

ORAL ARGUMENT NOT YET SCHEDULED

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

TRUCK TRAILER)
 MANUFACTURERS)
 ASSOCIATION, INC., *et al.*,)
)
 Petitioners,)
)
 v.)
)
 UNITED STATES)
 ENVIRONMENTAL PROTECTION)
 AGENCY, *et al.*)
)
 Respondents.

Consolidated Case
Nos. 16-1430, 16-1447

**AMENDED MOTION TO INTERVENE
IN SUPPORT OF RESPONDENTS**

Pursuant to Federal Rules of Appellate Procedure 15(d) and 27, and Rule 15(b) of this Court, the Environmental Defense Fund, Natural Resources Defense Council, Sierra Club, Center for Biological Diversity, and the Union of Concerned Scientists (collectively, “Movants”) hereby move for leave to intervene in support of Respondents Environmental Protection Agency (“EPA”) and National Highway Traffic Safety Administration (“NHTSA”) (collectively, “the agencies”) in case Nos. 16-1372, 16-1447, and in all cases challenging the agency actions challenged in those cases. Counsel for all parties have been contacted for their position on this motion. Counsel for Petitioner Truck Trailer Manufacturers Association indicated

it will wait to see the motion before taking a position. At the time of filing, counsel for Petitioner Racing Enthusiasts and Suppliers Coalition had not provided its position. Counsel for the Federal Respondents stated that they do not oppose this motion for intervention. In support of its motion, Movants state as follows, and also rely on the declarations that accompany this motion.

INTRODUCTION

Petitioners seek review of the final rule promulgated by EPA under the Clean Air Act and by NHTSA under the Energy Independence and Security Act, entitled “Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles— Phase 2,” published at 81 Fed. Reg. 73,478 (Oct. 25, 2016) (“Phase 2 Rule”). The Phase 2 Rule for the nation’s fleet of large trucks and buses establishes standards to reduce greenhouse gas emissions and improve fuel economy for model year 2018–2027 vehicles. *Id.* at 73,481. These standards build upon the current Phase 1 Rule, which covers model year 2014-2018 vehicles. *Id.* at 73,480.

The Phase 2 Rule provides crucial health and environmental safeguards, and results in fuel savings that will benefit truckers and consumers alike. *Id.* at 73,902 (noting that commenters on the proposed rule estimated per-household fuel savings ranging from \$150 a year in 2030 to \$400 a year in 2035). These health, environmental, and economic benefits will accrue to Movants’ members, and

Movants have a demonstrable interest in defending the Phase 2 Rule against challenges brought by industry groups seeking to nullify, weaken, or delay it. This Court has granted Movants' requests to intervene in similar litigation aimed at reducing emissions of greenhouse gases and other dangerous air pollutants. *See, e.g., West Virginia v. EPA*, No. 15-1363 (D.C. Cir.) (case challenging EPA's Emissions Guidelines for power plants); *North Dakota v. EPA*, No. 16-1242 (D.C. Cir.) (case challenging EPA's New Source Performance Standards for the oil and gas sector); *Coal. For Responsible Regulation, Inc. v. EPA*, No. 09-1322 (D.C. Cir.) (case challenging EPA's Endangerment Finding). Comparable circumstances warrant granting this motion.

BACKGROUND

I. Movant Environmental and Public Health Organizations

Movant Environmental Defense Fund ("EDF") is a national non-profit environmental group that is committed to protecting its members and the public from the effects of dangerous air pollution, including climate change. Declaration of John Stith ¶¶ 3-6. With a long-standing interest in protecting human health and the environment, EDF has long been involved in advocating and working for the reduction of dangerous air emissions from vehicles. *Id.* ¶¶ 5-6. EDF has members who live and work in close proximity to, and commute on, highways and other roads where medium- and heavy-duty vehicles are in use, and are harmed and

threatened by emissions of hazardous air pollutants and volatile organic compounds (“VOCs”), which form ozone and particulate matter pollution, from medium- and heavy-duty vehicles. *Id.* ¶ 8; Declaration of James Fine ¶¶ 12-13. EDF also has members throughout the United States who are harmed by greenhouse emissions from medium- and heavy-duty vehicles, and associated climate change. Stith Decl. ¶¶ 8-9; Fine Decl. ¶¶ 8-10; Declaration of Denise Fort ¶¶ 8-11.

Movant Natural Resources Defense Council (“NRDC”) is a national nonprofit environmental organization with more than 290,000 members. Declaration of Gina Trujillo ¶¶ 3-7. NRDC uses law, science, and the support of its members to ensure a safe and healthy environment for all living things. One of NRDC’s top priorities is to reduce emissions of the air pollutants that are causing global warming. *Id.* ¶¶ 3-7. NRDC has members throughout the United States who are harmed by the greenhouse gas emissions from medium and heavy duty vehicles and associated climate change. Declaration of Gerald Winegrad ¶ 16. NRDC also has members who live and work near roadways used by trucks and buses and who are harmed by the soot, smog, and hazardous air pollutants emitted by these vehicles. Declaration of Elizabeth Coplon ¶ 5.

Movant the Center for Biological Diversity (the “Center”) is a non-profit corporation with offices throughout the United States and approximately 48,500

members. The Center believes that the health and vigor of human societies and the integrity and wildness of the natural environment are closely linked. Combining conservation biology with litigation, policy advocacy, 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 welfare of generations to come. The Center's Climate Law Institute's primary mission is to curb global warming and other air pollution, and sharply limit their damaging effects on endangered species, their habitats, and human health for all of us who depend on clean air, a safe climate, and a healthy web of life. Declaration of Kassie Siegel ¶¶ 2-10. The Center has members throughout the United States who are harmed by the greenhouse gas emissions from medium and heavy duty vehicles and the climate change those emissions cause. Declaration of Jenny Ross ¶¶ 7, 34, and *passim*.

Movant Sierra Club, founded in 1892, is a national nonprofit environmental organization with more than 695,000 members nationwide. *See* Declaration of Huda Fashho ¶ 5. Sierra Club's purposes are to explore, enjoy, and protect the wild places of the Earth; to practice and promote the responsible use of the Earth's ecosystems and resources; to educate and enlist humanity in the protection and restoration of the quality of the natural and human environment; and to use all lawful means to carry out these objectives. *See* Declaration of Gina Coplon-

Newfield ¶ 4. Sierra Club members are greatly concerned about climate change, and the impact of burning fossil fuels for transportation on climate; as a result, the Sierra Club has undertaken a wide range of activities concerning fossil fuels in our nation's transportation fleet, including commenting on the current Rule and engaging in court to defend the Phase 1 version of the Rule. *Id.* ¶¶ 5-7.

Movant Union of Concerned Scientists (“UCS”) is a non-profit that was founded in 1969 to put rigorous, independent science to work to solve our planet's most pressing problems. Declaration of Kenneth Kimmell ¶ 1. Joining with citizens across the country, we combine technical analysis and effective advocacy to create innovative, practical solutions for a healthy, safe, and sustainable future. *Id.* ¶ 1. One of UCS's top priorities is reducing oil emissions by one half by 2035 and reducing the emission of heat trapping gases that cause global warming. UCS has over 100,000 members and an additional 400,000 supporters who are harmed by the global warming causing emissions from medium- and heavy-duty trucks and has a long history of advocating for strong standards to protect our members and the rest of American citizens. *Id.* ¶¶ 2-4.

II. Statutory and Regulatory Background

The Clean Air Act aims “to protect and enhance the quality of the Nation's air resources.” 42 U.S.C. § 7401(b)(1). To help meet this goal, Title II of the Act requires EPA to establish standards for emissions of air pollutants from mobile

source categories. *Id.* § 7521 *et seq.* Section 202(a)(1) of the Clean Air Act requires EPA to “prescribe (and from time to time revise) . . . standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles . . . , which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.” *Id.* § 7521(a)(1). In 2009, EPA concluded that greenhouse gases endanger public health and welfare and that emissions from mobile sources cause or contribute to that endangerment. Consequently, EPA is required under section 202(a) to issue standards for new motor vehicles. 74 Fed. Reg. 66,496 (Dec. 15, 2009).

The Energy Policy and Conservation Act of 1975 (“EPCA”) seeks to meet energy conservation goals by requiring fuel economy standards for motor vehicles. 42 U.S.C. § 6201(5). The EPCA was amended in 2007 by the Energy Independence and Security Act to require the creation of a medium- and heavy-duty fuel efficiency program. 49 U.S.C. § 32902(k). Under Section 103 of the EISA, NHTSA is responsible for conducting a rulemaking proceeding to issue regulations for the “commercial medium- and heavy-duty on-highway vehicle and work truck fuel efficiency improvement program [that are] designed to achieve the maximum feasible improvement.” *Id.*

Under these respective statutory authorities, the agencies have previously issued fuel economy and greenhouse gas standards for both light-duty vehicles and

medium- and heavy-duty vehicles. In 2010, EPA and NHTSA promulgated a joint Phase 1 rule for light-duty vehicles, establishing greenhouse gas emissions and fuel economy standards for model year 2012-2016 cars and small trucks. 75 Fed. Reg. 25,324 (May 7, 2010). The agencies then finalized the Phase 2 light-duty program in 2012, setting emissions and fuel economy standards for model year 2017-2025 vehicles. 77 Fed. Reg. 62,624 (Oct. 15, 2012). Collectively, EPA projected that these requirements would “result in MY 2025 light-duty vehicles with nearly double the fuel economy, and approximately one half of the GHG emissions compared to MY 2010 vehicles.” *Id.* at 62,631.

In 2011, EPA and NHTSA issued Phase 1 greenhouse gas and fuel economy standards for model year 2014-2018 medium- and heavy-duty vehicles, covering heavy-duty pickup trucks and vans, combination tractors, and vocational vehicles. 76 Fed. Reg. 57,106 (Sep. 15, 2011). At the time, the agencies recognized the need to “develop a second phase of regulations to reinforce these initial rules and achieve further reductions in GHG emissions and fuel consumption reduction for the mid- and longer-term time frame (beyond 2018).” *Id.* at 57,108.

III. The Phase 2 Rule

On October 25, 2016, EPA and NHTSA promulgated the Phase 2 Rule for medium- and heavy-duty trucks, setting greenhouse gas emissions and fuel economy standards for model year 2018-2027 large trucks and buses. 81 Fed. Reg.

73,478. The final Phase 2 Rule is the result of a collaborative process among the agencies and stakeholders, with the agencies incorporating extensive feedback from public hearings, meetings with stakeholders, and over 200,000 public comments regarding the standards. *Id.* at 73,481. The Phase 2 Rule builds upon the underlying regulatory structure of the Phase 1 standards, strengthening the standards in response to ongoing improvements in technology, and for the first time sets standards for trailers. *Id.*

The Phase 2 Rule will result in reductions of over a billion metric tons of carbon dioxide equivalent greenhouse gas emissions over the lifetime of model year 2018-2029 vehicles. *Id.* at 73,482. At the same time, the Phase 2 Rule will save medium- and heavy-duty vehicle users up to 82 billion gallons of fuel over the lifetime of these vehicles. *Id.* The fuel savings and climate benefits of the Rule substantially outweigh the Rule's costs, delivering net benefits of up to \$229 billion over the lifetime of these vehicles. *Id.*

ARGUMENT

Movants meet the requirements for intervention because they have demonstrated interests in protecting the benefits conferred by the Phase 2 Rule. Their members will benefit from reduced exposure to dangerous air pollution and greenhouse gas emissions from medium- and heavy-duty vehicles if the Phase 2 Rule is implemented as adopted, and will likewise benefit economically due to the

more efficient and less-costly transport of goods and services the Phase 2 Rule will enable. Further, they have independent organizational interests in assuring the Phase 2 Rule remains rigorous and is not nullified, weakened, or delayed. These interests may be impaired by the disposition of this case. *See* Fed. R. App. P. 15(d).¹

I. Movants have interests in protecting their members and others from dangerous air pollution from medium- and heavy-duty vehicles.

Movants have a strong interest in ensuring that the requirements for medium- and heavy-duty vehicles established in the Phase 2 Rule deliver health, environmental, and economic benefits for their members, many of whom live and work in close proximity to, and commute on, highways and roads where medium- and heavy-duty vehicles are likely to be used. These members are therefore particularly exposed to the pollutants emitted by medium- and heavy-duty vehicles, including VOCs and hazardous air pollutants, as well as to the particulate matter and ozone pollution created by those emissions. Movants also have members who are particularly susceptible to harms posed by climate change, to which greenhouse gas emissions from medium- and heavy-duty vehicles significantly contribute.

¹ Under Federal Rule of Appellate Procedure 15(d), a motion to intervene need only make “a concise statement of the interest of the moving party and the grounds for intervention.” This Court has noted that “in the intervention area the ‘interest’ test is primarily a practical guide to disposing of lawsuits by involving as many apparently concerned persons as is compatible with efficiency and due process.” *Nuesse v. Camp*, 385 F.2d 694, 700 (D.C. Cir. 1967) (reversing denial of intervention under Fed. R. Civ. P. 24(a)).

The health and welfare of Movants' members are threatened by air emissions generated by medium- and heavy-duty vehicles. Many of Movants' members live, work, commute, and engage in recreation and other activities near highways and roads where medium- and heavy-duty vehicles that are covered by the Phase 2 Rule travel or in other areas where medium- and heavy-duty vehicles are likely to be used, such as transportation centers or ports. *See, e.g.*, Fine Decl. ¶¶ 12-13; Declaration of Barbara Campbell ¶¶ 9-10; Coplon Decl. ¶ 5. They are thus exposed to or are at high risk for exposure to emissions from nearby medium- and heavy-duty vehicles. As a result, Movants' members experience harm from medium- and heavy-duty vehicles, including exposure or likely future exposure to air pollution and an attendant greater risk of harm to their health. Nitrogen oxides and VOCs react in the atmosphere with other pollutants to form ground-level ozone and likewise form fine particulates. 81 Fed. Reg. at 73,837.

