ORAL ARGUMENT NOT YET SCHEDULED

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

No. 12-1238

CENTER FOR BIOLOGICAL DIVERSITY, *et al.*,
Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al.*,
Respondents.

Petition for Review of Final Administrative Action of the
United States Environmental Protection Agency

OPENING BRIEF FOR PETITIONERS

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Dated: November 30, 2012

PETITIONERS' CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

In accordance with Circuit Rules 27(a)(4) and 28(a)(1), petitioners hereby certify as follows:

(A) Parties and Amici

(i) Parties, Intervenors, and Amici Who Appeared in the District Court

This case is a petition for review of final agency action, not an appeal from the ruling of a district court.

(ii) Parties to This Case

Petitioners:

The Petitioners are the Center for Biological Diversity, Clean Air Council, and National Parks Conservation Association.

Respondents:

The Respondents are the United States Environmental Protection Agency and Lisa P. Jackson, Administrator (collectively, "EPA").

Intervenors:

The Utility Air Regulatory Group and American Petroleum Institute are intervenors on the side of Respondents.

(iii) *Amici* in This Case

As yet, there are no *amici curiae*.

(iv) Circuit Rule 26.1 Disclosures for Petitioners

Petitioners incorporate by reference the Rule 26.1 Disclosure Statement below.

(B) Ruling Under Review

Petitioners seek review of the final action taken by EPA at 77 Fed. Reg. 20,218 (April 3, 2012) and titled "Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Sulfur."

(C) Related Cases

Petitioners are unaware of any related cases.

RULE 26.1 DISCLOSURE STATEMENT

Center for Biological Diversity: Center for Biological Diversity has no parent companies, and there are no publicly held companies that have a 10 percent or greater ownership interest in Center for Biological Diversity.

Center for Biological Diversity, a corporation organized and existing under the laws of the State of California, is a not-for-profit organization focused on the preservation, protection, and restoration of biodiversity, native species, ecosystems, public lands and waters, and public health.

Clean Air Council: Clean Air Council has no parent companies, and there are no publicly held companies that have a 10 percent or greater ownership interest in Clean Air Council.

Clean Air Council, a corporation organized and existing under the laws of the Commonwealth of Pennsylvania, is a not-for-profit organization focused on the protection of public health and the environment.

National Parks Conservation Association: National Parks Conservation Association has no parent companies, and there are no publicly held companies that have a 10 percent or greater ownership interest in the National Parks Conservation Association.

National Parks Conservation Association, a corporation organized and existing under the laws of the District of Columbia, is a national nonprofit organization dedicated to protecting and enhancing America's National Parks for present and future generations.

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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

Pursuant to Circuit Rule 28(a)(3), the following is a glossary of acronyms and abbreviations used in this brief:

μeq/L	microequivalents per liter
AAI	Aquatic Acidification Index
CAA	Clean Air Act
ANC	Acid neutralizing capacity
EPA	U.S. Environmental Protection Agency and Lisa P. Jackson, Administrator
ISA	Integrated Science Assessment
JA	Joint Appendix
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
NPCA	National Parks Conservation Association
NAAQS	National Ambient Air Quality Standards
PA	Policy Assessment
REA	Risk and Exposure Assessment
CASAC	Clean Air Scientific Advisory Committee
SO_2	sulfur dioxide
SO_x	oxides of sulfur

JURISDICTIONAL STATEMENT

(A) Agency. Respondents U.S. Environmental Protection Agency and Lisa P. Jackson, Administrator (collectively, "EPA" or "the agency") have jurisdiction to revise primary (health-protective) and secondary (welfare-protective) national ambient air quality standards ("standards" or "NAAQS") for oxides of sulfur and nitrogen under the Clean Air Act (also called "the Act" or "CAA") § 109, 42 U.S.C. § 7409.

(B) Court of Appeals. Pursuant to 42 U.S.C. § 7607(b)(1), this Court has jurisdiction to review the final EPA actions, taken at 77 Fed. Reg. 20,218 (Apr. 3, 2012) ("Final Rule") (JA____), challenged in this proceeding.

(C) Timeliness. The petition for review was timely filed within the 60-day window of Clean Air Act § 307(b)(1), 42 U.S.C. § 7607(b)(1), on June 1, 2012.[1]

STATUTES AND REGULATIONS

Pertinent statutes and regulations appear in an addendum to this brief.

STATEMENT OF ISSUES PRESENTED

Whether EPA acted illegally and arbitrarily in:

1. Failing to specify a level of air quality and set a new secondary national ambient air quality standard that is requisite to protect the public welfare

[1] Petitioners are Center for Biological Diversity, Clean Air Council, and National Parks Conservation Association (collectively, "Petitioners").

from severe harm to fish, forests, and other natural resources caused by deposition of sulfur and nitrogen compounds in air pollution, despite having concluded that existing secondary standards are not requisite to protect the public welfare from these harms;

2. Failing to revise secondary national ambient air quality standards for oxides of sulfur and oxides of nitrogen to protect against aquatic acidification and other adverse welfare effects, in disregard of the sound scientific basis developed by EPA's own staff and science advisors for revising the standards; and

3. Failing to adequately explain its decision not to revise secondary national ambient air quality standards for oxides of sulfur and oxides of nitrogen, particularly where this decision contradicted the advice and conclusions of EPA staff and scientific advisors.

FACTUAL AND STATUTORY BACKGROUND

I. The Ecological Impacts of Sulfur and Nitrogen Deposition

Acid rain from air pollution kills fish and other aquatic life in many of the nation's rivers and lakes. In the Adirondack Mountains, many lakes are so acidic that they are lethal to fish species such as brook trout, and contain only half the fish species that would otherwise be present. *See, e.g.*, Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Sulfur; Proposed Rule, 76 Fed. Reg. 46,084, 46,094/1-3-46,095/1 (Aug. 1, 2011) ("Proposed Rule") (JA____,

____-__); EPA, Policy Assessment for the Review of the Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Oxides of Sulfur ("PA"), EPA-HQ-OAR-2007-1145-0177 at 6-13 (JA____). Likewise, in the Shenandoah Mountains, most streams are so acidic that many fish species have been eliminated. *Id*. at 6-13 (JA____); s*ee also* Final Rule at 20,236/2-3 (JA____). On land, acidification kills trees like red spruce and sugar maple by stunting their growth and increasing their susceptibility to disease. *See, e.g.*, Proposed Rule at 46,093/2-3 (JA____); PA at ES-2, 3-17 (JA____, ____).

Nitrogen and sulfur pollution have adverse effects beyond acid rain. As every backyard gardener knows, nitrogen is a powerful fertilizer. When deposited on land and in water, nitrogen compounds disrupt the natural nutrient balance of ecosystems, altering the composition, richness, and diversity of species present. Final Rule at 20,227/1-2 (JA____). Sulfur deposition also has been linked to increased mercury methylation, a chemical change which allows this potent neurotoxin to be absorbed more easily by the tiniest forms of life and further concentrated as it moves up the food chain. *Id.* at 20,228/2 (JA____).

The problem is caused by air pollution. Combustion of fuels, whether for energy, industrial uses, or in motor vehicles, produces oxides of nitrogen and

sulfur.[2] These chemicals form acidic compounds in the atmosphere that are then deposited on land via acid rain ("wet deposition"), fog or clouds, or in particulate or gaseous form ("dry deposition"). *See Id.* at 20,224/3-20,225/1 (JA____-__). Those compounds then pass into soils, streams, and lakes, where their effects range from killing fish like trout and salmon to disruption of the breeding and distribution of birds like goldeneye ducks and loons. *See, e.g.*, Proposed Rule at 46,092/2-46,093/2 (JA____-__); PA at ES-2, 3-10 to 3-16 (JA____, ____-__).

The sensitivity of an area to acid deposition depends on the ability of a particular ecosystem to neutralize the acid—that is, the ecosystem's "acid neutralizing capacity" ("ANC"), which varies with local geology, soil characteristics, and plant life. Deposition of these pollutants can cause lakes, streams, and soils to become increasingly acidic. Final Rule at 20,225/1-2 (JA____). New England, the Adirondack Mountains, the Appalachian Mountains, the mountainous West, and the Upper Midwest contain the lakes and streams most sensitive to aquatic acidification. *Id.* at 20,225/3 (JA____). The nation's most at-risk forests include those in the Adirondack Mountains of New York, Green Mountains of Vermont, White Mountains of New Hampshire, the Allegheny

[2] Unless otherwise specified, references in this brief to "sulfur and nitrogen pollution," "oxides of sulfur and nitrogen," "sulfur and nitrogen oxides," and similar formulations refer collectively to all sulfur and nitrogen compounds that cause or contribute to acidification and nutrient enhancement when deposited on land or in water.

Plateau of Pennsylvania, and high-elevation forest ecosystems in the southern Appalachians and mountainous regions in the West. *Id.* at 20,226/1-2 (JA____). Several ecosystems, including the coastal sage scrub ecosystems of Southern California, chaparral regions of the Sierra Nevada Mountains, and alpine ecosystems in Colorado's Front Range, are especially sensitive to damage by nutrient enrichment. *Id.* at 20,227/2 (JA____).

The effects of sulfur and nitrogen in air pollution—acidification of aquatic and terrestrial ecosystems, nutrient enhancement, and contributions to mercury toxicity—cause extensive ecosystem damage and adversely affect the public welfare. *See* Armistead Russell and Jonathan M. Samet, CASAC Comments on the Policy Assessment for the Review of the Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Oxides of Sulfur (May 17, 2011) ("Russell and Samet 2011"), EPA-HQ-OAR-2007-1145-0174 at 10 (JA____) ("There is clear evidence that such adverse effects are occurring in sensitive ecosystems in the United States as a result of anthropogenic acidic deposition.").

II. Statutory Framework

The Clean Air Act requires EPA to set national ambient air quality standards for pollutants that "cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare," and which are emitted "from numerous or diverse mobile or stationary sources." 42 U.S.C. §

7408(a)(1)(A), (B). The Act requires two sets of standards—"primary" and "secondary"—for each such pollutant. The primary standard must be set at a level "requisite to protect the public health." 42 U.S.C. § 7409(b)(1). The secondary standard:

> shall specify a level of air quality the attainment and maintenance of which in the judgment of the Administrator . . . is requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air.

42 U.S.C. § 7409(b)(2). EPA's duty to determine this "requisite" level of protection is mandatory. *Am. Farm Bureau Fed'n v. EPA*, 559 F.3d 512, 530 (D.C. Cir. 2009). The secondary standard must be set at a level necessary to protect against the pollutant's adverse effects without regard to the cost of implementing the standard. *Whitman v. Am. Trucking Ass'ns, Inc.*, 531 U.S. 457, 471 n.3 (2001) ("EPA may not consider implementation costs in setting the secondary NAAQS").

In setting a standard, EPA must take into account air quality "criteria" documents prepared by EPA staff as well as the recommendations of the agency's Clean Air Scientific Advisory Committee (Scientific Advisory Committee, or "CASAC"). *See Am. Farm Bureau Fed'n*, 559 F.3d at 516 (citing 42 U.S.C. § 7409(d)(2)). Standards must be reviewed, using the same procedures, at least once every five years. *See* 42 U.S.C. § 7409(d)(1).

Secondary standards—the standards at issue here—must protect against the effects of air pollution on "welfare," which Congress has defined very broadly. Welfare effects include:

> effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being, whether caused by transformation, conversion, or combination with other air pollutants.

42 U.S.C. § 7602(h). The scope of this definition encompasses "all conceivable forms of harm from air pollution . . . ." David R. Wooley and Elizabeth M. Morss, Clean Air Act Handbook § 1:3 (21st ed. 2011). Thus, EPA must set secondary standards that are requisite to protect the public welfare from this wide range of effects.

III. History of the Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Sulfur

EPA first set secondary air quality standards for nitrogen dioxide (NO_2) and sulfur dioxide (SO_2) in 1971. Final Rule at 20,219/2-3 (JA____). These standards were "not directed toward depositional effects," *id.* at 20,240/1 (JA____), but rather were set "to protect against direct effects of gaseous oxides of nitrogen and sulfur." *Id.* at 20,239/2 (JA____). Over the next four decades, the scientific evidence mounted rapidly that these standards do not adequately protect lakes, streams, forests, and other sensitive ecosystems from acid deposition. During that

same period, scientists and regulators developed a sound scientific basis for effectively addressing acid deposition through secondary air quality standards. Yet today, after forty years of studying the problem, the EPA has still not strengthened the standards set in 1971.

EPA completed its most recent prior review of the secondary standard for oxides of nitrogen in 1996, leaving the existing standard in place. *Id.* at 20,219/3 (JA____). In 1988, EPA proposed not to revise the secondary standard for sulfur dioxide. *Id.* at 20,220/2 (JA____). EPA has taken no further action to strengthen the secondary standard for oxides of sulfur. *Id.* (JA____)

IV. Title IV and the Acid Rain Program

Amid mounting concern over acid rain, Congress added the Acid Rain Program to Title IV of the Clean Air Act in 1990. 42 U.S.C. §§ 7651-7651o. The program aimed to reduce some of the emissions of sulfur and nitrogen oxides from a limited group of large power plants, but did not address emissions from other sources. 42 U.S.C. § 7651(b). Recognizing that these reductions might not be sufficient to address the welfare effects of acid deposition, Congress also directed EPA to report on the feasibility of establishing further standards "to protect sensitive and critically sensitive aquatic and terrestrial resources." Clean Air Act Amendments of 1990, Pub. L. 101-549, § 404, 104 Stat. 2399, 2632 (1990), 42 U.S.C. § 7651 note. Congress further ordered the National Acid Precipitation

Assessment Program, first established in 1980, to continue assessing and reporting on the Acid Rain Program's effectiveness. *See* 42 U.S.C §§ 7403(j), 8901-8906.

