CENTER FOR BIOLOGICAL DIVERSITY

BECAUSE LIFE IS GOOD.

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November 22, 2005

National Highway Traffic Safety Administration
Docket Management Facility
U.S. Department of Transportation
400 Seventh Street, SW.
Nassif Building, Room PL-401
Washington, DC 20590-001

Re: Docket No. 2005-22223 Average Fuel Economy Standards for Light Trucks; Model Years 2008-2011

Dear Sir or Madam,

I am writing on behalf of the Center for Biological Diversity ("Center"), a non-profit organization with over 15,000 members and offices in California, Oregon, Arizona, and New Mexico. The Center is dedicated to protecting imperiled species and their habitats by combining scientific research, public organizing, and advocacy. The primary goal of the Center's Climate, Air, and Energy Program is to reduce United States greenhouse gases and other harmful air pollutants in order to protect biological diversity, public health, and the environment.

The National Highway Traffic Safety Administration's ("NHTSA") rulemaking setting average fuel economy standards for light trucks for model years 2008-2011 ("light truck rule") is flawed in a number of regards including but not limited to the following:

- The NHTSA has failed entirely to consider global warming, which is one of the most serious problems our nation faces today. The Energy Policy and Conservation Act, 49 U.S.C. Chapter 329 ("EPCA") requires the NHTSA to consider our nation's need to conserve energy in the light truck rule. The need to conserve energy cannot be fully evaluated without consideration of global warming. The Global Change Research Act, National Environmental Policy Act, and Endangered Species Act all also require the NHTSA to consider global warming.

- The NHTSA has erred by predetermining the maximum feasible average fuel economy for light trucks, and only afterwards analyzing the environmental impacts of this fuel economy standard. The EPCA's statutory factors, including the nation's need to conserve energy and the economic practicability of the proposed fuel standards cannot be properly considered without first analyzing the environmental impacts of a reasonable range of fuel economy standards and factoring this information into the analysis. In addition, the National Environmental Policy Act, 42 U.S.C. §§ 4321 et seq.

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("NEPA") requires the NHTSA to analyze a reasonable range of fuel economy levels before committing to a determination of the maximum feasible level.

- Because the impact of the light truck rule are enormously significant, the NHTSA must prepare an Environmental Impact Statement under NEPA, rather than the cursory and inadequate Environmental Assessment.

- The NHTSA has failed to conduct the required review of the impacts of the light truck rule on species listed as threatened and endangered under the Endangered Species Act.

The many errors in the rulemaking process have deprived the public and decisionmakers of the required disclosure and analysis of the true costs and benefits of possible fuel economy standards. The exclusion of global warming from consideration has resulted in a proposed fuel economy level far below the maximum feasible level.

Despite Congressional intent to achieve substantial national energy savings and energy self-sufficiency via technology forcing, nearly thirty years after the EPCA's passage, technology has far outstripped the low fuel economy levels required by the NHTSA. While the technology exists to double the current average fuel economy of light trucks, the NHTSA's proposed fuel economy standards would increase current levels by only a few miles per gallon through model year 2011.

Correcting the deficiencies in the proposed rule will require revising the rulemaking and environmental review documents to fully consider global warming, and to analyze and disclose the direct, indirect, and cumulative impacts of a reasonable range of fuel economy levels. Correcting these deficiencies should result in a much higher proposed fuel economy standard. The Center suggests an average fuel economy standard of no less than 45 miles per gallon for light trucks beginning in model year 2008. Our full comments are set forth below and supported by Attachments A through Q. In order to comply with the maximum file size for the electronic filing, these comments and the attachments are submitted in four parts.

Global Warming is One of the Foremost Threats Our Nation Faces Today

Global warming is one of the foremost problems our nation faces today and implicates all aspects of society, including environmental health and biodiversity, public health, the stability of our economy, and national security. Overall, the World Health Organization estimates that as of the year 2000, 154,000 deaths and the loss of 5.5 million daily adjusted life years per year worldwide are attributable to global warming (WHO 2002). As further detailed in the attachments, global warming is caused primarily by society's combustion of fossil fuels for energy and resulting emissions of greenhouse gases. In the absence of substantial reductions of greenhouse gas emissions, global warming and its impacts will accelerate rapidly in this century.