Exposure to ozone and fine particulates is associated with significant public health and environmental effects, including premature deaths, cardiovascular problems such as heart attacks, respiratory problems such as asthma attacks and bronchitis, and injury to vegetation. *See id.* at 73,882-83. Medium- and heavy-duty vehicles also emit significant quantities of hazardous air pollutants (such as benzene), which are associated with further serious health concerns—for example, several of these pollutants are carcinogens. *Id.* at 73,885. Movants' members who

live near highways or other areas where medium- and heavy-duty vehicles are used thus face elevated risks of all of these harms. *See, e.g.*, Fine Decl. ¶¶ 12-13; Campbell Decl. ¶¶ 9-10.

Because of this air pollution, and because of their concern about additional health impacts and risks due to this pollution, Movants' members do or will refrain from or curtail recreational, aesthetic, and associational activities that they have enjoyed in the past, and emissions from medium- and heavy-duty vehicles thus diminish their enjoyment or potential enjoyment of these activities. *See, e.g.*, Fine Decl. ¶ 11. Movants' members are also harmed as a result of their increased concern about their health and the health of their family members, and decreased enjoyment of other activities during which they are exposed to dangerous air pollution, including while they work, on visits to friends and family, and during their daily commutes. *See id.*

Additionally, emissions of greenhouse gases from medium- and heavy-duty vehicles threaten public health and welfare by contributing to climate change. *See* 74 Fed. Reg. 66,496, 66,497-98 (Dec. 15, 2009) (EPA's Endangerment Finding); *see also Coal. for Responsible Regulation, Inc. v. EPA*, 684 F.3d 102, 117-26 (D.C. Cir. 2012) (upholding Endangerment Finding), *cert. denied in relevant part sub nom. Virginia v. EPA*, 134 S. Ct. 418 (2013); 81 Fed. Reg. at 73,486-87 (concluding that more recent scientific assessments confirm and strengthen the

science that supported the Endangerment Finding). Movants' members use, own, and enjoy property and natural resources that are harmed and threatened by climate change. *See, e.g.*, Fine Decl. ¶¶ 8-10; Fort Decl. ¶¶ 8-11; Winegrad Decl. ¶ 16; Campbell Decl. ¶¶ 5-8. These members are affected by elevated temperatures, greater risk of forest fires, extreme weather events, reduced snowfall, and exacerbated air pollution problems and other health risks in the areas where they live, work, and recreate. *See* 81 Fed. Reg. at 73,486-87 (describing the adverse health and welfare impacts of climate change); Fine Decl. ¶¶ 8-10; Fort Decl. ¶¶ 8-11; Campbell Decl. ¶¶ 5-8. The damage done by climate change directly affects some members' ability to pursue their professions and livelihoods. Ross Decl. ¶¶ 7, 34, and *passim*.

The Phase 2 Rule will help redress the occurrence of these future harms to Movants' members, as recognized by the agencies. The Phase 2 Rule's emissions reductions will lead to health protection benefits from reduced exposure to ozone, fine particulate matter, and hazardous air pollutants. 81 Fed. Reg. at 73,836-46. The agencies further estimate that the Phase 2 Rule will prevent greenhouse gas emissions of over a billion metric tons of carbon dioxide equivalent over the lifetime of model year 2018-2029 vehicles, while saving vehicle operators up to \$169 billion in pre-tax fuel savings. 81 Fed. Reg. 73,482.

Recognizing the important health and environmental benefits provided in the Phase 2 Rule, Movants were active participants in the rulemaking that led to the Phase 2 Rule. Movants submitted written comments supporting aspects of the proposed Phase 2 Rule, and urged EPA to strengthen the final standards to ensure that they reflected the full range of cost-effective technologies available for reducing emissions and fuel consumption for medium- and heavy-duty vehicles. Comments of Environmental Defense Fund at 2 (Oct. 1, 2015) (Docket Nos. EPA–HQ–OAR–2014–0827 & NHTSA–2014–0132); Comments of Natural Resources Defense Council at 2 (Oct. 1, 2015) (Docket Nos. EPA–HQ–OAR–2014–0827 & NHTSA-2014-0132); Comments of Center for Biological Diversity at 2 (Oct. 1, 2015) (Docket Nos. EPA-HQ-OAR-2014-0927 & NHTSA-2014-0132); Comments of Sierra Club et al. at 2-3 (Oct. 1, 2015) (Docket Nos. EPA-HQ-OAR-2014-0827 & NHTSA-2014-0132); Comments of Union of Concerned Scientists at 2-3 (Oct. 1, 2015) (Docket Nos. EPA-HQ-OAR-2014-0827 & NHTSA-2014-0132).

After EPA issued its Notice of Data Availability, Movants again submitted comments further highlighting the need for rigorous standards. Comments of Environmental Defense Fund at 2 (Apr. 1, 2016) (Docket Nos. EPA-HQ-OAR-2014-0827 & NHTSA-2014-0132) Comments of Clean Air Task Force, Sierra Club, et. al. (Apr. 1, 2016) (Docket Nos. EPA-HQ-OAR-2014-0827 & NHTSA-2014-0132). These comments included detailed technical and economic analysis

concerning the agencies' proposed engines standards and likewise underscored the agencies' legal authority to address trailers and the importance of including those sources in the final Phase 2 Rule.

II. Movants' interests in protecting their members and others are threatened by these petitions for review.

Movants' interests described above are threatened by Petitioners' challenges to the Phase 2 Rule. Industry Petitioners seeking review of the Phase 2 Rule will likely seek to weaken or vacate the Phase 2 Rule's requirements, given that their comments during the rulemaking attacked protective measures contained in the proposed rule. For example, during the rulemaking, Petitioner Truck Trailer Manufacturers Association questioned the agencies' authority to establish fuel economy and emissions standards encompassing trailers. *See* Comments of Truck Trailer Manufacturers Association at 2 (Sep. 30, 2015) (Docket Nos. EPA-HQ-OAR-2014-0827 & NHTSA-2014-0132).

Movants have a strong interest in intervening to prevent Petitioners' attempts to nullify, weaken, or delay the Phase 2 Rule, which would harm their legally protected interests and those of their members. Fort Decl. ¶ 15; Stith Decl. ¶ 9; Ross Decl. ¶¶ 7, 34; Campbell Decl. ¶¶ 8, 11, 13. Because Movants' members would be deprived of these health and environmental benefits were Petitioners to succeed in their challenges, Movants have both a clear "interest" under Rule 15(d)

and standing to intervene under Article III of the Constitution. *See Lujan v. Defenders of Wildlife*, 504 U.S. 555 (1992).²

Further, Movants have independent organizational interests in defending against Petitioners' attempts to nullify, weaken or delay the Phase 2 Rule in any way. As discussed above, Movants' advocacy has helped contribute to the development of the Phase 2 Rule. Movants also have an organizational interest in having access to full and prompt information regarding emissions by medium- and heavy-duty vehicles. *See, e.g.* 40 C.F.R. § 86.1920 (requiring reporting of in-use testing information). The access to this information, which the Phase 2 Rule will help to further, is central to Movants' fulfillment of their organizational mission, because disseminating such information is a core function for Movants. *See Siegel Dec.* ¶¶ 3, 16, 17; *Coplon-Newfield Decl.* ¶ 5; *Stith Decl.* ¶ 2; *Fort Decl.* ¶ 2. The possibility that the petitions may weaken or nullify the Phase 2 Rule establishes Movants' organizational interests under Rule 15(d) and their standing to intervene under Article III of the Constitution. *See D.C. Appleseed Ctr. for Law & Justice, Inc. v. D.C. Dep't of Ins., Sec., & Banking*, 54 A.3d 1188, 1209 (D.C. 2012) (holding that an organization has an injury in fact when a challenge to an agency's

² This Court has held repeatedly that organizations such as Movants have standing to sue to protect their members from pollution that threatens and concerns those members. *See, e.g., Nat. Res. Def. Council v. EPA*, 755 F.3d 1010, 1016-17 (D.C. Cir. 2014); *Ass'n of Battery Recyclers, Inc. v. EPA*, 716 F.3d 667, 672-73 (D.C. Cir. 2013).

interpretation of a law that furthered the organization's mission sought to weaken the law and thus impair the organization's ability to carry out its mission, and the organization had been an active participant in the development of the law); *see also Am. Soc. for Prevention of Cruelty to Animals v. Feld Entm't, Inc.*, 659 F.3d 13, 25 (D.C. Cir. 2011) (similar) (citing *Havens Realty Corp. v. Coleman*, 455 U.S. 363, 379 (1982)).

Movants' participation as intervenors in support of the agencies will not delay the proceedings or prejudice any party. This motion to intervene was first timely filed on January 19, 2016 by Movant EDF, and the instant amended motion is timely filed on January 23, 2016, all within the 30-day period allowed under Federal Rule of Appellate Procedure 15(d). *See Ala. Power Co. v. ICC*, 852 F.2d 1361, 1367 (D.C. Cir. 1988). The Court has not yet scheduled oral argument or established a briefing schedule. Movants' participation will not undermine the efficient and timely adjudication of this case. Indeed, as nonprofit, environmental citizens' groups with members living near areas where medium- and heavy-duty vehicles are used, Movants are likely to offer a distinct perspective as the Court considers challenges to the Phase 2 Rule.

This Court has previously allowed Movants to intervene in industry petitions challenging EPA actions under the Clean Air Act. *See supra* at 3. Comparable circumstances warrant a grant of intervention here.

CONCLUSION

For the foregoing reasons, Movants respectfully request leave to intervene in Case Nos. 16-1430 and 16-1447 under D.C. Circuit Rule 15(b), and in all other petitions for review of the challenged EPA and NHTSA action.

DATED: January 23, 2017

Respectfully submitted,

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/s/ Susannah L. Weaver

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CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing Amended **Motion to Intervene in Support of Respondent** on all parties through the Court's electronic case filing (ECF) system.

/s/ Susannah L. Weaver
Susannah L. Weaver

DATED: January 23, 2017

DECLARATIONS

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DECLARATION OF BARBARA CAMPBELL

I, Barbara Campbell, state and declare as follows:

1. My name is Barbara Campbell. I am over 18 years of age and competent to give this declaration. All information herein is based on my own personal knowledge unless otherwise indicated.
2. I live in Garden City, Kansas, and my husband and I have lived in our home for 44 years. We have a granddaughter and great-grandson that live in Garden City as well.
3. I am an active member of the Sierra Club. I joined Sierra Club in 2009 because I support the Club's efforts to protect air quality, water resources, and the environment.
4. The Sierra Club is a nationwide non-profit environmental membership organization, which has its purpose to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; 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.
5. As mentioned above, I joined the Sierra Club to help protect the planet and because I am very concerned about the impacts of climate change, both in my community and worldwide. I am a life member of the Kansas Ornithological

Society (KOS) for more than 20 years. Participating in annual bird counts throughout Southwest Kansas over the years has shown a glaring vision of climate change. I am very concerned about how these changes impact the local and migrating bird population.

6. I have lived in this community for 44 years and have witnessed the effects of climate change over time. For example, our winters in Kansas are now much warmer on average than for the first three to four decades that I lived here. I am very distressed about the warming winter temperatures because I know that this is a trend being observed all over the planet, impacting many biological ecosystems and communities.

7. I understand that carbon emissions from vehicles' tailpipes are a leading contributor to climate change. I know that the transportation sector is responsible for over a quarter of greenhouse gas emissions in the United States.

8. If medium and heavy duty vehicles--like trucks, work vans, semi trucks, buses, and other large road vehicles--are held to a stronger fuel efficiency standard, I understand that this will support the transition to alternate fueled heavy duty vehicles and will reduce tailpipe emissions. I know that this reduction in emissions will help mitigate the impacts of climate change that I am concerned about, described above.

9. In addition to my concerns about climate change on the habitat and species

around me, I live directly next to a truck route and am directly impacted by the air pollution caused by the emissions coming from the heavy duty vehicles that drive along this road.

10. Additionally, I live on the access road, which is a designated truck route, to three horse stables. Within 1/4 mile of my home is the Finney County Fairgrounds (the same access road). This facility hosts the Beef Empire Days annual cattle show and rodeo, the Kansas State High School Rodeo and Horse Show, Little Britches Rodeo, Kansas Western Horse Association shows and other types of rodeos and horse shows. The Garden City Community College's (GCCC) Horse Palace is located across the street from the Fairgrounds. Students involved in rodeo through GCCC, stable their horses there. They come, each day, at least twice, to tend to their livestock and practice their skills. They host a three day, regional college rodeo once each year. Just to the west of my home is the Miles of Smiles operation. Two miles to the west of my house is a quarter horse race track. Each of these facilities creates overwhelming "big" pickup, trailer and camper traffic.

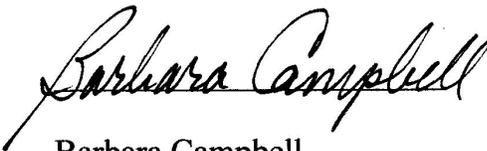
11. If these heavy duty trucks are held to a strong fuel efficiency standard, there will be more investments made towards alternate fueled vehicles and there will be less tailpipe emissions. With fewer tailpipe emissions from the trucks passing by my home on a regular basis, the air I breathe will be cleaner and my health and lifestyle will certainly improve.

12. Lastly, my husband and I use a pellet stove and a wood burner, so we own a pickup truck in order to transport wood pellets and firewood for the heating of our home. If stronger fuel efficiency standards for trucks are enforced, a future replacement vehicle that we would buy for our current vehicle would be more fuel-efficient, saving us money--we would certainly both benefit from the availability of such more fuel efficient vehicles.