EPA completed its study of the feasibility of an acid deposition standard in 1995. It projected that a substantial percentage of lakes and streams in sensitive regions throughout the eastern United States (especially the Adirondacks and southern Blue Ridge Mountains) would remain vulnerable to damage, even after full implementation of the 1990 Clean Air Act Amendments. *See* EPA, EPA 430-R-98-001, Acid Deposition Feasibility Study Report to Congress 114-16 (1995) (JA____-__).

Ten years later, the 2005 National Acid Precipitation Assessment Program report concluded that despite some improvement due to emissions reductions under Title IV and other Clean Air Act programs, those reductions were "insufficient to achieve recovery or to prevent further acidification in some regions," and that further pollution cuts would be needed to protect sensitive areas from the ongoing harms of acid deposition. Douglas A. Burns, et al., National Acid Precipitation Assessment Program Report to Congress: An Integrated Assessment ES-3 (2005) (JA____).

V. EPA's Current Review

A. EPA's Delay in Reviewing the Standards

Although the Clean Air Act requires EPA to review both primary and secondary air quality standards at least every five years, 42 U.S.C. § 7409(d)(1), the agency ended its last previous review of the standards for sulfur oxides in 1988, and of the nitrogen oxides standards in 1996. Final Rule at 20,219/2-3-20,220/1-2 (JA____-__ In 1999, seven Northeastern states petitioned the EPA to promulgate secondary standards to address the ongoing impacts of acid deposition in New York and New England. *Id.* at 20,220/3-20,221/1 (JA____-__). In addition, in 2000, the Secretary of the Interior requested that the EPA initiate a rulemaking to protect the country's national parks from the impacts of air pollution, including acid deposition. *Id.* at 20,221/1 (JA____). The EPA sought comment on these requests, but took no further action upon them. In 2005, petitioner Center for Biological Diversity and four other plaintiffs filed suit against EPA for violation of its statutory duty to conduct timely reviews of the air quality standards for sulfur and nitrogen oxides. *Id.* at 20,221/3 (JA____). A 2007 consent decree resolving the litigation set a schedule for completion of the reviews, EPA-HQ-OAR-2007-1145-0173 (JA ____), which the parties extended in 2009.

After EPA finally began its review of the existing secondary standards, EPA prepared an Integrated Science Assessment ("ISA") building on past research and incorporating new scientific information on nitrogen and sulfur oxides, a Risk Exposure Assessment ("REA") evaluating these pollutants' ecosystem effects, and

a Policy Assessment ("PA") setting forth staff's conclusions as to the inadequacy of the current standards and proposing a new, ecologically relevant standard. *See* Final Rule at 20,221/2-3 (JA____). As noted by the EPA, "[t]he ISA, REA, and PA all conclude that the current standards are not adequate to protect against the adverse impacts of aquatic acidification on sensitive ecosystems." *Id.* at 20,236/3 (JA____). These three key documents also all conclude that "the current standards are not adequate to protect against the adverse impacts of terrestrial acidification on sensitive ecosystems." *Id.* at 20,237/2 (JA____). In addition, the Risk and Exposure Assessment concludes that the current standards "are not adequate to protect against anticipated adverse impacts from [nitrogen] nutrient enrichment in sensitive ecosystems." *Id.* at 20,238/1 (JA____).

The Scientific Advisory Committee reviewed each document and provided additional advice and recommendations. *Id.* at 20,221/2-3 (JA____); *see generally* Russell and Samet 2011 (JA____). The Scientific Advisory Committee reached consensus on the conclusion that "[t]he levels of the current NOx and SOx secondary NAAQS are not sufficient, nor the forms of those standard appropriate, to protect against adverse depositional effects; thus a revised NAAQS is warranted." Final Rule at 20,239/1 (JA____); Russell and Samet 2011 at 1-2 (JA____-__).

B. The Proposed Rule and the Aquatic Acidification Index

EPA issued a proposed rule in August, 2011. Proposed Rule at 46,084 (JA____). The agency proposed a "joint review" of existing secondary standards because nitrogen and sulfur oxides are "linked from an atmospheric chemistry perspective, as well as from an environmental effects perspective." *Id.* at 46,089/1 (JA____). The Proposed Rule explained that after reviewing in detail the scientific evidence linking nitrogen and sulfur deposition to acidification, nutrient enhancement, and other harmful effects, the EPA Administrator had concluded

> that current levels of oxides of nitrogen and sulfur are sufficient to cause acidification of both aquatic and terrestrial ecosystems, nutrient enrichment of terrestrial ecosystems and contribute to nutrient enrichment effects in estuaries that could be considered adverse, and the current secondary standards do not provide adequate protection from such effects.

Id. at 46,111/1 (JA____).

In light of this conclusion, the Administrator proposed consideration of a new "ecologically relevant" standard to protect rivers and lakes from harmful acid deposition. *Id.* at 46,111/1-3 (JA____). The standard would be set in the form of an Aquatic Acidification Index ("AAI"), a measure of the impact of sulfur and nitrogen air pollution on the acid neutralizing or buffering capacity of rivers and lakes. *Id.* at 46,112/1 (JA____).

Unlike traditional clean air standards, a higher Aquatic Acidification Index is more protective than a lower one because it reflects greater protection from

acidification. Acid deposition from sulfur and nitrogen pollution lowers the ability of rivers and lakes to neutralize acid (their "acid neutralizing capacity," or "ANC"), so higher levels of sulfur and nitrogen air pollution translate into a lower actual Aquatic Acidification Index.[3] EPA staff recommended an Aquatic Acidification Index standard in the range of an acid neutralizing capacity of 20 (least protective) to 75 (most protective) ueq/L (microequivalents per liter), to be achieved as a 3 to 5 year average. The stringency of the standard is also reflected in the percentage of waters in each region that would be protected from exceeding the Aquatic Acidification Index standard. Staff recommended consideration of a range from 70th percentile (least protective) to 90th percentile (most protective) for this purpose. *See* PA at 7-39 to 7-40, 7-52 to 7-53, (JA____-__, ____-__); Russell and Samet 2011 at 2, 9 (JA____, ____).

[3] Acid neutralizing capacity is correlated with pH, and is expressed numerically in terms of microequivalents per liter ("μeq/L"). Ecosystem damage increases as acid neutralizing capacity levels decrease. In lakes and streams, acid neutralizing capacity levels above 100 μeq/L are generally safe for living creatures, and are associated with a peak in fish species diversity. EPA, Final Risk and Exposure Assessment Report for Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Oxides of Sulfur ("REA"), EPA-HQ-OAR-2007-1145-0064 at 4-6 (JA____). Between 100 μeq/L and 50 μeq/L, the health of sensitive species, such as brook trout and zooplankton, begins to decline. *Id.* (JA____). Acid neutralizing capacity concentrations below 50 μeq/L generally kill or harm sensitive species, while acid neutralizing capacity concentrations below 20 μeq/L kill or harm all living things in a water body. *Id.* (JA____). When acid neutralizing capacity concentrations remain below 0 μeq/L, all fish and most other aquatic life are killed, resulting in "dead" lakes. *Id.* at 4-7 (JA____).

The new standard is "defined in terms of the same basic elements that are used to define any NAAQS—indicator, form, averaging time, and level." Proposed Rule at 46,111/2 (JA____). The standard's atmospheric indicators are total reactive oxidized nitrogen ("NO_y") and sulfur oxides ("SO_x")—indicators that capture a broad range of pollutants (and their atmospheric products) known to contribute to acidification. *Id.* at 46,111/3, 46,112/1-2 (JA____, ____). The form of the standard is the Aquatic Acidification Index. *Id.* at 46,113/2-3 (JA____). Finally, the standard includes a multi-year averaging time and a level—expressed as a "single, national target ANC value"—that in the context of the Aquatic Acidification Index would identify maximum ambient NO_y and SO_x concentrations. *Id.* at 46,112/1 (JA____).

The Aquatic Acidification Index would enable EPA to set a single national standard that nonetheless accounts for regional variations in acid sensitivity, emission and deposition patterns, and atmospheric chemistry. The Aquatic Acidification Index is expressed as a mathematical equation, the terms of which are four "factors" quantifying relative ecosystem acid sensitivity, the acidifying potential of reduced nitrogen compounds, and deposition of nitrogen and sulfur oxides at particular atmospheric concentrations. *Id.* at 46,118/1-3 (JA____).

EPA staff determined relative ecosystem sensitivity by dividing the contiguous United States into 84 "ecoregions" and assessing the "critical load" of

acidifying pollutants (i.e., the acid neutralizing capacity level that would protect against ecosystem damage) in each region. *Id.* at 46,121 (JA____); PA at 7-32 to 7-36 (JA____-__). EPA staff then calculated the Aquatic Acidification Index for acid-sensitive ecoregions, based on ecosystem-specific values for each factor of the Aquatic Acidification Index equation, under different "form" and "level" combinations ranging from the least to the most protective. Proposed Rule at 46,122/1-46,123/1, 46,124/1-3 (JA____-__, ____); PA at 7-56 to 7-59 (JA____-__) (Tables 7-1a to 7-1d). All relatively non-acid-sensitive ecoregions would meet the proposed standard under any combination of form and level, while between eight and 25 acid-sensitive regions would not meet the standard, depending on the form and level chosen. PA at 7-60 to 7-61 (JA____-__).

The Scientific Advisory Committee found the Policy Assessment's approach "appropriate for use in determining a secondary standard to help protect aquatic ecosystems from acidifying deposition of oxides of sulfur and nitrogen." Russell and Samet 2011 at 2 (JA____). The Scientific Advisory Committee lauded EPA's "commendable job" in developing the Aquatic Acidification Index and expressed support for the "potential choices/ranges" presented by EPA staff on the indicators, form, averaging time, and level that should be considered in setting a standard. *Id.* (JA____). The Scientific Advisory Committee found the Policy Assessment's assessment of ecoregion sensitivity reasonable, and concluded that the Policy

Assessment's proposed ranges for the form and level of the standard "provide[d] the Administrator with a broad but reasonable range of minimally to substantially protective options" from which to choose. *Id.* at 9 (JA____).

Although the Scientific Advisory Committee acknowledged remaining uncertainty and identified areas of further research and potential future improvement, *see id.* at 11-12 (JA____-__), nothing in the Scientific Advisory Committee's consensus comments stated—or even suggested—that uncertainties were so great as to preclude setting any standard at all. In sum, the Aquatic Acidification Index and the range of standards recommended by EPA staff represented a carefully tailored and reasoned solution to a problem with which scientists and regulators had wrestled for forty years.

In the Proposed Rule, however, the Administrator declined to choose an Aquatic Acidification Index-based standard from within the ranges proposed in the Policy Assessment and affirmed by the Scientific Advisory Committee. Rather, the Administrator asserted that remaining uncertainties stemming from observational data gaps and the use of atmospheric modeling, Proposed Rule at 46,130-32 (JA____), were "of such nature and degree as to prevent her from reaching a reasoned decision such that she is adequately confident as to what level and form (in terms of a selected percentile) of such a standard would provide any particular intended degree of protection" for public welfare. *Id.* at 46,135/1

(JA____). The Administrator proposed instead to add secondary standards "identical to the NO_2 and SO_2 primary 1-hour standards set in 2010"—even though this "[would] not add secondary standards of an ecologically relevant form to address deposition-related effects." *Id.* at 46,135/2 (JA____). Finally, the Administrator proposed to gather additional data through a "field pilot program" and additional ambient monitoring. *Id.* at 46,135/3 (JA____).

C. Comments on the Proposed Rule

Numerous organizations and individuals, including petitioners here, submitted comments criticizing the Administrator's failure to propose ecologically relevant standards, especially in light of the agency's well-supported conclusion that the existing 1971 standards are inadequate to protect public welfare. *See, e.g.*, U.S. Dept. of Interior Comments (EPA-HQ-OAR-2007-1145-0149) (JA____); National Park Service Comments (EPA-HQ-OAR-2007-1145-0183) (JA____); State of New York Comments (EPA-HQ-OAR-2007-1145-0130) (JA____); National Parks Conservation Ass'n ("NPCA") et al. Comments (EPA-HQ-OAR-2007-1145-0131) at 2-3 (JA____-__); Center for Biological Diversity Comments (EPA-HQ-OAR-2007-1145-0140) at 8-16 (JA____-__).

The National Park Service also provided detailed comments on the Policy Assessment supporting a standard even more protective than proposed by EPA staff in order to protect the sensitive lakes, streams, and forests in the nation's

national parks. Specifically, the Park Service supported an acid neutralizing capacity of 100 μeq/L "to protect against adverse impacts to overall aquatic ecosystem health," and urged EPA to protect 95 percent of streams and lakes. EPA-HQ-OAR-2007-1145-0082 at 2, 5 (JA____,____). In subsequent comments on the Proposed Rule, the National Park Service observed that the scientific basis for the Aquatic Acidification Index "is sound and well supported," disagreed with EPA's proposal not to set a new secondary standard, and specifically disagreed with the Administrator's assertion "that uncertainties prevent EPA from understanding the level of protection afforded by a specific level and form of the standard." EPA-HQ-OAR-2007-1145-0183 (JA____). The New York State Department of Environmental Conservation similarly noted that acid deposition "has been one of the significant issues facing New York and other states for the last three decades," that it "disagrees with the Administrator's decision not to follow CASAC's recommendations to propose an ecologically-relevant secondary standard for NOx and SOx at this time," and that it "believes that a new multi-pollutant ecologically based secondary standard should be set." EPA-HQ-OAR-2007-1145-0130 at 1-2 (JA____-__). New York further noted that it "believes that the EPA has ample evidence to support a new, more relevant ecologically-based standard and that the process proposed in the PA for a combined NOx and SOx standard is reasonable and scientifically defendable." *Id.* at 3 (JA____).

