. While living in the Bay Area, I began feeling much better and my health improved. In 2012, I returned to Wilmington. Three years later, I began living in an area close to the Phillips 66 refinery, the Interstate 110

freeway, and the Port of Los Angeles.

4. In 2019, I moved from Wilmington to Long Beach, California. I live six miles from the Port of Long Beach and within eight miles of the Valero Wilmington, Marathon Carson, and Marathon Los Angeles refineries and the Port of Los Angeles. I live less than five miles from the Long Beach Airport. All of these locations have significant truck traffic to and from them.

5. I am employed as a Civic Engagement Director for Communities for a Better Environment (“CBE”), an environmental justice organization that seeks to prevent pollution and build healthy communities and environments. I normally work out of CBE’s Wilmington office, which is less than a quarter mile from the Phillips 66 oil refinery, 5.5 miles from the Port of Los Angeles, and less than 3 miles from the Interstate 110 freeway, which also carries very heavy car and truck traffic to and from the Ports and the refinery. On my way to work in Wilmington, I drive on the Interstate 710 freeway, which is heavily congested with freight trucks coming from and going to the Ports of Long Beach and Los Angeles.

6. I am extremely concerned and care greatly about the bad air quality where I live and work, both for myself and those on whose behalf I advocate. I often suffer from air pollution sickness due to the emissions from heavy traffic to and from refineries and other industrial facilities, and the Port of Los Angeles. When air pollution increases, my symptoms get worse. In 2018, I suffered from

sinus infections that were worse than any I had experienced previously. In one instance, I was so sick I had to miss work for about a week. I might have lost my job if I did not work for an organization dedicated to caring for communities and people affected by air pollution. I had another terrible sinus infection in December 2022 and January 2023.

7. When I get sinus infections, I become extremely sensitive to light and noise, and I feel painful pressure in my nasal cavities, above my eyelids, in my temples, and in my ears. When my nasal cavity is inflamed, it often feels as if I have a painful ear infection. My throat becomes sore, and the discomfort and pain keep me from being able to work. I was fully incapacitated in this way twice in 2017 and once the year before. When the temperature rises, as it has in recent years, my sinus infections are more frequent and intense, and my overall health worsens. I know that the greenhouse gases (“GHGs”) produced by cars and trucks contribute to the ever-rising temperatures that make air pollution and my symptoms worse.

8. I am on a medication regimen that calls for administering a nasal decongestant weekly or daily, depending on the temperature. Usually I take allergy tablets and prescribed eye drops to prevent my eyes from becoming dry and itchy. I try to use these medicines to preempt any air pollution sickness, but I still become incapacitated. I suffer all these effects even though I changed my diet

to make it as healthy as possible and increased my fluid intake. I use an inhaler whenever I exercise, hike, or go for a bike ride. I know it is the cumulative emissions from the oil refineries, diesel trucks, and fossil fuel cars that make me so sick.

9. Because of my job, I am aware of many people in Wilmington who live close to many refineries (including the Valero, Wilmington, Marathon Carson, and Marathon Los Angeles refineries), the Port of Los Angeles, and the 110 freeway who suffer from air pollution-related illnesses, such as asthma, sinus infections, other lung diseases, and even heart attacks. Particulate matter and ozone pollution are known causes for all of these conditions. Diesel exhaust is a known carcinogen, and the Wilmington area is notoriously described as a “cancer cluster.” I know many Wilmington community members suffering from leukemia, including children already diagnosed with the disease. In 2015, my friend died of leukemia. The harmful and often lethal consequences of the combination of diesel emissions and refinery emissions (including benzene) make me anxious and fearful of my own risk of contracting cancer.

10. Poor air quality also impacts my family members, especially my younger nieces who are ten and eight years old. They live in Wilmington about one mile from a refinery and across the street from oil wells, and they go to school near the Port of Los Angeles, the 110 freeway, and several refineries. They both

have to use inhalers and nebulizers to assist their breathing. I have watched how air pollution adversely impacts their health and prevents them from leading happy, healthy, and unencumbered lives. They must always remember to bring their inhalers to school and could be disciplined by the school if they use them without first going to the school nurse's office.

11. Because of my personal health issues from fossil-fuel-related pollution and my job duties, I am well informed of regulations, programs, and workshops designed to reduce the air pollution affecting my health and that of the communities I serve. For example, there are state programs that provide financial assistance to low-income communities for purchasing ZEVs. At CBE, we have been advocating for greater investments for an electric bus fleet in Wilmington. Unlike other California communities, Wilmington lags far behind when it comes to embracing clean transportation technology that could drastically improve the health and well-being of its residents. Until recently, city buses would spew exhaust as they traveled by our office and neighboring frontline communities. Now those buses are powered by "clean" natural gas; however, what the community wants and needs most is a zero-emission fleet.

12. In 2021, the California Air Resources Board ("CARB") adopted the Advanced Clean Trucks Rule ("ACT"), which requires manufacturers to produce and sell increasing quantities of medium- and heavy-duty ZEV trucks and near-

zero emission vehicles (“NZEVs”) in California, based on increasingly higher percentages of annual sales. The ACT Rule is set to take effect in Model Year 2024. On December 20<sup>th</sup>, 2021, CARB applied to the Environmental Protection Agency (“EPA”) for a waiver to implement the ACT Rule. On June 13, 2022, EPA announced a public comment period to consider the waiver request, and on March 31, 2023, EPA finalized the waiver.

13. In 2019, CARB adopted the Zero Emission Airport Shuttle Bus Rule (“ZEAS”) and the Zero Emission Powertrain (“ZEP”) Certification. The ZEAS Rule increases zero emission requirements for shuttle bus fleet owners that service California’s largest 13 airports (including the Long Beach Airport), while the ZEP Certification contains certification requirements and optional emissions standards for medium- and heavy-duty ZEVs and their zero emission powertrains. On December 20<sup>th</sup>, 2021, CARB applied to the Environmental Protection Agency (“EPA”) for a waiver to implement the ZEAS Rule and ZEP Certification. On June 13, 2022, EPA announced a public comment period to consider the waiver requests, and on March 31, 2023, EPA signed the waivers.

14. I am deeply concerned by what would happen if California loses the ability to implement these programs due to its waiver being voided. That would make it exceedingly difficult to reduce tailpipe emissions in our environment, since medium- and heavy-duty trucks are such a major contributor to the air

quality issues that burden communities like mine.

15. I am also concerned that the loss of California’s waiver—and the absence of the ACT Rule, the ZEAS Rule, and the ZEP Certification—would increase PM2.5, ozone-forming nitrogen oxides, and greenhouse gas emissions from the Interstate 710 and 110 freeways, Ports, and airport near where I live and work, resulting in more polluted air. The loss of California’s waiver would increase pollution from medium- and heavy-duty trucks on the freeway and at the airport near me because less fuel-efficient vehicles require more fossil fuels to power them. I am very worried that, as a result, the loss of California’s waiver would cause direct harm to my health. I would very likely miss more days of work due to more bouts of air pollution sickness. I am anxious about the prospect of more traumatic health experiences such as severe sinus infections, unnerving light and noise sensitivity, pressure in my head, pain in my ears, and shortness of breath. I experience fear and anxiety about how much my health and that of my community will continue to deteriorate.

16. Furthermore, I know that increased GHG emissions worsen climate change, and that the loss of California’s waiver would vastly increase GHG emissions. I am also concerned that by undermining ZEVs and authorizing trucks with lower gas mileage, the loss of California’s waiver would harm the climate. Urban areas like mine can suffer from “heat island” effects, which warm my area

faster than others. Warmer temperatures increase air pollution, including ozone, and mean that I, and the communities I serve, will suffer more of the severe health consequences I have described. Wilmington is also low lying, and likely to suffer the consequences of storm surges and sea-level rise if climate change gets worse. California's waiver—along with the ACT Rule, ZEAS Rule, and ZEP Powertrain Certification—is vital to slowing the most harmful effects of climate change.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on April 6, 2023, at Long Beach, California.

A handwritten signature in black ink, appearing to read "Sylvia Arredondo". The signature is fluid and cursive, with a large initial "S" and a distinct "Arredondo" ending in a loop.

Sylvia Arredondo

**DECLARATION OF KASSIA R. SIEGEL ON BEHALF OF THE CENTER  
FOR BIOLOGICAL DIVERSITY**

I, Kassia R. Siegel, state and declare as follows:

1. I am the director of the Center for Biological Diversity's Climate Law Institute. I have personal knowledge of the following facts and statements, and if called as a witness could and would testify competently to them.

2. The Center for Biological Diversity (the "Center") is a tax-exempt non-profit membership organization based in Tucson, Arizona, with offices throughout the United States. The Center has more than 84,000 members, including more than 17,000 members in California. The Center works to protect wild places and their inhabitants. The Center believes that the health and vigor of human societies, the integrity and wildness of the natural environment, and preservation of biodiversity are closely linked. Combining conservation biology with litigation, policy advocacy, creative communications and strategic vision, the Center is working to secure a future for animals and plants hovering on the brink of extinction, for the wilderness they need to survive, and by extension, for the spiritual welfare of generations to come.

3. The Center has developed several different practice areas and programs to achieve its goals, including the Climate Law Institute. The Climate Law Institute is an internal institution with the primary mission of curbing greenhouse gas and other air pollution, and sharply limiting the damaging effects

of climate change and air pollution on endangered species, their habitats, and human health, for the benefit of all who depend on clean air, a safe climate, and healthy ecosystems. In my role as director of the Center's Climate Law Institute, I oversee all aspects of the Center's climate work.

4. Climate change represents the most significant and pervasive threat to biodiversity worldwide, affecting both terrestrial and marine species from the tropics to the poles. Absent major reductions in greenhouse gas emissions, by the middle of this century upwards of a third or more of the earth's species could be extinct or committed to extinction as a result of climate change. Even under moderate warming scenarios, sea level rise will largely inundate otherwise "protected" areas like the Everglades and the Northwest Hawaiian Islands, threatening to make future biodiversity conservation efforts futile.

5. To prevent extinctions from occurring at levels unprecedented in the last 65 million years, greenhouse pollution must be rapidly and deeply reduced. Given the lag time in the climate system and the likelihood that positive feedback loops will accelerate global warming, the world's leading scientists have warned that global emissions must peak by 2025 at the latest, be slashed in half in the next decade, and must fall to zero by mid-century to limit warming to more than 1.5 degrees Celsius and avoid the most catastrophic damages.<sup>1</sup> Deep and immediate

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<sup>1</sup> Intergovernmental Panel on Climate Change, AR 6 Synthesis Report, Climate Change 2023 (March 2023), <https://www.ipcc.ch/report/ar6/syr/>.

greenhouse gas reductions, especially by phasing down existing production and use of oil and gas, are required if we are to save many species the Center is currently working to protect, including but not limited to, the polar bear, Pacific walrus, ribbon, ringed, and bearded seals, American pika, Emperor penguin, Florida Keys mole skink, and many other species.

6. One of the Climate Law Institute's priorities is ensuring the full and immediate use of the Clean Air Act to limit and reduce greenhouse gases and other air pollutants. The Clean Air Act is our strongest and best existing tool for doing so, and we have long worked to enforce the Clean Air Act's mandates to accomplish this goal.

7. For instance, the Center was a Plaintiff in *Massachusetts vs. EPA*, which resulted in the landmark Supreme Court decision finding that greenhouse gases are pollutants under the Clean Air Act, which ultimately led to EPA's first-ever rulemaking to reduce greenhouse gas emissions from passenger cars and light trucks under section 202. *Massachusetts v. EPA*, 549 U.S. 497, 127 S. Ct. 1438 (2007).