13. If fuel efficiency standards for heavy duty trucks are enforced, for the reasons described above, I will surely benefit. I therefore support efforts by Sierra Club to defend this rule in court.

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

Executed January 19, 2017.



Barbara Campbell

DECLARATION OF ELIZABETH COPLON

I, Elizabeth Coplon, hereby declare as follows under penalty of perjury:

1. I am currently a member of the Natural Resources Defense Council (NRDC) and have been since 1995.

2. I support NRDC's efforts to stop global warming and reduce its impacts. I believe that global warming poses a significant threat to the wellbeing of humans, wildlife, and the natural environment, and that we have a responsibility to maintain the environment to the best of our ability.

3. I live in Santa Monica, California.

4. I am concerned about the effects that global warming will have on my property and community. It is well-known that global warming will cause a significant rise in sea levels, resulting in increased storm-surge damage and shoreline erosion. I am concerned that these impacts could harm the nearby beaches that make Santa Monica a special place to live, deprive me of recreational opportunities and likely affect the value of my home.

5. I am also concerned about the quality of the air in the Los Angeles area. Soot and smog pollution from trucks is a significant source of pollution in the Los Angeles area. In addition, I understand that

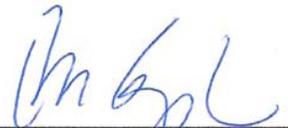
global warming could worsen ozone conditions and other air quality problems.

6. I believe that the regulation of greenhouse gas emissions from medium and heavy duty trucks and buses will help prevent global warming and also will reduce the smog and soot pollution directly emitted by these vehicles. This will protect the air I breathe, the natural areas I use and enjoy, and the economic value of my property.

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

Executed in Santa Monica, California

on January ²³____, 2017.



Elizabeth Coplon

DECLARATION OF GINA COPLON-NEWFIELD

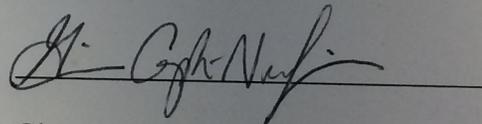
I, Gina Coplon-Newfield, declare as follows:

1. I am the Director of Sierra Club's Electric Vehicles Initiative. I have had this position for six years.
2. In this role, I manage and coordinate Sierra Club's policies and efforts on behalf of its members to advocate for greater fuel efficiency for our nation's vehicle fleet, including the fleet of medium- and heavy-duty vehicles, such as large trucks, work vans, buses, and semi tractors.
3. As an organization, and on behalf of our members, Sierra Club is very concerned that United States policies ensure further increases in fuel efficiency for such vehicles. For example, for the protection of our air quality and climate safety, it is important that the Environmental Protection Agency's and National Highway Traffic Safety Administration's Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles Phase 2 (published in the Federal Register at 81 Fed. Reg. 73,478), or "Phase II Truck Rule"—are put into place and properly implemented.
4. The Sierra Club is a non-profit membership organization incorporated under the laws of the State of California. Its mission is to explore, enjoy, and protect the wild place of the Earth; 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.
5. As part of carrying out this mission, the Sierra Club engages in a coordinated set of efforts to use grassroots organizing, legal advocacy, communications, and political strategies to reduce greenhouse gas emissions. Part and parcel of this are our efforts to reduce this country's dependence on oil as a transportation fuel.

6. For example, Sierra Club has previously engaged before the D.C. Circuit to help defend the first phase of the Truck Rule. Sierra Club has also commented on numerous proposed federal fuel efficiency standards, including on the proposal that led to the current Phase II Truck Rule. Finally, Sierra Club pursues a variety of efforts to educate and engage our membership about fuel efficiency and vehicle policy, and how that impacts our environment.

7. Sierra Club's members are very concerned about climate change and the impacts that burning fossil fuels, including oil- and natural gas-based transportation fuels, have on our environment.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed in Boston, Massachusetts on January 19, 2017.



Gina Coplon-Newfield

DECLARATION OF HUDA FASHHO

I, Huda Fashho, declare as follows:

1. The Sierra Club is a non-profit membership organization.
2. I am the Associate Director or Member Services at the Sierra Club. I have had this position for five years.
3. In this role, I manage the Sierra Club's customer service functions related to members, including maintaining an accurate list of members and managing the organization's member databases.
4. When an individual becomes a member of the Sierra Club, his or her current residential address is recorded in our membership database. The database entry reflecting the member's residential address is verified or updated as needed.
5. The Sierra Club currently has 695,289 members nationally.
6. Sierra Club members have a strong interest in protecting the environment from the impacts of climate change, and in efforts to minimize the harm from climate change.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct. Executed in Oakland, California on January 18, 2017.


Huda Fashho

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

DECLARATION OF JAMES DAVID FINE
Submitted In Support of Environmental Defense Fund

I, James Fine, under penalties of perjury, declare as follows:

1. I respectfully submit this declaration on behalf of proposed Intervenor-Respondent Environmental Defense Fund (“EDF”). I am an EDF member and have worked at EDF as an economist since 2007. Prior to that, I worked as an Assistant Professor of Environmental Science and Environmental Studies at the University of San Francisco, teaching courses in environmental economics, environmental science, and community engagement in environmental planning. I also have extensive experience working with environmental justice communities in urban air quality planning. I have a PhD from the Energy and Resources Group at the University of California at Berkeley and currently reside in Alameda, California.

2. Emissions of greenhouse gases into the atmosphere are causing global warming. I am familiar with the broad scientific consensus that human-induced global warming is happening at an accelerating pace, and I am familiar with and understand the scientific evidence documenting the current and predicted impacts of global warming 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 storm intensities, and extreme weather events such as drought and prolonged heat waves.

3. 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 also residing in Alameda, California.

4. 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. I am aware that recent inventories suggest that mobile sources account for almost 30 percent of all U.S. greenhouse gas emissions and that heavy-duty vehicles account for over 20 percent of all mobile source emissions.

5. I also understand that the exhaust from heavy-duty vehicles emits other health-harming 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, which

increase the risk of respiratory problems; and benzene, a known human carcinogen.

6. I am aware that the U.S. Environmental Protection Agency (“EPA”) and the Department of Transportation’s National Highway Traffic Safety Administration (“NHTSA”) have taken actions to improve fuel economy and reduce emissions in their rule, Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles— Phase 2 (“Phase 2 Rule”). The Phase 2 Rule would apply to medium and heavy-duty vehicles covering model years 2018 through 2027.

7. The Phase 2 Rule would result in significant greenhouse gas reductions, which EPA has estimated at over 1 billion metric tons of CO₂ equivalent over the lifetime of vehicles sold. This represents tailpipe greenhouse gas reductions by model year 2027 of 25% for combination tractors, 9% for trailers, 24% for vocational vehicles, and 16% for heavy-duty pickup trucks and vans when compared to the emissions levels that would occur absent the Phase 2 Rule. These standards would also reduce the other air pollutants contained in these vehicles’ tailpipe emissions, including carbon monoxide, fine particulate matter, oxides of sulfur, volatile organic compounds, oxides of nitrogen, and benzene.

8. As a resident of Alameda, California, I regularly visit the ocean where I enjoy surfing and playing with my children and dog, Tikka. I am concerned that projected sea-level rise will impact both my residence and my ability to enjoy beaches close to my home.

9. In the winter, I enjoy snowboarding and sledding in California's Sierra Nevada mountain range. I fear that decreases in snowpack – which have already declined in many areas and are projected to continue to do so – will mean that the quality or seasonal duration of snow will be reduced in the near future. As well, I understand how decreased snowpack in the mountains will exacerbate water scarcity in California.

10. For all the above reasons, I am concerned that I will be injured if the Phase 2 Rule is invalidated and greenhouse gas emissions from heavy-duty vehicles are not reduced, instead continuing to contribute to the impacts of climate change.

11. Finally, I am concerned about the negative impacts to my and family's health if the Phase 2 Rule is weakened or overturned, particularly our increased risk of developing respiratory diseases such as asthma from exposure to oxides of sulfur, volatile organic compounds, oxides of nitrogen, and ground-level ozone. These pollutants are emitted from or form as a result of emission from medium- and heavy-duty vehicles. I am likewise

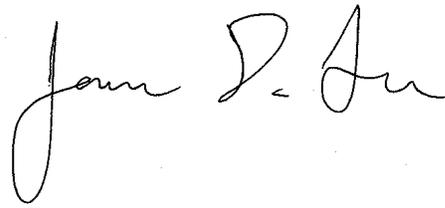
concerned about increased cancer risks from toxic pollutants such as benzene in the exhaust from medium- and heavy-duty vehicles.

12. The city of Alameda is in Alameda County, which is currently designated by EPA as a nonattainment zone for fine particulate matter and ozone. By reducing vehicle emissions of particulate matter and pollutants that contribute to high ozone levels, such as oxides of nitrogen and volatile organic compounds, the Phase 2 Rule will protect me and my family from the health-harming effects of this pollution.

13. I also live and work with environmental justice communities. I am a member of the board of the West Oakland Environmental Indicators Project, which works to achieve environmental justice in West Oakland. I fear that increases in ground-level ozone will adversely affect both my own health and welfare and my ability to accomplish my professional goals of reducing urban air pollution and its' associated public health and ecosystem impacts.

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

Dated: January 19, 2017.

A handwritten signature in black ink, appearing to read "James P. Fine". The signature is written in a cursive style with a large initial "J".

James Fine

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

DECLARATION OF DENISE FORT
Submitted In Support of Environmental Defense Fund

I, Denise Fort, under penalties of perjury, declare as follows:

1. I am currently a member of the Environmental Defense Fund (EDF), and I have been a member for many years. I reside in Santa Fe County, New Mexico. I have resided in New Mexico for more than 25 years and am a tenured faculty member at the University of New Mexico School of Law, with the title of Research Professor and Emeritus Professor of Law. My area of expertise is environmental and natural resources law.

2. As a law school professor specializing in environmental and natural resources law, I closely follow regulatory developments concerning the Clean Air Act, including through communications that I receive as an EDF member. I have taught classes on environmental law, climate change, and natural resources law.

3. I am familiar with the pollution associated with medium- and heavy-duty vehicles. I am aware that mobile sources account for almost 30 percent of all U.S. greenhouse gas emissions. I am also aware that trucks and buses emit approximately 400 million metric tons of climate pollution annually.

4. I understand that tractor-trailers represent 60 percent of medium- and heavy-duty vehicle emissions and that, as the primary load-carrying device, trailers contribute significantly to these vehicles' emissions.

5. Because of my work as an environmental law professor, I am familiar with and deeply concerned about the impacts of climate change due to greenhouse gas emissions. I am aware of the latest scientific evidence, which concludes that warming of the climate is unequivocal, that it is extremely likely that human influences have been the dominant cause of this warming since the mid-20th century, and that continued emissions of greenhouse gases will cause further warming.

6. This evidence demonstrates that climate change is posing a significant threat to the wellbeing of humans, wildlife, and the natural environment. For instance, I am aware of scientific evidence suggesting that certain types of extreme weather events—including heat waves, heavy downpours, and, in some areas, floods and droughts—have become more frequent and / or intense. Studies also confirm that warming is causing sea levels to rise, oceans to become more acidic, and snowpack to decline.

7. The evidence also shows that these and other changes threaten human health. For example, more intense heatwaves lead to more heat-related disease and deaths. An increase in the frequency and severity of

drought can contribute to water supply shortages and exacerbate wildfires, which can cause personal injury, damage infrastructure, and contribute to worsening air pollution problems. Extreme precipitation events can lead to flooding that can cause injuries and increase the risk of contracting waterborne diseases. And rising sea levels can threaten public safety through an increased risk of coastal flooding and storm surge. These are just some of the numerous public health and safety harms associated with climate change.

8. I see and experience many of these impacts in New Mexico, where my family and I live. For instance, New Mexicans are experiencing elevated temperatures, reduced snowfall in the mountains, and an increase in both the occurrence and severity of extreme weather events like droughts and heat waves. Projected summertime temperatures for the southwest region due to climate change are higher than the rest of country, making New Mexicans like myself particularly vulnerable to heat-related diseases and deaths.

9. Personally, I have in the past and intend to continue enjoying the outdoors on my own property. I am aware that climate change has caused an increased risk of forest fires—New Mexico has already experienced an increase in the frequency and severity of wildfires in recent

years. My home in Santa Fe is in a pinon-juniper forest, which is affected by a bark beetle that spreads during conditions that are more prevalent in warmer climates. The bark beetle kills pinons. The resulting dead trees make ready fuel for increasingly intense and frequent wildfires. Because of this danger, I have removed lower branches from trees in my yard and removed dead vegetation close to the house. The potential destruction of the landscape around my home and possibly my home itself from forest fires has an obvious negative effect on my life and property values.

10. I enjoy hiking, skiing, engaging in river sports, and bird watching in many areas across New Mexico. I have visited the Bisti Badlands and traveled around the Four Corners area of New Mexico. Often accompanied by my daughter and friends, I hike at all elevations in the nearby Santa Fe and Carson National Forests, as well as in natural areas surrounding Albuquerque, in Bernalillo County. We kayak on the Rio Grande and the Chama rivers. We engage in birdwatching during these outings, and regularly do so in our own backyard. On these excursions, I derive great pleasure from viewing trees, other natural vegetation, and wildlife.

11. A warming climate, in which there is less snow, will reduce our recreational opportunities. Reduced snowfall caused by global warming will

limit our ability to ski in the winter, and changes in snowpack are projected to reduce the runoff during the summer, which will lower water levels, limiting my ability to recreate in the river.

12. I am aware that in October 2016, the Environmental Protection Agency (EPA) and the Department of Transportation (DOT) finalized the second phase of the National Program to reduce greenhouse gas emissions and improve fuel economy for medium- and heavy-duty vehicles (“Phase 2 Rule”). The Phase 2 Rule applies to model year 2018 through 2027 vehicles, setting emission standards that become incrementally more stringent, and would result in significant greenhouse gas reductions, which EPA estimates at 1.1 billion metric tons over the lifetime of vehicles sold.