The Energy Policy Conservation Act Requires the NHTSA to Consider Global Warming

Concerned about national problems relating to energy use, supply, and demand, Congress passed the Energy Policy and Conservation Act, 94 P.L. 163 ("EPCA") in 1975 to accomplish several purposes including restraining energy demand and protecting the United States from energy related national

security risks. To this end, the EPCA establishes regulation of the fuel economy standards for passenger cars and light trucks, known as the Corporate Average Fuel Economy ("CAFÉ") program.

With regard to light trucks, the Secretary of Transportation is required to determine and require the maximum feasible average fuel economy, taking into account four statutory factors: (1) technological feasibility; (2) economic practicability; (3) the effect of other Government motor vehicle standards on fuel economy, and (4) the need for the United States to conserve energy. 49 U.S.C. § 32902(f). The primary source of greenhouse gas emissions which cause global warming is combustion of fossil fuels to obtain energy. The most direct way to decrease greenhouse gas emissions is to consume less energy. Therefore, any discussion of the nation's need to conserve energy must include consideration of global warming.

The transportation sector, primarily passenger cars and light trucks, is responsible for fully 66% of the United States petroleum use and approximately 33% of its greenhouse gas emissions. 70 Fed. Reg. 51455 (FN 74). Light trucks currently make up 41% of light vehicles in the United States and account for over 50% of new vehicle sales. 70 Fed. Reg. 51443. Overall the U.S. transportation sector accounts for 7% of global greenhouse gas emissions. Carbon dioxide emissions result directly from and are directly proportional to fuel combustion, and therefore increasing fuel economy for light trucks will also proportionally decrease their carbon dioxide emissions. In fact, increasing fuel economy for light trucks is probably one of the most straightforward and cost-effective actions that can be taken by any federal agency to achieve major reductions in greenhouse gas emissions.

The NHTSA has failed entirely to consider this important aspect of the need for the United States to conserve energy. Merely mentioning in the rulemaking and Environmental Assessment that global warming is happening and that greenhouse gas emissions from light trucks contribute to the global warming problem is wholly inadequate to meet the NHTSA's obligation to rigorously consider this factor in the rulemaking.

The NHTSA's failure to monetize the costs of greenhouse gas emissions and the benefits of a reasonable range of possible fuel economy standards also renders the rulemaking inadequate. 70 Fed. Reg. 51455. An estimate of the true costs of the carbon emissions is one of the most important inputs into the NHTSA's algorithm for determining the maximum feasible average fuel economy level. Estimates of the monetary benefits of greenhouse gas emissions reductions from passenger cars and light trucks is readily available in the California Air Resources Board ("CARB") Regulations to Control Greenhouse Gas Emissions from Motor Vehicles Final Statement of Reasons (CARB 2005), the CARB Preliminary Statement of Reasons (CARB 2004), and the Northeast States Center for a Clean Air Future ("NESCCAF") report Reducing Greenhouse Gas Emissions from Light Duty Vehicles (NESCCAF 2004). The cost-benefit analysis information in these reports could be adapted for use directly in the rulemaking. At a minimum, these reports show that it is feasible and practicable to monetize the cost of greenhouse gas emissions. Excluding a monetization of the greenhouse gas emissions from the NHTSA's light truck fuel economy rulemaking on the basis that the future costs of global warming are uncertain is arbitrary and capricious. Excluding this vital information leads to a proposed maximum feasible fuel economy level that is much lower than it would otherwise be, and therefore undercuts Congressional direction to conserve energy. It is certain that if current greenhouse gas emissions levels continue or increase, that the United States and the world will suffer profound economic and other losses. The NHTSA cannot dismiss these costs as "uncertain" while

simultaneously relying upon the uncertain projections of claimed economic hardship recited by the automobile industry for an estimate of the cost of increasing fuel economy.