D. The Final Rule

EPA published its Final Rule in the Federal Register on April 3, 2012. Final Rule at 20,218 (JA____). In the Final Rule, EPA summarized the effects of nitrogen and sulfur deposition that continue to occur under existing secondary standards, including degradation of lakes and streams which "affects recreational fishing and tourism," decreased forest growth "affecting red spruce and sugar maple timber production, sugar maple syrup production, hiking, aesthetic enjoyment and tourism," nutrient enrichment "affecting fish production, swimming, boating, aesthetic enjoyment and tourism," and harm to "ecosystem services" affecting biodiversity, endangered species, fire control, and other values. Final Rule at 20,234/1 (JA____).

The Final Rule also confirmed EPA's conclusions that the existing standards do not use an ecologically relevant averaging time or appropriate atmospheric indicators, improperly consider nitrogen and sulfur impacts separately instead of concurrently, and fail to take into account variations in ecosystem sensitivity. *Id.* at 20,234/3-20,235/2 (JA____-__). In particular, the Administrator found that current standards "do not provide adequate protection for ecosystems that are sensitive to aquatic acidification and that effects to these ecosystems are ongoing from ambient deposition" of nitrogen and sulfur oxides, and further found "sufficient evidence to conclude that ambient deposition under the current

secondary standards is causing or contributing to terrestrial acidification [and] nutrient enrichment in sensitive ecosystems." *Id.* at 20,240/1 (JA____). Indeed, ***"[t]here are expansive data to indicate that the levels of deposition under the current standards are not sufficient to prevent adverse effects in ecosystems***." *Id.* at 20,240/1-2 (JA____) (emphasis added). The Administrator thus reiterated her conclusion that

> current levels of oxides of nitrogen and sulfur are sufficient to cause acidification of both aquatic and terrestrial ecosystems, nutrient enrichment of terrestrial ecosystems and contribute to nutrient enrichment effects in estuaries that could be considered adverse, and ***the current secondary standards do not provide adequate protection from such effects***.

Id. at 20,241/3-20,242/1 (JA____-__) (emphasis added).

Despite this conclusion, however, the Administrator refused to adopt a standard that would provide requisite protection against the adverse effects she conceded would persist under existing standards. Citing remaining uncertainties discussed in the Policy Assessment and the Scientific Advisory Committee review, the Administrator asserted that these uncertainties were "of such a significant nature and degree that sufficient information does not exist for the EPA to make a reasoned judgment" concerning a level of protection requisite to protect public welfare. *Id.* at 20,256/1 (JA____). She reached this conclusion notwithstanding the Policy Assessment's identification of ranges of values for the form and level of a standard that would provide specific, quantified degrees of protection, based on

the known ecosystem effects of acidic deposition, and the Scientific Advisory Committee's conclusion that the Policy Assessment provided an appropriate and reasonable basis for setting a standard. The Administrator's conclusion thus directly contradicted findings by EPA staff and the Scientific Advisory Committee —findings echoed and endorsed by the National Park Service and the State of New York—that such an approach was scientifically sound and appropriate despite remaining uncertainty.

The Administrator also withdrew her proposal to set secondary standards at the level of the 2010 one-hour SO_x and NO_x primary standards. *Id.* at 20,263/3 (JA____). Instead, the Administrator found "that it is not appropriate under Section 109(b) to set any new secondary standards at this time to address potentially adverse deposition-related effects associated with oxides of nitrogen and sulfur." *Id.* (JA____) The Administrator left the existing standards in place, but only to "address direct effects of gaseous NO_2 and SO_2 on vegetation." *Id.* at 20,263/3-20,264/1 (JA____-__). The Administrator's decision thus once again leaves fish, wildlife, and forests in sensitive ecosystems across the country without any standard whatsoever to protect against ongoing harm from deposition of nitrogen and sulfur pollution.

STANDARD OF REVIEW

At issue is whether the Administrator's action was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 42 U.S.C. § 7607(d)(9). For statutory interpretation, "[i]f the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress." *Chevron U.S.A., Inc. v. Natural Res. Defense Council*, 467 U.S. 837, 842-43 (1984). If the statute is ambiguous, under *Chevron* step two, a reasonable agency interpretation of the statute is given deference. *Id.* at 843. Unless otherwise expressly indicated, references in this brief to "unlawful" agency action address both violation of congressional intent under *Chevron* step one and unreasonable agency interpretation under step two.

Agency action is arbitrary and capricious if, for example, the agency "entirely failed to consider an important aspect of the problem," *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983), reached a conclusion unsupported by substantial evidence, *Ass'n of Data Processing Serv. Orgs., Inc. v. Bd. of Governors Fed. Reserve Sys.*, 745 F.2d 677, 683-84 (D.C. Cir. 1984), or failed to "identif[y] and explain[] the reasoned basis for its decision," *Transactive Corp. v. U.S.*, 91 F.3d 232, 236 (D.C. Cir. 1996). In setting a NAAQS, EPA "has the heaviest of obligations to explain and expose

every step of its reasoning." *Am. Lung Ass'n v. EPA*, 134 F.3d 388, 392 (D.C. Cir. 1998).

SUMMARY OF ARGUMENT

The Administrator concluded in the Final Rule that acidic deposition caused by nitrogen and sulfur compounds in air pollution is damaging sensitive ecosystems, disrupting the aquatic food chain, killing fish (including trout and salmon) and suppressing aquatic life in acidified lakes and streams, and contributing to disease and dieback in forests of red spruce and sugar maple. The Administrator also concluded that existing secondary standards for oxides of nitrogen and sulfur are inadequate to address these adverse effects on the public welfare. Yet the Administrator chose to retain those standards—thus allowing known and anticipated adverse effects to the public welfare to continue. In so doing, the Administrator violated her statutory duty to identify a requisite level of protection for the public welfare and to set ambient air quality standards for nitrogen and sulfur oxide air pollution necessary to achieve and maintain that level of protection. As decades of Clean Air Act case law make clear, scientific uncertainties do not excuse EPA from this duty; rather, the statute affirmatively requires EPA to act in the face of uncertainty.

Further, the Administrator's stated rationale—that uncertainty is so great as to prevent any reasoned judgment as to the "requisite" level of protection for

public welfare—has no support in the law, the record, or EPA's own explanations. Contrary to the Administrator's claims, the agency's own staff and scientific advisors provided an ample scientific basis for setting a standard requisite to protect against aquatic acidification. Other agencies of government—including the National Park Service and the State of New York—echoed these recommendations. Yet the Administrator unlawfully, arbitrarily, and without reasoned explanation failed to adopt a requisite standard. The Final Rule must be vacated.

STANDING

Petitioners are non-profit membership organizations dedicated to the protection of America's air, parks, forests, fish and wildlife, and the ecosystems on which they depend. As shown in the attached declarations, Petitioners have members who regularly use and enjoy rivers, lakes, forests and wildlife that have been and will continue to be damaged by acidification and nutrient enrichment caused by deposition of nitrogen and sulfur compounds in air pollution. Petitioners' members' use and enjoyment of these resources has been and will continue to be adversely affected by acidification of forest and aquatic ecosystems caused by levels of nitrogen and sulfur air pollution allowed by the decision challenged here. *See, e.g.*, Decl. of John Davis; Decl. of Mollie Matteson; Decl. of Gregory Gorman; Decl. of Elizabeth Norcross.

EPA's decision to retain and not to revise existing, inadequate secondary standards for oxides of nitrogen and sulfur will prolong exposure of rivers, lakes, forests and wildlife that Petitioners' members use and enjoy to deposition from nitrogen and sulfur air pollution associated with a variety of adverse welfare effects, including death and injury to fish, disruption of breeding and distribution patterns in waterfowl, unsightly damage to trees and forests, and other serious effects as described herein and throughout the record. As shown in the attached declarations, these effects impair and threaten to impair Petitioners' members' use and enjoyment of these resources and deprive them of welfare protections the Act guarantees.

Further support for Petitioners' standing appears in the materials cited in this brief, in the record for EPA's final action, and in the attached declarations. Accordingly, Petitioners have standing to maintain this action. *See, e.g.*, *Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.*, 528 U.S. 167, 183 (2000) (environmental group has standing where members aver that they use affected area and that their aesthetic and recreational interests are impaired by the challenged actions); *Natural Res. Defense Council v. EPA*, 489 F.3d 1364, 1370-71 (D.C. Cir. 2007) (environmental group has standing to challenge adequacy of national EPA emission standards for plywood plants where members state that their enjoyment of outdoor activities is diminished by emissions from such plants); *Nuclear Energy*

Institute, Inc. v. EPA, 373 F.3d 1251, 1266 (D.C. Cir. 2004) (environmental groups have standing to challenge EPA failure to adopt more protective standards for radionuclide releases that could impact members' water supply).

ARGUMENT

Secondary standards must be "requisite to protect the public welfare." 42 U.S.C. § 7409(b)(2). EPA agrees that adverse effects to public welfare—including the death of fish in sensitive lakes and streams, disruptions of the aquatic food chain, and harm to red spruce and sugar maple forests—are occurring under current secondary standards for nitrogen and sulfur oxides. *Supra* at 10-12; 19-21. In light of the Administrator's own conclusion that current standards are not "requisite" to protect against these effects, the agency violated a clear statutory duty in failing to set a new, "requisite" standard, and instead deciding to retain standards it concedes are not requisite. Moreover, the Administrator's claim that it lacked any reasoned basis for adopting a requisite standard was arbitrary, capricious, and unsupported by an adequate explanation. The Final Rule must be vacated and EPA must be ordered to set a secondary standard requisite to protect the public welfare.

I. EPA Violated the Clean Air Act in Failing to Specify a Level of Air Quality Requisite to Protect Public Welfare and Instead Retaining Standards it Found are Not Requisite to Provide Such Protection

A. The EPA Failed to Specify a Level of Air Quality Requisite to Protect the Public Welfare as Mandated by the Act

In the Final Rule, the Administrator concluded that current secondary standards for oxides of nitrogen and sulfur are not requisite to protect the public welfare because they "are neither appropriate nor adequate to protect against deposition-related effects." Final Rule at 20,242/1 (JA____). In particular, the extensive scientific review and analysis conducted in the Integrated Science Assessment, Risk and Exposure Assessment and Policy Assessment, and the advice of the Scientific Advisory Committee, led the Administrator to conclude that

> current levels of oxides of nitrogen and sulfur are sufficient to cause acidification of both aquatic and terrestrial ecosystems, nutrient enrichment of terrestrial ecosystems and contribute to nutrient enrichment effects in estuaries that could be considered adverse, and the **current secondary standards do not provide adequate protection from such effects**.

Id. at 20,241/3-20,242/1 (JA____-__) (emphasis added).

In her final decision, the Administrator chose to leave those secondary standards in place to protect plants from direct gaseous exposure to SO_2 and NO_2—that is, for the same reason those standards were originally adopted in 1971. *See id.* at 20,239/2, 20,263/32-20,264/1 (JA____, ____-__). However, despite the Clean Air Act's clear requirement that secondary standards be adopted at a level "requisite" to protect *all* aspects of the public welfare, the Administrator failed to

identify *any* requisite level of protection or set *any* standard to address acidification or nutrient enhancement from nitrogen and sulfur deposition. *Id.* at 20,263/3 (JA____) (declining "to set any new secondary standards at this time to address potentially adverse deposition-related effects").

The Administrator's decision violated the express terms of the statute. Section 109(b)(2) of the Act requires that "any" secondary standard "*shall specify a level of air quality* the attainment and maintenance of which in the judgment of the Administrator…*is requisite to protect the public welfare from any known or anticipated adverse effects* associated with the presence of such air pollutant in the ambient air." 42 U.S.C. §§ 7409(b)(2) (emphasis added); 7409(d)(1) (requiring any revision of the NAAQS to be "in accordance" with section 7409(b)). The Administrator has refused to "specify a level of air quality . . . requisite to protect the public welfare," 42 U.S.C. § 7409(b)(2), and has instead opted to retain standards that she concedes do *not* provide requisite protection against acknowledged harm from deposition of air pollutants. The agency's violation of the statute could not be clearer.

This Court's opinion in *Am. Farm Bureau Fed'n* is directly on point. In that case, EPA declined to identify a specific secondary standard for fine particulate matter requisite to protect the public welfare from visibility impairment. 559 F.3d at 529. EPA argued that it need not identify a level of visibility protection

requisite to protect public welfare due to uncertainty, specifically the inability of visibility studies to identify "the precise level or percentage of days of visibility impairment" at which adverse effects occurred. *Id.* The Court flatly rejected EPA's argument:

> EPA's assertion that it need not determine what level of visibility protection is requisite to protect the public welfare fails under the plain language of the statute. . . . *The EPA's failure to identify such a level when deciding where to set the level of air quality required by the revised secondary fine PM NAAQS is contrary to the statute and therefore unlawful*. Furthermore, the failure to set any target level of visibility protection deprived the EPA's decisionmaking of a reasoned basis.

Id. at 530 (emphasis added).