13. I understand that an important feature of the Phase 2 Rule is the development for the first time of greenhouse gas and fuel efficiency standards for certain trailers that are used in combination with tractors.

14. EPA and NHTSA have projected that the Phase 2 Rule will have other important benefits. More fuel efficient vehicles will also help to save money through avoided fuel costs, which could add up to more \$170 billion over the lifetime of the vehicles. The agencies noted that some portion of these savings would accrue to truckers and some to consumers, through reduced costs of goods and services that rely on heavy-duty vehicle

transport. Indeed, I am aware of an analysis by the Consumer Federation of America, which suggests these consumer savings would be substantial. I purchase and expect to continue to purchase goods that are transported using vehicles that would be subject to these standards, and so I expect to benefit from these consumer cost savings.

15. If the Phase 2 Rule is weakened or invalidated, greenhouse gas emissions and fuel consumption from medium- and heavy-duty vehicles will likely increase. This increase in greenhouse gas emissions will cause me injury by exacerbating the effects of climate change in New Mexico, resulting in less wildlife for me to view, lower flows in the summer months in rivers that I now use for recreation, and loss of forests due to bark beetle infestation and forest fire. I will also be injured by foregone cost savings on consumer goods transported by these less efficient vehicles.

16. I am concerned for the future of my community, family, and the environment in my state and across the globe if medium- and heavy-duty vehicles are not subject to the greenhouse gas emissions limitations and fuel economy standards in the Phase 2 Rule.

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

Dated: January 17, 2017.



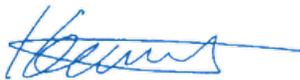
Denise Fort

I, Kenneth Kimmell, hereby depose and say as follows:

I am the President of the Union of Concerned Scientists (UCS), and have held this position since May 2014.

1. UCS was founded in 1969 to put rigorous, independent science to work to solve our planet's most pressing problems. Joining with citizens across the country, we combine technical analysis and effective advocacy to create innovative, practical solutions for a healthy, safe, and sustainable future.
2. UCS has over 100,000 members and an additional 400,000 supporters.
3. Our members are harmed by the emissions of greenhouse gases from heavy duty trucks. Our members are also harmed by the economic costs of shipping goods using trucks that are not fuel efficient.
4. For many years, UCS has advocated for federal rules to increase the fuel efficiency of heavy duty vehicles. UCS has provided technical, policy, and political leadership to a coalition of organizations seeking to ensure a strong rule. UCS performed significant technical work on the appropriate stringency of the Phase II rule that underpinned the NGO community position on the stringency level that we advocated with the agencies. We documented how much oil is used to ship consumer goods to their final destinations and worked with five major companies to estimate their fuel use and the savings they would incur if the rule was finalized with the stringency we proposed.¹ We testified at both public hearings that were held on the rule, one in Long Beach, CA and one in Chicago, IL. We provided the agencies with technical input before the rule was released and again provided detailed technical comments on the proposal before the rule was finalized.² Our members also provided nearly 29,000 comments to the docket in support of a strong rule.
5. UCS and its members have a direct stake in the outcome of this suit, and seek to intervene to demonstrate that the rule is within the statutory authority of the agency and supported by substantial evidence in the record.

Signed under pains and penalties of perjury this 23rd day of January 2017.



Ken Kimmell

¹ Cooke, David, Engines for Change, 2015, Union of Concerned Scientists
<http://www.ucsusa.org/sites/default/files/attach/2015/03/Engines-For-Change-Full-Report.pdf>

² Newly Proposed Heavy-Duty Truck Efficiency Standards for 2018-2029, 2015, UCS
<http://www.ucsusa.org/sites/default/files/attach/2015/07/proposed-heavy-duty-vehicles-standards.pdf>

1 6. I am aware that both phases of the rulemaking for medium- and heavy-duty vehicles,
2 and particularly the much more effective phase 2 rulemaking, are key elements of any plan to avoid
3 the worst consequences of climate change. They are necessary if the United States is to make good
4 on its plan to reduce U.S. greenhouse gas emissions by 26-28 percent below its 2005 levels by 2025,
5 itself a part of the U.S. commitment to the Paris Climate Agreement's pledge to limit global
6 temperature increases to well below 2 degrees Celsius.

7 7. I believe that any weakening of the Truck Standards would have serious and
8 debilitating effects on our ability to mitigate global warming, and would have direct negative effects
9 on my ability to make my living as a photographer of wildlife threatened by that warming. As fully
10 explained below, I also believe that my health would be negatively affected because the fuel
11 combustion of medium- and heavy-duty vehicles causes the emission of dangerous co-pollutants
12 such as soot and smog. A court decision upholding the Truck Standards in their present form will
13 address these negative effects.

14 8. I practiced law for a number of years and I now earn my living as a freelance
15 photographer and writer specializing in wildlife natural history and conservation subjects, and
16 environmental issues. I take photographs that capture the essence of wild animals and wild places,
17 explain scientific research to non-scientists, inspire concern and action for wildlife conservation and
18 ecosystem protection, and elicit a renewed appreciation of the natural world. My images of wildlife
19 and ecosystems and my essays on natural history, conservation, and environmental issues have been
20 displayed in a number of professional exhibitions and are frequently published in magazines,
21 newspapers, and books. I also frequently collaborate with renowned scientists to create presentations
22 and articles that combine photographs with scientifically accurate and engaging information.

23 9. I have won awards for my work including the Nature's Best Award for Wildlife
24 Photography, the Philip Hyde Award for Environmental Photography, the Vision Award of the
25 North American Nature Photography Association, and an award for Arctic Biodiversity
26 photojournalism from the Arctic Council's CAFF (Conservation of Arctic Flora and Fauna)
27 Secretariat. I have also received First Prize for Nature photojournalism in the World Press Photo
28 awards, and have been honored in the Pictures of the Year International awards, the BBC Wildlife

1 Photographer of the Year awards, and the Society of Environmental Journalists' Annual Awards for
2 Reporting on the Environment.

3 10. For more than a decade much of my work has focused on arctic species and
4 ecosystems and the transformation underway in the Far North due to climate change. I have
5 observed significant changes in the Arctic as the result of rising temperatures, and my work and my
6 life have been directly affected by the effects of climate change there. I first photographed polar
7 bears and other subjects in the Arctic in 2000, and I became deeply involved in photographing arctic
8 species when I was commissioned in 2002 to create a traveling photographic exhibition about the
9 world's eight living bear species, including polar bears. Following creation of the exhibit I have
10 continued to visit the Arctic to observe and photograph polar bears, a wide variety of other species,
11 arctic sea ice, glaciers, and ice caps including the Greenland Ice Sheet. My visits to the Arctic have
12 also focused on collaborating with scientists who are studying arctic species, their ecosystems, and
13 the earth systems they rely on. I have also reviewed much of the current scientific literature relating
14 to warming of the Arctic due to anthropogenic climate change. I am familiar with extensive
15 information collected and analyzed by scientists around the world demonstrating unequivocally that
16 climate change is altering the Arctic, posing a fundamental threat to the continued survival of many
17 arctic species – including ice-dependent species such as bearded seals, polar bears, and Pacific
18 walruses – and threatening human well-being by causing adverse effects in the Arctic that are having
19 serious and worsening negative consequences globally (e.g., melting of the Greenland Ice Sheet is
20 causing global sea level to rise).

21 11. I have used the images and information I have obtained through my work in the
22 Arctic for lecture-slideshow presentations, articles and other purposes focused on educating the
23 general public about wildlife, ecosystems and earth systems in the Arctic, and the significant
24 ominous changes occurring in the Far North due to rising temperatures as the result of human-caused
25 climate change. Increasingly I am also focusing on the global ramifications of the arctic changes that
26 are underway. For example, based on my work studying polar bears and their habitat, I created a
27 slideshow and lecture entitled *Life on Thin Ice: Polar Bear Biology, Ecology, Behavior, and*
28 *Conservation*. This presentation includes more than 150 of my polar bear photographs, and covers

1 numerous scientific issues in a manner that is interesting and engaging for a general audience. I
2 update the content of the presentation on a regular basis to ensure it includes the most recent
3 scientific information. Past clients and venues for the presentation include: The Alaska Bear Forum,
4 the Anchorage Museum of History & Art, Aurora Expeditions, California Audubon, the Desert
5 Research Institute, Google, Heritage Expeditions, Lindsay Wildlife Museum, the Northern Nevada
6 Science Coalition, Oceanwide Expeditions, Polar Bears International, the Pratt Museum, the Pacific
7 Grove Museum of Natural History, San Francisco Zoo, Sierra Club, Squaw Valley Institute, and the
8 Tahoe Bear League.

9 12. Arctic species like seals, walruses, and polar bears are among the most important and
10 highest-priority species for me to photograph and study in their arctic sea-ice environment in the
11 coming years, because they are exceedingly reliant on the ice, the ice-free period is lengthening
12 significantly in many regions that are their crucial habitat, and the transformation of the climate in
13 the Arctic due to rising temperatures is happening extraordinarily fast. Arctic seabirds are also
14 increasingly being affected by loss of arctic sea ice and rising arctic temperatures, and those species
15 are therefore also becoming increasingly important for me to photograph and study. I plan to
16 continue to use my photographs and research to highlight the plight of arctic species and the
17 transformation of arctic ecosystems and earth systems occurring due to climate change.

18 13. I travel frequently to the Arctic and sub-Arctic to photograph seals and other ice-
19 dependent species. For example, at the beginning of March 2006, I traveled to the Gulf of St.
20 Lawrence to photograph adult seals and their pups on the sea ice. During that trip, I witnessed and
21 photographed the changes in ice conditions that are taking place due to climate change. The region
22 experienced unusually warm temperatures that winter. Although historically the Gulf of St.
23 Lawrence has typically been nearly covered with massive floes of thick sea ice in early spring, that
24 year the sea ice was very sparse, thin, and highly fractured as a result of warm temperatures. Due to
25 a lack of sea ice and poor ice conditions, we had considerable difficulty locating any ice at all on
26 which to land a helicopter and photograph seals.

27 14. Just a few weeks prior to my arrival in the Gulf of St. Lawrence region in March
28 2006, a colony of grey seals – which normally give birth to pups on the floating sea ice – had been

1 forced to pup on the beach at Pictou Island due to the absence of ice. Subsequently, a storm surge in
2 the Northumberland Strait engulfed the beach and drowned approximately 75% of the seal pups.
3 Canadian Fisheries officials estimated that more than 2000 seal pups died. This incident is
4 representative of the profound impacts on the arctic ecosystem that are occurring due to climate
5 change.

6 15. In July 2006 I traveled by ice-reinforced ship in the Svalbard Archipelago, attempting
7 to photograph polar bears and ice seals. Although there is typically extensive sea ice at that time of
8 year in that portion of the Norwegian Arctic, there was almost none during my trip. Even in
9 locations that were only about 600 miles from the North Pole, the pack ice was absent. As a result,
10 ice-dependent polar bears and seals were very difficult to find and photograph. I was not able to
11 photograph any seals during that trip. The bears that we were able to locate were limited to the last
12 remaining bits of annual fjord ice or were marooned on land. I observed and photographed several
13 bears, including a small cub, that were obliged to swim from one island to another in search of food
14 due to the lack of ice. Knowing that scientists have documented the recent drowning deaths of polar
15 bears in similar circumstances, I anxiously watched the Svalbard bears as they traveled through the
16 ocean waves. It was poignant and upsetting to see the exhausted young cub, lacking body fat and not
17 well insulated from the cold water, struggling to follow its mother.

18 16. On another trip to the Magdalen Islands (Les Îles de Madeleine) to photograph ice
19 seals in March 2007, I again had a very difficult time even finding any seals, or ice, to photograph,
20 and some days we could not even fly in a helicopter because it was raining. The ice we did encounter
21 was extremely thin and slushy, and melting rapidly. I saw just two harp seal pups and one family of
22 hooded seals during a week in the region. I was told by my local guide that many newborn seal pups,
23 which are unable to swim, were drowned when the ice supporting them had disintegrated. The one
24 hooded seal family I photographed was on a small, isolated floe of ice that was moving extremely
25 quickly in the current because there was no other ice surrounding it to hold it in place. I could not
26 remain on the floe photographing the seals for very long, because the floe was rapidly being carried
27 eastward by the current, out of the Gulf toward the Atlantic Ocean and beyond helicopter range.
28

1 17. In summer 2009 I traveled by ice-reinforced ship throughout various regions of the
2 Bering and Chukchi Seas, ultimately reaching my northernmost destination for the trip along the
3 north coast of Wrangel Island in Russia. I had hoped to have the opportunity during that voyage to
4 photograph ice seals on floes; however, the arctic temperatures were warm and the sea ice had
5 melted and receded very far to the north toward the Central Polar Basin, so I saw no sea ice or seals
6 at all. While in the Chukchi Sea, I observed and photographed an adult polar bear swimming in
7 rough waves during a storm. The bear was far from land and even farther from the nearest sea ice.
8 Although it is not possible to know the ultimate fate of that bear, due to its location and the ocean
9 conditions, I believe it may have drowned before reaching safety.

10 18. In October 2009 I traveled to Greenland with a South Korean film crew from Arirang
11 TV to work on a project about climate change in the Arctic. My photographs of landscapes, wildlife,
12 and indigenous people in Greenland, and my experiences on assignment there for Arirang TV
13 were featured in two television documentaries about climate change; and a collection of my
14 photographs related to climate change issues in the Arctic was also displayed in an associated
15 exhibition. The TV documentaries were broadcast in English on all Arirang network outlets
16 worldwide in December 2009 and January 2010. The exhibition of photographs was presented in
17 Seoul, South Korea at the Total Museum of Contemporary Art during November 2009, and then
18 traveled to Copenhagen for display during December 2009 in association with the United
19 Nations Climate Change Conference.