The NHTSA has also erred by predetermining the maximum feasible fuel economy level prior to conducting environmental review. The NHTSA's direct mandate to consider global warming relative to the nation's need to conserve energy in setting fuel economy standards is supplemented and amplified by other laws such as the Global Change Research Act, the National Environmental Policy Act, and the Endangered Species Act. The NHTSA must analyze the impacts of different possible fuel economy levels under NEPA and other laws prior to determining the maximum feasible fuel economy level. The NHTSA has conducted the analysis backwards and thus the NEPA review has become a post-hoc analysis.

The NHTSA must also give proper weight to each of the statutory factors and Congress's intent in passing the NHTSA. While intended as a technology-forcing program and one of the leading mechanisms by which our country would achieve substantial energy savings and energy self-sufficiency, the CAFÉ program has languished over time. Technology has now far outstripped the inordinately lax fuel economy standards required by the NHTSA. The technology already exists today to double the current fuel economy standards for light trucks, thereby cutting this portion of greenhouse gas emissions approximately in half. The NHTSA's failure to consider global warming impacts its consideration of the other statutory factors. Whether a given action is economically practicable depends upon the costs of the alternatives to that action. By ignoring global warming, the NHTSA has ignored a vital aspect of this equation. As a result, the NHTSA's consideration of economic practicability has been distorted, and the claims of economic loss made by the regulated car manufacturers have been given disproportionate and impermissible weight. Failure to properly and reasonably consider the statutory factors renders the NHTSAs rulemaking arbitrary, capricious, and unlawful.

At a minimum, the NHTSA must consider a range of possible fuel economy standards for light trucks that includes a doubling of the current standard. The NHTSA must then analyze the range of possible standards under the NEPA, Global Change Research Act, and the Endangered Species Act as outlined below. The NHTSA's approach has been to analyze only the incremental change between the last model year's standard and the proposed standards. This approach is flawed and inadequate. The NHTSA has the mandate to set the maximum feasible fuel economy level, a standard which is not determined based on the previous model year's standard. Therefore, the NHTSA must analyze a reasonable range of possible fuel economy standards, and this range cannot be arbitrarily constrained to one within several tenths of a mile per gallon of the previous standard. Because the technology so clearly exists to double current fuel economy levels, the NHTSA must consider a range of alternatives that includes at minimum a doubling of the current standard. The NHTSA cannot exclude consideration of technologically available standards by predetermining that those levels would not be economically practicable for a few car manufacturers, especially since the information submitted by the manufacturers is self-serving and largely unverified.

The Requirements of the Global Change Research Act

Concerned that the consequences of human-induced global warming will "adversely affect world agricultural and marine production, coastal habitability, biological diversity, human health, and global economic and social well-being," Congress passed the Global Change Research Act in 1990. 15 U.S.C.

§2931(a)(2). The purpose of the GCRA is "to provide for development and coordination of a comprehensive and integrated United States research program which will assist the Nation and the world to understand, assess, predict, and respond to human-induced and natural processes of global change." 15 U.S.C. § 2931(b).

To this end, the GCRA requires the Climate Change Science Program ("CCSP") to prepare, not less frequently than every 4 years, a scientific assessment which:

(1) integrates, evaluates, and interprets the findings of the Program and discusses the scientific uncertainties associated with such findings;
(2) analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; and
(3) analyzes current trends in global change, both human-[induced] and natural, and projects major trends for the subsequent 25 to 100 years.

15 U.S.C. § 2936.

This scientific assessment (hereineafter "4-Year Report") is to be used by "all Federal agencies and departments" in "responding to human-induced and natural processes of global change pursuant to other statutory responsibilities." 15 U.S.C. § 2938(b)(2). The NHTSA, then, is under a clear duty to use the 4-Year Report in its consideration of the nation's need to conserve energy when setting fuel economy standards for light trucks.

The last 4-Year Report was transmitted to Congress in November, 2000. This 600-page report entitled C*limate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change* and its associated 154-page summary sought to identify the key climatic vulnerabilities of particular regions and economic sectors of the country in the context of the changes in the nation's environment, resources, and economy. While the CCSP has missed the deadline of November, 2004, for completion of the updated 4-Year Report, this does not excuse the NHTSA from using the available version supplemented by the best available scientific information. Key publications since the November, 2000 4-Year Report include IPCC (2001), ACIA (2004), and Epstein and Mills (2005). At a bare minimum, these major synthesis reports must be considered along with the 4-Year Report in the light truck fuel economy rulemaking.