8. The Center has submitted comments on each successive light- and medium- and heavy-duty vehicle rule, under both the Energy Policy Conservation Act ("EPCA") and the Clean Air Act. The Center also successfully challenged the National Highway Traffic Safety Administration's ("NHTSA") 2006 light duty fuel economy standards issued under EPCA. The court invalidated the standards in

part because NHTSA failed to monetize the value of carbon emissions, and because the environmental assessment failed to analyze whether the standards' greenhouse gas emissions would significantly affect the environment. *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 538 F.3d 1172 (9<sup>th</sup> Cir. 2008). In 2017, when EPA issued a memorandum announcing that it would not enforce existing emission standards for glider trucks, the Center litigated to enforce the existing Clean Air Act standards. *Environmental Defense Fund v. EPA*, No. 18-1190. As a result, EPA withdrew the memorandum. When the EPA withdrew its final determination of the mid-term evaluation of greenhouse gas emission standards for model year 2022-2025 light-duty vehicles (83 Fed. Reg. 16,077-87 (Apr. 13, 2018)), the Center challenged the lawfulness of that withdrawal. *California v. EPA*, No. 18-1114. In 2019, when NHTSA issued a rule under EPCA preempting state greenhouse gas emissions standards and zero emission mandates, and EPA withdrew California's Clean Air Act waiver allowing it to set those standards (84 Fed. Reg. 41,310 (Sept. 27, 2019)), the Center challenged the preemption rule and waiver withdrawal. *Union of Concerned Scientists v. National Highway Traffic Safety Administration*, No. 19-1230. We also challenged NHTSA and EPA's rollback to the existing fuel economy and greenhouse gas light-duty vehicle emissions standards. *Natural Resources Defense Council et al. v. Andrew Wheeler and the Environmental Protection Agency*, No. 20-1168 and *Environmental Defense Fund et al. v. James C. Owens, Elaine L.*

*Chao, and the National Highway Traffic Safety Administration*, No. 20-1169. The Center submitted comments in support of California's waiver requests for its Heavy-Duty Vehicle and Engine Emissions Warranty and Maintenance Provisions ("Warranty Amendments"); Advanced Clean Trucks ("ACT"), Zero Emission Airport Shuttle ("ZEAS"); and Zero-Emissions Power Train ("ZEP") Certification regulations (collectively, "MHD ZEV Rules" and which are the subject of this litigation); and the Omnibus Low NO<sub>x</sub> Regulation ("Omnibus Rule"). *See* Docket Nos. EPA-HQ-OAR-2022-0330; EPA-HQ-OAR-2022-0331; EPA-HQ-OAR-2022-0332.

9. The Center has also been involved in many other Clean Air Act administrative proceedings and legal actions seeking to enforce the Act's provisions for greenhouse gases. For example, in September 2010, we petitioned EPA to issue greenhouse gas standards for locomotive engines pursuant to Clean Air Act section 213(a)(5). *Petition for Rulemaking Under the Clean Air Act to Reduce Greenhouse Gas and Black Carbon Emissions from Locomotives* (Sept. 21, 2010). In December 2009, we petitioned EPA to designate greenhouse gases as criteria air pollutants under Clean Air Act section 108 and to issue National Ambient Air Quality Standards ("NAAQS") sufficient to protect public health and welfare. *Petition to Establish National Pollution Limits for Greenhouse Gases Pursuant to the Clean Air Act* (Dec. 2, 2009). These examples are illustrative of our advocacy in this area, not exhaustive.

10. The Center has also worked through the Clean Air Act to address other pollutants that adversely impact biodiversity and human health. For example, we filed suit against EPA for failing to review and revise the air quality criteria for oxides of nitrogen and sulfur oxides and the NAAQS for nitrogen dioxide and sulfur dioxide. This case resulted in a court-ordered settlement agreement setting forth deadlines for EPA to update these critically important standards. On February 9, 2010, EPA issued updated primary NAAQS for nitrogen dioxide. Primary National Ambient Air Quality Standards for Nitrogen Dioxide; Final Rule, 75 Fed. Reg. 6474 (February 9, 2010). On June 22, 2010, EPA issued updated primary NAAQS for sulfur dioxide. Primary National Ambient Air Quality Standard for Sulfur Dioxide; Final Rule, 75 Fed. Reg. 35520 (June 22, 2010). When EPA decided not to revise the 40-year-old secondary NAAQS for sulfur and nitrogen oxides, despite acknowledging ongoing harm to terrestrial and aquatic ecosystems from acid rain and other depositional pollution, we challenged the decision as contrary to the Clean Air Act. *See Ctr. for Biological Diversity v. EPA*, 749 F.3d 1079 (D.C. Cir. 2014). We also filed suit in 2010 against EPA for failing to meet numerous deadlines for limiting dangerous particle pollution, including deadlines for: (a) determining whether areas in five western states are complying with existing air pollution standards, and (b) ensuring that states are implementing legally required plans to meet the standards. *Ctr. for Biological Diversity v. Jackson*, N.D. Cal. No. CV 10-1846 MMC (filed April 29, 2010). This case

resulted in another settlement establishing deadlines for EPA to carry out these important duties.

11. If California loses the ability to implement the MHD ZEV Rules, that action will harm the Center and its members in numerous ways. These rules, among other obligations, require manufacturers to produce and sell increasing quantities of medium- and heavy-duty zero-emission and near-zero-emission trucks in California. If California loses its waiver, it would make it exceedingly difficult to reduce climate-damaging pollution in California and the nation. The United States Transportation sector makes up nearly 30% of the United States' greenhouse gas emissions, the largest single sector contributing to emissions. Medium- and heavy-duty trucks make up over one-quarter of these transportation emissions. In addition, emissions from diesel trucks are particularly damaging to public health, and people who live near areas with heavy truck traffic, areas often referred to as "diesel death zones," are more susceptible to asthma, lung disease, and death. Heavy-duty trucks are the largest source of NO<sub>x</sub> emissions (which contributes to ground-level ozone, or smog), as well as particulate matter, carbon monoxide, and air toxics.

12. Air pollution and greenhouse gas emissions from vehicles and oil and gas production and refining harm the health, welfare, economic, recreational, and aesthetic interests of the Center's members. Climate change is already driving many animals and plants to extinction, increasing temperatures, and causing

droughts, flooding and sea level rise, and affecting the livelihoods and property of Center members. Center members are increasingly less able to, and sometimes altogether prevented from, viewing, photographing, and enjoying wildlife threatened by climate change and from recreating in wilderness areas undergoing rapid climate change. They are deprived of the aesthetic and recreational enjoyment that stems from such activities, and experience worry, upset, and other significant emotional injury because of it. Some of our members suffer from pulmonary diseases such as asthma from the smog-forming co-pollutants emitted by vehicles and from refineries used to process fuels. Those co-pollutants include volatile organic compounds, sulfur dioxide, nitrogen oxides, and fine particulate matter. Blocking or rolling back the MHD ZEV Rules would exacerbate all of these harms.

13. The greenhouse gases emitted from all vehicles must be sharply reduced, and eventually eliminated to prevent harm to the Center and its members. Indeed, quickly phasing out fossil fuel-powered vehicles is critical in keeping warming below 1.5°C—the level necessary to avoid the most catastrophic damages to people and life on Earth.<sup>2</sup> Blocking or rolling back the MHD ZEV Rules would allow greenhouse gas emissions from trucks to increase and render the avoidance of the worst effects of climate change near impossible.

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<sup>2</sup> Christopher J. Smith et al., *Current fossil fuel infrastructure does not yet commit us to 1.5°C warming*, Nature Communications (2019), doi.org/10.1038/s41467-018-07999-w.

14. Any decision by this Court to vacate EPA's approval of California's waiver for the MHD ZEV Rules would harm the interests of the Center and its members as discussed throughout. These interests also include the procedural interests in enforcing all aspects of rulemakings that reduce greenhouse gas and air pollution, including but not limited to the ability to comment upon draft rules and advocate for stricter standards.

I declare under penalty of perjury that the foregoing is true and correct and was executed on April 11, 2023 at Joshua Tree, California.



Kassia R. Siegel

## DECLARATION OF ELENA CRAFT

I, Elena Craft, declare as follows:

1. I am an Associate Vice President at Environmental Defense Fund (“EDF”). I have been with the organization for 15 years.
2. I received a Ph.D. in toxicology from Duke University’s Nicholas School of the Environment – Earth and Ocean Sciences Division. I also have a Master of Science degree in toxicology from North Carolina State University.
3. As Associate Vice President of EDF’s Climate and Health program, I focus on implementing policies to reduce health-harming pollution from the energy and transportation sectors. I have provided expert testimony at three House Congressional hearings related to issues of air quality, and ozone specifically. I have served on various advisory committees to the U.S. Environmental Protection Agency (“EPA”), including: the Mobile Source Technical Review Subcommittee under the Clean Air Act Advisory Committee; the Air, Climate, and Energy Subcommittee of the Board of Scientific Counselors; an Environmental Justice Technical Review Subcommittee; and a ports work group.
4. This declaration refers to final actions of EPA set forth in the notice published at 88 Fed. Reg. 20,688 (Apr. 6, 2023) and titled *Waiver of Preemption; Decision: California State Motor Vehicle and Engine Pollution Control Standards; Heavy-Duty Vehicle and Engine Emission Warranty and Maintenance Provisions;*

*Advanced Clean Trucks; Zero Emission Airport Shuttle; Zero-Emission Power Train Certification*, (“Challenged Actions”). Through the Challenged Actions, EPA granted waivers of preemption that enable California and other states to enforce California’s Advanced Clean Trucks, Zero Emission Airport Shuttle Bus, and Zero Emission Powertrain Certification regulations. I am personally familiar with those regulations and the Challenged Actions.

5. I am submitting this declaration in support of EDF’s Motion to Intervene in Support of Respondents in Case No. 23-1143, in the U.S. Court of Appeals for the District of Columbia Circuit (and consolidated cases).

### **Health Effects from Ozone Exposure**

6. There is a broad scientific consensus that emissions of oxides of nitrogen (“NO<sub>x</sub>”) and volatile organic compounds are precursors to ozone formation and that exposure to ozone is associated with significant public health effects. Ozone forms when volatile organic compounds and NO<sub>x</sub> react in the presence of heat and sunlight. This process becomes more pronounced in the summertime.

7. The American Lung Association estimates that there are more than 137 million people in the United States living with unhealthy levels of ozone

pollution.<sup>1</sup> According to the American Lung Association analysis, people of color are almost four times more likely to be living in counties with failing grades for short- and long-term particle pollution and ozone pollution as compared to white people.<sup>2</sup>

8. A longstanding body of scientific research, including numerous EPA assessments, demonstrates that exposure to ground-level ozone harms human health and can cause heart disease, permanent lung damage, aggravation of asthma, and premature death from respiratory causes.<sup>3</sup>

9. In its 2020 Integrated Scientific Assessment for Ozone, EPA concluded that “[r]ecent studies support and expand upon the strong body of evidence, which has been accumulating over many decades, that short-term ozone exposure causes respiratory effects.”<sup>4</sup> Those effects can include decreases in lung function, asthma and chronic obstructive pulmonary disease exacerbations, and increases in respiratory-related hospital admissions and emergency room visits.<sup>5</sup>

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<sup>1</sup> Am. Lung Ass’n, *State of the Air 2022*, at 16 (2022), <https://www.lung.org/getmedia/74b3d3d3-88d1-4335-95d8-c4e47d0282c1/sota-2022>.

<sup>2</sup> *Id.* at 11.

<sup>3</sup> See EPA, *Health Effects of Ozone Pollution*, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution> (2022).

<sup>4</sup> EPA, *Integrated Science Assessment for Ozone and Related Photochemical Oxidants*, at IS-1, EPA/600/R-20/012 (Apr. 2020), <https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=348522> (“2020 ISA”).

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

10. EPA also concluded that there is a causal relationship or likely causal relationship between both short- and long-term ozone exposure and a broad range of harmful respiratory and metabolic effects in humans.<sup>6</sup> Short-term exposure is defined as hours, days, or weeks, and long-term exposure is measured in months to years.<sup>7</sup>

11. For short-term exposure, EPA found that “[e]pidemiologic studies continue to provide evidence that increased ozone concentrations are associated with a range of respiratory effects, including asthma exacerbation, chronic obstructive pulmonary disease (COPD) exacerbation, respiratory infection, and hospital admissions and ED visits for combined respiratory diseases.”<sup>8</sup>

Short-term exposure to ozone can have critical health implications. For instance, there is strong evidence of an association between out-of-hospital cardiac arrests and short-term exposure to ozone, including a recent meta-study.<sup>9</sup> Time scales of exposure up to three hours in duration and also at the daily level on the day of the

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<sup>6</sup> *Id.* at 1S-7, tbl.1S-1.

<sup>7</sup> *Id.* at 1S-23.

<sup>8</sup> *Id.* at IS-8.