20 19. During my October 2009 assignment for Arirang TV, while I was in remote
21 northwestern Greenland, the Arirang film crew and I accompanied three experienced Inuit hunters
22 on a multi-day trip north from Qaanaaq through Smith Sound and into the Kane Basin to document
23 their subsistence hunt of walruses to obtain meat for their families. We were obliged to travel in a
24 very small motorboat, because there was no sea ice on which we could travel by dog sled. The
25 hunters had great difficulty finding any walruses, due to the lack of sea ice on which the animals
26 ordinarily haul out. Finally, after searching for almost two days and reaching nearly 79° north in the
27 Kane Basin, the hunters were able to kill two walruses. To ensure the meat does not spoil, it is
28 essential to butcher the animals immediately. In a remote bay, the men eventually found a single ice

1 floe strong enough to hold our weight along with the walrus and were able to accomplish the
2 butchering. I photographed the meticulous and time-consuming butchering process. By the time the
3 hunters completed their task, it was evening. The temperature abruptly began plummeting, the wind
4 shifted, and the men suddenly realized that rapidly-forming sea ice had totally blocked off the
5 entrance to the bay and almost completely surrounded our vessel. Despite their lifetimes of
6 experience living and hunting in the Arctic, the men said they had never encountered such a situation
7 before. I knew from my research that climate change has caused freezing and thawing conditions in
8 the Arctic to become so erratic and unpredictable that rapidly-forming and quickly-deteriorating sea
9 ice often creates extremely dangerous conditions for indigenous arctic hunters. The men were clearly
10 exceedingly anxious as they struggled to push the ice away from our boat. At one point, the most
11 senior hunter said to me in an agitated tone totally uncharacteristic for an Inuit man, "This is bad!
12 Very bad! Very dangerous!" The men were so concerned about the situation that they told the
13 Arirang film crew and me to go down into the vessel's tiny sitting area below deck and remain there
14 while they tried to deal with the crisis. We complied, and sat below listening to the straining engine,
15 the hunters rushing back and forth above, and the grinding and thumping of ice against the hull of
16 the boat. I knew it was a potentially life-threatening situation. If we could not get out into open
17 water, we would be trapped in the ice for an indefinite period of time. If the hull were damaged by
18 shifting, expanding, and scraping ice, there would be nowhere for us to go except into the frigid
19 water, and that would be deadly. A vast expanse of rapidly-forming new ice can be strong enough to
20 trap and fatally damage a small boat, while being insufficiently thick to support the weight of a
21 person. Thankfully the hunters were ultimately able to free the boat and move us back into open
22 water. But our narrow escape from perilous circumstances impressed upon me that as climate change
23 causes arctic sea ice conditions to be increasingly capricious, my work is becoming increasingly
24 hazardous.

25 20. In July 2010, I traveled by ship to the Barents Sea and Svalbard Archipelago to view
26 and photograph arctic wildlife, ecosystems, and sea ice. I had hoped to be able to photograph ice
27 seals, including ringed seals and bearded seals, but there was insufficient sea ice in continental shelf
28 regions to offer any good opportunities. On July 21, 2010 in the Barents Sea, as the sea ice melted

1 rapidly and opportunities for polar bears to hunt seals also quickly disappeared, I observed and
2 photographed an extraordinary incident of polar bear infanticide and cannibalism involving an adult
3 male polar bear preying on a yearling cub for food. In December 2011 the journal *Arctic* published a
4 scientific paper I wrote in collaboration with renowned polar bear biologist Dr. Ian Stirling
5 describing this incident and analyzing the relationship between the effects of climate warming in the
6 Arctic and the occurrence of polar bear infanticide and cannibalism on melting summer sea ice.

7 21. In July 2011, I traveled by ship to Novaya Zemlya, Russia (an arctic archipelago
8 located north of Siberia where the Barents and Kara Seas meet), and to the Russian Arctic
9 archipelago Franz Josef Land in the Barents Sea, to observe and photograph arctic species and
10 ecosystems. In far northern Novaya Zemlya on July 30, 2011, I photographed a polar bear climbing
11 on the face of a sheer cliff at the edge of the ocean on a tiny island, attempting to feed on seabird
12 (guillemot) eggs and chicks in nests perched on the cliff. The bear was stranded on land and unable
13 to hunt for seals, because the sea ice had melted throughout the region and had receded very far to
14 the north. Due to his inability to hunt for his normal prey, this bear clearly endangered his safety and
15 even his life by climbing precariously on the face of this cliff. He was unable to eat any birds or eggs
16 during the entire time I watched and photographed him climbing on the cliff, and he ultimately
17 abandoned his efforts. I believe this bizarre polar bear behavior involving attempted predation of this
18 type of seabird that does not nest on the ground has only been reported a handful of times, in other
19 Arctic locations where bears were marooned on land due to a lack of sea ice and seabirds were
20 accessible to them. Moreover, to my knowledge this behavior has never been previously documented
21 in such an extreme situation involving a seemingly desperate hungry polar bear endangering its life
22 by climbing on a sheer cliff, and it has not previously been photographically documented in the
23 manner I was able to do on this occasion.

24 22. In summer 2011 I traveled to the Russian High Arctic. During my trip I observed a
25 herd of walrus hauled out on an extremely small sliver of beach beneath towering cliffs on Herald
26 Island in the Chukchi Sea. I know that walrus must haul out to rest frequently on sea ice or land,
27 and they strongly prefer sea ice for a variety of crucial reasons. So I knew the walrus were hauled
28 out on Herald Island because there was no sea ice throughout the entire region. At the haul-out there

1 were walrus of all ages, including small calves, and they were all crammed tightly together. Herald
2 Island consists almost entirely of very steep and high cliffs, and the only beach I saw there other than
3 the one where the walrus were hauled out was occupied by several polar bears that were also
4 stranded ashore because there was no sea ice. I was extremely concerned that if the walrus herd were
5 startled, perhaps by an approaching polar bear, the animals would stampede into the water and the
6 young calves might be crushed and suffocated. Knowing that numerous calves have been killed in
7 that manner in recent years when large numbers of walrus have been obliged to haul out on land in
8 the absence of sea ice, I was very worried about the risky situation I witnessed.

9 23. I had hoped to observe and photograph adult female polar bears accompanied by
10 young cubs during my visit to Wrangel Island in 2011; however, despite many attempts to locate
11 family groups of mothers and cubs, I did not have the chance to photograph any, and in fact I did not
12 even see any. This situation was very disappointing and disturbing for me, and caused me to be
13 extremely worried about the declining status of the Chukchi Sea polar bear population. Following
14 my visit to Wrangel Island, while I was working on writing a magazine article about polar bears in
15 the fall of 2011, I discussed the status of Wrangel Island polar bears by email with Russian scientist
16 Nikita Ovsyanikov, who has observed and documented polar bears on that high-arctic island for
17 many years. He told me that use of Wrangel Island by female polar bears for maternity denning has
18 been declining significantly in recent years in association with the decline of arctic sea ice
19 throughout the region. Based on my ongoing research, I know that the number of denning polar
20 bears on Wrangel Island and the number of cubs born there have decreased even further since 2011.
21 I have not returned to Wrangel Island since 2011, in part because I know it is now even more
22 unlikely that I will have the opportunity to photograph mother polar bears and their cubs.

23 24. At the beginning of 2012 I formally launched my ongoing long-term project entitled
24 Life On Thin Ice® to leverage the power of photography combined with science to communicate
25 accurately and effectively about climate change in the Arctic, increase public interest in the issues
26 and understanding of the problems, and motivate informed action to address the growing climate
27 crisis. My goals for this project include comprehensively documenting the earth systems,
28 ecosystems, species, and people of the circumpolar Arctic and the increasing effects of climate

1 change on them; and educating members of the public about climate change issues by enhancing
2 their understanding of the Arctic and the current problems, long-term risks, and world-wide
3 consequences of the transformation that is underway there due to rising temperatures.

4 25. In summer 2012, I participated in the Norwegian Polar Institute's (NPI) Ice, Climate,
5 and Ecosystems (ICE) expedition to the Central Polar Basin of the Arctic Ocean to photograph and
6 learn about a variety of scientific research activities for my magazine feature article about sea ice to
7 be published in 2014, and to provide photographs for NPI's educational and outreach purposes. The
8 sea ice was so sparse and thin that it was necessary for us to travel much farther north than originally
9 anticipated – to a location above 82.5 degrees north – in order to find a floe of sea ice large enough
10 and thick enough for the scientists to conduct their experiments. Often the weather was so unusually
11 warm that wearing the required waterproof “survival suit” while working out on the ice was
12 uncomfortably hot. During the course of the scientific work, in three separate incidents, three of the
13 NPI researchers fell through thin disintegrating sea ice and plunged into the frigid 4000-meter-deep
14 ocean. The scientists were able to extract themselves from the water safely, but those dangerous
15 events were distressing, and it was worrisome to be working out on the sea ice myself in such
16 perilous conditions.

17 26. In August and September 2013 I traveled by ship to northeast Greenland to
18 photograph arctic wildlife, glaciers, and the Greenland Ice Sheet. During my trip I saw and
19 photographed countless shrinking glaciers coming from the ice sheet. In one location, so many large
20 icebergs had recently been calved that it was impossible to get near the front of the glacier, even in a
21 highly-maneuverable Zodiac boat. In many other locations, former tidewater glaciers had receded so
22 much that they no longer reached the sea; instead, their meltwater poured down bare, previously ice-
23 covered mountainsides into the ocean. Witnessing these stark and widespread examples of the
24 effects of global warming, and knowing that they indicated significant sea level rise was being
25 caused by the disintegration of the Greenland Ice Sheet and associated glaciers, was very disturbing
26 to me.

27 27. In October 2014 a major magazine feature article I wrote and photographed was
28 published by *Ocean Geographic*. The article, entitled “Global Warning: The Arctic Meltdown” and

1 sub-titled “Why the Disappearance of Arctic Sea Ice Matters,” focused on the loss of arctic sea ice as
2 the result of global warming, and explained the many significant adverse consequences of vanishing
3 sea ice that are of grave concern for wildlife and people throughout the Arctic and beyond.

4 28. When I am not actually traveling in various regions of the Arctic, on virtually a daily
5 basis I monitor a variety of satellite images and scientific data products relating to the status of the
6 sea ice throughout the Arctic and sub-Arctic. In addition, on an ongoing basis I read new scientific
7 studies on a wide range of issues related to arctic species, ecosystems, and earth systems, and the
8 effects of climate change on them. I also stay in touch with many scientists who conduct fieldwork on
9 arctic species and subjects. Apart from my desire to understand the issues, I do so because I must be
10 well-informed concerning the status of the ice and associated species in order to plan my
11 photographic trips, and I need to know the best available scientific data in order to prepare the
12 lecture-slideshow presentations I do, as well as the articles I write.

13 29. In light of the rapidly declining extent and quality of arctic sea ice, plus what I have
14 seen and have not seen during my trips throughout the Arctic, as well as what I have learned through
15 my research, I’m extremely worried about the fate of ice-dependent species in the Far North. The
16 rapid rates at which temperatures are rising and ice is disappearing in the Arctic cause me great
17 apprehension and emotional distress. I am particularly concerned by my observations of the
18 increasing lack of sea ice over biologically-productive continental shelf regions that are crucial
19 habitat for many arctic species. In addition, I am profoundly worried about the thawing of arctic and
20 sub-arctic permafrost due to climate warming, and the dangerous additional carbon emissions that
21 will be released as a consequence of permafrost disintegration. I am also extremely concerned about
22 and distressed by rapid melting of the Greenland Ice Sheet, because I know that its disintegration will
23 cause major global sea level rise, destruction of crucial ecosystems all along the world’s coasts, and
24 permanent flooding of numerous heavily-populated regions around the globe.

25 30. Additional warming caused by human emissions of greenhouse gases from medium-
26 and heavy-duty vehicles will substantially affect my ability to continue to visit and photograph arctic
27 species in their natural habitat. Indeed, global warming may cause the extinction of the polar bear,
28 the Pacific Walrus, the bearded seal, and other arctic species, and the complete transformation of the

1 arctic environment in which I work. Global warming and the decline of ice-dependent arctic species
2 have a direct, negative impact on my livelihood. The decline and disappearance of arctic species
3 from areas in which they previously occurred and in which I previously found them increases the
4 expenses I must incur and the time I must invest to observe and photograph them, activities upon
5 which my livelihood and my profession directly depend. I have every intention of continuing my
6 career as a wildlife and nature photographer and writer, and of continuing all of the above-described
7 activities in the future. The arctic environment and arctic species will remain a major focus of my
8 photography and writing, and as such I have every intention of continuing to visit all areas of the
9 Arctic as frequently as possible in the coming years. For my Life On Thin Ice® project, and for
10 associated articles, exhibits, lecture-slideshow presentations, and a book about the changing Arctic, I
11 will need to do many additional trips to the Arctic during at least the next several years to
12 photograph arctic wildlife, ecosystems, earth systems, and scientific research throughout the
13 circumpolar region. These trips are becoming increasingly difficult, risky, and expensive as global
14 warming continues to affect the Arctic and its species.

15 31. A healthy arctic environment is extremely important to, and greatly enhances, both
16 my personal and professional lives. A healthy, functioning sea-ice ecosystem is necessary for me to
17 continue to pursue my photography career successfully. I have already experienced firsthand the
18 effects of global warming on the arctic ecosystem. These changes have diminished my ability to
19 photograph, observe, and enjoy the Arctic and the species that live there. If global warming and
20 other threats to the Arctic continue unabated, I believe that many species I study and photograph will
21 decline and become extinct, and I will be unable to continue to observe and photograph the species
22 in the wild. Moreover, I may never be able to photograph some species I have sought but have not
23 been able to find as the result of sea-ice loss. Although I believe a certain amount of additional
24 climate warming and consequent impacts to the Arctic are inevitable, I also believe it is not too late
25 to save the Arctic as we know it and all the species that depend upon the sea-ice ecosystem. A
26 critically important part of saving the Arctic is to enforce our existing environmental laws, including
27 the Clean Air Act.