The Requirements of the National Environmental Policy Act

The National Environmental Policy Act ("NEPA") is the "basic national charter for protection of the environment." 40 C.F.R. § 1500.1(a). The purpose of NEPA is to "help public officials make decisions that are based on an understanding of environmental consequences, and take actions that protect, restore, and enhance the environment." *Id*. at § 1500.1(c). NEPA's fundamental purposes are to guarantee that: (1) agencies take a "hard look" at the environmental consequences of their actions before these actions occur by ensuring that the agency carefully considers detailed information concerning significant environmental impacts; and (2) agencies make the relevant information available to the public so that it may also play a role in both the decisionmaking process and the implementation of that decision. See, e.g. 40 C.F.R. § 1500.1.

NEPA and its implementing regulations require that all federal agencies must prepare an

environmental impact statement ("EIS") for all "major federal actions significantly affecting the quality of the human environment."[1] 42 U.S.C. § 4332 (2)(C); see also 40 C.F.R. § 1501.4.

An EIS protects the environment by providing to both the public and decisionmakers a detailed statement of: (1) the environmental impact of the proposed action; (2) any adverse environmental effects that cannot be avoided should the proposed action be implemented; (3) alternatives to the proposed actions; (4) the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity; and (5) any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented. 42 U.S.C. § 4332(C); 40 C.F.R. § 1502.1. NEPA also requires federal agencies to analyze the direct, indirect, and cumulative impacts of the proposed action, as well as mitigation measures to minimize the environmental impacts of the proposed action. 40 C.F.R. §§ 1508.7, 1508.8, 1502.14, 1502.16.

Congress has directed that NEPA be interpreted to apply to all federal actions "to the fullest extent possible." 42 U.S.C. § 4332; Jones v. Gordon, 792 F.2d 821, 826 (9th Cir. 1986).

The NHTSA Must Prepare an Environmental Impact Statement that Analyzes the Direct and Indirect Impacts of the Light Truck Rule

Whether there may be a significant effect on the environment requires consideration of two broad factors: "context and intensity." *See* 40 C.F.R. § 1508.27; 42 U.S.C. § 4332(2)(C). The factors the NHTSA must consider include the degree to which the proposed action affects public health or safety, the degree to which the effects on the quality of the human environment are likely to be highly controversial, the degree to which the possible effects on the human environment are highly uncertain, whether the action is related to other actions with individually insignificant but cumulatively significant impacts, the degree to which the action may adversely affect an endangered or threatened species or its critical habitat, and other factors. 40 C.F.R. § 1508.27.

The NHTSA appears to be relying upon Public Citizen, et al. v. National Highway Traffic Safety Administration, et al., 848 F.2d 256 (D.C. Cir. 1988) to support its predetermination that it need only prepare an Environmental Assessment on the light truck fuel economy rulemaking. The NHTSA cannot substitute reliance upon this highly fact-specific case for a real analysis of this rulemaking. The Public Citizen decision is nearly 20 years old and highly fact specific. There can be no question today that the NHTSA must prepare an EIS on the light truck fuel economy rulemaking.

Global warming is one of the foremost public health and safety issues we face today, and the issuance of light truck fuel economy standards is one of the federal agency actions with the single largest impact upon U.S. greenhouse gas emission levels. The fact that greenhouse gas emissions from fossil fuel combustion is the leading cause of the planet's increasing temperatures is not subject to scientific controversy. However, what actions should be taken to address global warming are highly

[1] An agency may first prepare a detailed Environmental Assessment ("EA") to determine whether the project may significantly affect the environment and requires a full EIS. 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1508.9. If the EA shows that the proposed action will have no significant impact, the agency may issue a finding of no significant impact ("FONSI") and then execute the action. 40 C.F.R. § 1508.13. If however, the EA shows that the proposed activity will have a significant impact, the federal agency must prepare an EIS *before* proceeding with the proposed activity. 42 U.S.C. § 4332(2)(C).

politically controversial and therefore deserve treatment in an EIS. While many effects of global warming are already being felt in the U.S. and globally (much earlier than predicted even just several years ago), the precise nature of future impacts is still subject to uncertainty, which also weighs in favor of an EIS.