<sup>9</sup> Zong Z, Zhang M, Xu K, Zhang Y, Hu C. Association between Short-Term Exposure to Ozone and Heart Rate Variability: A Systematic Review and Meta-Analysis. *Int J Environ Res Public Health*. 2022 Sep 6;19(18):11186. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9517606/>; Katherine B. Ensor et al., *A Case-Crossover Analysis of Out-of-Hospital Cardiac Arrest and Air Pollution*, 127 *Circulation* 1192 (2013), <https://www.ncbi.nlm.nih.gov/pubmed/23406673>.

event were significant.<sup>10</sup> This evidence augments the long-standing body of literature demonstrating the serious impacts from short-term exposure to ozone pollution.<sup>11</sup>

12. Short-term ozone exposure has also been linked to other cardiovascular effects. A large body of research provides robust evidence of the relationship between ozone and strokes, as well as some evidence for arrhythmias in those with pre-existing heart disease. A large meta-analysis of over 20 studies found a 2.45% increase in ischemic stroke rate per 10 parts per billion (“ppb”) increase in ozone.<sup>12</sup> More recent work on the relationship between ozone exposure and arrhythmias also seems to suggest a relationship in those with preexisting cardiac disease. For example, one meta-analysis covering more than 400,000 participants in four studies (median ozone exposure 36 ppb) found a significant relationship, a 1% increase in rates of atrial fibrillation per 10 ppb ozone.<sup>13</sup>

13. There continues to be strong evidence for a relationship between short-term ozone concentrations and mortality and accumulating evidence for a relationship between long-term ozone exposure and mortality. Two large time

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<sup>10</sup> *Id.*

<sup>11</sup> See 2020 ISA, *supra*, at 1S-1.

<sup>12</sup> Wan-Shui Yang et al., *An evidence-based appraisal of global association between air pollution and risk of stroke*, 175 *Int’l J. Cardiology* 307 (2014).

<sup>13</sup> Qingmiao Shao et al., *Association between air pollution and development of atrial fibrillation: A meta-analysis of observational studies*, 45 *Heart & Lung* 557 (2016).

studies demonstrated a significant, non-linear relationship between short-term ozone concentration and mortality that was positive above concentrations of roughly 35-40 ppb.<sup>14</sup> A meta-analysis of a large number of studies of ozone and mortality found an increased risk of mortality among elderly people and younger adults.<sup>15</sup> EPA's 2013 Integrated Scientific Assessment previously found that there is "likely to be a causal relationship between short-term [ozone] exposures and total mortality."<sup>16</sup>

14. Long-term exposure to ozone likewise has critical health implications. EPA has concluded that there is a "likely to be a causal relationship between long-term ozone exposure and respiratory effects."<sup>17</sup> Studies have reported positive associations between long-term ozone exposure and new-onset asthma, and respiratory symptoms in children with asthma.<sup>18</sup>

15. EPA has also concluded that there is a "likely to be causal

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<sup>14</sup> Sanghyuk Bae et al., *Non-Linear Concentration-Response Relationships between Ambient Ozone and Daily Mortality*, 10 PLoS ONE 1 (2015); Philippe Collart et al., *Concentration–response curve and cumulative effects between ozone and daily mortality: an analysis in Wallonia, Belgium*, 28 Int'l J. Env't Health Res. 147 (2018).

<sup>15</sup> Michelle L. Bell et al., *Who is More Affected by Ozone Pollution? A Systematic Review and Meta-Analysis*, 180 Am. J. Epidemiology 15 (2014).

<sup>16</sup> EPA, *Integrated Science Assessment of Ozone and Related Photochemical Oxidants 1-15*, EPA/600/R-10/076F (Feb. 2013), <https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=247492>.

<sup>17</sup> 2020 ISA, *supra*, at 1S-8.

<sup>18</sup> *Id.* at IS-8.

relationship” between short-term ozone exposure and metabolic effects.<sup>19</sup> Studies demonstrate “activation of sensory nerve pathways following ozone exposure that trigger the central neuroendocrine stress response, as indicated by increased corticosterone/cortisol and adrenaline production” and “associations between ozone exposure and perturbations in glucose and insulin homeostasis.”<sup>20</sup> Those changes are often “accompanied by increased inflammatory markers in peripheral tissues and by changes in liver biomarkers.”<sup>21</sup>

16. Long-term exposure to ozone has been associated with development and diagnosis of metabolic syndrome, increased incidence of type 2 diabetes, and diabetes-related mortality.<sup>22</sup>

17. Ozone pollution is particularly harmful for vulnerable populations, such as children, people with respiratory diseases or asthma, older adults, and people who are active outdoors, especially outdoor workers.<sup>23</sup> Children with asthma also face heightened risks from ozone exposure. Many studies have demonstrated that children with asthma experience decrements in lung function

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<sup>19</sup> *Id.*

<sup>20</sup> *Id.*

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> See EPA, *Health Effects of Ozone Pollution*, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution> (2022); EDF, *Accelerating to 100% Clean: Zero Emitting Vehicles Save Lives, Advance Justice, Create Jobs* (Aug. 2020), <https://www.edf.org/sites/default/files/documents/TransportationWhitePaper.pdf>.

and increases in respiratory symptoms when exposed to ozone pollution.<sup>24</sup>

18. A study of almost 61 million Medicare patients conducted nationwide indicates a significant association between ozone exposure and all-cause mortality, with effects strongest in minorities and those of low socioeconomic status. Effects were seen at ozone concentrations well below EPA's current health-based standard.<sup>25</sup>

19. Ozone exposure is also associated with health effects other than cardiovascular, metabolic, or respiratory effects. A 2017 study suggested that ozone exposure may be linked to approximately 8,000 stillbirths per year.<sup>26</sup> Prolonged exposure to ozone may also accelerate cognitive decline in the early stages of dementia.<sup>27</sup> In 2015, EPA strengthened the national health-based standard for ground-level ozone, lowering the standard from 75 ppb to 70 ppb. *See* 80 Fed. Reg. 65,292 (Oct. 26, 2015). The record for that rulemaking, however, along with subsequent scientific studies, demonstrates that health effects can occur at much

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<sup>24</sup> *See* 2020 ISA at IS-8, IS-24.

<sup>25</sup> Qian Di et al., *Air Pollution and Mortality in the Medicare Population*, 376 *New Eng. J. Med.* 2513 (2017), <https://www.nejm.org/doi/full/10.1056/NEJMoa1702747>.

<sup>26</sup> Pauline Mendola et al., *Chronic and Acute Ozone Exposure in the Week Prior to Delivery is Associated with the Risk of Stillbirth*, 14 *Int'l J. Env't Res. & Pub. Health* 731 (2017), <https://www.ncbi.nlm.nih.gov/pubmed/28684711>.

<sup>27</sup> Ekaterina Galkina Cleary et al., *Association of Low-Level Ozone with Cognitive Decline in Older Adults*, 61 *J. Alzheimer's Disease* 67 (2018), <https://www.ncbi.nlm.nih.gov/pubmed/29103040>.

lower levels, especially in sensitive populations. An 8-hour maximum limit of 60 ppb aligns with the 2020 ISA's finding of lung function impairments, pulmonary inflammation, injury, oxidative stress and other respiratory symptoms in children and adults exposed to ozone concentrations at that level or lower.<sup>28</sup> Many health and medical associations also suggested that lower standards may be appropriate. *See* 80 Fed. Reg. at 65,321–23, 65,355.

20. In addition, particular areas of the country are not in attainment with the current 70 ppb standard, and therefore frequently experience even unhealthier levels of air quality. These additionally unhealthy levels of ozone air quality can result in acute respiratory illness and other damaging health outcomes.

### **Health Effects of Fine Particulate Matter Exposure**

21. Particulate pollution, often called “soot,” is a mixture of directly emitted particles, and tiny “secondary” particles formed in the atmosphere from sulfur dioxide (“SO<sub>2</sub>”), NO<sub>x</sub>, and ammonia. The smallest particles are considered the most dangerous (particularly those less than 2.5 microns in diameter, referred to as fine particulate matter (“PM<sub>2.5</sub>”)), as they are easily inhaled and reach deep into the lungs where they can trigger an inflammatory response. People with heart

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<sup>28</sup> 2020 ISA at IS-24 to IS-25.

or lung disease, elderly people, and children are at highest risk from exposure to particulate pollution.<sup>29</sup>

22. EPA has previously determined that PM<sub>2.5</sub> is harmful to human health above 12 micrograms per cubic meter (“µg/m<sup>3</sup>”) on an annual basis, 78 Fed. Reg. 3086 (Jan. 15, 2013), and the latest scientific evidence suggests far more protective standards are needed.<sup>30</sup> EPA recently proposed to find that PM<sub>2.5</sub> is harmful to human health above 9–10 µg/m<sup>3</sup> on an annual basis. *See* 88 Fed. Reg. 5558 (Jan. 27, 2023).

23. According to the American Lung Association, nearly one in five people in the United States—more than 63.2 million—live in an area with too many days with unhealthful levels of particle pollution, and more than 20.3 million people (6.1%) suffer from unhealthy year-round levels of particle pollution.<sup>31</sup> In

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<sup>29</sup> *See* Am. Lung Ass’n, *Particle Pollution*, <https://www.lung.org/our-initiatives/healthy-air/outdoor/air-pollution/particle-pollution.html> (2022).

<sup>30</sup> U.S. EPA. Integrated Science Assessment (ISA) for Particulate Matter (Final Report, Dec 2019). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-19/188, 2019. (“2019 PM ISA”) <https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=347534>; U.S. EPA. Supplement to the 2019 Integrated Science Assessment for Particulate Matter (Final Report, 2022). U.S. Environmental Protection Agency, Washington, DC, EPA/635/R-22/028, 2022. (“2022 Supplement to PM ISA”) <https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=354490>

<sup>31</sup> *See* Am. Lung Ass’n, *State of the Air 2022*, at 12, 14 (2022), <https://www.lung.org/getmedia/74b3d3d3-88d1-4335-95d8-c4e47d0282c1/sota-2022>.

the last few years, many U.S. cities reached their highest number of days with unhealthy levels of particle pollution ever reported.

24. Fine particulate matter, PM<sub>2.5</sub>, is associated with a host of adverse health effects, including decreased lung function, allergic responses, chronic obstructive pulmonary disease, lung cancer, and both acute and chronic cardiovascular effects.<sup>32</sup> Current ambient concentrations of particulate matter are considered a health risk in many locations throughout the country.<sup>33</sup>

25. According to a study by the National Academy of Sciences, PM<sub>2.5</sub> air pollution exposure is the largest environmental health risk factor in the United States, causing more than 100,000 premature deaths per year.<sup>34</sup> People of color are exposed to particulate matter at higher rates. A 2021 study found that Black Americans are exposed to 21% greater PM<sub>2.5</sub> concentrations than the average American, while white Americans are exposed to 8% *lower* PM<sub>2.5</sub> concentrations than the average American.<sup>35</sup>

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<sup>32</sup> See 2019 PM ISA and 2022 Supplement to PM ISA.

<sup>33</sup> EPA, *Area Designations for 2012 Annual PM<sub>2.5</sub> Standard*, <https://www.epa.gov/particle-pollution-designations/particle-pollution-designations-where-you-live#state>.

<sup>34</sup> Andrew L. Goodkind et al., *Fine-scale damage estimates of particulate matter air pollution reveal opportunities for location-specific mitigation of emissions*, 116 Proc. Nat'l Acad. Sci. 8775 (2019), <https://doi.org/10.1073/pnas.1816102116>.

<sup>35</sup> Christopher W. Tessum et al., *PM<sub>2.5</sub> pollutants disproportionately and systemically affect people of color in the United States*, 7 Science Advances (2021), <https://www.science.org/doi/10.1126/sciadv.abf4491>.

26. A recent study, using a sample three times larger than all previous research combined, provides comprehensive evidence of the relationship between PM<sub>2.5</sub> and cardiac arrests. The study concluded that there is an increased risk of out-of-hospital cardiac arrest (OHCA) even from short-term exposure to low concentrations of PM<sub>2.5</sub>.<sup>36</sup>

27. According to EPA's Regulatory Impact Analysis for the Proposed Reconsideration of the National Ambient Air Quality Standards for Particulate Matter, released in December 2022 in parallel with the proposed revisions to the PM<sub>2.5</sub> National Ambient Air Quality Standards, the accumulation of published studies serves to strengthen the case for a causal association between PM exposure and respiratory inflammation and infection leading to premature mortality in children under five years of age.<sup>37</sup> In this document, EPA cites the findings of the Science Advisory Board – Health Effects Subcommittee,<sup>38</sup> which in turn references numerous corroborating studies linking PM exposure to many adverse health

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<sup>36</sup> Bing Zhao et al., *Short-term exposure to ambient fine particulate matter and out-of-hospital cardiac arrest: a nationwide case-crossover study in Japan*, 4 *Lancet* E15 (2020), [https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(19\)30262-1/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(19)30262-1/fulltext).

<sup>37</sup> EPA, *Regulatory Impact Analysis for the Proposed Reconsideration of the National Ambient Air Quality Standards for Particulate Matter*, EPA-452/P-22-001 (2022), [https://www.epa.gov/system/files/documents/2023-01/naaqs-pm\\_ria\\_proposed\\_2022-12.pdf](https://www.epa.gov/system/files/documents/2023-01/naaqs-pm_ria_proposed_2022-12.pdf).