The same analysis holds here. The Administrator has an unambiguous statutory duty to set secondary standards for nitrogen and sulfur deposition that provide requisite protection "from *any* known or anticipated adverse effects" on the public welfare. 42 U.S.C. § 7409(b)(2) (emphasis added). The expansive term "any" embraces effects "of whatever stripe," *see Massachusetts v. EPA*, 549 U.S. 497, 528-29 & n.25 (2007), and thus necessarily includes all "known or anticipated" welfare effects related to acid deposition. Given the Administrator's conclusion that existing secondary standards are *not* in fact requisite to protect the public welfare from acidification and nutrient enhancement caused by a range of sulfur and nitrogen compounds, she plainly could not satisfy her duty under the

Clean Air Act by simply leaving in place 40-year old standards that protect only against direct exposure to gaseous NO_2 and SO_2.

Further, the Administrator did not follow *Am. Farm Bureau Fed'n's* directive that the agency first identify the requisite level of protection for the affected welfare value and then set the secondary NAAQS to achieve that level of protection. 559 F.3d at 529-30. Here, the Administrator met neither requirement. She refused to identify requisite levels of protection for aquatic life and forests from the adverse effects of nitrogen and sulfur deposition, and failed to specify a standard to achieve such levels of protection.

Accordingly, the Administrator's action contradicts the plain text of the statute, and thus fails at "Step 1" of the *Chevron* analysis. *See Am. Farm Bureau Fed'n*, 559 F.3d at 530 ("EPA's assertion that it need not determine what level . . . is requisite to protect the public welfare fails under the plain language of the statute."). In light of this clear legal error, therefore, the Court need not even reach the Administrator's claim regarding remaining scientific uncertainty. Final Rule at 20,262/3-20,263/1 (JA____-__). *See Am. Farm Bureau Fed'n*, 559 F.3d at 530 (EPA's failure to "identify any target level" for welfare protection made it unnecessary to determine whether EPA's rejection of target recommended by staff and CASAC was reasonable in light of uncertainty).

B. The Clean Air Act Requires EPA to Set Secondary Standards Despite Remaining Uncertainty.

In the Final Rule, the Administrator claimed that the Clean Air Act does not require adoption of a secondary standard where scientific uncertainty "is of such a significant nature and degree that sufficient information does not exist for the EPA to make a reasoned judgment" as to whether the standard "would satisfy the criteria of Section 109(b)." Final Rule at 20,256/1 (JA____). Yet, as decades of case law in this Court have established, the Administrator cannot evade her duty to set standards requisite to protect the public welfare by claiming that uncertainty or gaps in data make selection of the required standard difficult.

It is well settled that setting or revising a NAAQS requires EPA to act in the face of uncertainty. In *Am. Petroleum Institute v. EPA*, 684 F.3d 1342 (D.C. Cir. 2012), for example, the Court found EPA justified in revising the primary sulfur oxides NAAQS in light of statistically significant information about health effects, "even if the agency did not know the precise dose-response relationship" involved. *Id.* at 1350-51. The Court similarly upheld EPA's extrapolation "from known to unknown harm levels" in updating the NAAQS for lead, recognizing in the process "that 'by its nature the finding of risk is uncertain and the Administrator must use his [or her] discretion to meet the statutory mandate' of the particular Clean Air Act provisions involved." *Coal. of Battery Recyclers Ass'n v. EPA*, 604 F.3d 613,

621 (D.C. Cir. 2010) (quoting *Natural Res. Defense Council v. EPA*, 824 F.2d 1146, 1165 (D.C. Cir. 1987) (en banc)). And in *Am. Trucking Ass'ns, Inc. v. EPA*, 283 F.3d 355, 369-370 (D.C. Cir. 2002), this Court held that the Clean Air Act *requires* EPA to establish a NAAQS "even where, as here, the pollutant's risks cannot be quantified or precisely identified as to nature or degree." *Id.* at 369 (quotation marks omitted).

Indeed, the line of cases recognizing the necessity of establishing air quality standards despite scientific uncertainty extends, unbroken, all the way back to the early days of the Clean Air Act. *See, e.g.*, *Am. Lung Ass'n*, 134 F.3d 388; *Natural Res. Defense Council, Inc. v. Adm'r, United States EPA*, 902 F.2d 962, 968-69 (D.C. Cir. 1990), *vacated in part on other grounds*, 921 F.2d 326 (D.C. Cir. 1991); *Lead Indus. Ass'n, Inc. v. EPA*, 647 F.2d 1130, 1154-1155 (D.C. Cir. 1980); *see also Ethyl Corp. v. EPA*, 541 F.2d 1, 25, 27-28 (D.C. Cir. 1976).

Put simply, in setting a NAAQS EPA cannot wait for certainty before choosing a "requisite" standard. *Am. Trucking Ass'ns, Inc.*, 283 F.3d at 369. The statute does not limit EPA's standard-setting duty to situations where data are complete and uncertainties eliminated. *Lead Indus. Ass'n*, 647 F.2d at 1155. Rather, EPA must use its best judgment to specify, based on its review of the relevant factors and advice from the Scientific Advisory Committee, a standard that meets the statutory mandate *despite* remaining uncertainty. *Coal. of Battery*

Recyclers, 604 F.3d at 621. Thus, EPA cannot justify a complete refusal to identify a level of protection requisite to protect public welfare on the basis of residual uncertainty.

The Administrator attempts to find support for her inaction in a novel reading of a single sentence of *Massachusetts v. EPA*, 549 U.S. 497. *See* Final Rule at 20,256/1 (JA____). In that case, the Supreme Court *rejected* EPA's argument that scientific uncertainty justified the agency's refusal to determine whether greenhouse gas emissions from cars and trucks endanger public health and welfare. *See Massachusetts v. EPA*, 549 U.S. at 534. According to the Administrator, however, *Massachusetts v. EPA* stands for the proposition that the agency can evade its clear and mandatory statutory duty simply by proclaiming that scientific uncertainty is "so profound that it precludes the EPA from making a reasoned judgment." Final Rule at 20,256/1 (JA____) (quoting *Massachusetts v. EPA*, 549 U.S. at 534).

The Administrator's reliance on *Massachusetts v. EPA* is misplaced. The Clean Air Act provision at issue in that case required EPA to determine in the first instance whether emissions of pollutants from cars and trucks cause or contribute to air pollution that endangers health and welfare, as a prerequisite to setting limits on those emissions. *See Massachusetts v. EPA*, 549 U.S. at 532-34; 42 U.S.C. § 7521(a). The Clean Air Act at issue here, in contrast, affirmatively requires EPA

to "specify a level" of requisite protection from pollutants *already* identified as dangerous to health and welfare by virtue of having been listed as "criteria" pollutants. *See* 42 U.S.C. § 7409(b). These two provisions of the Act differ markedly.

Indeed, as *Am. Farm Bureau Fed'n* makes clear, the plain language of Section 109 requires EPA first to identify a requisite level of protection for the affected welfare value and then to set the secondary standard to achieve that level of protection.[4] 559 F.3d at 529-530. The Administrator failed to take either of these legally mandated steps here. Moreover, *Am. Farm Bureau Fed'n* makes clear that uncertainty is simply not a lawful excuse for such failures. *Id.* at 530 ("Because the EPA failed to identify any target level, we need not decide whether it was reasonable for the agency to reject the target recommended by the Staff Paper and the [Scientific Advisory Committee] because it was based on uncertain subjective evidence.").

II. EPA's Failure to Revise Existing Secondary Standards Here was Arbitrary and Irrational

[4] Even if *Massachusetts v. EPA* were applicable here, it would not support EPA's failure to act. As the Supreme Court held: "That EPA would prefer not to regulate greenhouse gases because of some residual uncertainty . . . is irrelevant. The statutory question is *whether sufficient information exists* to make an endangerment finding." 549 U.S. at 534 (emphasis added). As demonstrated below, there was more than sufficient information to establish a secondary air quality standard to protect against acid deposition.

Even if EPA could lawfully rely on uncertainty to evade its duties under section 109, the agency's failure to set new secondary standards here would be arbitrary and irrational. By claiming that the nature and degree of uncertainty here is such as to prevent any reasoned judgment whatsoever as to the "degree of protectiveness" provided by the standard, *see* Final Rule at 20,262/3 (JA____), the Administrator is seeking to avoid the clear and unambiguous requirements of Section 109. In analogous circumstances, this Court has held that EPA's "burden of justification . . . is especially heavy." *Alabama Power Co. v. Costle*, 636 F.2d 323, 359 (D.C. Cir. 1979) (discussing standards for evaluation of agency's argument that statutory compliance may be avoided where administratively impossible). The Administrator has failed to carry any such burden here.

Indeed, the record does not support the Administrator's excuse at all. The range of forms and levels recommended in the Policy Assessment and endorsed by the Scientific Advisory Committee provided a reasoned basis for choosing both a requisite level of protection and a standard to achieve it. Moreover, the Administrator has failed even to adequately explain, much less demonstrate, that the data gaps and modeling uncertainties mentioned in the Final Rule are so profound as to render any choice of a level and standard inherently irrational.

The Administrator cannot claim she had no reasoned basis for judgment without completely ignoring the facts in front of her. This is the very definition of arbitrary and capricious action.

A. EPA Staff and the Scientific Advisory Committee Provided the Administrator with an Ample Basis for Reasoned Judgment as to the Form and Level of a Requisite Secondary Standard

Put simply, the Administrator's excuses cannot be squared with the fact that the Scientific Advisory Committee and EPA's own staff explicitly laid out, in great detail, an ample basis for setting a standard providing requisite protection from aquatic acidification. A standard based on the considered advice of these authorities plainly would have a reasoned basis sufficient to withstand judicial review. In fact, this Court has ruled that EPA **must** follow the Scientific Advisory Committee's advice unless EPA provides a reasoned explanation for rejecting it. *Am. Trucking*, 283 F.3d at 378-79. Though the Administrator might prefer greater certainty, the record flatly contradicts her extreme claim that there is "no" reasoned basis for setting a standard providing requisite protection.

EPA staff in the Policy Assessment laid out specific, quantitative values for levels and forms of the standard that, in combination, would offer a range of minimal to substantial protection from acidic deposition. Specifically, EPA staff developed two related ranges from which the Administrator could choose in setting an Aquatic Acidification Index-based standard: a "form" that would protect

between 70 and 90 percent of an acid-sensitive ecoregion's water bodies from exceeding a specified critical load, and a national acid neutralizing capacity "level" ranging from 20 to 75 μeq/L. Proposed Rule at 46,126/2-46,127/1 (JA____-__); PA at 7-39 to 7-40 (JA____-__) (discussing basis for selecting a percentage of water bodies for protection), 7-44 to 7-53 (JA____-__) (discussing basis for selection of level, including ecological effects associated with different levels offering minimal to substantial protection).

The Staff's recommended range of acid neutralizing capacity between 20 to 75 μeq/L was based on an analysis of known ecological impacts that occur at different acid neutralizing capacity levels.[5] *See* PA at 7-47 to 7-48 (JA____-__). Choosing to protect more water bodies would lead to a more protective standard, as would choosing a higher acid neutralizing capacity level.

[5] As noted above, a higher level of acid neutralizing capacity provides greater protection. Thus, selecting an acid neutralizing capacity of 100 μeq/L would provide near-complete protection for all living things, while a level between 100 μeq/L and 50 μeq/L would allow some decline in the health of sensitive species. REA at 4-6 (JA____). A level in the range of 75 μeq/L, moreover, would provide protection against "episodic" acidification (for example, when snow melts, releasing accumulated acidic precipitation into sensitive aquatic habitats, and acid neutralizing capacity temporarily dips to lower and more harmful levels). *See* PA at 7-49, 7-53 (JA____, ____). A level below 50 μeq/L would allow death or harm to sensitive species, while a level below 20 μeq/L would allow death or harm to all living things in a water body. REA at 4-6 (JA____); *see also* PA at 7-46 to 7-48 (JA____-__).

In order to test the effectiveness of the proposed ranges, EPA staff analyzed the results for acid-sensitive regions at four alternative levels between 20 and 75 μeq/L and in five different forms aiming to protect between 70 and 90 percent of a region's water bodies. PA at 7-56 to 7-59 (JA____) (Tables 7-1a to 7-1d). Depending on the level and form chosen, between eight and 25 acid-sensitive regions would not meet the standard. PA at 7-60 to 7-61 (JA____-__). EPA staff concluded that, "[a]s expected," fewer regions would meet the more stringent standards in the range. PA at 7-60 (JA____). Moreover, the ecosystems known to be the most sensitive—such as the Appalachian and Shenandoah mountains, the lake regions of the Upper Midwest, and the high Rockies—would exceed all or most expressions of the standard, indicating that the new standard reflected observed data as to the effects of acid deposition. *See* PA at 7-60 to 7-61 (JA____-__).

The Scientific Advisory Committee wholeheartedly endorsed staff's approach. In the Scientific Advisory Committee's unanimous, consensus view, the final Policy Assessment "clearly sets out the basis for the recommended ranges for each of the four elements (indicator, averaging time, level and form) of a potential NAAQS that uses ambient air indicators to address the combined effects of oxides of nitrogen and oxides of sulfur on aquatic ecosystems, primarily streams and lakes." Russell and Samet 2011 at 2 (JA____). The Scientific Advisory

Committee also found that the Policy Assessment "describes the implications of choosing specific combinations of elements and provides numerous maps and tabular estimates of the spatial extent and degree of severity of NAAQS exceedances expected to result from possible combinations of the elements of the standard." *Id.* (JA____). Accordingly, the Scientific Advisory Committee concluded that "this final PA is appropriate for use in determining a secondary standard to help protect aquatic ecosystems from acidifying deposition of oxides of sulfur and nitrogen," congratulated EPA staff on a "commendable" job in developing the aquatic acidification index, and expressed support for the potential ranges and choices presented by staff. *Id.* (JA____); *see also id.* at 9 (JA____) (concluding that Policy Assessment "provide[d] the Administrator with a broad but reasonable range of minimally to substantially protective options" from which to choose). Even the Administrator herself recognized that the Aquatic Acidification Index standard's structure is "well-grounded in the science" underlying the relationships between ambient air pollution, deposition, and aquatic acidification. Final Rule at 20,260/3-20,261/1 (JA____-__). She further acknowledged the conclusion of the Policy Assessment and the Scientific Advisory Committee that "there is a strong scientific basis" for developing a standard based on the Aquatic Acidification Index, and that the equation "generally performs well." *Id.* at 20,261/1 (JA____).