The light truck fuel economy rule also requires an EIS because it is related to other actions with individually insignificant but cumulatively significant impacts. Global warming is caused by many, many different sources of varying sizes. Contrary to the incredibly cursory treatment in the EA, the existence of many diffuse sources is not an excuse for glossing over the problem, but rather a reason for analyzing the impacts of the light truck fuel economy rule even more rigorously in an EIS.

Finally, as discussed further below, greenhouse gas emissions and global warming from light trucks will impact species listed under the Endangered Species Act and their critical habitat. These impacts themselves require preparation of an EIS.

The NHTSA Must Analyze a Reasonable Range of Alternatives

The evaluation of alternatives is the "heart of the environmental impact statement," and is designed to "sharply" define the issues and provide a "clear basis for choice among options by the decisionmaker and the public ...." 40 C.F.R. § 1502.14. The Ninth Circuit has held that "[t]he existence of a viable but unexamined alternative renders an [EIS] inadequate." Alaska Wilderness Recreation & Tourism Ass'n v. Morrison, 67 F.3d 723, 729 (9th Cir. 1995) (citations omitted). Moreover, an agency is not permitted "to disregard alternatives merely because they do not offer a complete solution to the problem." Natural Resources Defense Council v. Morton, 458 F.2d 827, 836 (D.C. Cir. 1972). NEPA "does not permit the agency to eliminate from discussion or consideration a whole range of alternatives, merely because they would achieve only some of the purposes of a multi-purpose project." Town of Matthews v. U.S. Dep't of Transp., 527 F. Supp. 1055, 1057 (W.D.N.C. 1981). Agencies are to "[r]igorously explore and objectively evaluate all reasonable alternatives" and discuss the no-action alternative and other "reasonable courses of action." 40 C.F.R. §§ 1502.14(a), 1508.25(b)(2).

The NHTSA has not analyzed a reasonable range of alternatives in the light truck rule. The NHTSA seems to take the position that since the EPCA requires fuel economy to be set at the maximum feasible level taking into account the statutory factors, that the EA can be prepared after the NHTSA has predetermined this level and therefore exclude consideration of more stringent fuel economy standards. This position is in error, and violates not only the EPCA's mandate to consider the nation's need to conserve energy before determining the maximum feasible fuel economy level, but also NEPA's mandate that agencies fully consider the effects of their actions on the environment before committing to a course of action. A full discussion of global warming and the contribution from different levels of light truck emissions must be included in an EIS. The NHTSA must then use this valuable information to inform its determination of the maximum feasible level of fuel economy.

A reasonable range of alternatives must be explored for other assumptions, as well. For example, the NHTSA estimated the economic benefits of the proposed fuel economy standards based on a fuel price range of from $1.51 to $1.58 during the operating period for the subject model years. 70 Fed. Reg. 41448. This estimate has now proven to be unrealistically low by a wide margin. Because the NHTSA did not analyze a range of fuel prices, the proposed rule and EA tell the public and

decisionmakers very little about the true benefits of increased fuel economy – we know only that they are much higher than the numbers in the current document.

The NHTSA Must Properly Analyze the Direct and Indirect Impacts of the Light Truck Rule Against the Proper Baseline

Once again, the NHTSA must also analyze the direct and indirect impacts of global warming relative to the true baseline. The NHTSA has the mandate to set the maximum feasible fuel economy level based on the statutory factors. Therefore, the baseline is not the previous year's standard, but rather the maximum technologically feasible standard. The impacts of the NHTSA's action are the additional greenhouse gas emissions, air pollution, and other impacts from the lowering of this level based on economic and other considerations. The way the NHTSA has defined the baseline and conducted the analysis deprives decisionmakers and the public of a true understanding of the costs and benefits of the NHTSA's rulemaking. Stated another way, the NHTSA has defined the baseline so that any increase, even the extraordinary modest proposed improvement, results in net benefits. This is misleading. The NHTSA must disclose the vast environmental costs inherent in its decision not to choose a much higher possible fuel economy standard. The NHTSA cannot avoid this obligation by asserting that its choice of fuel economy level is constrained by the EPCA. The EPCA does not constrain the agency's discretion in the way the NHTSA has asserted, but rather assigns the NHTSA the responsibility to choose the maximum feasible level from among all the possible fuel economy levels.