<sup>38</sup> US EPA Science Advisory Board Health Effects Subcommittee, *SAB Advice on the Use of Economy-Wide Models in Evaluating the Social Costs, Benefits, and Economic Impacts of Air Regulations*, EPA-SAB-17-012 (2017).

outcomes. The Regulatory Impact Analysis also cites a study by Woodruff et al. that finds associations between PM<sub>2.5</sub> and infant mortality.<sup>39</sup> More recent studies have found connections between PM<sub>2.5</sub> and preterm births, as well as low infant birth weight.<sup>40</sup>

28. With the publication of numerous studies involving the collection of data over an extended period of time,<sup>41</sup> the evidence linking particulate matter with premature mortality, significant lung damage, and other significant adverse health effects is strong. The extended observational period of these studies, combined with more sophisticated exposure assessments, continues to strengthen the evidence that particulate matter poses a significant health threat at current levels of exposure. A study released in 2012 reaffirmed decades' worth of analyses on the association of particulate pollution exposure to increased risk of premature

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<sup>39</sup> See Tracey J. Woodruff, Jennifer D. Parker, & Kenneth C. Schoendorf, *Fine Particulate Matter (PM<sub>2.5</sub>) Air Pollution and Selected Causes of Post-Neonatal Infant Mortality in California*, 114 *Env't Health Persp.* 786 (2006).

<sup>40</sup> Rakesh Ghosh et al., *Ambient and household PM<sub>2.5</sub> pollution and adverse perinatal outcomes: A meta-regression and analysis of attributable global burden for 204 countries and territories*, 18 *PLoS Med.* 1 (Sep. 28, 2021).

<sup>41</sup> See, e.g., Daniel Krewski et. al., *Extended Follow-Up and Spatial Analysis of the American Cancer Society Study Linking Particulate Air Pollution and Mortality*, Health Effects Inst. Res. Rep. 140 (2009); M. Brauer et al., *Air Pollution and Development of Asthma, Allergy and Infections in a Birth Cohort*, 29 *Eur. Respiratory J.* 879 (2007); W. James Gauderman et al., *Effect of Exposure to Traffic on Lung Development from 10 to 18 Years of Age: a Cohort Study*, 369 *Lancet* 571 (2007); Francine Laden et al., *Reduction in Fine Particulate Air Pollution and Mortality Extended Follow-up of the Harvard Six Cities Study*, 173 *Am. J. Respiratory & Critical Care Med.* 667 (2006).

mortality. The study found that every increase of 10  $\mu\text{g}/\text{m}^3$  in  $\text{PM}_{2.5}$  pollution was associated with a 14% increased risk of “all-cause” mortality, a 26% increase in cardiovascular death, and a 37% increase in lung cancer death.<sup>42</sup>

29. The consistency of the data on  $\text{PM}_{2.5}$  makes it possible to quantify the health benefits of reducing this type of pollution for a suite of health indicators, including: premature mortality, bronchitis, hospital admissions for both respiratory and cardiovascular events, emergency room visits for asthma, nonfatal heart attacks, lower and upper respiratory illness, minor restricted-activity days, work loss days, asthma exacerbations, respiratory symptoms (asthmatic population), and infant mortality.<sup>43</sup>

### **Health Impacts from Exposure to Sulfur Oxides**

30. Sulfur oxides are a group of ambient air pollutants emitted during the burning or combustion of fossil fuels and other industrial processes. Among them, sulfur dioxide (“ $\text{SO}_2$ ”) is the pollutant that causes the greatest concern for public health.

31. EPA has established health-based standards for  $\text{SO}_2$ , using the pollutant as an indicator for the full group of sulfur oxides. EPA determined in

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<sup>42</sup> Johanna Lepeule et al., *Chronic Exposure to Fine Particles and Mortality: An Extended Follow-up of the Harvard Six Cities Study from 1974 to 2009*, 120 *Env’t Health Persp.* 965 (2012).

<sup>43</sup> *Id.*

2019 that a 1-hour daily maximum standard at a level of 75 ppb was necessary to protect human health. *See* 84 Fed. Reg. 9,866 (April 18, 2019).

32. Short-term exposure to SO<sub>2</sub> is linked to adverse respiratory effects, especially for at-risk populations such as those with asthma or other respiratory conditions.<sup>44</sup> Epidemiological studies link short-term SO<sub>2</sub> exposure to asthma-related hospital admissions, especially for children.<sup>45</sup>

33. SO<sub>2</sub> emissions also react with other components in the air to form harmful PM.<sup>46</sup>

### **Health Impacts from Exposure to Hazardous Air Pollutants**

34. EPA defines hazardous air pollutants, also known as air toxics, as those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects.<sup>47</sup>

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<sup>44</sup> EPA, *Integrated Science Assessment (ISA) for Sulfur Oxides – Health Criteria*, EPA/600/R-17/451 (2017), <https://www.epa.gov/isa/integrated-science-assessment-isa-sulfur-oxides-health-criteria>.

<sup>45</sup> *Id.* at xlix.

<sup>46</sup> EPA, *Sulfur Dioxide (SO<sub>2</sub>) Pollution*, <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics> (Feb. 16, 2023).

<sup>47</sup> EPA, *What are Hazardous Air Pollutants?*, <https://www.epa.gov/haps/what-are-hazardous-air-pollutants> (Dec. 19, 2022).

35. There is no safe level of human exposure to hazardous air pollutants such as benzene.<sup>48</sup> Even brief exposure to such pollutants can increase the risk of adverse health effects, including severe metabolic disorders.<sup>49</sup>

36. Exposure to hazardous air pollutants can cause cancer and seriously impair the human neurological system. For example, EPA has found that benzene is a “known human carcinogen (causing leukemia) by all routes of exposure, and . . . that its exposure is associated with additional health effects, including genetic changes in both humans and animals.”<sup>50</sup> A “number of adverse noncancer health effects including blood disorders, such as preleukemia and aplastic anemia, have also been associated with long-term exposure to benzene.”<sup>51</sup>

37. Hazardous air pollutants have atmospheric lifetimes ranging from several hours to over a week. Even acute (short-term) exposure to hazardous air

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<sup>48</sup> Bruce Lanphear, *Low-level toxicity of chemicals: No acceptable levels?* 15 PLoS Biol. 1 (2017), <http://doi.org/10.1371/journal.pbio.2003066>.

<sup>49</sup> See, e.g., EPA, *Benzene* (Jan. 2012), <https://www.epa.gov/sites/production/files/2016-09/documents/benzene.pdf> (noting short-term exposure can cause “drowsiness, dizziness, headaches, as well as eye, skin, and respiratory tract irritation”); Ying Cui, *et al.*, *Benzene Exposure Leads to Lipodystrophy and Alters Endocrine Activity In Vivo and In Vitro*, 13 *Frontiers in Endocrinology* 1-11 (2022), <https://www.frontiersin.org/articles/10.3389/fendo.2022.937281/full>

<sup>50</sup> EPA, *Regulatory Impact Analysis to the Final Emission Guidelines for Existing Sources and the New Source Performance Standards in the Municipal Solid Waste Landfills Sector* 4-36 (July 2016), Docket No. EPA-HQ-OAR-2014-0451-0225.

<sup>51</sup> *Id.*

pollutants can cause a variety of negative health impacts, including asthma attacks or effects on the central nervous system.<sup>52</sup>

### **Near-Roadway Pollution Harms Public Health**

38. It is well documented that the harmful pollutants emitted by highway vehicles, including heavy-duty trucks and buses, contribute significantly to air pollution around roads.<sup>53</sup> Major roadways and surrounding areas typically have elevated concentrations of many pollutants from diesel and gasoline exhaust, including volatile organic compounds, carbon monoxide, NO<sub>x</sub>, PM<sub>2.5</sub>, and benzene. *See* 88 Fed. Reg. 4296 (Jan. 24, 2023). EPA has estimated that 72 million people live within 200 meters of a truck freight route, and relative to the rest of the

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<sup>52</sup> *See, e.g.,* EPA, *Environments and Contaminants – Hazardous Air Pollutants* (Oct. 2022),

<https://www.epa.gov/americaschildrenenvironment/environments-and-contaminants-hazardous-air-pollutants> (noting health effects associated with hazardous air pollutants include “cancer, asthma, and other respiratory ailments, birth defects, reproductive effects, and neurological defects.”); America’s Children and the Environment, *Hazardous Air Pollutants* (August 2019), [https://www.epa.gov/system/files/documents/2022-04/hazardous\\_air\\_pollutants\\_report\\_section\\_23\\_july\\_2019.pdf](https://www.epa.gov/system/files/documents/2022-04/hazardous_air_pollutants_report_section_23_july_2019.pdf) (noting short-term exposure, including, one day, one hour, or less, may in some cases trigger immediate responses, such as asthma attacks or effects on the central nervous system).

<sup>53</sup> *See, e.g.,* Am. Lung Ass’n, *Living Near Highways and Air Pollution*, <https://www.lung.org/our-initiatives/healthy-air/outdoor/air-pollution/highways.html> (2022); EPA, *Near Roadway Air Pollution and Health: Frequently Asked Questions*, EPA-420-F-14-044 (Aug. 2014), <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100NFFD.PDF?Dockkey=P100NFFD.PDF>.

population, people of color and those with lower incomes are more likely to live near truck routes. *Id.* at 4298.

39. Commercial diesel trucks impose an especially heavy pollution burden on neighborhoods along their routes. A years-long study in Canada confirms large trucks to be the greatest contributors to black carbon emissions near major roadways.<sup>54</sup> A study in Oakland, California found that transportation-related air pollution (including black carbon and NO<sub>x</sub>) was much higher—in some cases double—on a freeway that is a designated truck route compared to another freeway in the same city where trucks are prohibited.<sup>55</sup> Another study near the Port of Oakland also found that black carbon levels measured along truck routes were higher compared to measurements at most other sites, including those near industrial facilities, on other highways, and on residential streets.<sup>56</sup>

40. The risks associated with roadside exposure to medium- and heavy-duty truck pollution are a serious public health concern. Studies have shown that

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<sup>54</sup> Jonathan M. Wang et al., *Near-Road Air Pollution Measurements: Accounting for Inter-Site Variability Using Emission Factors*, 52 *Env't Sci. & Tech.* 9495 (2018), <http://dx.doi.org/10.1021/acs.est.8b01914>.

<sup>55</sup> Joshua S. Apte et al., *High-Resolution Air Pollution Mapping with Google Street View Cars: Exploiting Big Data*, 51 *Env't Sci. & Tech.* 6999 (2017), <https://pubs.acs.org/doi/10.1021/acs.est.7b00891>.

<sup>56</sup> Julien J. Caubel et al., *A Distributed Network of 100 Black Carbon Sensors for 100 Days of Air Quality Monitoring in West Oakland, California*, 53 *Env't Sci. & Tech.* 7564 (2019), <https://pubs.acs.org/doi/10.1021/acs.est.9b00282>.

mobile source air pollution accounts for a significant portion of total pollution-related mortality in the U.S.<sup>57</sup>

41. In 2010, the Health Effects Institute published a major review of evidence of health risks near roadways.<sup>58</sup> A panel of expert scientists looked at more than 700 studies from around the world, examining the health effects of traffic pollution. The panel concluded that traffic pollution causes asthma attacks in children and may cause a wide range of other effects including: the onset of childhood asthma, impaired lung function, premature death, and death from cardiovascular diseases and cardiovascular morbidity. They concluded that the area most impacted is within 300 to 500 meters of the highway and the number of people living “close to a busy road” may include 30 to 45% of the urban population in North America.<sup>59</sup> The risks are particularly high for communities of color and low-income communities because they constitute a higher percentage of

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<sup>57</sup> Kenneth Davidson, et. al., *The recent and future health burden of the U.S. mobile sector apportioned by source*, *Env't Res. Lett.* (2020), <https://iopscience.iop.org/article/10.1088/1748-9326/ab83a8>; see also Ernani F. Choma et. al., *Health benefits of decreases in on-road transportation emissions in the United States from 2008 to 2017*, 118 *Proc. Nat'l Acad. Sci.* (Dec. 13, 2021), <https://www.pnas.org/content/118/51/e2107402118>.

<sup>58</sup> Health Effects Inst. Panel on the Health Effects of Traffic-Related Air Pollution, *Traffic-Related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects* (2010), <https://www.healtheffects.org/publication/traffic-related-air-pollution-critical-review-literature-emissions-exposure-and-health>.