28

1 32. A scientific study by Dirk Notz and Julienne Stroeve published in November 2016 in
2 the journal *Science* found that there is a linear relationship between the quantity of greenhouse gas
3 emissions and the amount of arctic sea ice that melts. The study concluded that approximately three
4 square meters of arctic sea ice will disappear by the end of the melt season in September for each ton
5 of carbon dioxide emitted. The scientists project that consequently if just 1000 Gt more carbon
6 dioxide is emitted, the world's remaining summer arctic sea ice will be lost throughout September.
7 In this way, it is clear scientifically that every ton of CO₂ emitted by medium- and heavy-duty
8 vehicles has a direct negative effect on the continued existence of arctic sea ice by causing about
9 three square meters of the ice to vanish; every ton of CO₂ emitted by these vehicles thereby directly
10 contributes to causing the essential sea-ice habitat of polar bears, arctic seals, walruses, and other
11 ice-reliant species to disappear. This disappearance has a direct negative effect not only on my
12 enjoyment of the arctic species I study and photograph, but on my ability to pursue my profession
13 and my very livelihood.

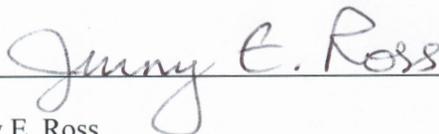
14 33. During 2015 and 2016, much of my time was spent working on photography,
15 research, and writing for another long-term project focused on the Salton Sea ecosystem in
16 southeastern California. The Salton Sea is one of the most endangered wetland ecosystems in North
17 America. It provides essential habitat for more than 400 species of birds, several of which are
18 threatened or endangered, and supports millions of fish including the endangered desert pupfish.
19 Survival of the Salton Sea ecosystem and the many species reliant on it is threatened by inadequate
20 and decreasing freshwater inflows. Most of the Salton Sea's water comes from the Colorado River
21 and reaches the lake via drainage from Imperial Valley agricultural fields where food crops are
22 cultivated year-round. The Colorado River's water is shared by seven western U.S. states and
23 Mexico, and the amount of water available to users has been dwindling as the result of rising
24 temperatures and a multi-year drought in which human-caused climate change is playing an
25 important role. Due to the resulting reductions in the amount of Colorado River water applied to
26 agricultural fields in the Imperial Valley, the amount of water flowing into the Salton Sea has been
27 reduced significantly and will continue to decrease. Consequently the Salton Sea is shrinking and
28 becoming more saline. As human emissions of greenhouse gases continue to cause worsening

1 climate warming and drought in the western United States, scientists project that the amount of water
2 in the Colorado River available for allocation among users and ecosystems reliant on it will decrease
3 significantly in the coming decades. The Salton Sea is expected to shrivel, and will become a very
4 small hypersaline lake that is loaded with concentrated contaminants and is unable to support its
5 current fish and bird populations. Vast expanses of dry lakebed exposed as the Salton Sea shrinks
6 will then be raked by the region's strong winds, and widespread pollution of the air with hazardous
7 particulates will result. I have personally witnessed such dust storms already beginning to occur as
8 the shoreline of the Salton Sea retreats. I have been visiting the Salton Sea on a regular basis for
9 approximately 10 years to photograph wildlife and document the water issues, agricultural
10 challenges, and environmental problems there. During that time I have seen progressive deterioration
11 of the Salton Sea ecosystem due to water-deprivation. I have witnessed massive fish-kill events
12 during which tens or hundreds of thousands of fish die, as well as mass mortality of birds. I have
13 also been personally exposed to elevated concentrations of dangerous particulates in the air near the
14 Salton Sea, as well as severe dust storms blowing off of the desiccated playa. During the past several
15 years I have developed asthma; and while I cannot directly attribute this disease to the increasingly
16 dry conditions and poor air quality at the Salton Sea, my exposure to the blowing dust from the
17 desiccating playa there as the Salton Sea shrinks has clearly played a role in exacerbating my
18 symptoms and continues to worsen them.

19 34. If greenhouse gases from medium- and heavy-duty vehicles are not reduced, or if
20 those reductions are diminished by excluding trailers from the scope of the Truck Standards or by
21 the exploitation of other loopholes, an ever-rising amount of vehicle CO₂ will continue to be emitted
22 into the atmosphere, directly contributing to the continuing decline and eventual extinction of the
23 ice-dependent species and Salton Sea species I photograph and study. As they already have, these
24 emissions will continue to impede and impair, and in some cases eradicate altogether, my ability to
25 photograph these species, greatly increase the expense and time it takes me to obtain photographs
26 and scientific information, multiply the risks of injury and even death to me personally while
27 engaged in these endeavors, and in general interfere with my ability to use the Arctic and the Salton
28 Sea professionally. This will directly affect my income and livelihood. I will also be harmed

1 personally because I care greatly for the arctic and Salton Sea ecosystems and their amazing species,
2 and wish to see them preserved and protected. I would be deeply distressed personally by further
3 harm to or the loss of the arctic and Salton Sea species I photograph and study. I believe that these
4 harms and losses will be significantly worsened if the Truck Standards are weakened or nullified,
5 and if the large amount of greenhouse gases that medium- and heavy-duty vehicles emit is not
6 regulated and reduced by emission standards.

7 I declare under penalty of perjury that the foregoing is true and correct and
8 was executed on January 21, 2017 at Truckee, California.

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10 
11 Jenny E. Ross

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1 change threatens to render many other biodiversity conservation efforts either futile or irrelevant.
2 To prevent extinctions from occurring at levels unprecedented in the last 65 million years,
3 emissions of carbon dioxide and other greenhouse gases must be reduced deeply and rapidly.
4 Given the lag time in the climate system and the likelihood that positive feedback loops will
5 accelerate global warming, leading scientists have warned that we have only a few decades, at
6 most, to significantly reduce greenhouse gas emissions if we are to avoid catastrophic effects.
7 Deep and immediate greenhouse gas reductions are required if we are to save many species which
8 the Center is currently working to protect, including but not limited to the polar bear, Pacific
9 walrus, ribbon seal, Kittlitz's murrelet, American pika, Emperor penguin, and many species of
10 corals. Leading scientists have also stated that levels of carbon dioxide, the most important
11 greenhouse gas, must be reduced to no more than 350 parts per million (ppm) and likely less than
12 that, "to preserve a planet similar to that on which civilization developed and to which life on
13 Earth is adapted" (J. Hansen et al., *Target Atmospheric CO2: Where Should Humanity Aim?*, 2
14 *Open Atmospheric Sci. J.* 217, 218 (2008)).

15 6. One of the Climate Law Institute's top priorities is the full and immediate use of
16 the Clean Air Act to rein in greenhouse gases and other pollutants. The Clean Air Act is our
17 strongest and best existing tool for doing so, and we have long worked to enforce the Clean Air
18 Act's mandates to accomplish this goal. For example, the Center was a Plaintiff in *Massachusetts*
19 *vs. EPA*, which resulted in the landmark Supreme Court decision finding that greenhouse gases are
20 pollutants under the Clean Air Act, which ultimately led to EPA's first-ever rulemaking to reduce
21 greenhouse gas emissions from passenger cars and light trucks under section 202. That rulemaking
22 is comprised of the *Endangerment and Cause or Contribute Findings for Greenhouse Gases*
23 *Under Section 202(a) of the Clean Air Act*, 74 Fed. Reg. 66,496 (Dec. 15, 2009) ("Endangerment
24 Finding"), and the *Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate*
25 *Average Fuel Economy Standards*, 75 Fed. Reg. 25,324, 25,397 (May 7, 2010), updated twice
26 since then. The Center also submitted comments to each of those successor light duty vehicle
27 rules, as well as to the first medium duty/heavy duty vehicle rule and its proposed successor, the
28

1 *Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines*
2 *and Vehicles, Phase 2; Proposed Rule*, 80 Fed. Reg. 40138 (July 13, 2015).

3 7. EPA's rulemaking to reduce greenhouse gases from passenger vehicles preceded
4 significant additional regulatory activity for greenhouse gases under other Clean Air Act
5 programs, including rulemakings that enforce the Clean Air Act's PSD permitting program and
6 best available control technology ("BACT") requirements for greenhouse gases emitted by
7 stationary sources and implementation of New Source Performance Standards for various
8 industrial facilities. *E.g.*, *Prevention of Significant Deterioration and Title V Greenhouse Gas*
9 *Tailoring Rule*, 75 Fed. Reg. 31,514 (2010). EPA's rulemakings were upheld in 2012 in *Coalition*
10 *for Responsible Regulation v. EPA* (D.C. Cir. 2012) 684 F.3d 102, a matter in which the Center
11 submitted an amicus brief. The Supreme Court affirmed *Coalition for Responsible Regulation* in
12 part, upholding EPA's authority to require BACT for greenhouse gas emissions from facilities that
13 must obtain PSD permits due to their potential to emit non-greenhouse gas pollutants. *See Util.*
14 *Air Reg. Group v. EPA*, 573 U.S. ___, 134 S. Ct. 2427, 2449 (2014).

15 8. We have also worked to obtain an endangerment finding and emission standards
16 for greenhouse gases from aircraft for nearly a decade. In 2007, we and others petitioned EPA to
17 issue an endangerment finding and greenhouse gas standards for aircraft under Clean Air Act
18 section 231. When EPA failed to respond, we and others sued EPA for unreasonable delay in
19 2010, and obtained a court order requiring EPA to undertake an endangerment finding for aircraft
20 in 2011. *Center for Biological Diversity v. EPA*, 794 F. Supp. 2d 151 (D.D.C. 2011). When EPA
21 failed to act, we notified it of our intent to sue for unreasonable delay in 2014. In 2015, EPA
22 released a proposed endangerment finding and an advance notice of proposed rulemaking for
23 aircraft greenhouse gases, *Proposed Finding That Greenhouse Gas Emissions from Aircraft Cause*
24 *or Contribute to Air Pollution That May Reasonably Be Anticipated To Endanger Public Health*
25 *and Welfare and Advance Notice of Proposed Rulemaking, Proposed Rule*, 80 Fed. Reg. 37758
26 (July 1, 2015). When EPA failed to finalize the endangerment finding, we filed a second lawsuit in
27 April 2016 to compel EPA to act. *Center for Biological Diversity v. EPA*, No. 1:16-CV-00681.
28 On August 15, 2016, EPA finally issued the Aircraft Endangerment Finding.

1 9. We also commented on EPA’s proposed rulemakings to set standards and
2 guidelines for greenhouse gas emissions from new, modified/reconstructed, and existing power
3 plants under Clean Air Act sections 111(b) and 111(d). (Center comments, EPA- EPA-HQ-OAR-
4 2011-0660-10171 [June 22, 2012]; HQ-OAR-2013-0495-10119 [May 9, 2014]; EPA-HQ-OAR-
5 2013-0602-25292 [Dec. 1, 2014].) We sought leave from this Court to intervene on behalf of EPA
6 in the ongoing litigation over both the existing and the new, modified/reconstructed final power
7 plant greenhouse gas rulemakings, and were granted that leave. *West Virginia v. EPA*, No. 15-
8 1363 (D.C. Cir. filed October 23, 2015); *North Dakota v. EPA*, No. 15-1381 (D.C. Cir. Oct. 23,
9 2015). We have since actively participated in that litigation through numerous filings. We have
10 also been involved in many other Clean Air Act administrative proceedings and legal actions
11 seeking to enforce the Act’s provisions for greenhouse gases. For example, the Center and others
12 filed a lawsuit challenging an EPA rule exempting large-scale biomass-burning facilities from
13 carbon dioxide limits under the Clean Air Act. *See Center for Biological Diversity v. EPA*, 722
14 F.3d 401 (D.C. Cir 2013). On July 12, 2013, this Court overturned EPA’s exemption for
15 “biogenic carbon dioxide,” confirming that Clean Air Act limits on carbon dioxide pollution apply
16 to industrial facilities that burn biomass, including tree-burning power plants. *Id.* We have
17 participated in numerous other legal actions, including but not limited to *Sierra Club v. EPA*, 762
18 F.3d 971 (9th Cir. 2014) (challenging EPA’s decision to exempt the Avenal power plant from
19 Clean Air Act requirements applicable at the time of permit issuance), and *Resisting*
20 *Environmental Destruction on Indigenous Lands v. EPA*, 716 F.3d 1155 (9th Cir. 2013)
21 (challenging errors in air permits that would allow Shell to conduct exploratory drilling in the
22 Arctic ocean). In September, 2010, we petitioned EPA to issue greenhouse gas standards for
23 locomotive engines pursuant to Clean Air Act section 213(a)(5). *Petition for Rulemaking Under*
24 *the Clean Air Act to Reduce Greenhouse Gas and Black Carbon Emissions from Locomotives*
25 (Sept. 21, 2010). In December 2009, we petitioned EPA to designate greenhouse gases as criteria
26 air pollutants under Clean Air Act section 108 and to issue National Ambient Air Quality
27 Standards (NAAQS) sufficient to protect public health and welfare. *Petition to Establish National*
28

1 *Pollution Limits for Greenhouse Gases Pursuant to the Clean Air Act* (Dec. 2, 2009). These
2 examples are illustrative of our advocacy in this area, not exhaustive.