The NHTSA Must Properly Analyze Cumulative Impacts

The NHTSA has also failed to properly analyze the cumulative impacts of the light truck rule relative to greenhouse gas emissions. An EIS must "catalogue adequately past projects in the area" and must present a "useful analysis of the cumulative impacts of past, present and future projects." City of Carmel-by-the-Sea v. U.S. Dep't. of Transp., 123 F.3d 1142, 1160 (9th Cir. 1997). "The EIS must analyze the combined effects of the actions in sufficient detail to be 'useful to the decisionmaker in deciding whether, or how, to alter the program to lessen cumulative impacts.'" Muckleshoot Indian Tribe v. U.S. Forest Service, 177 F.3d 800, 810 (9th Cir. 1999) (quoting City of Carmel, 123 F.3d at 1160). "Detail is therefore required in describing the cumulative effects of a proposed action with other proposed actions." Id. (internal citations omitted).

The EIS must list and describe sources of United States greenhouse gas emissions by category and percent of the total to place the greenhouse gas emissions from light trucks into perspective. Setting fuel economy for light trucks is an action with one of the single largest possible impacts on overall United States greenhouse gas emissions, and it must be viewed in this context. The NHTSA cannot predetermine the maximum feasible fuel economy level without a full understanding and analysis of how its action impacts the overall ability of the United States to reduce its greenhouse gas emissions. This understanding is not possible based on the current EA, which has failed to even mention other sources of greenhouse gas emissions, let alone analyze them. Analysis of cumulative impacts such as air pollution and human health is similarly inadequate.

The NHTSA Must Prepare A Legally Adequate EIS

The EA is inadequate in many additional regards. For example, the NHTSA has also failed to fully analyze the air quality and human health impacts from the proposed fuel standards. Human health

impacts from conditions such as asthma and heart disease exacerbated by air pollution must be fully disclosed and analyzed in the EIS. The number of lost work days, lost school days, hospitalizations, and deaths that will be avoided or added by different levels of air pollution from different levels of light truck fuel economy can and must be quantified and disclosed. Sharp and Walker (2002), NET (2002) and Bell et al. (2004) demonstrate that this information is readily available.

The NHTSA's preparation of an EA on a predetermined level of maximum fuel economy, compounded by the EAs failure to analyze global warming, a reasonable range of alternatives, and cumulative impacts deprives decisionmakers and the public of the vitally important information concerning the consequences of the light truck rule. A legally adequate EIS and rulemaking would include a full discussion of global warming, estimates of total greenhouse gas emissions reductions possible through increased fuel economy of light trucks, an analysis of each alternative's contribution to the overall problem, and a thorough analysis of cumulative greenhouse gas sources.

While we recognize the statutory constraint to set standards 18 months prior to the regulated model year, this requirement cannot be used as an excuse not to immediately begin work on a legally adequate rulemaking and EIS.

The Requirements of the Endangered Species Act

Congress enacted the Endangered Species Act ("ESA") to conserve endangered and threatened species and the ecosystems upon which they depend. 16 U.S.C. § 1531(b). The Supreme Court's review of the ESA's "language, history, and structure" convinced the Court "beyond a doubt" that "Congress intended endangered species to be afforded the highest of priorities." Tennessee Valley Authority v. Hill, 437 U.S. 153, 174 (1978). As the Court found, "the plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the cost." Id. at 184.

Species are added to the lists of endangered and threatened species by the U.S. Fish and Wildlife Service (with jurisdiction over most terrestrial and freshwater species) and the National Marine Fisheries Service (with jurisdiction over most marine species) (collectively, the "Services"). A species is "endangered" if it "is in danger of extinction throughout all or a significant portion of its range." 16 U.S.C. § 1532(6). A species is "threatened" if it "is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." 16 U.S.C. § 1532(20).