State and Federal agencies lent further support to staff's approach and urged EPA to choose specific standards they thought requisite to protect against aquatic acidification. For example, New York opined "that [an acid neutralizing capacity] value of 50 μeq/L . . . would be appropriate." EPA-HQ-OAR-2007-1145-0130 at 2 (JA____). The National Park Service, noting that less stringent standards would leave the most sensitive areas without adequate standards, urged EPA to go beyond the ranges identified in the Policy Assessment by protecting 95% of water bodies at an acid neutralizing capacity level of 100 μeq/L, because this level "is most appropriate for protecting and maintaining biodiversity in aquatic ecosystems." EPA-HQ-OAR-2007-1145-0082 at 5 (JA____).

Neither staff, nor the Scientific Advisory Committee, nor the National Park Service expressed any concern that uncertainty precluded setting a standard here. EPA staff and the Scientific Advisory Committee acknowledged some remaining uncertainties in the record but recommended action nonetheless. Russell and Samet 2011 at 11-12 (JA____-__). As the Department of Interior pointed out, nothing in the Scientific Advisory Committee's consensus comments even suggested that uncertainties were so great as to preclude setting any standard at all. EPA-HQ-OAR-2007-1145-0149 at 2 (JA____) ("CASAC recommended that further work be done to resolve uncertainties associated with ecosystem and atmospheric processes, but did not suggest that EPA defer setting an ecosystem-

based standard until that work was completed. We encourage EPA to proceed expeditiously to set ecologically based secondary standards."). New York and the National Park Service similarly urged the EPA to set a new secondary standard despite remaining uncertainty. EPA-HQ-OAR-2007-1145-0130 at 2 (JA____) ("[T]he Department believes that a new multi-pollutant ecologically based secondary standard should be set, despite the uncertainties listed in the ISA, REA and PA"); EPA-HQ-OAR-2007-1145-0183 at 1 (JA____) ("We disagree with EPA's assertion that uncertainties prevent EPA from understanding the level of protection afforded by a specific level and form of the standard.")

In light of this extensive record supporting selection of a form and level of a secondary standard requisite to protect against aquatic acidification, it is the Administrator's failure to set a standard that reflects a profound lack of reasoned judgment. EPA staff developed a sound and robust basis for selection of a standard to protect against aquatic acidification. The Scientific Advisory Committee reviewed staff's work and found it not only "reasonable," but "commendable." State and federal agencies urged EPA to adopt a requisite standard based on staff's efforts. Yet the Administrator refused to do so—claiming that in all of this work, built on decades of careful research, she could find no "reasoned basis" for exercising her judgment.

Further, any uncertainties in the Aquatic Acidification Index standard cannot possibly provide a reasoned basis for the Administrator's decision to retain the existing, outdated secondary standards that she herself concluded will allow ongoing harm to fish, forests, and wildlife in sensitive areas. This is precisely why the Clean Air Act requires action in the face of uncertainty—to avoid the certain harm that will occur from a failure to act. The Administrator's failure to act here lacks any support in the record, and is thus irrational and arbitrary on its face.

B. EPA Failed to Adequately Explain its Conclusion that Uncertainty was So Profound as to Preclude Adoption of a Secondary Standard

In addition to each of the violations discussed above, EPA violated its clear obligation to explain its conclusion that uncertainty prevented any reasoned selection of a new secondary standard—especially where that conclusion ran counter to the advice of its own staff and the Scientific Advisory Committee. In the Clean Air Act context, where

> Congress has delegated to an administrative agency the critical task of assessing the public health and the power to make decisions of national import in which individuals' lives and welfare hang in the balance, that agency has the heaviest of obligations to explain and expose every step of its reasoning. For these compelling reasons, we have always required the Administrator to "cogently explain why [she] has exercised [her] discretion in a given manner."

Am. Lung Ass'n, 134 F.3d at 392 (quoting *State Farm*, 463 U.S. at 48) (alteration in original). EPA also has a specific statutory duty to explain its rejection of the

Scientific Advisory Committee's recommendation. *Am. Farm Bureau Fed'n*, 559 F.3d at 521 (citing 42 U.S.C. § 7607(d)(3)).

Having conceded the strong scientific basis for the Aquatic Acidification Index standard, Final Rule, 20,260/3-20,261/1 (JA____-__), the Administrator nonetheless tried to claim that remaining uncertainty prevented her from establishing a new standard in any reasoned fashion. Specifically, she claimed "several important limitations in the available data upon which elements of the AAI are based," including both air and water quality data. *Id.* at 20,254/2 (JA____); *see also id.* at 20,249/1-20,250/2 (JA____-__). She further claimed that "uncertainties related to the use of ecological and atmospheric models are difficult to evaluate" due to this lack of data, *id.* at 20,254/3 (JA____), and that the "application" of these models to the Aquatic Acidification Index "introduces uncertainties" because "limited observational data" make evaluation of "this specific application" of the models difficult. *Id.* at 20,250/1 (JA____). Taken together, the Administrator asserted, these various uncertainties "prevent a reasoned understanding of the degree of protectiveness that would be afforded to various ecoregions across the country" by the Staff's proposed standard. *Id.* at 20,255/2, 20,262/3 (JA____, ____).

The Administrator failed, however, to explain exactly why these acknowledged uncertainties were so profound as to prevent any reasoned judgment

whatsoever. Rather, she simply recited the uncertainties discussed in the Policy Assessment and Scientific Advisory Committee review—neither of which recommended against setting a standard—and then asserted in conclusory fashion that these uncertainties deprived her of any reasoned basis for setting a standard. In so doing, the Administrator failed to rationally support or adequately explain her claimed inability to make a judgment. *See State Farm*, 463 U.S. at 51-53 (1983)(agency claim that it "could not reliably predict" benefits of automatic seat belts was not a reasoned basis for rescinding requirement for such seat belts, where claim was not supported by direct evidence and not adequately explained).

Data gaps, for example, are common to modeling, and do not defeat reliance on a model unless they are so extensive as to eliminate any rational connection whatsoever between the model and the known behavior of the pollutants modeled. *See Chemical Mfrs. Ass'n v. EPA*, 28 F.3d 1259, 1265 (D.C. Cir. 1994); *see also Appalachian Power Co. v. EPA*, 135 F.3d 791, 805 (D.C. Cir. 1998) ("To invalidate a model simply because it does not perfectly fit every data point would be to defeat the purpose of using a model.") (quotation marks omitted). The Administrator cited several areas where improved water quality and atmospheric data could lead to better model validation, *see* Final Rule at 20,520/1-3 (JA____), but nowhere did she demonstrate that these data gaps would render use of these models in calculating the Aquatic Acidification Index factors completely irrational.

This is insufficient to defeat reliance on the models. *See Appalachian Power*, 135 F.3d at 805-06 ("Appalachian Power does not suggest in its argument before us that the uncertainty surrounding the data points is statistically unacceptable, only that it exists. We would not deem that sufficient to label EPA's model arbitrary and capricious.").

The agency's explanation for refusing to follow the advice of staff and the Scientific Advisory Committee is similarly lacking. First and foremost, the Final Rule misstates the Scientific Advisory Committee's conclusions. The Administrator claimed that "CASAC did not indicate that there was such a degree of scientific support for quantifying the terms of the AAI equation and setting a specific AAI-based standard at this time that it would be inappropriate to consider not setting an AAI-based standard in this review in light of the uncertainties that CASAC itself recognized." Final Rule at 20,261/3 (JA____). This does not accurately convey the Scientific Advisory Committee's consensus view. The Scientific Advisory Committee did not state that the Administrator could fulfill her statutory duty by simply "considering" and rejecting a standard. Rather, the Scientific Advisory Committee very clearly stated that the information in the Policy Assessment was "appropriate *for use in determining* a secondary standard," that EPA staff had "done a commendable job" in developing the Aquatic Acidification Index, and that it supported "the potential choices/ranges presented

by EPA staff on the indicators, form, averaging time, and level that should be considered for a revised secondary NOx-SOx NAAQS." Russell and Samet 2011 at 2 (JA____) (emphasis added); *see id.* at 9 (JA____) ("These combined recommendations provide the Administrator with a broad but reasonable range of minimally to substantially protective options for the standard.") All of these comments show that the Scientific Advisory Committee believed that the information was sufficient to support *adoption* of a standard, not mere consideration and rejection of a standard.

The Administrator's attempt to convert the Scientific Advisory Committee's evaluation of remaining uncertainty into a rationale for declining to set a standard similarly fails. She notes that the Scientific Advisory Committee itself "acknowledged that important uncertainties remain that would benefit from further study and data collection efforts, which might lead to potential revisions or modifications" to an Aquatic Acidification Index-based standard. Final Rule at 20,261/3 (JA____). Yet the Scientific Advisory Committee recommended further research and analysis in the context of "future" EPA work, not as a necessary step before any Aquatic Acidification Index-based standard could be adopted. *See* Russell and Samet 2011 at 11-12 (JA____-__). Again, nothing in the Scientific Advisory Committee's evaluation suggested that these uncertainties were so profound as to prevent the Administrator from choosing a standard. On the

contrary, the Scientific Advisory Committee explicitly found "reasonable" the range of choices offered in the Policy Assessment.

Once again, *Am. Farm Bureau Fed'n* is instructive. There, the Scientific Advisory Committee recommended an annual primary (health) standard for fine particulate matter more protective than 15 $\mu g/m^3$, based on short-term exposure studies showing adverse health effects in places with annual concentrations below that level. 559 F.3d at 520-21. EPA, while not disagreeing with the factual basis for the Scientific Advisory Committee's recommendation, nonetheless chose to retain the 15 $\mu g/m^3$ standard, based on the belief that it was more appropriate to consider the short-term exposure studies referenced in the Scientific Advisory Committee report only in the context of a separate, shorter-term (24-hour) standard. *Id.* at 521. The Court held EPA "failed adequately to explain its reason for not accepting the CASAC's recommendations." *Id.*

EPA took a similarly deficient approach here in expressing agreement with the Scientific Advisory Committee's overall discussion of the Aquatic Acidification Index-based standard's scientific robustness, yet refusing to set a revised Aquatic Acidification Index-based standard. Nowhere does EPA adequately explain why the very same uncertainty discussed by the Scientific Advisory Committee in the context of finding the Policy Assessment's range of recommended standards "reasonable" is nonetheless so great as to foreclose any

"reasoned" selection of a standard from within that range. Nowhere does EPA explain how its mere "consideration" and rejection of the standard has any basis in the Scientific Advisory Committee's and Policy Assessment's conclusions that the record supported establishment of the standard. EPA completely failed to explain the "link between this conclusion and the factual record." *Am. Lung Ass'n*, 134 F.3d at 392. At the very least, therefore, the Final Rule must be vacated and remanded for further explanation.

CONCLUSION AND RELIEF REQUESTED

For the reasons stated above Petitioners respectfully request that this Court vacate the Final Rule and remand this matter to EPA to establish a new standard adequate to protect the public welfare, including protection against aquatic acidification. Petitioners further request that this Court establish a schedule for EPA action on remand, as EPA's long delays in this rulemaking have previously required a deadline suit to compel action.[6] See, e.g., *Envtl. Def. Fund v. EPA*, 852 F.2d 1316, 1331 (D.C. Cir. 1988) ("EPA's history of delay and missed deadlines with respect to its statutory obligations . . . indicates that a court-imposed schedule is necessary here"). In this rulemaking, fourteen months elapsed between the Policy Assessment of February 2011 and the Final Rule of April 2012. Given

[6] EPA-HQ-OAR-2007-1145-0173 (JA____).

EPA's consideration of this subject matter to date, and EPA's prior history of delay, an equivalent time period will be more than sufficient for EPA to issue a new final rule. Therefore, Petitioners request that this Court order EPA to issue a final rule complying with the terms of its decision within fourteen months of such a decision.

DATED: November 30, 2012

Respectfully submitted,

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CERTIFICATE REGARDING WORD LIMITATION

Counsel hereby certifies that, in accordance with Federal Rule of Appellate Procedure 32(a)(7)(C), the foregoing Final Opening Brief of Petitioners contains 10,912 words, as counted by counsel's word processing system.

DATED: November 30, 2012

/s/Charles McPhedran
Charles McPhedran

CERTIFICATE OF SERVICE

I hereby certify that on this 30th day of November, 2012, I have served the foregoing **Preliminary Opening Brief of Petitioners** on all registered counsel through the Court's electronic filing system (ECF).

/s/Charles McPhedran
Charles McPhedran

STATUTES AND REGULATIONS

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42 U.S.C.A. § 7403(j)

§ 7403. Research, investigation, training, and other activities

Currentness

(j) Continuation of national acid precipitation assessment program

(1) The acid precipitation research program set forth in the Acid Precipitation Act of 1980 [42 U.S.C.A. § 8901 et seq.] shall be continued with modifications pursuant to this subsection.