<sup>59</sup> *Id.* at 5.

the population near major roadways, in part as a result of historical housing discrimination and other unjust policies.<sup>60</sup>

42. Children who live or go to school near major roadways are at considerable additional risk for substantial deficits in lung function, even in areas with low regional pollution.<sup>61</sup> While children are among the most vulnerable, adults are also at risk from near roadway pollution. Cardiovascular disease accounts for about a third of all U.S. deaths, and studies show that living near major roadways increases the risk of the disease.<sup>62</sup> Long-term exposure to traffic air pollution may also increase the risk of developing chronic obstructive

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<sup>60</sup> Nardone A, Casey JA, Morello-Frosch R, Mujahid M, Balmes JR, Thakur N. Associations between historical residential redlining and current age-adjusted rates of emergency department visits due to asthma across eight cities in California: an ecological study. *Lancet Planet Health*. 2020 Jan; 4(1): e24-e31.

<https://pubmed.ncbi.nlm.nih.gov/31999951/>; Gregory M. Rowangould, *A census of the US near-roadway population: Public health and environmental justice considerations*, 25 *Transp. Res. Part D: Transport & Env't* 59 (2013), <https://www.sciencedirect.com/science/article/pii/S1361920913001107>.

<sup>61</sup> EPA & Nat'l Inst. Env't Health Sci., *NIEHS/EPA Children's Environmental Health and Disease Prevention Research Centers Impact Report: Protecting Children's Health Where They Live, Learn, and Play* (2017),

[https://www.epa.gov/sites/production/files/2017-10/documents/niehs\\_epa\\_childrens\\_centers\\_impact\\_report\\_2017\\_0.pdf](https://www.epa.gov/sites/production/files/2017-10/documents/niehs_epa_childrens_centers_impact_report_2017_0.pdf).

<sup>62</sup> Cavin K. Ward-Caviness et al., *Associations Between Residential Proximity to Traffic and Vascular Disease in a Cardiac Catheterization Cohort*, 38 *Arteriosclerosis, Thrombosis, & Vascular Biology* 275 (2018),

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5972827/>.

pulmonary disease<sup>63</sup> and heart failure.<sup>64</sup> In addition, studies have found increased risk of premature death from living near a major highway or an urban road,<sup>65</sup> higher risk of ischemic stroke associated with residential proximity to major roadways,<sup>66</sup> increased risk of heart attacks from being in traffic, whether driving or

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<sup>63</sup> Zorana J. Andersen et al., *Chronic Obstructive Pulmonary Disease and Long-Term Exposure to Traffic-related Air Pollution: A Cohort Study*, 183 *Am. J. Respiratory & Critical Care Med.* 455 (2011),

<https://www.atsjournals.org/doi/full/10.1164/rccm.201006-0937OC>.

<sup>64</sup> Lim, Y. et al, Long-Term Exposure to Air Pollution, Road Traffic Noise, and Heart Failure Incidence: The Danish Nurse Cohort, *J Am Heart Assoc.* 2021;10:e021436. <https://doi.org/10.1161/JAHA.121.021436>.

<sup>65</sup> Hadley MB, Nalini M, Adhikari S, Szymonifka J, Etemadi A, Kamangar F, et al. (2022) Spatial environmental factors predict cardiovascular and all-cause mortality: Results of the SPACE study. *PLoS ONE* 17(6): e0269650.

<https://doi.org/10.1371/journal.pone.0269650>; Weeberb J. Requia et al., *The health impacts of weekday traffic: A health risk assessment of PM2.5 emissions during congested periods*, 111 *Env't Int'l* 164 (2018),

<https://doi.org/10.1016/j.envint.2017.11.025>; Murray M. Finkelstein et al., *Traffic Air Pollution and Mortality Rate Advancement Periods*, 160 *Am. J. Epidemiology* 173 (2004),

[https://www.researchgate.net/publication/8473852\\_Traffic\\_Air\\_Pollution\\_and\\_Mortality\\_Rate\\_Advancement\\_Periods](https://www.researchgate.net/publication/8473852_Traffic_Air_Pollution_and_Mortality_Rate_Advancement_Periods); Gerard Hoek et al., *Associations between mortality and indicators of traffic-related air pollution in the Netherlands: a cohort study*, 360 *Lancet* 1203 (2002).

<sup>66</sup> Kulick ER, Wellenius GA, Boehme AK, Sacco RL, Elkind MS. Residential Proximity to Major Roadways and Risk of Incident Ischemic Stroke in NOMAS (The Northern Manhattan Study). *Stroke.* 2018 Apr;49(4):835-841.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5871599/>

taking public transportation,<sup>67</sup> and decreased lung function in women associated with traffic-related pollution.<sup>68</sup>

43. I am aware that a recent study found that regulations of motor vehicle emissions in the United States continues to yield large benefits to society from reduced PM<sub>2.5</sub>-attributable mortality and greenhouse gas emissions—up to \$270 billion in 2017 alone.<sup>69</sup>

### **Communities of Color and Low-Income Communities Face Greater Health Risks from Transportation Pollution**

44. Traffic-related air pollution and the health impacts associated with such pollution have a disproportionate impact on communities of color and low-income communities.<sup>70</sup> Households that are located near large transportation

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<sup>67</sup> Annette Peters et al., *Exposure to Traffic and the Onset of Myocardial Infarction*, 351 *New Eng. J. Med.* 1721 (2004), <https://www.nejm.org/doi/full/10.1056/NEJMoa040203>.

<sup>68</sup> Shakira Franco Suglia et al., *Association between Traffic-Related Black Carbon Exposure and Lung Function among Urban Women*, 116 *Env't Health Persp.* 1333 (2008), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2569091/>.

<sup>69</sup> Ernani F. Choma et. al., *Health benefits of decreases in on-road transportation emissions in the United States from 2008 to 2017*, 118 *Proc. Nat'l Acad. Sci.* 1 (Dec. 13, 2021), <https://www.pnas.org/content/118/51/e2107402118>.

<sup>70</sup> See, e.g., Nancy Tian, Jianping Xue, & Timothy M. Barzyk, *Evaluating Socioeconomic and Racial Differences in Traffic-Related Metrics in the United States Using a GIS Approach*, 23 *J. Exposure Sci. & Env't Epidem.* 213 (2012); Jayajit Chakraborty, *Automobiles, Air Toxics, and Adverse Health Risks: Environmental Inequities in Tampa Bay, Florida*, 99 *Annals Ass'n Am. Geog.* 674 (2009); Rachel Morello-Frosch & Bill M. Jesdale, *Separate and Unequal: Residential Segregation and Estimated Cancer Risks Associated with Ambient Air Toxics in U.S. Metropolitan Areas*, 114 *Env't Health Persp.* 386 (2006); Nardone A, Casey JA, Morello-Frosch R, Mujahid M, Balmes JR, Thakur N. Associations

facilities, including major roadways, are more likely to be occupied by people of color, to have lower incomes, and to have lower educational attainment. 88 Fed. Reg. at 4423. Schools located near large roadways also have higher numbers of minority students and students who are eligible for free or reduced-price lunches. *Id.* Studies have found that people who live in such chronically stressed areas may be more susceptible to the harmful health effects associated with air pollution, and that these are disproportionately people of color and low-income communities.<sup>71</sup>

45. According to the American Lung Association's 2022 *State of the Air* report, people of color are almost four times as likely to live in a county with failing grades for unhealthy levels of short term and long term particle pollution

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between historical residential redlining and current age-adjusted rates of emergency department visits due to asthma across eight cities in California: an ecological study. *Lancet Planet Health*. 2020;4(1):e24-e31.

<sup>71</sup> See, e.g., HEI Panel on the Health Effects of Long-Term Exposure to Traffic-Related Air Pollution (2022) health effects of long-term exposure to traffic related air pollution. Health Effects Institute Special Report 23. [Online at [https://www.healtheffects.org/system/files/hei-special-report-23\\_1.pdf](https://www.healtheffects.org/system/files/hei-special-report-23_1.pdf).] This more recent review focused on health outcomes related to birth effects, respiratory effects, cardiometabolic effects, and mortality; Long, D.; Lewis, D.; Langpap, C. (2021) Negative traffic externalities and infant health: the role of income heterogeneity and residential sorting. *Environ and Resource Econ* 80: 637–674. [Online at <https://doi.org/10.1007/s10640-021-00601-w>]; U.S. EPA (2021). Estimation of Population Size and Demographic Characteristics among People Living Near Truck Routes in the Conterminous United States. Memorandum to the Docket. Talat Islam et al., *Parental Stress Increases the Detrimental Effect of Traffic Exposure on Children's Lung Function*, 184 *Am. J. Respiratory & Critical Care Med.* 822 (2011);.

and ozone pollution compared to white people.<sup>72</sup> A report by Moving Forward Network found that, on average, Asian and Black Americans are exposed to PM<sub>2.5</sub> pollution that is 56 and 44% higher, respectively, than white Americans.<sup>73</sup> And an EDF analysis of the Bay Area in California found that neighborhoods with higher percentages of residents of color experienced double the rate of asthma from nitrogen dioxide (“NO<sub>2</sub>”)—a pollutant often used as a marker for transportation-related pollution.<sup>74</sup>

46. I am also aware that heavy-duty diesel vehicle emissions are often identified as among the largest source of disparity, disproportionately affecting people of color across geographies and demographics.<sup>75</sup>

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<sup>72</sup> Am. Lung Assoc., *State of the Air* (2022), <https://www.lung.org/getmedia/74b3d3d3-88d1-4335-95d8-c4e47d0282c1/sota-2022.pdf>.

<sup>73</sup> Jimmy O’Dea, Moving Forward Network, *Zero-Emissions Technology for Freight: Heavy-Duty Trucks, Tools to Advocate for Zero-Emissions Technology* (2020), [http://www.movingforwardnetwork.com/wp-content/uploads/2020/10/MFN\\_ZeroEmissionToolkit-1.pdf](http://www.movingforwardnetwork.com/wp-content/uploads/2020/10/MFN_ZeroEmissionToolkit-1.pdf).

<sup>74</sup> Southerland et al., *Assessing the Distribution of Air Pollution Health Risks Within Cities: A Neighborhood-Scale Analysis Leveraging High-Resolution Data Sets in the Bay Area, California*, 129 *Env’t Health Perspectives* 037006 (Mar. 31, 2021), <https://ehp.niehs.nih.gov/doi/full/10.1289/EHP7679>; EDF, *Air Pollution’s Unequal Impacts in the Bay Area* (2021), <https://www.edf.org/airqualitymaps/oakland/health-disparities>.

<sup>75</sup> Christopher W. Tessum et al., *PM<sub>2.5</sub> pollutants disproportionately and systemically affect people of color in the United States*, 7 *Sci. Advances* 1 (Apr. 28, 2021), <https://www.science.org/doi/10.1126/sciadv.abf4491>.

47. A recent analysis by The Real Urban Emissions (“TRUE”) Initiative finds that people of color living in New York City are exposed to 5% more PM<sub>2.5</sub> attributable to diesel trucks operating in the city than average, while non-Latino white residents are exposed to 10% less.<sup>76</sup> TRUE concludes that “[t]hese inequities in air pollution exposure contribute to racial disparities in health outcomes.”<sup>77</sup> Recent work using satellite data to assess the health burdens from NO<sub>2</sub> pollution in 52 cities found diesel traffic is the dominant source of disparities—across race, ethnicity, and income—and that a 62% reduction in on-road diesel traffic would decrease these inequalities by 37%.<sup>78</sup> Heavy-duty diesel vehicle emissions, specifically, contribute to the majority of these NO<sub>2</sub> inequalities.<sup>79</sup>

48. Analysis by scientists at EDF, Harvard Chan School of Public Health, and the University of North Carolina, using state-of-the-art fine-scale air quality modeling and health impact assessment methods in New York City, found that many communities of color and low-income neighborhoods with high baseline levels of asthma emergency department visits also have elevated diesel truck and

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<sup>76</sup> Michelle Meyer & Tim Dallmann, TRUE Initiative, *Air Quality and Health Impacts of Diesel Truck Emissions in New York City and Policy Implications* (2022), <https://www.trueinitiative.org/media/792240/true-nyc-report-fv.pdf>.

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

<sup>78</sup> Mary Angelique G. Demetillo et al., *Space-Based Observational Constraints on NO<sub>2</sub> Air Pollution Inequality from Diesel Traffic in Major US Cities*, 48 *Geophysical Res. Letters* 1 (Aug. 25, 2021), <https://doi.org/10.1029/2021GL094333>.