Once a species is listed under the ESA, Section 7 requires all federal agencies to "insure" that their actions neither "jeopardize the continued existence" of any listed species nor "result in the destruction or adverse modification" of its "critical habitat." Id. at § 1536(a)(2). In addition, the "take" of listed species is generally prohibited. Id. at § 1538(a); 50 C.F.R. § 17.31(a). "Take" means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." 16 U.S.C. § 1532(19). The Services may, however, permit "incidental" take on a case-by-case basis if it finds, among other things, that such take will be minimized and mitigated and that such take will not "appreciably reduce the likelihood of survival and recovery of the species." Id. at § 1539(a).

The light truck rule will impact species listed as threatened and endangered in several ways, yet the NHTSA has failed to initiate the required Section 7 consultations with the Services on its impact. The NHSTA may also be liable for take of listed species from increased greenhouse gas emissions and

global warming that result from the NHSTA's failure to set fuel economy levels at higher and more reasonable levels.

Global warming is emerging as one of the leading threats to all species worldwide. Thomas et al. (2004) have estimated that up to one third of the species included in a study of 20% of the world's surface area may be committed to extinction because of global warming by the year 2050. This study was based on minimum, mid-range, and maximum warming IPCC (2001) scenarios (Thomas et al. 2004). Under the minimal climate-warming scenario, about 18% of species would be committed to extinction, while under the mid-range scenario about 24% of species would be committed to extinction, and under the maximum warming scenario about 35% of species would be committed to extinction (Thomas et al. 2004). Reducing greenhouse gas emissions will allow total warming to be kept to the low end of the range, thereby preventing many thousands of species extinctions (Thomas et al. 2004).

Global warming's impacts on species already listed as threatened and endangered have been documented. The endangered Quino checkerspot butterfly (*Euphydryas editha quino*) which occurs in southern California and Baja, Mexico is threatened by the significant warming and drying of its habitat from global warming (Parmesan and Galbraith 2004). The drying and warming is causing the species' host plant to die off and dry up prior to the completion of caterpillar growth, resulting in mass starvation of young caterpillars (Parmesan and Galbraith 2004).

Two other listed species of *Euphydryas* butterflies, the Bay checkerspot and Taylor's checkerspot, are also impacted by global warming (Parmesan and Galbraith 2004). When species cannot shift their ranges northward or to increased elevations in response to climate warming, they will become extinct (Parmesan and Galbraith 2004).

Two species of Caribbean coral, the elkhorn coral (*Acropora palmata*) and staghorn coral (*Acropora cervicornis*) have been proposed for listing as threatened species, in part due to global warming and increased carbon dioxide concentrations. 70 Fed. Reg. 24359. Sustained increased ocean temperatures cause these coral to expel symbiotic algae on which they depend for photosynthesis and energy, the deadly phenomenon known as "coral bleaching." 70 Fed. Reg. 24362. In addition, increased levels of dissolved carbon dioxide in surface seawater acidifies the oceans and decreases the ability of these corals to calcify. 70 Fed. Reg. 24363.

Other species such as the polar bear are directly threatened with extinction by global warming but not yet proposed for listing under the Endangered Species Act. The Center for Biological Diversity, NRDC, and Greenpeace have submitted a Petition to the U.S. Fish and Wildlife Service to list polar bears under the Endangered Species Act, initiating the listing process. Polar bears are completely dependent upon Arctic sea-ice habitat for survival. Polar bears need sea ice as a platform from which to hunt their primary prey (ringed seals, *Phoca hispida*), to make seasonal migrations between the sea ice and their terrestrial denning areas, and for other essential behaviors such as mating. The polar bear's sea-ice habitat is melting away due to global warming, and the Arctic may be ice-free in the summer well before the end of this century (Overpeck et al. 2005). Habitat loss is the leading cause of species extinction, and polar bears cannot be expected to survive the near complete loss of their sea-ice habitat (Center for Biological Diversity 2005). The NHTSA should consider the impacts of the light truck rule on species like the polar bear which are in the listing process and very likely to be proposed for listing within the near future.