(2) The Acid Precipitation Task Force shall consist of the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of the Interior, the Secretary of Agriculture, the Administrator of the National Oceanic and Atmospheric Administration, the Administrator of the National Aeronautics and Space Administration, and such additional members as the President may select. The President shall appoint a chairman for the Task Force from among its members within 30 days after November 15, 1990.

(3) The responsibilities of the Task Force shall include the following:

(A) Review of the status of research activities conducted to date under the comprehensive research plan developed pursuant to the Acid Precipitation Act of 1980 [42 U.S.C.A. § 8901 et seq.], and development of a revised plan that identifies significant research gaps and establishes a coordinated program to address current and future research priorities. A draft of the revised plan shall be submitted by the Task Force to Congress within 6 months after November 15, 1990. The plan shall be available for public comment during the 60 day period after its submission, and a final plan shall be submitted by the President to the Congress within 45 days after the close of the comment period.

(B) Coordination with participating Federal agencies, augmenting the agencies' research and monitoring efforts and sponsoring additional research in the scientific community as necessary to ensure the availability and quality of data and methodologies needed to evaluate the status and effectiveness of the acid deposition control program. Such research and monitoring efforts shall include, but not be limited to--

(i) continuous monitoring of emissions of precursors of acid deposition;

(ii) maintenance, upgrading, and application of models, such as the Regional Acid Deposition Model, that describe the interactions of emissions with the atmosphere, and models that describe the response of ecosystems to acid deposition; and

(iii) analysis of the costs, benefits, and effectiveness of the acid deposition control program.

(C) Publication and maintenance of a National Acid Lakes Registry that tracks the condition and change over time of a statistically representative sample of lakes in regions that are known to be sensitive to surface water acidification.

(D) Submission every two years of a unified budget recommendation to the President for activities of the Federal Government in connection with the research program described in this subsection.

(E) Beginning in 1992 and biennially thereafter, submission of a report to Congress describing the results of its investigations and analyses. The reporting of technical information about acid deposition shall be provided in a format that facilitates communication with policymakers and the public. The report shall include--

(i) actual and projected emissions and acid deposition trends;

(ii) average ambient concentrations of acid deposition percursors[1] and their transformation products;

(iii) the status of ecosystems (including forests and surface waters), materials, and visibility affected by acid deposition;

(iv) the causes and effects of such deposition, including changes in surface water quality and forest and soil conditions;

(v) the occurrence and effects of episodic acidification, particularly with respect to high elevation watersheds; and

(vi) the confidence level associated with each conclusion to aid policymakers in use of the information.

(F) Beginning in 1996, and every 4 years thereafter, the report under subparagraph (E) shall include--

(i) the reduction in deposition rates that must be achieved in order to prevent adverse ecological effects; and

(ii) the costs and benefits of the acid deposition control program created by subchapter IV-A of this chapter.

Credits

(July 14, 1955, c. 360, Title I, § 103, formerly § 3, as added Dec. 17, 1963, Pub.L. 88-206, § 1, 77 Stat. 394, and renumbered § 103 and amended Oct. 20, 1965, Pub.L. 89-272, Title I, §§ 101(3), 103, 79 Stat. 992, 996; Nov. 21, 1967, Pub.L. 90-148, § 2, 81 Stat. 486; Dec. 31, 1970, Pub.L. 91-604, §§ 2(a), 4(b)(2), 15(a)(2), (c)(2), 84 Stat. 1676, 1689, 1710, 1713; Aug. 7, 1977, Pub.L. 95-95, Title I, § 101(a), (b), 91 Stat. 686, 687; Nov. 15, 1990, Pub.L. 101-549, Title IX, § 901(a) to (c), 104 Stat. 2700 to 2703.)

Footnotes

[1] So in original. Probably should be “precursors”.

42 U.S.C.A. § 7403, 42 USCA § 7403

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Part A. Air Quality and Emissions Limitations (Refs & Annos)

42 U.S.C.A. § 7408

§ 7408. Air quality criteria and control techniques

Effective: November 10, 1998

Currentness

(a) Air pollutant list; publication and revision by Administrator; issuance of air quality criteria for air pollutants

(1) For the purpose of establishing national primary and secondary ambient air quality standards, the Administrator shall within 30 days after December 31, 1970, publish, and shall from time to time thereafter revise, a list which includes each air pollutant--

(A) emissions of which, in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare;

(B) the presence of which in the ambient air results from numerous or diverse mobile or stationary sources; and

(C) for which air quality criteria had not been issued before December 31, 1970, but for which he plans to issue air quality criteria under this section.

(2) The Administrator shall issue air quality criteria for an air pollutant within 12 months after he has included such pollutant in a list under paragraph (1). Air quality criteria for an air pollutant shall accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollutant in the ambient air, in varying quantities. The criteria for an air pollutant, to the extent practicable, shall include information on--

(A) those variable factors (including atmospheric conditions) which of themselves or in combination with other factors may alter the effects on public health or welfare of such air pollutant;

(B) the types of air pollutants which, when present in the atmosphere, may interact with such pollutant to produce an adverse effect on public health or welfare; and

(C) any known or anticipated adverse effects on welfare.

(b) Issuance by Administrator of information on air pollution control techniques; standing consulting committees for air

pollutants; establishment; membership

(1) Simultaneously with the issuance of criteria under subsection (a) of this section, the Administrator shall, after consultation with appropriate advisory committees and Federal departments and agencies, issue to the States and appropriate air pollution control agencies information on air pollution control techniques, which information shall include data relating to the cost of installation and operation, energy requirements, emission reduction benefits, and environmental impact of the emission control technology. Such information shall include such data as are available on available technology and alternative methods of prevention and control of air pollution. Such information shall also include data on alternative fuels, processes, and operating methods which will result in elimination or significant reduction of emissions.

(2) In order to assist in the development of information on pollution control techniques, the Administrator may establish a standing consulting committee for each air pollutant included in a list published pursuant to subsection (a)(1) of this section, which shall be comprised of technically qualified individuals representative of State and local governments, industry, and the academic community. Each such committee shall submit, as appropriate, to the Administrator information related to that required by paragraph (1).

(c) Review, modification, and reissuance of criteria or information

The Administrator shall from time to time review, and, as appropriate, modify, and reissue any criteria or information on control techniques issued pursuant to this section. Not later than six months after August 7, 1977, the Administrator shall revise and reissue criteria relating to concentrations of NO_2 over such period (not more than three hours) as he deems appropriate. Such criteria shall include a discussion of nitric and nitrous acids, nitrites, nitrates, nitrosamines, and other carcinogenic and potentially carcinogenic derivatives of oxides of nitrogen.

(d) Publication in Federal Register; availability of copies for general public

The issuance of air quality criteria and information on air pollution control techniques shall be announced in the Federal Register and copies shall be made available to the general public.

(e) Transportation planning and guidelines

The Administrator shall, after consultation with the Secretary of Transportation, and after providing public notice and opportunity for comment, and with State and local officials, within nine months after November 15, 1990, and periodically thereafter as necessary to maintain a continuous transportation-air quality planning process, update the June 1978 Transportation-Air Quality Planning Guidelines and publish guidance on the development and implementation of transportation and other measures necessary to demonstrate and maintain attainment of national ambient air quality standards. Such guidelines shall include information on--

(1) methods to identify and evaluate alternative planning and control activities;

(2) methods of reviewing plans on a regular basis as conditions change or new information is presented;

(3) identification of funds and other resources necessary to implement the plan, including interagency agreements on providing such funds and resources;

(4) methods to assure participation by the public in all phases of the planning process; and

(5) such other methods as the Administrator determines necessary to carry out a continuous planning process.

(f) Information regarding processes, procedures, and methods to reduce or control pollutants in transportation; reduction of mobile source related pollutants; reduction of impact on public health

(1) The Administrator shall publish and make available to appropriate Federal, State, and local environmental and transportation agencies not later than one year after November 15, 1990, and from time to time thereafter--

(A) information prepared, as appropriate, in consultation with the Secretary of Transportation, and after providing public notice and opportunity for comment, regarding the formulation and emission reduction potential of transportation control measures related to criteria pollutants and their precursors, including, but not limited to--

(i) programs for improved public transit;

(ii) restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high occupancy vehicles;

(iii) employer-based transportation management plans, including incentives;

(iv) trip-reduction ordinances;

(v) traffic flow improvement programs that achieve emission reductions;

(vi) fringe and transportation corridor parking facilities serving multiple occupancy vehicle programs or transit service;

(vii) programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use;

(viii) programs for the provision of all forms of high-occupancy, shared-ride services;

(ix) programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place;

(x) programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas;

(xi) programs to control extended idling of vehicles;

(xii) programs to reduce motor vehicle emissions, consistent with subchapter II of this chapter, which are caused by extreme cold start conditions;

(xiii) employer-sponsored programs to permit flexible work schedules;

(xiv) programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity;

(xv) programs for new construction and major reconstructions of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation when economically feasible and in the public interest. For purposes of this clause, the Administrator shall also consult with the Secretary of the Interior; and

(xvi) program to encourage the voluntary removal from use and the marketplace of pre-1980 model year light duty vehicles and pre-1980 model light duty trucks.

(B) information on additional methods or strategies that will contribute to the reduction of mobile source related pollutants during periods in which any primary ambient air quality standard will be exceeded and during episodes for which an air pollution alert, warning, or emergency has been declared;

(C) information on other measures which may be employed to reduce the impact on public health or protect the health of sensitive or susceptible individuals or groups; and

(D) information on the extent to which any process, procedure, or method to reduce or control such air pollutant may cause an increase in the emissions or formation of any other pollutant.

(2) In publishing such information the Administrator shall also include an assessment of--

(A) the relative effectiveness of such processes, procedures, and methods;

(B) the potential effect of such processes, procedures, and methods on transportation systems and the provision of transportation services; and

(C) the environmental, energy, and economic impact of such processes, procedures, and methods.

(g) Assessment of risks to ecosystems

The Administrator may assess the risks to ecosystems from exposure to criteria air pollutants (as identified by the Administrator in the Administrator's sole discretion).

(h) RACT/BACT/LAER clearinghouse

The Administrator shall make information regarding emission control technology available to the States and to the general public through a central database. Such information shall include all control technology information received pursuant to State plan provisions requiring permits for sources, including operating permits for existing sources.

Credits

(July 14, 1955, c. 360, Title I, § 108, as added Dec. 31, 1970, Pub.L. 91-604, § 4(a), 84 Stat. 1678; amended Aug. 7, 1977, Pub.L. 95-95, Title I, §§ 104, 105, Title IV, § 401(a), 91 Stat. 689, 790; Nov. 15, 1990, Pub.L. 101-549, Title I, §§ 108(a) to (c), (o), 111, 104 Stat. 2465, 2466, 2469, 2470; Nov. 10, 1998, Pub.L. 105-362, Title XV, § 1501(b), 112 Stat. 3294.)

Notes of Decisions (13)

42 U.S.C.A. § 7408, 42 USCA § 7408

Current through P.L. 112-195 (excluding P.L. 112-140 and 112-141) approved 10-5-12 **End of Document**

United States Code Annotated
Title 42. The Public Health and Welfare
Chapter 85. Air Pollution Prevention and Control (Refs & Annos)
Subchapter I. Programs and Activities
Part A. Air Quality and Emissions Limitations (Refs & Annos)

42 U.S.C.A. § 7409

§ 7409. National primary and secondary ambient air quality standards

Currentness

(a) Promulgation

(1) The Administrator--

(A) within 30 days after December 31, 1970, shall publish proposed regulations prescribing a national primary ambient air quality standard and a national secondary ambient air quality standard for each air pollutant for which air quality criteria have been issued prior to such date; and

(B) after a reasonable time for interested persons to submit written comments thereon (but no later than 90 days after the initial publication of such proposed standards) shall by regulation promulgate such proposed national primary and secondary ambient air quality standards with such modifications as he deems appropriate.

(2) With respect to any air pollutant for which air quality criteria are issued after December 31, 1970, the Administrator shall publish, simultaneously with the issuance of such criteria and information, proposed national primary and secondary ambient air quality standards for any such pollutant. The procedure provided for in paragraph (1)(B) of this subsection shall apply to the promulgation of such standards.

(b) Protection of public health and welfare

(1) National primary ambient air quality standards, prescribed under subsection (a) of this section shall be ambient air quality standards the attainment and maintenance of which in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health. Such primary standards may be revised in the same manner as promulgated.

(2) Any national secondary ambient air quality standard prescribed under subsection (a) of this section shall specify a level of air quality the attainment and maintenance of which in the judgment of the Administrator, based on such criteria, is requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air. Such secondary standards may be revised in the same manner as promulgated.

(c) National primary ambient air quality standard for nitrogen dioxide

The Administrator shall, not later than one year after August 7, 1977, promulgate a national primary ambient air quality standard for NO_2 concentrations over a period of not more than 3 hours unless, based on the criteria issued under section 7408(c) of this title, he finds that there is no significant evidence that such a standard for such a period is requisite to protect public health.

(d) Review and revision of criteria and standards; independent scientific review committee; appointment; advisory functions

(1) Not later than December 31, 1980, and at five-year intervals thereafter, the Administrator shall complete a thorough review of the criteria published under section 7408 of this title and the national ambient air quality standards promulgated under this section and shall make such revisions in such criteria and standards and promulgate such new standards as may be appropriate in accordance with section 7408 of this title and subsection (b) of this section. The Administrator may review and revise criteria or promulgate new standards earlier or more frequently than required under this paragraph.

(2)(A) The Administrator shall appoint an independent scientific review committee composed of seven members including at least one member of the National Academy of Sciences, one physician, and one person representing State air pollution control agencies.