<sup>79</sup> *Id.*

bus traffic and pollution and therefore face disproportionate impacts. Specifically, census tracts with 97% people of color bear more than 35% of total childhood asthma emergency department visits attributable to medium- and heavy-duty vehicles, despite being only 19% of the population.<sup>80</sup> And in Houston's Fifth Ward, diesel trucks that come and go from the cluster of metal recyclers and concrete processing plants, drive up NO<sub>2</sub> levels by 48% relative to the rest of the city. Residents are largely people of color (more than 90%), 40% live below the federal poverty line, and life expectancy is almost a decade lower than it is in the rest of the region (69 compared to 78 years).<sup>81</sup>

**Dangerous Air Pollution from Medium- and Heavy-Duty Vehicles Will  
Decrease as a Result of the Challenged Actions**

49. As described above, medium- and heavy-duty vehicles are responsible for large amounts of climate-warming and health-harming pollutants such as PM<sub>2.5</sub>, volatile organic compounds, sulfur oxides, NO<sub>x</sub>, and hazardous air pollutants.

50. I understand that California's Advanced Clean Trucks, Zero Emission Airport Shuttle Bus, and Zero Emission Powertrain Certification regulations will profoundly reduce medium- and heavy-duty vehicle tailpipe pollution in

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<sup>80</sup> The Opportunity for Near-Term Electrification of Medium- and Heavy-duty Vehicles. 2022. Environmental Defense Fund.

<https://blogs.edf.org/climate411/files/2022/05/FINAL-EDF-HD-ZEV-report-5.17.22.pdf>

<sup>81</sup> See EDF, *Finding Pollution—and Who It Impacts Most—in Houston* (June 3, 2020), <https://www.edf.org/airqualitymaps/houston/findings>.

California and will have a positive impact on the health of communities disproportionately impacted by transportation pollution.<sup>82</sup> Those regulations are expected to result in a decrease in levels of ground-level ozone because the concentration of ambient NO<sub>x</sub>, a critical component of ozone creation, will significantly decrease.<sup>83</sup>

51. According to California's estimates, the Advanced Clean Trucks rule alone is projected to reduce NO<sub>x</sub> emissions by 6.9 tons per day and PM<sub>2.5</sub> emissions by 0.24 tons per day in California by 2031.<sup>84</sup> The Zero Emission Airport Shuttle Bus and Powertrain Certification regulations will result in additional reductions of PM<sub>2.5</sub>, NO<sub>x</sub>, and other health-harming pollutants in California.<sup>85</sup> The regulations are thus expected to result in fewer premature deaths, healthcare costs, and missed workdays.<sup>86</sup> Those benefits are especially relevant for communities of color and low-income communities, which are disproportionately impacted by near-roadway pollution.<sup>87</sup>

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<sup>82</sup> See CARB, ACT Initial Statement of Reasons, at V-9 (Oct. 22, 2019), Docket No. EPA-HQ-OAR-2022-0331-0047 (hereinafter "ACT ISOR"); ZEAS Initial Statement of Reasons, at ES-3 (Dec. 31, 2018), Docket No. EPA-HQ-OAR-2022-0331-0015; ZEP Initial Statement of Reasons 9 (Dec. 31, 2018), Docket No. EPA-HQ-OAR-2022-0331-0011.

<sup>83</sup> CARB, Clean Air Act § 209(b) Waiver Request Support Document 22-25 (Dec. 20, 2021), Docket No. EPA-HQ-OAR-2022-0331-0003.

<sup>84</sup> *Id.* at 27.

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

<sup>86</sup> ACT ISOR, *supra* note 85 at V-3.

<sup>87</sup> *Id.* at VIII-1.

52. I further understand that public health and other pollution-reduction benefits will extend to residents of other States that choose to implement California's regulations. Specifically, Massachusetts, New Jersey, New York, Oregon, Vermont, and Washington have each adopted the Advanced Clean Trucks rule.

53. By permitting California and other states to enforce the Advanced Clean Trucks, Zero Emission Airport Shuttle Bus, and Zero Emission Powertrain Certification regulations, the Challenged Actions will result in significant reductions in climate-warming and health-harming pollution from medium- and heavy-duty vehicles.

54. I am concerned that if the Challenged Actions do not remain in effect, higher levels of NO<sub>x</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, volatile organic compounds, and hazardous air pollutants such as benzene will further harm individuals and communities impacted by near-roadway pollution in California and other states that choose to implement California's regulations.

55. In conclusion, the Challenged Actions directly and concretely benefit public health.

I declare under penalty of perjury that the foregoing is true and correct.

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Executed on June 6, 2023.

  
\_\_\_\_\_  
Elena Craft

## DECLARATION OF ERIC KNAUFT

I, Eric Knauft, declare as follows:

1. I have been an EDF member for the last 14 years I have been working as a software engineer for the last 16 years. Prior to that, I received my BSE in computer science from Princeton University.
2. I support EDF's mission to protect the health and future of our children from climate change and dangerous air pollution because as a parent to a young daughter, I want her to have a safe and healthy world to grow up in. I have always been concerned about climate change, and within the last 15 years have felt the need to take action. This feeling has grown after our daughter was born, as I wish to ensure my family and daughter can thrive in a safe environment.
3. I have volunteered in the past to help with advocacy because I wanted to organize an event to help people realize the dangers of climate change and advocate for awareness of environmental issues.
4. I currently live in San Francisco in San Francisco County with my wife and three-year-old daughter. We have lived at our current location for about 2.5 years. I have lived in San Francisco for about 15 years.
5. I am aware that the city of San Francisco is in San Francisco County, which is currently designated by EPA as a nonattainment zone for fine particulate matter and ozone.
6. Our home is less than less than a half mile from I-280, an interstate highway and major freight corridor.

7. My daughters' school is less than one mile from I-280, an interstate highway and major freight corridor. Additionally, her school is one mile from San Francisco International Airport.
8. I understand that emissions of greenhouse gases into the atmosphere are causing climate change. I am familiar with the broad scientific consensus that human-induced climate change is happening at an accelerating pace, and I am familiar with and understand the scientific evidence documenting the current and predicted impacts of climate change in the United States and my home state of California. These include: elevated temperatures, reduced snowfall in the mountains, deteriorating air quality such as worsening ground-level ozone concentrations, increased frequency of wildfires, increased storm intensities, flooding, and extreme weather events such as drought and prolonged heat waves.
9. Based on these scientific findings, I understand that continued increases in greenhouse gas emissions will exacerbate these already-occurring impacts, potentially harming me and my family residing in San Francisco, California.
10. I understand that greenhouse gas emissions from medium- and heavy-duty vehicles — line haul tractors, trailers, heavy-duty pickups and vans, and vocational trucks (including buses, refuse trucks, concrete mixers, and ambulances) — account for a significant percentage of U.S. greenhouse gas emissions.
11. I also understand that the exhaust from heavy-duty vehicles emits other health-harming, criteria air pollutants such as carbon monoxide and fine particulate matter, which have been linked to increased risk of heart disease; oxides of sulfur

volatile organic compounds, and oxides of nitrogen (NOx), which increase the risk of respiratory problems; and benzene, a known human carcinogen. This pollution contributes to unhealthy air quality in and around the communities where my family and I live, as well as where my young daughter goes to school.

12. I further understand that these health impacts are particularly detrimental for children, including my own daughter. Children face a greater health risk from PM and NOx pollution because their lungs are still growing and they are more active outdoors.
13. I am aware that through its Advanced Clean Trucks, Zero Emission Airport Shuttle Bus, and Zero Emission Powertrain Certification regulations, the California Environmental Protection Agency's Air Resources Board (CARB) has taken action to reduce health-harming and greenhouse gas pollution from medium-and-heavy duty vehicles. I am also aware that EPA recently granted a waiver from Clean Air Act preemption for these rules.
14. I understand that these rules will result in significant reductions of greenhouse gas and health-harming pollution.
15. I am concerned that my preferred recreational activities will be negatively impacted if EPA's waiver were overturned. As a resident of San Francisco, California, I regularly go biking, and my family and I enjoy spending many days outside at local playgrounds. Without EPA's waiver for California's rules, medium- and heavy-duty vehicles will emit additional PM and NOx pollution, generating more smog and haze — pollution which will interfere with my and my

daughter's ability to enjoy outdoor activities close to our home, such as playing at the local parks.

16. I am additionally concerned about the negative impacts to my and my family's health if EPA's waiver is overturned, particularly our increased risk of developing respiratory diseases such as asthma from exposure to SO<sub>x</sub>, volatile organic compounds, NO<sub>x</sub>, and ground-level ozone. I want my three-year-old daughter to grow up unaffected by pollution. I am concerned that she could develop asthma or other health ailments due to nearby pollution and particulate matter. These pollutants are emitted from or form as a result of emission from medium- and heavy-duty vehicles. I am likewise concerned about increased cancer risks from toxic pollutants such as benzene in the exhaust of medium- and heavy-duty vehicles. The release of these pollutants is especially troubling to my family because my wife is sensitive to pollutants and has pre-asthma. In the past, for example during the fires in 2020, when wildfires have released smoke and particulate matter, we have been forced to stay indoors for long periods of time due to my wife's sensitivities and concern for my three-year-old daughter's lungs.
17. Concerns about air quality, as well as concerns about climate change induced environmental harms, have prevented my wife and I from purchasing a home here in San Francisco. Although we had previously planned to purchase a home in San Francisco, my wife and I are concerned by the increased number of wildfires and flooding risk. We were concerned about the increasing risk of long power outages due to wildfire, flooding, and extreme heat events. We have also been

concerned about air quality, especially given our close proximity to a major highway.

18. By reducing vehicle emissions of particulate matter and pollutants that contribute to high ozone levels, such as oxides of nitrogen and volatile organic compounds, California's medium- and heavy-duty regulations will protect me and my family from the health-harming effects of this pollution.
19. Finally, I am concerned that EPA's waivers being overturned in this case would prevent CARB from addressing California's unique air pollution problem through future regulations, causing further harm to me and my family.
20. For all the above reasons, I am concerned the waiver being overturned would adversely affect my and my family's health and welfare.
21. I declare that the foregoing is true and correct to the best of my knowledge, information, and belief.

Dated: April 23, 2023



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Eric Knauft

## DECLARATION OF JOHN STITH

I, John Stith, declare as follows:

1. I have personal knowledge of the matters set forth herein. I submit this declaration in support of EDF's Motion to Intervene in Support of Respondents in challenges to final actions of the U.S. Environmental Protection Agency ("EPA") published as *Waiver of Preemption; Decision: California State Motor Vehicle and Engine Pollution Control Standards; Heavy-Duty Vehicle and Engine Emission Warranty and Maintenance Provisions; Advanced Clean Trucks; Zero Emission Airport Shuttle; Zero-Emission Power Train Certification*, 88 Fed. Reg. 20,688 (Apr. 6, 2023).

2. I am Senior Director of Performance Analytics and CRM Operations at the Environmental Defense Fund ("EDF"). I have had this position for more than two months, and I have worked for EDF for more than 17 years.

3. My duties include maintaining an accurate list of EDF members. My colleagues and I provide information to members, acknowledge gifts and volunteer actions, and manage the organization's member databases. My work requires me to be familiar with EDF's purposes, staffing, activities, and membership.

4. EDF is a membership organization incorporated under the laws of the State of New York. It is recognized as a not-for-profit corporation under section 501(c)(3) of the United States Internal Revenue Code.

5. EDF relies on science, economics, and law to protect and restore the quality of our air, water, and other natural resources. EDF employs more than 150 scientists, economists, engineers, business school graduates, and lawyers to help solve challenging environmental problems in a scientifically sound and cost-effective way.

6. I understand that EPA has granted waivers of preemption that enable California to enforce its Advanced Clean Trucks, Zero Emission Airport Shuttle Bus, and Zero Emission Powertrain Certification regulations. The Advanced Clean Trucks regulation requires an increasing portion of medium- and heavy-duty vehicles sold in California to be zero or near zero emission vehicles beginning in model year 2024. Similarly, the Zero Emission Airport Shuttle Bus regulation requires an increasing portion of the shuttle fleets at the thirteen largest California airports to be zero emission vehicles. Finally, the Powertrain Certification regulation sets emissions standards and certification requirements starting with 2021 model year medium- and heavy-duty vehicles.

7. I understand that these rules will have significant benefits for California residents, including EDF members in the state. Medium- and heavy-

duty vehicles are responsible for large amounts of health-harming pollutants such as fine particulate matter (“PM2.5”) and oxides of nitrogen (“NOx”). According to California’s estimates, the Advanced Clean Trucks rule alone is projected to reduce NOx emissions by 6.9 tons per day and PM2.5 emissions by 0.24 tons per day in California by 2031. The Zero Emission Airport Shuttle Bus and Powertrain Certification regulations will result in additional reductions of PM2.5, NOx, and other health-harming pollutants in California. The regulations are thus expected to result in fewer premature deaths, healthcare costs, and missed workdays. Those benefits are especially relevant for communities of color and low-income communities, which are disproportionately impacted by near-roadway pollution.