The light truck rule will impact listed species in other ways as well. For example, vehicles are a primary sources of excess nitrogen in the environment. Excess nitrogen contributes to major environmental problems including reduced water quality, eutrophication of estuaries, nitrate-induced toxic effects on freshwater biota, changes in plant community composition, disruptions in nutrient cycling, and increased emissions from soil of nitrogenous greenhouse gases (Fenn et al. 2003). Nitrogen deposition therefore impacts species listed under the Endangered Species Act in a number of ways.

Nitrogen deposition has contributed to the severe decline of the threatened bay checkerspot butterfly, endemic to the San Francisco Bay Area (Fenn et al. 2003). The bay checkerspot butterfly is restricted to outcrops of serpentine rock which are low in nitrogen and support a diverse native grassland with more than 100 species of forbs and grasses, including the butterfly's host plants (Fenn et al. 2003). Nitrogen deposition in the soil creates a more hospitable environment for non-native grasses which crowd out the butterfly's host primary host plant, *Plantago erecta* (Fenn et al. 2003). Nitrogen deposition and increasing non-native grass invasion has similarly acted in concert with global warming and drought to extirpate the Quino checkerspot butterfly in much of its range in southern California (Fenn et al. 2003).

Nitrogen deposition also contributes to type conversion of Southern California's coastal sage scrub vegetation community to non-native grasslands, threatening a host of species listed under the Endangered Species Act including the California gnatcatcher (Fenn et al. 2003). Nitrogen deposition is a problem in desert ecosystems, as well. The threatened desert tortoise is also impacted by the increased spread of non-native plants with lower nutritional value for the species (Fenn et al. 2003). Protection and recovery efforts for many threatened and endangered species may therefore not succeed without regional and national level policies to reduce air pollution (Fenn et al. 2003).

The NHTSA cannot rely on the EA's conclusory statements that higher levels of light truck fuel economy will have only a "small" impact on greenhouse gas emissions and air pollutants such as NOx. The fuel economy level authorized by the NHTSA is one of the factors with the greatest single influence on greenhouse gas emissions and nitrogen deposition. The NHTSA must initiate consultation, via the preparation of a Biological Assessment, on all species listed and proposed for listing that are impacted by global warming and nitrogen deposition or otherwise impacted by the light truck rule. The NHTSA will be liable for take of listed species that occurs due to its authorization of low fuel economy standards for light trucks in the absence of a Section 7 consultation and incidental take statement from the Services.

Conclusion

The NHTSA must fully consider global warming and the nation's need to conserve energy in the light truck rulemaking. A reasonable range of fuel economy levels for light trucks must be proposed, which includes, at a minimum, a doubling of current fuel economy levels. The impacts of this range of fuel economy standards must then be analyzed in an EIS before the NHTSA determines the maximum feasible level of light truck fuel economy. The NHTSA must also fully comply with all applicable laws and regulations including the Global Change Research Act, National Environmental Policy Act, and Endangered Species Act, consistent with these comments. The Center looks forward to reviewing the revised rulemaking, EIS, and Biological Assessment.

The sources cited in this comment and in Attachment A: Global Warming are listed together below. Sources that have been attached to these comments are listed in the first section, and sources that have been cited but not attached are listed in the second section.

Please contact me at (760) 366-2232 x.302 or at the address on this letterhead if you have any question or concerns. Thank you so much for your consideration of these comments.

Yours Sincerely,

Kassie Siegel

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Attachment D: CARB. 2004. Regulations to Control Greenhouse Gas Emissions from Motor Vehicles; Preliminary Statement of Reasons. Available at http://www.arb.ca.gov/regact/grnhsgas/grnhsgas.htm. 251 pp.

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Attachment K: Northeast States Center for a Clean Air Future ("NESCCAF") report Reducing Greenhouse Gas Emissions from Light Duty Vehicles (NESCCAF 2004). Available at http://bronze.nescaum.org/committees/mobile/rpt040923ghglightduty.pdf. 193 pp.

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