(B) Not later than January 1, 1980, and at five-year intervals thereafter, the committee referred to in subparagraph (A) shall complete a review of the criteria published under section 7408 of this title and the national primary and secondary ambient air quality standards promulgated under this section and shall recommend to the Administrator any new national ambient air quality standards and revisions of existing criteria and standards as may be appropriate under section 7408 of this title and subsection (b) of this section.

(C) Such committee shall also (i) advise the Administrator of areas in which additional knowledge is required to appraise the adequacy and basis of existing, new, or revised national ambient air quality standards, (ii) describe the research efforts necessary to provide the required information, (iii) advise the Administrator on the relative contribution to air pollution concentrations of natural as well as anthropogenic activity, and (iv) advise the Administrator of any adverse public health, welfare, social, economic, or energy effects which may result from various strategies for attainment and maintenance of such national ambient air quality standards.

Credits

(July 14, 1955, c. 360, Title I, § 109, as added Dec. 31, 1970, Pub.L. 91-604, § 4(a), 84 Stat. 1679; amended Aug. 7, 1977, Pub.L. 95-95, Title I, § 106, 91 Stat. 691.)

Notes of Decisions (65)

42 U.S.C.A. § 7409, 42 USCA § 7409

Current through P.L. 112-195 (excluding P.L. 112-140 and 112-141) approved 10-5-12**End of Document**

United States Code Annotated
Title 42. The Public Health and Welfare
Chapter 85. Air Pollution Prevention and Control (Refs & Annos)
Subchapter II. Emission Standards for Moving Sources
Part A. Motor Vehicle Emission and Fuel Standards (Refs & Annos)

42 U.S.C.A. § 7521(a)

§ 7521. Emission standards for new motor vehicles or new motor vehicle engines

Currentness

(a) Authority of Administrator to prescribe by regulation

Except as otherwise provided in subsection (b) of this section--

(1) The Administrator shall by regulation prescribe (and from time to time revise) in accordance with the provisions of this section, standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare. Such standards shall be applicable to such vehicles and engines for their useful life (as determined under subsection (d) of this section, relating to useful life of vehicles for purposes of certification), whether such vehicles and engines are designed as complete systems or incorporate devices to prevent or control such pollution.

(2) Any regulation prescribed under paragraph (1) of this subsection (and any revision thereof) shall take effect after such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period.

(3)(A) In general

(i) Unless the standard is changed as provided in subparagraph (B), regulations under paragraph (1) of this subsection applicable to emissions of hydrocarbons, carbon monoxide, oxides of nitrogen, and particulate matter from classes or categories of heavy-duty vehicles or engines manufactured during or after model year 1983 shall contain standards which reflect the greatest degree of emission reduction achievable through the application of technology which the Administrator determines will be available for the model year to which such standards apply, giving appropriate consideration to cost, energy, and safety factors associated with the application of such technology.

(ii) In establishing classes or categories of vehicles or engines for purposes of regulations under this paragraph, the Administrator may base such classes or categories on gross vehicle weight, horsepower, type of fuel used, or other appropriate factors.

(B) Revised standards for heavy duty trucks

(i) On the basis of information available to the Administrator concerning the effects of air pollutants emitted from heavy-duty vehicles or engines and from other sources of mobile source related pollutants on the public health and welfare, and taking costs into account, the Administrator may promulgate regulations under paragraph (1) of this subsection

revising any standard promulgated under, or before the date of, the enactment of the Clean Air Act Amendments of 1990 (or previously revised under this subparagraph) and applicable to classes or categories of heavy-duty vehicles or engines.

(ii) Effective for the model year 1998 and thereafter, the regulations under paragraph (1) of this subsection applicable to emissions of oxides of nitrogen (NO_x) from gasoline and diesel-fueled heavy duty trucks shall contain standards which provide that such emissions may not exceed 4.0 grams per brake horsepower hour (gbh).

(C) Lead time and stability

Any standard promulgated or revised under this paragraph and applicable to classes or categories of heavy-duty vehicles or engines shall apply for a period of no less than 3 model years beginning no earlier than the model year commencing 4 years after such revised standard is promulgated.

(D) Rebuilding practices

The Administrator shall study the practice of rebuilding heavy-duty engines and the impact rebuilding has on engine emissions. On the basis of that study and other information available to the Administrator, the Administrator may prescribe requirements to control rebuilding practices, including standards applicable to emissions from any rebuilt heavy-duty engines (whether or not the engine is past its statutory useful life), which in the Administrator's judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare taking costs into account. Any regulation shall take effect after a period the Administrator finds necessary to permit the development and application of the requisite control measures, giving appropriate consideration to the cost of compliance within the period and energy and safety factors.

(E) Motorcycles

For purposes of this paragraph, motorcycles and motorcycle engines shall be treated in the same manner as heavy-duty vehicles and engines (except as otherwise permitted under section 7525(f)(1) of this title) unless the Administrator promulgates a rule reclassifying motorcycles as light-duty vehicles within the meaning of this section or unless the Administrator promulgates regulations under subsection (a) of this section applying standards applicable to the emission of air pollutants from motorcycles as a separate class or category. In any case in which such standards are promulgated for such emissions from motorcycles as a separate class or category, the Administrator, in promulgating such standards, shall consider the need to achieve equivalency of emission reductions between motorcycles and other motor vehicles to the maximum extent practicable.

(4)(A) Effective with respect to vehicles and engines manufactured after model year 1978, no emission control device, system, or element of design shall be used in a new motor vehicle or new motor vehicle engine for purposes of complying with requirements prescribed under this subchapter if such device, system, or element of design will cause or contribute to an unreasonable risk to public health, welfare, or safety in its operation or function.

(B) In determining whether an unreasonable risk exists under subparagraph (A), the Administrator shall consider, among other factors, (i) whether and to what extent the use of any device, system, or element of design causes, increases, reduces, or eliminates emissions of any unregulated pollutants; (ii) available methods for reducing or eliminating any risk to public health, welfare, or safety which may be associated with the use of such device, system, or element of design, and (iii) the availability of other devices, systems, or elements of design which may be used to conform to requirements prescribed under this subchapter without causing or contributing to such unreasonable risk. The Administrator shall include in the consideration required by this paragraph all relevant information developed pursuant to section 7548 of this title.

(5)(A) If the Administrator promulgates final regulations which define the degree of control required and the test procedures by which compliance could be determined for gasoline vapor recovery of uncontrolled emissions from the fueling of motor vehicles, the Administrator shall, after consultation with the Secretary of Transportation with respect to motor vehicle safety, prescribe, by regulation, fill pipe standards for new motor vehicles in order to insure effective connection between such fill pipe and any vapor recovery system which the Administrator determines may be required to comply with such vapor recovery regulations. In promulgating such standards the Administrator shall take into consideration limits on fill pipe diameter, minimum design criteria for nozzle retainer lips, limits on the location of the unleaded fuel restrictors, a minimum access zone surrounding a fill pipe, a minimum pipe or nozzle insertion angle, and such other factors as he deems pertinent.

(B) Regulations prescribing standards under subparagraph (A) shall not become effective until the introduction of the model year for which it would be feasible to implement such standards, taking into consideration the restraints of an adequate leadtime for design and production.

(C) Nothing in subparagraph (A) shall (i) prevent the Administrator from specifying different nozzle and fill neck sizes for gasoline with additives and gasoline without additives or (ii) permit the Administrator to require a specific location, configuration, modeling, or styling of the motor vehicle body with respect to the fuel tank fill neck or fill nozzle clearance envelope.

(D) For the purpose of this paragraph, the term "fill pipe" shall include the fuel tank fill pipe, fill neck, fill inlet, and closure.

(6) Onboard vapor recovery

Within 1 year after November 15, 1990, the Administrator shall, after consultation with the Secretary of Transportation regarding the safety of vehicle-based ("onboard") systems for the control of vehicle refueling emissions, promulgate standards under this section requiring that new light-duty vehicles manufactured beginning in the fourth model year after the model year in which the standards are promulgated and thereafter shall be equipped with such systems. The standards required under this paragraph shall apply to a percentage of each manufacturer's fleet of new light-duty vehicles beginning with the fourth model year after the model year in which the standards are promulgated. The percentage shall be as specified in the following table:

IMPLEMENTATION SCHEDULE FOR ONBOARD VAPOR RECOVERY REQUIREMENTS

Model year commencing after standards promulgated	Percentage*
Fourth	40
Fifth	80
After Fifth	100

*Percentages in the table refer to a percentage of the manufacturer's sales volume.

The standards shall require that such systems provide a minimum evaporative emission capture efficiency of 95 percent. The

requirements of section 7511a(b)(3) of this title (relating to stage II gasoline vapor recovery) for areas classified under section 7511 of this title as moderate for ozone shall not apply after promulgation of such standards and the Administrator may, by rule, revise or waive the application of the requirements of such section 7511a(b)(3) of this title for areas classified under section 7511 of this title as Serious, Severe, or Extreme for ozone, as appropriate, after such time as the Administrator determines that onboard emissions control systems required under this paragraph are in widespread use throughout the motor vehicle fleet.

Credits

(July 14, 1955, c. 360, Title II, § 202, as added Oct. 20, 1965, Pub.L. 89-272, Title I, § 101(8), 79 Stat. 992; amended Nov. 21, 1967, Pub.L. 90-148, § 2, 81 Stat. 499; Dec. 31, 1970, Pub.L. 91-604, § 6(a), 84 Stat. 1690; June 22, 1974, Pub.L. 93-319, § 5, 88 Stat. 258; Aug. 7, 1977, Pub.L. 95-95, Title II, §§ 201, 202(b), 213(b), 214(a), 215 to 217, 224(a), (b), (g), Title IV, § 401(d), 91 Stat. 751 to 753, 758 to 761, 765, 767, 769, 791; Nov. 16, 1977, Pub.L. 95-190, § 14(a)(60) to (65), (b)(5), 91 Stat. 1403, 1405; Nov. 15, 1990, Pub.L. 101-549, Title II, §§ 201 to 207, 227(b), 230(1) to (5), 104 Stat. 2472 to 2481, 2507, 2529.)

Editors' Notes

EXECUTIVE ORDERS

EXECUTIVE ORDER NO. 13432

<May 14, 2007, 72 F.R. 27717>

COOPERATION AMONG AGENCIES IN PROTECTING THE ENVIRONMENT WITH RESPECT TO GREENHOUSE GAS EMISSIONS FROM MOTOR VEHICLES, NONROAD VEHICLES, AND NONROAD ENGINES

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. Policy. It is the policy of the United States to ensure the coordinated and effective exercise of the authorities of the President and the heads of the Department of Transportation, the Department of Energy, and the Environmental Protection Agency to protect the environment with respect to greenhouse gas emissions from motor vehicles, nonroad vehicles, and nonroad engines, in a manner consistent with sound science, analysis of benefits and costs, public safety, and economic growth.

Sec. 2. Definitions. As used in this order:

(a) "agencies" refers to the Department of Transportation, the Department of Energy, and the Environmental Protection Agency, and all units thereof, and "agency" refers to any of them;

(b) "alternative fuels" has the meaning specified for that term in section 301(2) of the Energy Policy Act of 1992 (42 U.S.C. 13211(2));

(c) "authorities" include the Clean Air Act (42 U.S.C. 7401-7671q), the Energy Policy Act of 1992 (Public Law 102-486), the Energy Policy Act of 2005 (Public Law 109-58), the Energy Policy and Conservation Act (Public Law 94-163), and any other current or future laws or regulations that may authorize or require any of the agencies to take regulatory action that directly or indirectly affects emissions of greenhouse gases from motor vehicles;

(d) "greenhouse gases" has the meaning specified for that term in Executive Order 13423 of January 24, 2007;

(e) "motor vehicle" has the meaning specified for that term in section 216(2) of the Clean Air Act (42 U.S.C. 7550(2));

(f) "nonroad engine" has the meaning specified for that term in section 216(10) of the Clean Air Act (42 U.S.C. 7550(10));

(g) "nonroad vehicle" has the meaning specified for that term in section 216(11) of the Clean Air Act (42 U.S.C. 7550(11));

(h) "regulation" has the meaning specified for that term in section 3(d) of Executive Order 12866 of September 30, 1993, as amended (Executive Order 12866); and

(i) "regulatory action" has the meaning specified for that term in section 3(e) of Executive Order 12866.

Sec. 3. Coordination Among the Agencies. In carrying out the policy set forth in section 1 of this order, the head of an agency undertaking a regulatory action that can reasonably be expected to directly regulate emissions, or to substantially and predictably affect emissions, of greenhouse gases from motor vehicles, nonroad vehicles, nonroad engines, or the use of motor vehicle fuels, including alternative fuels, shall:

(a) undertake such a regulatory action, to the maximum extent permitted by law and determined by the head of the agency to be practicable, jointly with the other agencies;

(b) in undertaking such a regulatory action, consider, in accordance with applicable law, information and recommendations provided by the other agencies;

(c) in undertaking such a regulatory action, exercise authority vested by law in the head of such agency effectively, in a manner consistent with the effective exercise by the heads of the other agencies of the authority vested in them by law; and

(d) obtain, to the extent permitted by law, concurrence or other views from the heads of the other agencies during the development and preparation of the regulatory action and prior to any key decision points during that development and preparation process, and in no event later than 30 days prior to publication of such action.