8. I further understand that pollution-reduction benefits will extend to residents of other States that choose to implement California’s regulations. Specifically, Massachusetts, New Jersey, New York, Oregon, Vermont, and Washington have each adopted the Advanced Clean Trucks rule. EDF members in those states will thus also benefit from pollution reductions and public health improvements.

9. I also understand that greenhouse gas pollution from medium- and heavy-duty vehicles is a significant contributor to climate change. The Advanced Clean Trucks rule is projected to reduce greenhouse gas emissions by 0.5 million metric tons per year of carbon-dioxide equivalent emissions by 2031. The Zero

Emission Airport Shuttle Bus and Powertrain Certification regulations will result in additional reductions of greenhouse gas emissions. Those greenhouse gas emissions reductions will slow the most harmful effects of climate change, thereby benefiting EDF members throughout the United States.

10. EDF has a strong organizational interest, and a strong interest that is based in its members' recreational, aesthetic, professional, educational, public health, environmental, and economic interests, in reducing harmful air pollution from medium- and heavy-duty vehicles and facilitating increased deployment of clean and zero-emission vehicles.

11. Through its programs aimed at protecting human health, EDF has long pursued initiatives at the state and national levels to reduce emissions of health-harming and climate-altering air pollutants from all major sources, including medium- and heavy-duty vehicles. This work has routinely addressed emissions of the same pollutants targeted by the California regulations for which EPA has granted waivers: carbon dioxide and other greenhouse gases, NO<sub>x</sub>, PM<sub>2.5</sub>, and other harmful pollutants from the transportation sector.

12. In addition to EDF's scientific expertise, EDF has a long history of litigating cases concerning EPA's authority to grant waivers for California vehicle emission standards. For instance, in *Ohio, et al. v. EPA*, No. 22-1081 (D.C. Cir.), EDF intervened in defense of EPA's reinstatement of portions of its 2013 waiver

for California's Advanced Clean Cars regulations, which reduce emissions from light-duty vehicles. EDF has also challenged prior EPA actions regarding waivers for California's vehicle emission regulations in other instances. *See e.g., Union of Concerned Scientists v. Nat'l Highway Traffic Safety Admin.*, No. 19-1230 (D.C. Cir. filed Oct. 28, 2019); *California, et al. v. EPA*, No. 08-1178 (D.C. Cir. filed May 5, 2008).

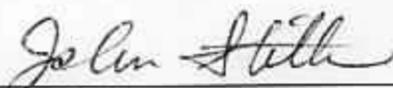
13. When an individual becomes a member of EDF, their current residential address is recorded in our membership database. The database entry reflecting the member's residential address is verified or updated as needed. The database is maintained in the regular course of business, and each entry reflecting a member's residential address and membership status is promptly updated to reflect changes. I obtained the information about our membership discussed below from our membership database.

14. EDF currently has over 348,000 members in the United States, and we have members in all 50 states and the District of Columbia. Of those members, over 56,000 live in California and over 87,000 live in other States that have adopted California's Advanced Clean Trucks rule. Those members have a strong interest in ensuring that California and other States can enforce the Advanced Clean Trucks, Zero Emission Airport Shuttle Bus, and Zero Emission Powertrain Certification regulations. And those members would be adversely impacted by the

additional health-harming and climate-altering pollution that would result if this lawsuit were to succeed in reversing EPA's actions to grant the waivers.

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Takoma Park, Maryland on June 8, 2023.

  
\_\_\_\_\_  
John Stith

## DECLARATION OF GINA TRUJILLO

I, Gina Trujillo, declare as follows:

1. I am the Director of Membership at the Natural Resources Defense Council, Inc. (NRDC). I have held this position since 2015 and have worked at NRDC in the membership department for more than 30 years.
2. My duties include supervising the preparation of materials that NRDC distributes to members and prospective members. Those materials describe NRDC and identify its mission. My duties also include supervising the maintenance and updating of NRDC's membership database, which is a listing of those persons who are members of NRDC.
3. NRDC is a membership organization incorporated under the laws of the State of New York. It is recognized as a not-for-profit corporation under Section 501(c)(3) of the United States Internal Revenue Code.
4. NRDC currently has hundreds of thousands of members nationwide, including in each of the fifty states and the District of Columbia.
5. When an individual becomes a member of NRDC, she or he authorizes NRDC to take legal action on her or his behalf to protect the environment and public health.
6. NRDC's mission statement declares that the organization's purpose is "to safeguard the Earth: its people, its plants and animals, and the natural systems

on which all life depends.” Advocating for, and helping defend, regulatory actions that reduce dangerous pollution from motor vehicles, and protecting NRDC members from the harmful effects of air pollution and climate change, are central to NRDC’s purpose. NRDC has long worked to promote government standards that require cleaner, more-efficient new motor vehicles.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Executed on April 7, 2023, in Katonah, NY.

  
Gina Trujillo

## DECLARATION OF KATHLEEN WOODFIELD

I, Kathleen Woodfield, state and declare as follows:

1. I am a member of the Natural Resources Defense Council (NRDC). I joined NRDC more than 18 years ago because I was concerned about air pollution in my community. I rely on NRDC to advocate on behalf of me and the health of my community.

2. I live in San Pedro, California. I have lived within the same few blocks since 1985. San Pedro is part of the City of Los Angeles and is adjacent to the Port of Los Angeles and the community of Wilmington.

3. San Pedro is located within the South Coast Air Basin, a region with some of the worst air quality in the nation. According to the American Lung Association, it is one of the most ozone-polluted regions in the country. Air quality in the South Coast Air Basin violates federal and state standards for ozone and particulate matter, among other pollutants. These pollutants can create and exacerbate cardiovascular and respiratory problems such as asthma.

4. The air quality in San Pedro is especially affected by emissions of pollutants caused heavy-duty truck traffic to and from the Port of Los Angeles, which is one mile from my house. My home is also only a few blocks away from Interstate 110, a main artery for Port-related truck traffic,

and I also live close to several refineries in Wilmington: less than four miles from the Phillips 66 refinery and about six miles from the Valero and Tesoro refineries. The fuel and byproducts produced in these refineries are often stored nearby, including massive amounts of highly volatile butane at the Rancho LPG facility only two miles from my house. These products are also transported via rail and trucks through my community.

5. I work nearby, in the City of Long Beach, only a few blocks from Highway 1 where it ramps to Interstate 710, which are both heavily trafficked roadways. Highway 1 at that location has non-stop truck traffic as trucks are going to or getting off Interstate 710. Also, there are traffic lights in both directions, so there are always idling trucks waiting for the green lights. Truck traffic on Interstate 710 is nearly non-stop.

6. I am deeply concerned about the health risks I face from breathing air pollution caused by heavy-duty truck traffic where I live and work. The health impacts associated with air pollution are extensive, and more information about harmful impacts comes forward regularly. Older adults, like myself, are especially at risk because our bodies are less able to compensate for the effects of environmental hazards. I suffer from chronic sinusitis, an inflammation of the sinuses that can be exacerbated by air pollution. I have also been diagnosed with high blood pressure and

hypertension, which studies have similarly linked to air pollution exposure.

My husband has had throat cancer and has suffered from pneumonia.

7. For all of these reasons, I strongly support regulatory actions that promote the reduction of NO<sub>x</sub> and other pollutants from heavy-duty vehicles such as Port-serving trucks. I believe it is critically important to have rules in place that help keep the air as clean as possible.

8. I understand that the California Air Resources Board (CARB) has enacted three sets of regulations that are designed to reduce pollution from heavy-duty trucks: the Advanced Clean Trucks (ACT), Zero Emission Airport Shuttle Bus (ZEAS), and Zero Emission Powertrain (ZEP) Certification regulations. I also understand that these regulation have been submitted to the United States Environmental Protection Agency (EPA) for approval to be effective. I am aware that on April 6, 2023, EPA granted waivers (approval) for these CARB regulations.

9. The CARB ACT regulation requires that truck manufacturers produce and sell increasing quantities of medium- and heavy-duty zero-emission vehicles and near zero emission vehicles in California. These regulations will help reduce harmful emissions of NO<sub>x</sub> and particulate matter near where I live and work.

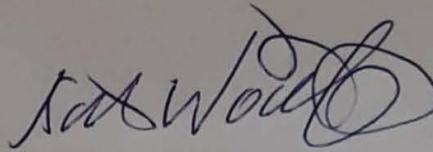
10. The CARB ZEAS regulation establishes steadily increasing zero-emission airport shuttle fleet composition requirements for airport shuttle fleet owners who service the thirteen largest California airports, including Los Angeles International Airport which is about 20 miles from my home, and which my husband and I sometimes use for travel.

11. The ZEP Certification regulation establishes certification requirements and optional emission standards for 2021 and subsequent model year medium- and heavy-duty ZEVs and the zero-emission powertrains installed in those vehicles. This regulation was enacted to support current and future advanced-technology measures applicable to medium- and heavy-duty vehicles, by helping ensure that zero-emission technologies being deployed are effective in reducing truck tailpipe pollution.

12. In my view, EPA approval of these three CARB regulations will help clean up the air where I live and work, and have a positive effect on my and my husband's health.

13. Setting truck pollution standards below what is healthy and achievable is not acceptable, really. Wherever possible, the government should push industry to clean itself up, and to not push the health costs onto people who happen to live in vulnerable areas.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief. Executed on April 1, 2023, in San Pedro, California.

A handwritten signature in black ink, appearing to read "Kathleen Woodfield", with a stylized flourish at the end.

Kathleen Woodfield

**DECLARATION OF BOBBI JO CHAVARRIA**

I, Bobbi Jo Chavarria, declare as follows:

1. I am over 18 years of age and competent to give this declaration. I have personal knowledge of the following facts, and if called as a witness could testify competently to them. As to those matters which reflect an opinion, they reflect my personal experience, opinion and judgment on the matter.

2. I live in Fontana, California, in San Bernardino County. San Bernardino is located within the larger region known as the Inland Empire. I live with my husband, two sons (11 and 14 years old), and a cat.

3. I have been a member of the Sierra Club's San Gorgonio Chapter, which is a part of the Los Serranos geographic group, for over 10 years. I have been organizing around the issue of air pollution caused by semis, delivery vans, and other heavy-duty vehicles for several years now. I have taught classes, conducted research, written a letter asking Governor Newsom to issue a warehouse moratorium, collaborated on a report submitted to the Governor, engaged in door-to-door and phone-based grassroots organizing, and authored letters to the editor in effort both to raise awareness around this issue and to call our government to action.

4. As a resident of the Inland Empire—an area the American Medical Association has declared the smoggiest in the nation—I worry about air pollution from heavy-duty vehicles every day. Pollution has long been an issue in the region, but as detailed in a report submitted to the governor in January, the recent boom in e-commerce in the Inland Empire has only exacerbated this issue. As warehouses and traffic from heavy-duty vehicles flood the region, my community is exposed to a debilitating amount of harmful emissions. Warehouse CITY has estimated that the approximately 4,000 warehouses located in the Inland Empire produce around 1,000 pounds of diesel particulate matter, 100,000 pounds of nitrogen oxides (NOx), and over 50,000,000

pounds of carbon dioxide emissions *per day*. Our exposure to this pollution is further exacerbated by the unique bowl shape of the region, meaning we live in an ever-present cloud of pollution. The residents of this community, largely people of color are not the beneficiaries of the heavy-duty vehicle industry; but we suffer the majority of the impacts of this pollution. As a direct result of this pollution, we face a whole host of damaging environmental and health impacts, including increased cardiac, respiratory, and reproductive health issues, including cancers.

5. I worry about air pollution from heavy-duty vehicles on a daily basis. Our home is located at 15585 Mallory Drive, Fontana, CA 92335, within fifteen hundred feet of Valley Boulevard, a heavily trafficked truck route. Our house lies just under a half mile away from the I-10 freeway. When we purchased our home in 1993, the area immediately near our home on Valley Boulevard had a chicken farm and several open fields, including a large field next to our local elementary school, Poplar Elementary. Now, there is a large Penske heavy-truck operation, a natural gas fueling station and heavy truck service area, and the field next to the elementary school has a natural gas truck rental facility with two large natural gas tanks about 100 feet away from the school's playground and a warehouse under construction. As a result, my entire household is now being boxed in with a disproportionate amount of pollution from the trucks and other heavy-duty vehicles near our house every day.