3 10. In addition to our work on greenhouse pollution, the Center has worked through the
4 Clean Air Act to address other pollutants that adversely impact biodiversity and human health.
5 For example, we filed suit against EPA for failing to review and revise the air quality criteria for
6 oxides of nitrogen and sulfur oxides and the NAAQS for nitrogen dioxide and sulfur dioxide. This
7 case resulted in a court-ordered settlement agreement setting forth deadlines for EPA to update
8 these critically important standards. On February 9, 2010, EPA issued updated primary NAAQS
9 for nitrogen dioxide. *Primary National Ambient Air Quality Standards for Nitrogen Dioxide;*
10 *Final Rule*, 75 Fed. Reg. 6474 (February 9, 2010). On June 22, 2010, EPA issued updated primary
11 NAAQS for sulfur dioxide. *Primary National Ambient Air Quality Standard for Sulfur Dioxide;*
12 *Final Rule*, 75 Fed. Reg. 35520 (June 22, 2010). On April 3, 2012, EPA decided not to revise the
13 40-year-old secondary NAAQS for sulfur and nitrogen oxides, despite acknowledging ongoing
14 harm to terrestrial and aquatic ecosystems from acid rain and other depositional pollution.
15 *Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Sulfur*, 77 Fed.
16 Reg. 20218 (April 3, 2012). We challenged the latter decision as contrary to the Clean Air Act.
17 *See Ctr. for Biological Diversity v. EPA*, 749 F.3d 1079 (D.C. Cir. 2014). We also filed suit in
18 2010 against EPA for failing to meet numerous deadlines for limiting dangerous particle pollution,
19 including deadlines for: (a) determining whether areas in five western states are complying with
20 existing air pollution standards, and (b) ensuring that states are implementing legally required
21 plans to meet the standards. *Ctr. for Biological Diversity v. Jackson*, N.D. Cal. No. CV 10-1846
22 MMC (filed April 29, 2010). This case resulted in another settlement establishing deadlines for
23 EPA to carry out these important duties.

24 11. We here seek intervention in support of the final rulemaking by EPA and the
25 National Highway Traffic Safety Administration to reduce the fuel consumption of and
26 greenhouse gas emissions from the nation's fleet of medium- and heavy-duty vehicles entitled,
27 *Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines*
28 *and Vehicles—Phase 2*, 81 Fed. Reg. 73,478 (the "Truck Standards"). More than 70 percent of the

1 oil used in the United States and 26 percent of greenhouse gas emissions come from the
2 transportation sector. *Id.* at 73,478. By 2010, total fuel consumption and GHG emissions from
3 medium- and heavy-duty vehicles had been growing, and these vehicles accounted for 23 percent
4 of total U.S. transportation-related greenhouse gas emissions and about 20 percent of
5 transportation-related energy use. *Id.* at 73,480. The first phase of these standards is expected to
6 save 530 million barrels of oil and avoid 270 million metric tons of carbon emissions. *Id.* Phase 2
7 of these standards, the Truck Standards at issue here, is projected to achieve additional vehicle fuel
8 savings as high as 25 percent, depending on the vehicle category, even while its benefits greatly
9 exceed its costs and consumers will see substantial net savings over the vehicle lifetime from fuel
10 savings alone. *Id.* at 73,481. The reduction of greenhouse gas emissions from these vehicles is
11 critical if the U.S. is to meet its pledge under the Paris Climate Agreement to hold global
12 temperature increases well below 2 degrees Celsius and avoid the worst consequences of climate
13 change. Conversely, without regulatory action from EPA, greenhouse gas emissions from
14 medium- and heavy-duty vehicles will increase and render the avoidance of the worst effects of
15 climate change near impossible.

16 12. Because emissions from medium- and heavy-duty vehicles are a significant source
17 of global warming, they must be reduced as quickly as possible. Emissions from these sources
18 harm the health, welfare, economic, professional and aesthetic interests of our members in
19 numerous ways. They contribute to climate change, which is already driving many animals and
20 plants to extinction, increasing temperatures, and causing droughts, flooding and sea level rise,
21 and affecting the livelihoods and property of our members. Our members are increasingly less
22 able to, and sometimes altogether prevented from, viewing and enjoying wildlife threatened by
23 climate change and from recreating in wilderness areas undergoing rapid climate change. They are
24 deprived of the aesthetic enjoyment that stems from such activities, and experience worry, upset
25 and other emotional injury because of it. Some of our members suffer from pulmonary diseases
26 such as asthma which is exacerbated by increases in dust and fine particulate matter caused by
27 increasingly dry conditions in fragile ecosystems such as the Salton Sea that are directly affected
28 by climate change.

1 13. Carbon emissions, including those from medium- and heavy-duty vehicles, have a
2 particularly pronounced effect on the Arctic and Antarctic, where sea ice is melting at a rapid and
3 accelerating rate. A recent study found a linear relationship between the quantity of greenhouse
4 gas emissions and the amount of arctic sea ice lost, calculating a loss of three square meters of
5 arctic sea ice at the end of the melt season in September for every ton of CO₂ emitted. CO₂
6 emissions from these sources cause that amount of sea ice to vanish, creating irreversible habitat
7 destruction for polar bears, arctic seals, walruses, and other ice-reliant species.¹

8 14. Combusting oil to power trucks and vans also creates other harmful co-pollutants,
9 including oxides of nitrogen and soot particles. Truck Standards, 81 Fed. Reg. 73,485. These
10 pollutants cause adverse health effects, particularly for persons living next to busy highways and
11 freeways. Short-term exposure to emissions of nitrogen dioxide “can aggravate respiratory
12 diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing, or
13 difficulty breathing), hospital admissions and visits to emergency rooms;” longer-term exposure
14 “may contribute to the development of asthma and potentially increase susceptibility to respiratory
15 infections.”² Emissions of nitrogen oxides also contribute to the formation of tropospheric ozone.
16 Ozone can reduce lung function, harm lung tissue, and trigger a variety of respiratory health
17 problems in humans, and can damage “sensitive vegetation and ecosystems, including forests,
18 parks, wildlife refuges and wilderness areas.”³

19 15. Improvements in the efficiency of medium- and heavy-duty vehicles directly
20 correlate to reductions in fuel use and, consequently, to reductions in the emissions of CO₂ and
21 other combustion-related pollutants. A CO₂ emission standard that results in reduced fuel
22 consumption will therefore decrease not just the amount of CO₂ emissions, but also the amount of
23 nitrogen oxides, soot particles, and other dangerous co-pollutants. If petitioners were to prevail in
24 weakening the Truck Standards, the combustion of fuels would increase, as would the emission of

25 ¹ Notz, Dick and Stroeve, Julianne, *Observed Arctic Sea-Ice Loss Directly Follows Anthropogenic*
26 *CO₂ Emissions*, Science, 10.1126/science.aag2345 (2016), available at
<http://science.sciencemag.org/content/early/2016/11/02/science.aag2345>.

27 ² EPA, Basic Information about NO₂, available at [https://www.epa.gov/no2-pollution/basic-](https://www.epa.gov/no2-pollution/basic-information-about-no2#Effects)
28 [information-about-no2#Effects](https://www.epa.gov/no2-pollution/basic-information-about-no2#Effects).

³ EPA, Ozone Basics, available at <https://www.epa.gov/ozone-pollution/ozone-basics#effects>.

1 these dangerous co-pollutants. This would directly prevent and thwart the attendant health
2 improvements and benefits.

3 16. The Center's members rely on the organization to support EPA's efforts to reduce
4 carbon and other harmful pollution from vehicles, to enforce the provisions of the Clean Air Act,
5 and to compel medium- and heavy-duty vehicles to operate lawfully.

6 17. Any decision by this Court that would weaken the Truck Standards or delay or
7 impede EPA's ability to enforce Clean Air Act section 202 to reduce carbon and other harmful
8 pollution from these sources would harm the interests of the Center and its members. These
9 interests include the procedural interests in enforcing all aspects of the rulemakings that reduce
10 carbon pollution, about which our members have commented extensively.

11 18. If this Court upholds denies the petitions, both the substantive and the procedural
12 harm that would come from impeding or delaying those pollution reductions would be addressed
13 and prevented.

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15 I declare under penalty of perjury under the laws of the United States of America that the
16 foregoing is true and correct. Executed on January 22, 2017, at San Francisco, California.

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Kassia R. Siegel

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

DECLARATION OF JOHN STITH
Submitted In Support of Environmental Defense Fund

I, John Stith, declare as follows:

1. I am Director of Database Marketing and Analytics at the Environmental Defense Fund (EDF). I have had this position for more than 11 years.
2. My duties include maintaining an accurate list of 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.
3. 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.
4. EDF relies on science, economics, and law to protect and restore the quality of our air, water, and other natural resources, and to support policies that mitigate the impacts of climate change.
5. Through its programs aimed at protecting human health, EDF has long pursued initiatives at the state, national, and international levels designed to reduce

emissions of greenhouse gases responsible for global warming from all major sources, including medium- and heavy-duty motor vehicles.

6. EDF has a strong organizational interest, and a strong interest that is based in its members' public health, environmental, recreational, aesthetic, professional, educational, and economic interests, in reducing emissions from motor vehicles.

7. When an individual becomes a member of EDF, his or her current residential address is recorded in our membership database. The database entry reflecting the member's residential address is verified or updated as needed.

8. EDF currently has over 350,000 members in the United States, including members residing in each of the 50 states and the District of Columbia. These members likewise have a strong interest in protecting human health and the environment from air pollution, including greenhouse gas emissions from motor vehicles.

9. If the current challenges to the standards for medium- and heavy-duty motor vehicles were successful, EDF's members would be harmed by their continued exposure to levels of pollution from these sources known negative impacts on human health and the environment.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Dated: January 19, 2017.



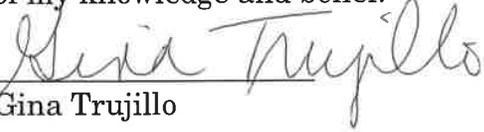
John Stith

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 served in this position since January 2015.
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.
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's mission statement declares that "The Natural Resources Defense Council's purpose is to safeguard the Earth: its people, its plants and animals, and the natural systems on which all life depends." The mission statement goes on to declare that NRDC works "to restore the integrity of the elements that sustain life- air, land, and water- and to defend endangered natural places." NRDC's mission includes the prevention and mitigation of global warming in order to protect and maintain NRDC's members' use and enjoyment of natural resources threatened by global warming.
5. Through its Climate Center, NRDC pursues federal and state policies to curb the pollution that is causing global warming, including emissions of carbon dioxide and other greenhouse gases from the transportation sector, which is responsible for approximately one-third percent of global warming pollution in the United States.
6. When an individual becomes a member of NRDC, his or her current residential address is recorded in NRDC's membership database. When a member renews his or her membership or otherwise makes a contribution to NRDC, the database entry reflecting the member's residential address is verified or updated.
7. NRDC currently has more than 298,000 members. There are NRDC members residing in each of the fifty United States and in the District of Columbia.

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


Gina Trujillo

Executed on January 20, 2017.

DECLARATION OF GERALD W. WINEGRAD

I, Gerald W. Winegrad, hereby declare as follows under penalty of perjury:

1. I am currently a member of the Natural Resources Defense Council (“NRDC”) and have been since 1981.

2. I support NRDC’s efforts to stop global warming and reduce its impacts. I am familiar with the science of climate change, and believe that global warming poses a significant threat to the well being of humans, wildlife, and the natural environment, and that we have a responsibility to maintain the environment to the best of our ability.

3. I am an attorney and served as an Adjunct Professor at the University of Maryland School of Public Policy where I taught graduate courses on Chesapeake Bay Restoration and Wildlife Management from 2005 to 2013 and before that beginning in 1988 for a few years. I am a lifelong Marylander and grew up fishing, crabbing, and swimming in the Bay. I served in the Maryland Legislature from 1983 to 1995, first in the House of Delegates and then 12 years as a State Senator. I represented the greater Annapolis area and served as Chairman of the Senate Environment Subcommittee for eight years and wrote, sponsored, or managed nearly all environmental legislation passing the Senate, including the Chesapeake Bay legislation. I also served on the tri-state Chesapeake Bay Commission, Maryland Environmental Trust, and National Conference of State Legislatures’ Environment Committee for 12 years. I have testified before Congressional committees for the latter group representing the 50 state legislatures on environmental issues, including the Clean Water and Clean Air Acts and have testified numerous times on other environmental issues. I received numerous

awards for my legislative work, including Legislator or Conservationist of the year from such groups as the Sierra Club, Audubon Society of the Central Atlantic States, Clean Water Action, SRA, and the Maryland Public Health Association. I was called the “environmental conscience” of the Senate by the Washington Post and Tom Horton wrote that “he is the person who more than any other set Maryland’s environmental agenda over the past 16 years.” In January 2002, I was presented the prestigious Life Time Achievement Award by the Chesapeake Bay Foundation, only the third person to be so honored.

4. I hold a B.A. Degree in Economics from Western Maryland College and a J.D. Degree from the University of Maryland School of Law, and I have been an attorney since 1969. My formal environmental career began in 1969 when I served as Counsel to the National Wildlife Federation. After leaving the Legislature in 1995, I served as Vice President for Policy of the American Bird Conservancy in Washington, D.C. until 2008. At the Conservancy, I directed the work of the 90-member organization Bird Conservation Alliance and led national efforts to conserve avian species.

5. I served as a naval officer in the Judge Advocate General’s Corps during the Vietnam War and was promoted to and served as a full-time Military Judge. I achieved the rank of Commander in the U.S. Naval Reserve. During the four years I spent in the Navy in Norfolk, Virginia, I lived on the water and crabbed every day of the summer, frequently hosting crab feasts for friends and family. I also used a small open power boat for family and friends to fish and crab and cruise the waters of the Lafayette River in Norfolk.