6. This air pollution has had a direct and debilitating effect on my and my family's physical health. My mother moved from Orange County to live with us in 1998 and began to experience respiratory health issues, including developing asthma, relying on inhalers daily. She is still in the Inland Empire, with a home in Colton, and has been diagnosed with COPD. In 2011, when I was pregnant with my second son and not yet aware of the dangers of air pollution, I spent a lot

of time walking on the trails with my firstborn near my house. While unaware at the time, I was regularly breathing in a large amount of pollution caused by the nearby heavy-duty vehicle traffic and developed rhinitis. The sinus congestion and headaches have been constant to the point that I take daily allergy medicine for relief. I have been tested for allergies and the results showed that I have no allergies but my doctor noted that environmental air quality can be a factor in the continued irritation I experience. My younger son regularly has nose bleeds, disrupting his daily life. As nosebleeds have been linked with chronic exposure to air pollution, we believe that his nosebleeds are also caused by exposure to air pollution from the heavy-duty vehicle traffic around our house. My older son began around the age of 18 months to cough, sneeze, and suffer congestion daily with large amounts of mucous. Both my sons have extreme allergies and their noses are frequently congested, even while taking daily allergy medicine. My husband, who moved from Los Angeles in his mid-teens, has chronic allergies, cough, and has developed diabetes, high blood pressure, as well as elevated cholesterol. We know that his ability to exercise outdoors on a regular basis has caused some of the health challenges he is now facing at the age of 51. He has worked in a warehouse facility since 1991, and currently works at FedEx Freight, where he is exposed to dangerous emissions daily.

7. In addition to causing several chronic health issues, the pollution caused by heavy duty vehicles around my house has also had a debilitating impact on my family's finances. In order to manage and reduce my family's, and particularly my son's exposure to air pollution within our home, we have spent thousands maintaining air filtration systems in our home. Because of finances, we have delayed investing in the cost of installing new windows to keep dust out and to help ensure a better indoor air quality, however we have saved the estimated \$10,000 to work on that this year. Furthermore, we take our children to school in Ontario (another city in San

Bernardino County) in search of cleaner air, even though the schools in Fontana are closer.

While we are fortunate to be able to take these measures to protect our children's health, these are not measures that many families in Fontana can afford, and they are not measures that anyone should be forced to take. Meanwhile, Ontario's air quality is now threatened as hundreds of acres of farmland in the area has been rezoned for industrial warehouses.

8. The air pollution caused by these heavy-duty vehicles has also impacted my family's daily lives. Monitoring air pollution has become part of my regular routine. As part of my involvement with a local community organization called GROW Fontana, we have participated in the EPA's Air Quality Flag Program since 2010 with a daily update of air quality in the region posted on a website. I try to organize our activities in such a way as to reduce our exposure to air pollution as much as possible. I check the air quality index around my house no less than every hour of every day, and make decisions about when to go outside, or to let my children go outside, based on the air quality. We are forced to restrict outdoor activities to when the air quality is safe enough to breathe. When it is particularly bad, which is often, we don't leave the house.

9. I am familiar with California's Advanced Clean Trucks regulation and its associated warranty and maintenance provisions (the "California Truck Rules"). I am also familiar with the Environmental Protection Agency's ("EPA") waiver authorizing those standards, issued on April 6th, 2023. The California Truck Rules reduce nitrogen oxides, carbon dioxide, and particulate matter from heavy-duty vehicles, from 2024 onwards. Those reductions in pollution will benefit me and my family by preventing further exacerbation of our existing, pollution-caused health conditions. Those Rules would also benefit us by allowing us to potentially send our children to school closer to our home and to engage in less expensive extracurricular activities in the hopes

of reducing their exposure to air pollution. Finally, the Truck Rules will allow me and my family to more frequently enjoy recreational activities outside of our home, without having to schedule our outdoor excursions around unpredictable windows of time when the air outside is safe to breathe. If the Rules were not to go into effect, continued pollution would adversely affect me and my family members by subjecting us to increasing air pollution around our home, thereby further exacerbating our existing health issues, preventing us from going outside on our own schedules, and taking expensive and inconvenient measures to reduce our exposure to heavy-duty trucks' pollution.

10. Like many in my community, I am directly and disproportionately impacted by pollution from freight trucks and other heavy-duty vehicles. I support more stringent emissions regulations on heavy-duty vehicles and I believe EPA's Final Rule is important for protecting our community from this toxic pollution. I fully support Sierra Club's intervention in court to defend these new EPA standards.

I declare under penalty of perjury that the foregoing is true and correct.

Signed on this 21 day of June, 2023 in Fontana, California.

  
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**DECLARATION OF KATHERINE GARCIA**

I, Katherine Garcia, declare as follows:

1. I am the Director of the Clean Transportation for All Campaign at Sierra Club.

I was formerly the Clean Transportation Policy Advocate at the Sierra Club California Chapter, a position that I held for three years.

2. In my current role, I manage and coordinate Sierra Club's policies and efforts on behalf of its members to advocate for greenhouse gas reductions and greater fuel efficiency from our nation's vehicle fleet. While at Sierra Club, I have worked on numerous matters involving greenhouse gas regulations and fuel economy standards for light-duty and heavy-duty vehicles. My position requires me to be familiar with Sierra Club's purpose and mission, its activities relating to motor vehicles and to air quality (among other things), and the nature and scope of its membership.

3. Sierra Club is a non-profit membership organization incorporated under the laws of the State of California, with its principal place of business in Oakland. Sierra Club's mission is to explore, enjoy and protect the wild places of the Earth; to practice and promote the responsible use of the Earth's resources and ecosystems; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives.

4. Sierra Club has 722,605 active members nationwide, according to data last updated in April 2023. These include members in California and elsewhere residing

and working close proximity to high volume roadways and refineries that process the oil products powering the vehicles traveling those busy roadways, some of whom experience adverse health effects from the resulting pollution. They include members in states and counties that have been designated non-attainment for ozone and particulate matter, pollution that is caused by vehicles, among other sources. They also include members whose use and enjoyment of the natural environment is threatened and harmed by a changing climate. These members have a strong interest in protecting human health and the environment from the air pollution emitted by the transportation sector. Sierra Club works on behalf of its members, who rely upon the organization to advocate for their interests in front of state, local and federal entities, including EPA, NHTSA and the courts.

5. As part of carrying out this mission, for decades the Sierra Club has used the traditional tools of advocacy--organizing, lobbying, litigation, and public outreach—to push for policies that decrease air and climate pollution by reducing our nation’s dependence on fossil fuels.

6. Sierra Club has a long history of involvement in regulations aimed at tackling pollution from heavy-duty and other vehicles and lessening our dependence on oil as a transportation fuel, in California and elsewhere. Sierra Club members and staff, for example, have attended meetings and submitted comments supporting stricter pollution standards for heavy-duty vehicles in California; have prepared reports on the

local effects of heavy-duty pollution, especially in heavily congested transportation corridors; advocated against local land-use decisions that exacerbate communities' exposure to heavy-duty vehicles' pollution, such as the concentrated siting of warehouses; advocated for stronger federal pollution standards for heavy-duty vehicles; and worked to secure adoption of California's heavy-duty vehicle standards in other states, including Colorado, Massachusetts, New York, New Jersey, Oregon, Vermont, and Washington State.

7. Strong regulations that reduce vehicles' harmful pollutants, including greenhouse gases, are a critical part of Sierra Club's work to reduce pollution in the transportation sector. The reversal of such rules harm our members in numerous ways. Our members rely on Sierra Club to represent their interests in reducing harmful pollution by means of strong vehicle emission standards. EPA's waiver determination for California's Advanced Clean Trucks regulation, as well as its associated warranty and certification provisions is, for that reason, of critical importance to the Sierra Club and its members.

8. Sierra Club intends to intervene in defense of EPA's waiver determination. If that defense is successful, California's heavy-duty vehicle rules will take effect. Sierra Club members will directly benefit from the resulting reductions in conventional air pollution and climate pollution, and in the many and grave harms they do to them and the environment.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief. Executed on April 24, 2023.



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Katherine Garcia

**DECLARATION OF MARY ANN RUIZ**

I, Mary Ann Ruiz, declare as follows:

1. I am over 18 years of age and competent to give this declaration. I have personal knowledge of the following facts, and if called as a witness could testify competently to them. As to those matters which reflect an opinion, they reflect my personal experience, opinion and judgment on the matter.

2. I live in Chino, California, in San Bernardino County.

3. I am a member of the Sierra Club and have been a member for 23 years. Prior to March 2023, I served as Chair of the Sierra Club's San Gorgonio Chapter which covers Riverside and San Bernardino counties – the region more broadly known as the Inland Empire. I have served in this position for the past six years. In my role, I focused my efforts on the environmental impacts of warehouse growth, particularly the associated pollution from heavy-duty vehicles. The ongoing siting of warehouses in our communities has led to an increasing concentration of freight trucks and other heavy-duty vehicles on our roads and highways, drastically worsening air quality in the area. Our chapter has been centrally focused on remedying that pollution. For example, we have also been working with a coalition of over 60 environmental justice organizations to urge California Governor Gavin Newsom to declare warehouse-induced pollution in the Inland Empire a public health crisis.

4. I am deeply concerned with increasing air pollution from heavy-duty vehicles. As explained in the report to the Governor, the Inland Empire has become a global hub for e-commerce. With nearly 1 billion square feet dedicated to warehouses and an additional 170 million square feet currently approved or pending for development, these warehouses, and the heavy-duty trucks deployed to and from them, generate billions of pounds of toxic air pollution each year. This pollution includes diesel particulate matter, nitrogen oxides, and carbon dioxide.

The concentration of warehouses in our area coupled with the increasing presence of delivery trucks and the unique topography of the region results in extreme air pollution that hovers over our communities. This exposure to pollution has been repeatedly linked to a variety of adverse health consequences including increased rates of cardiac, respiratory, and reproductive health impacts.

5. I am especially concerned about the role heavy-duty trucks play in exacerbating pollution in my region, specifically diesel trucks. My home is located about two miles away from California State Routes 60 and 71, and about four miles from California Highway 83. All three are major state highways. It is common for these freeways to be congested during all times of day, with a long line of solid trucks on the freeways, resembling slow-moving (or stalled) freight-cars. Many of those trucks are moving at low speeds or idling, and as I understand it, producing especially large quantities of nitrogen oxides and other pollution. I also live in close proximity to three city truck routes; I live one block away from Shaffer Avenue and Ramona Avenue, and two blocks away from Edison Avenue. These routes are used by diesel trucks on their way to Chino or Ontario warehouses, again often idling or moving at low speeds due to traffic congestion. There are nearly a dozen other truck routes just miles away from my residence. On nearly all sides of my home, I am surrounded by truck routes and therefore am significantly impacted by the pollution travelling trucks produce on these roads.

6. Especially, but by no means only, during the summer there are countless days each year where the air quality is unhealthy for sensitive groups. As someone who lives so close to warehouses, freeways, and truck routes, I am constantly thinking about air pollution and how it may worsen my asthma if I were to go outside. It is something that I think about every single

day, year-round. I check the air quality on my phone before I leave my house to avoid days when pollution in my area is especially severe; on those days I do not spend time outdoors.

7. I regularly spend time outdoors in my neighborhood. I enjoy taking afternoon walks, gardening in my yard, going to the local YMCA for a swim, or going for a short hike. Though these are activities that are often recommend to maintain good health at my age; I am unable to pursue them as often as I would like because of air pollution from heavy-duty vehicles in Chino. As truck traffic rises during the day, there are few hours available when I feel comfortable enjoying outdoor activities in my neighborhood. Often, poor air quality prevents me from activities I would otherwise pursue, and I am not able to enjoy my day-to-day without worrying about how the air pollution will negatively impact me.

8. I am familiar with California's Advanced Clean Trucks regulation, and its associated warranty, maintenance, and certification provisions (the "California Clean Truck Rules"). I am also familiar with the Environmental Protection Agency's ("EPA") waiver authorizing those standards, issued on March 31, 2023, 2023 and published in the Federal Register on April 6, 2023. The California Clean Truck Rules reduce nitrogen oxides, carbon dioxide and particulate matter from heavy duty trucks manufactured in model year 2024 and beyond. Those reductions in pollution will benefit me by allowing me to engage in my preferred outdoor activities more frequently and with less concern as to my health. If the Rules were not to go into effect, continued pollution would adversely affect me by preventing me from walking, gardening, and swimming as frequently as I otherwise would due to concerns regarding the effect of heavy-duty truck pollution on my health.

9. As demonstrated in my declaration above, I, like many in my community, are directly and disproportionately impacted by pollution from freight trucks and other heavy-duty vehicles. I

am in support of more stringent emissions regulations on heavy-duty vehicles and I believe California's Clean Truck Rules are important steps towards protecting our community from this toxic pollution. I fully support Sierra Club's intervention in court to defend these new EPA standards.

I declare under penalty of perjury that the foregoing is true and correct.

Signed on this 5th day of April, 2023 in Chino, California.

/s/   
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