6. Besides teaching graduate courses on Chesapeake Bay restoration and land use that I wrote at the University of Maryland at College Park since 1988, I have taught my Bay restoration course at the graduate school level at Johns Hopkins University and the University of Maryland Law School. I have authored

numerous articles on the environment and have spoken at many national and international conferences on the environment and on Chesapeake Bay. I continue my leadership on Bay issues making presentations to many groups, including Governors and other policy makers. In 2007, I founded and chair a group of 60 Senior Bay Scientists and Policy Makers for the Bay that is pushing for 25 bold steps to restore the Bay. They include top Bay scientists, two former Maryland Governors, a former U.S. Senator and Congressmen, and current state senators as well as leaders of the conservation community. I host groups of these Bay leaders on my deck overlooking Oyster Creek to plan strategies to foster Bay restoration and just recently met here with two-term former Maryland Governor Paris Glendening. I also host students here on my deck and pier and last year had 12 Brazilian college and law students with their professors and other professors from the University of Maryland here on the water for discussions on the restoring the Bay. Last year, I had two of my former grad students who now work for the Chesapeake Bay Foundation (CBF) and EPA Bay Program, respectively and two other young CBF staffers here at my pier putting seed oysters (shell with spat) into floats and cages to grow for my oyster bar I established under my pier to help clean the Bay. We adjourned to my deck overlooking the water for food and libations. In June 2016, I hosted two professors and 18 graduate students who were science writers from around the U.S. working on their masters degrees at my home on a presentation on Bay recovery and on a Chesapeake bay Foundation educational boat trip departing my pier at 10:00 a.m.

7. I am an active birder and crabber and was Vice President of the Anne Arundel Bird Club for nine years. I began fishing in the waters around Annapolis when I was 12 years old and learned to swim in the Bay off of Bay Ridge beach not far from where I live.

8. I currently own a home located on Washington Drive in Annapolis, Maryland 21403, on the waterfront of Oyster Creek, an inlet directly off of the Chesapeake Bay. I bought my property in December 1997. It is a small lot (about .4 acre) with a two-story home and back deck that are no more than 50 feet from tidal water with a pier. Part of my home is in the 100-year flood plain and for that reason, FEMA regulations required me to have flood insurance for our mortgage, now paid off. I still carry the flood insurance because of global warming-related sea level rise and the increased threat of flooding. My flood insurance continues to rise with the threats of flooding increasing likely due to global warming.

9. My wife and I live only about 100 yards from the Chesapeake Bay and chose our property as life-long Marylanders because of our love of the water, boating, fishing, crabbing, nature watching, birdwatching, photography, and a quiet dead end neighborhood. We use our home, pier and beach plus our community beach for crabbing and fishing, birdwatching and wildlife observation, photography, canoeing (I keep my canoe under my deck), and for hosting family and other large gatherings—sometimes 150 people when we use neighbors' yards as well. We hosted a family reunion crab fest in 2015 in our yard not 20 feet from tidal water. My grandchildren visit frequently and spend much time on the pier seining for critters, pulling crab pots, and even fishing and are joined my nieces and nephews. I often use nearby county parks--Quiet Waters Park and Thomas Point Park--for birdwatching and the former for speaking engagements. I led my local Anne Arundel Bird Club's annual waterfowl Sunday birdwatching tour each January for 15 years in local coastal areas including Thomas Point Park. These low-lying areas would be rendered inaccessible with continued sea level rise. I have spoken at Quiet Waters Park on the Restoration of the Chesapeake Bay as part of their environmental series open to the public at this county park.

10. I am concerned about the effects that global warming is having and will continue to have on my property and my community. Global warming already has contributed significantly to sea level rise and will cause an even more dramatic rise in sea level in the near future, resulting in increased inundation of land and storm-surge damage along coastal areas. I am fully aware that the Chesapeake Bay area is particularly susceptible to damage from sea level rise and storm surge associated with climate change and have seen the reports from leading scientists as to how severe this flooding could be in my area.

11. My home already has been damaged by rising waters and flooding associated with hurricanes. In September 2003, Tropical Storm Isabel caused severe damage from flooding in my neighborhood. My entire back yard was under several feet of water, which partially flooded my basement even though I had piled dirt bags against the door. My pier and its high pilings were totally under water, fish were swimming in my back yard, and some outdoor household articles were washed away. The bottom of the boat tied at our pier (my brother's) was damaged from rubbing on the top of a piling. My wife and I feared for our own personal safety and some people did evacuate from my neighborhood. While we were lucky and escaped most damage, adjoining neighbors and others just 100 yards away were not so lucky. Whole houses were cut in half by the storm surge; other houses were flooded; car engines were ruined with salt water; and our community pier was destroyed. Older homes with oil heat had their oil tanks' lines snapped by the flood waters, with home heating oil floating in our street creating a bad odor that gave us headaches after a while. Maryland Department of Environment's oil spill response crew was called in but much oil escaped into the Bay, and we were concerned with this as we fish and regularly crab (every day—May 30-October 30) and the oil would have ruined these activities for years. In addition, the flood waters penetrated into our well water systems, causing the County health

department to issue a safety warning to boil or not use well water until it was tested for safety. Folks had to buy bottled water as their wells were contaminated with salt water and/or bacteria from Isabel's flooding. Fortunately for us, the County-sponsored well testing showed our system to be okay—this time.

12. Oyster Harbor is a special taxing district and our dues are set on our property tax rate, which can rise due to damage like that caused by flooding from Isabel. I currently pay more than \$1,400 a year in these special community property taxes and this could rise as sea level rises and damage occurs to community roads and properties, including our piers and beaches. As a result of Isabel, the community pier on the Bay had to be replaced and the beach fence, too, at the community's cost. My family was also financially impacted when our property insurance company (USAA) raised our rate due to the combination of significant claims from Isabel in this area plus some insurers withdrawing from the property insurance market altogether in Maryland as a result of increased flooding risk due to global warming and sea level rise. This made it impossible to shop for cheaper homeowners' insurance. Undoubtedly, insurers look at this area as flood prone with much greater damage potential due to global warming and consequent rising water levels. My property insurance has continued to rise despite no claims and I have had to raise my deductible significantly (now \$1,700) to avoid even greater increases. My flood insurance also has –increased from \$301 a year in 2013 to \$412 this year.

13. I have also noticed more frequent high water levels that have been uprooting my intertidal Bay grasses/plants that thrive in front of my bulkhead and protect my property from erosion, as well as provide habitat for many critters such as shedding blue crabs, northern water snakes, Eastern painted turtles, birds, and muskrats. For two years, I had to go onto the beach at low tide in back of my property with a shovel and re-dig a hole to plant uprooted high-tide bush and three

square plants. But now, the uprooted intertidal plants there are gone and the water too high to replant them. This encroachment of the water further and further onto my property has steadily and slowly been occurring during my 19 years here. Soon, global warming-related higher water levels may take out all my vegetation, exposing my bulkhead and land to erosion as it has my adjoining neighbors who shares the same bulkhead.

14. We are already seeing soil erosion behind our, our neighbor's, and other adjoining properties from rising sea level. Our nearby community beach on the Bay is already eroding even though it has breakwaters installed to prevent erosion. With rising water levels the beach may be lost unless it is regularly replenished with dredged sand.

15. In addition, my property faces an increased threat as climate change worsens. I am very much concerned about future damage including the flooding of my basement and house, damage to my pier and bulkhead, erosion of my small beach, and the loss of intertidal vegetation which I am already seeing, the flooding that may occur in my backyard affecting our water supply, loss of use of our yard for crab feasts, dinner parties, and family get-togethers where we dine and recreate, playing football or tossing a softball on our back lawn, and my ability to use my pier when it is totally under water. This would stop my crabbing and fishing and might impact the ability to keep a boat at the pier. The erosion that might ensue could cause the loss of my land abutting the creek and erode and damage my bulkhead. This past summer my 41-year old daughter and three grandkids—9, 7, and 6, visited here and the grandkids love to be on the pier checking crab pots, seining for critters, and chicken necking. This family experience may be lost to them and me unless we can slow or stop sea level rise due to global warming.

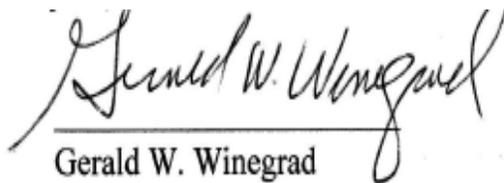
16. All of these impacts from global warming and consequent sea level rise could deprive me of water supply, use of my land and home, and recreational

opportunities. These impacts could also adversely affect the value of my home and property. I have had folks driving into our neighborhood looking at waterfront homes stop by and ask me about flooding and I tell these strangers the truth—we have had severe flooding. There is no doubt that prospective purchasers of property in my neighborhood are looking at increasing threats of flooding from global warming which is lowering property values, especially after Isabel.

17. I believe that regulation of greenhouse gas emissions, including as finalized on October 25, 2016 by the EPA and the National Highway Traffic Safety Administration (“NHTSA”) in the final standards to reduce greenhouse gas emissions and fuel consumption from the nation’s fleet of large trucks and buses are important to lower such emissions and prevent exacerbating the global warming problem and its effects on me and my property. Such regulations to prevent global warming and slow and/or lessen sea level rise and other problems associated with global warming are essential to lessening these problems and among other things, these proposed regulations will help protect the economic value of my property, decrease the frequency and severity of floods here, allow me to continue the normal use of my property, keep the cost of flood insurance and community property taxes from rising even more, and preserve the environmental and community characteristics that led me to choose this area as my home.

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

Executed in Annapolis, Maryland, on January 18, 2017.



Gerald W. Winegrad

ORAL ARGUMENT NOT YET SCHEDULED**IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

TRUCK TRAILER)	
MANUFACTURERS)	
ASSOCIATION, INC., <i>et al.</i> ,)	
)	
<i>Petitioners,</i>)	
)	
v.)	Consolidated Case
)	Nos. 16-1430, 16-1447
UNITED STATES)	
ENVIRONMENTAL PROTECTION)	
AGENCY, <i>et al.</i> ,)	
)	
<i>Respondents.</i>)	

MOVANTS' AMENDED RULE 26.1 DISCLOSURE STATEMENT**Environmental Defense Fund**

Non-Governmental Corporate Party to this Action: Environmental Defense Fund (“EDF”).

Parent Corporations: None.

Publicly Held Company that Owns 10% or More of Party’s Stock: None.

Party’s General Nature and Purpose: EDF is a 501(c)(3) non-profit membership organization incorporated under the laws of the State of New York. EDF relies on science, economics, and law to protect and restore the quality of our air, water, and

other natural resources, and to support policies that mitigate the impacts of climate change.

Natural Resources Defense Council

Non-Governmental Corporate Party to this Action: Natural Resources Defense Council (“NRDC”).

Parent Corporations: None.

Publicly Held Company that Owns 10% or More of Party’s Stock: None.

Party’s General Nature and Purpose: NRDC, a 501(c)(3) corporation organized and existing under the laws of the State of New York, is a national nonprofit membership organization dedicated to improving the quality of the human environment and protecting the nation’s endangered natural resources.

Sierra Club

Non-Governmental Corporate Party to this Action: Sierra Club.

Parent Corporations: None.

Publicly Held Company that Owns 10% or More of Party’s Stock: None.

Party’s General Nature and Purpose: Sierra Club, a 501(c)(3) corporation organized and existing under the laws of California, is a national nonprofit membership organization. Its purposes are to explore, enjoy, and protect the wild places of the Earth; to practice and promote the responsible use of the Earth’s ecosystem and resources; to educate and enlist humanity in the protection and

restoration of the quality of the natural and human environment; and to use all lawful means to carry out these purposes.

Center for Biological Diversity

Non-Governmental Corporate Party to this Action: Center for Biological Diversity (“CBD”).

Parent Corporations: None.

Publicly Held Company that Owns 10% or More of Party’s Stock: None.

Party’s General Nature and Purpose: CBD, a 501(c)(3) corporation organized and existing under the laws of California, is a national nonprofit membership organization 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 welfare of generations to come.

Union of Concerned Scientists

Non-Governmental Corporate Party to this Action: Union of Concerned Scientists (“UCS”).

Parent Corporations: None.

Publicly Held Company that Owns 10% or More of Party’s Stock: None.

Party’s General Nature and Purpose: UCS, a 501(c)(3) corporation organized and existing under the laws of the District of Columbia, is a national nonprofit membership organization. UCS works to put rigorous, independent science to

work to solve our planet's most pressing problems by combining technical analysis and effective advocacy to create innovative, practical solutions for a healthy, safe, and sustainable future.

DATED: January 23, 2017

Respectfully submitted,

/s/ Benjamin Longstreth

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*Counsel for Center for Biological
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*Counsel for the Union of
Concerned Scientists*

(ii) Parties to this CasePetitioners:

The petitioners are the Truck Trailer Manufacturers Association, Inc., and the Racing Enthusiasts and Suppliers Coalition.

Respondents:

The respondents are the United States Environmental Protection Agency, Regina McCarthy in her official capacity as Administrator of the United States Environmental Protection Agency, the National Highway Traffic Safety Administration, and Mark R. Rosekind in his official capacity as Administrator of the National Highway Traffic Safety Administration.

Intervenors:

Environmental Defense Fund originally moved to intervene on January 19, 2017 and through this amended motion, Natural Resources Defense Council, Sierra Club, the Center for Biological Diversity, and the Union of Concerned Scientists also move to intervene. No parties other than Movants have moved for leave to intervene at present.

(iii) *Amici* in this Case

None at present.

(iv) Circuit Rule 26.1 Disclosures

See disclosure form filed separately.

(B) Rulings Under Review

Petitioners seek review of the final action taken by the United States Environmental Protection Agency and the National Highway Traffic Safety Administration at 81 Fed. Reg. 73,478 (Oct. 25, 2016) and entitled “Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2.”

(C) Related Cases

Movants are not aware of other cases related to this matter.

DATED: January 23, 2017

Respectfully submitted,

/s/ Benjamin Longstreth

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