Sec. 4. Duties of the Heads of Agencies. (a) To implement this order, the head of each agency shall:

(1) designate appropriate personnel within the agency to (i) direct the agency's implementation of this order, (ii) ensure that the agency keeps the other agencies and the Office of Management and Budget informed of the agency regulatory actions to which section 3 refers, and (iii) coordinate such actions with the agencies;

(2) in coordination as appropriate with the Committee on Climate Change Science and Technology, continue to conduct and share research designed to advance technologies to further the policy set forth in section 1 of this order;

(3) facilitate the sharing of personnel and the sharing of information among the agencies to further the policy set forth in section 1 of this order;

(4) coordinate with the other agencies to avoid duplication of requests to the public for information from the public in the course of undertaking such regulatory action, consistent with the Paperwork Reduction Act (44 U.S.C. 3501 et seq.); and

(5) consult with the Secretary of Agriculture whenever a regulatory action will have a significant effect on agriculture related to the production or use of ethanol, biodiesel, or other renewable fuels, including actions undertaken in whole or in part based on authority or requirements in title XV of the Energy Policy Act of 2005, or the amendments made by such title, or when otherwise appropriate or required by law.

(b) To implement this order, the heads of the agencies acting jointly may allocate as appropriate among the agencies administrative responsibilities relating to regulatory actions to which section 3 refers, such as publication of notices in the **Federal Register** and receipt of comments in response to notices.

Sec. 5. Duties of the Director of the Office of Management and Budget and the Chairman of the Council on

Environmental Quality. (a) The Director of the Office of Management and Budget, with such assistance from the Chairman of the Council on Environmental Quality as the Director may require, shall monitor the implementation of this order by the heads of the agencies and shall report thereon to the President from time to time, and not less often than semiannually, with any recommendations of the Director for strengthening the implementation of this order.

(b) To implement this order and further the policy set forth in section 1, the Director of the Office of Management and Budget may require the heads of the agencies to submit reports to, and coordinate with, such Office on matters related to this order.

Sec. 6. General Provisions. (a) This order shall be implemented in accordance with applicable law and subject to the availability of appropriations.

(b) This order shall not be construed to impair or otherwise affect the functions of the Director of the Office of Management and Budget relating to budget, administrative, and legislative proposals.

(c) This order is not intended to, and does not, create any right, benefit or privilege, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, instrumentalities, or entities, its officers or employees, or any other person.

GEORGE W. BUSH

Notes of Decisions (45)

Footnotes

* Percentages in the table refer to a percentage of each manufacturer's sales volume.

1 So in original. Probably should be "(4)".

2 So in original. Probably should be "paragraph".

3 Another subsec. (f) is set out following subsec. (m).

4 So in original. Probably should be (n).

42 U.S.C.A. § 7521, 42 USCA § 7521

Current through P.L. 112-195 (excluding P.L. 112-140 and 112-141) approved 10-5-12 **End of Document**

United States Code Annotated
Title 42. The Public Health and Welfare
Chapter 85. Air Pollution Prevention and Control (Refs & Annos)
Subchapter III. General Provisions

42 U.S.C.A. § 7602(h)

§ 7602. Definitions

Currentness

When used in this chapter--

(h) All language referring to effects on welfare includes, but is not limited to, effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being, whether caused by transformation, conversion, or combination with other air pollutants.

Credits
(July 14, 1955, c. 360, Title III, § 302, formerly § 9, as added Dec. 17, 1963, Pub.L. 88-206, § 1, 77 Stat. 400, renumbered Oct. 20, 1965, Pub.L. 89-272, Title I, § 101(4), 79 Stat. 992; amended Nov. 21, 1967, Pub.L. 90-148, § 2, 81 Stat. 504; Dec. 31, 1970, Pub.L. 91-604, § 15(a)(1), (c)(1), 84 Stat. 1710, 1713; Aug. 7, 1977, Pub.L. 95-95, Title II, § 218(c), Title III, § 301, 91 Stat. 761, 769; Nov. 16, 1977, Pub.L. 95-190, § 14(a)(76), 91 Stat. 1404; Nov. 15, 1990, Pub.L. 101-549, Title I, §§ 101(d)(4), 107(a), (b), 108(j), 109(b), Title III, § 302(e), Title VII, § 709, 104 Stat. 2409, 2464, 2468, 2470, 2574, 2684.)

Notes of Decisions (12)

Footnotes
[1]
So in original.

42 U.S.C.A. § 7602, 42 USCA § 7602

Current through P.L. 112-195 (excluding P.L. 112-140 and 112-141) approved 10-5-12 End of Document

United States Code Annotated
Title 42. The Public Health and Welfare
Chapter 85. Air Pollution Prevention and Control (Refs & Annos)
Subchapter III. General Provisions

42 U.S.C.A. § 7607

§ 7607. Administrative proceedings and judicial review

Currentness

(a) Administrative subpenas; confidentiality; witnesses

In connection with any determination under section 7410(f) of this title, or for purposes of obtaining information under section 7521(b)(4) or 7545(c)(3) of this title, any investigation, monitoring, reporting requirement, entry, compliance inspection, or administrative enforcement proceeding under the[1] chapter (including but not limited to section 7413, section 7414, section 7420, section 7429, section 7477, section 7524, section 7525, section 7542, section 7603, or section 7606 of this title),,[2] the Administrator may issue subpenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and he may administer oaths. Except for emission data, upon a showing satisfactory to the Administrator by such owner or operator that such papers, books, documents, or information or particular part thereof, if made public, would divulge trade secrets or secret processes of such owner or operator, the Administrator shall consider such record, report, or information or particular portion thereof confidential in accordance with the purposes of section 1905 of Title 18, except that such paper, book, document, or information may be disclosed to other officers, employees, or authorized representatives of the United States concerned with carrying out this chapter, to persons carrying out the National Academy of Sciences' study and investigation provided for in section 7521(c) of this title, or when relevant in any proceeding under this chapter. Witnesses summoned shall be paid the same fees and mileage that are paid witnesses in the courts of the United States. In case of contumacy or refusal to obey a subpena served upon any person under this subparagraph, the district court of the United States for any district in which such person is found or resides or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before the Administrator to appear and produce papers, books, and documents before the Administrator, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof.

(b) Judicial review

(1) A petition for review of action of the Administrator in promulgating any national primary or secondary ambient air quality standard, any emission standard or requirement under section 7412 of this title, any standard of performance or requirement under section 7411 of this title,,[2] any standard under section 7521 of this title (other than a standard required to be prescribed under section 7521(b)(1) of this title), any determination under section 7521(b)(5) of this title, any control or prohibition under section 7545 of this title, any standard under section 7571 of this title, any rule issued under section 7413, 7419, or under section 7420 of this title, or any other nationally applicable regulations promulgated, or final action taken, by the Administrator under this chapter may be filed only in the United States Court of Appeals for the District of Columbia. A petition for review of the Administrator's action in approving or promulgating any implementation plan under section 7410 of this title or section 7411(d) of this title, any order under section 7411(j) of this title, under section 7412 of this title,,[2] under section 7419 of this title, or under section 7420 of this title, or his action under section 1857c-10(c)(2)(A), (B), or (C) of this title (as in effect before August 7, 1977) or under regulations thereunder, or revising regulations for enhanced monitoring and compliance certification programs under section 7414(a)(3) of this title, or any other final action of the Administrator under this chapter (including any denial or disapproval by the Administrator under subchapter I of this chapter) which is locally or

regionally applicable may be filed only in the United States Court of Appeals for the appropriate circuit. Notwithstanding the preceding sentence a petition for review of any action referred to in such sentence may be filed only in the United States Court of Appeals for the District of Columbia if such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination. Any petition for review under this subsection shall be filed within sixty days from the date notice of such promulgation, approval, or action appears in the Federal Register, except that if such petition is based solely on grounds arising after such sixtieth day, then any petition for review under this subsection shall be filed within sixty days after such grounds arise. The filing of a petition for reconsideration by the Administrator of any otherwise final rule or action shall not affect the finality of such rule or action for purposes of judicial review nor extend the time within which a petition for judicial review of such rule or action under this section may be filed, and shall not postpone the effectiveness of such rule or action.

(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) shall not be subject to judicial review in civil or criminal proceedings for enforcement. Where a final decision by the Administrator defers performance of any nondiscretionary statutory action to a later time, any person may challenge the deferral pursuant to paragraph (1).

(c) Additional evidence

In any judicial proceeding in which review is sought of a determination under this chapter required to be made on the record after notice and opportunity for hearing, if any party applies to the court for leave to adduce additional evidence, and shows to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for the failure to adduce such evidence in the proceeding before the Administrator, the court may order such additional evidence (and evidence in rebuttal thereof) to be taken before the Administrator, in such manner and upon such terms and conditions as to[3] the court may deem proper. The Administrator may modify his findings as to the facts, or make new findings, by reason of the additional evidence so taken and he shall file such modified or new findings, and his recommendation, if any, for the modification or setting aside of his original determination, with the return of such additional evidence.

(d) Rulemaking

(1) This subsection applies to--

(A) the promulgation or revision of any national ambient air quality standard under section 7409 of this title,

(B) the promulgation or revision of an implementation plan by the Administrator under section 7410(c) of this title,

(C) the promulgation or revision of any standard of performance under section 7411 of this title, or emission standard or limitation under section 7412(d) of this title, any standard under section 7412(f) of this title, or any regulation under section 7412(g)(1)(D) and (F) of this title, or any regulation under section 7412(m) or (n) of this title,

(D) the promulgation of any requirement for solid waste combustion under section 7429 of this title,

(E) the promulgation or revision of any regulation pertaining to any fuel or fuel additive under section 7545 of this title,

(F) the promulgation or revision of any aircraft emission standard under section 7571 of this title,

(G) the promulgation or revision of any regulation under subchapter IV-A of this chapter (relating to control of acid deposition),

(H) promulgation or revision of regulations pertaining to primary nonferrous smelter orders under section 7419 of this title (but not including the granting or denying of any such order),

(I) promulgation or revision of regulations under subchapter VI of this chapter (relating to stratosphere and ozone protection),

(J) promulgation or revision of regulations under part C of subchapter I of this chapter (relating to prevention of significant deterioration of air quality and protection of visibility),

(K) promulgation or revision of regulations under section 7521 of this title and test procedures for new motor vehicles or engines under section 7525 of this title, and the revision of a standard under section 7521(a)(3) of this title,

(L) promulgation or revision of regulations for noncompliance penalties under section 7420 of this title,

(M) promulgation or revision of any regulations promulgated under section 7541 of this title (relating to warranties and compliance by vehicles in actual use),

(N) action of the Administrator under section 7426 of this title (relating to interstate pollution abatement),

(O) the promulgation or revision of any regulation pertaining to consumer and commercial products under section 7511b(e) of this title,

(P) the promulgation or revision of any regulation pertaining to field citations under section 7413(d)(3) of this title,

(Q) the promulgation or revision of any regulation pertaining to urban buses or the clean-fuel vehicle, clean-fuel fleet, and clean fuel programs under part C of subchapter II of this chapter,

(R) the promulgation or revision of any regulation pertaining to nonroad engines or nonroad vehicles under section 7547 of this title,

(S) the promulgation or revision of any regulation relating to motor vehicle compliance program fees under section 7552 of this title,

(T) the promulgation or revision of any regulation under subchapter IV-A of this chapter (relating to acid deposition),

(U) the promulgation or revision of any regulation under section 7511b(f) of this title pertaining to marine vessels, and

(V) such other actions as the Administrator may determine.

The provisions of section 553 through 557 and section 706 of Title 5 shall not, except as expressly provided in this subsection, apply to actions to which this subsection applies. This subsection shall not apply in the case of any rule or circumstance referred to in subparagraphs (A) or (B) of subsection 553(b) of Title 5.

(2) Not later than the date of proposal of any action to which this subsection applies, the Administrator shall establish a rulemaking docket for such action (hereinafter in this subsection referred to as a "rule"). Whenever a rule applies only within a particular State, a second (identical) docket shall be simultaneously established in the appropriate regional office of the Environmental Protection Agency.

(3) In the case of any rule to which this subsection applies, notice of proposed rulemaking shall be published in the Federal Register, as provided under section 553(b) of Title 5, shall be accompanied by a statement of its basis and purpose and shall specify the period available for public comment (hereinafter referred to as the "comment period"). The notice of proposed rulemaking shall also state the docket number, the location or locations of the docket, and the times it will be open to public inspection. The statement of basis and purpose shall include a summary of--

(A) the factual data on which the proposed rule is based;

(B) the methodology used in obtaining the data and in analyzing the data; and

(C) the major legal interpretations and policy considerations underlying the proposed rule.

The statement shall also set forth or summarize and provide a reference to any pertinent findings, recommendations, and comments by the Scientific Review Committee established under section 7409(d) of this title and the National Academy of Sciences, and, if the proposal differs in any important respect from any of these recommendations, an explanation of the reasons for such differences. All data, information, and documents referred to in this paragraph on which the proposed rule relies shall be included in the docket on the date of publication of the proposed rule.

(4)(A) The rulemaking docket required under paragraph (2) shall be open for inspection by the public at reasonable times specified in the notice of proposed rulemaking. Any person may copy documents contained in the docket. The Administrator shall provide copying facilities which may be used at the expense of the person seeking copies, but the Administrator may waive or reduce such expenses in such instances as the public interest requires. Any person may request copies by mail if the person pays the expenses, including personnel costs to do the copying.

(B)(i) Promptly upon receipt by the agency, all written comments and documentary information on the proposed rule received from any person for inclusion in the docket during the comment period shall be placed in the docket. The transcript of public hearings, if any, on the proposed rule shall also be included in the docket promptly upon receipt from the person who transcribed such hearings. All documents which become available after the proposed rule has been published and which the Administrator determines are of central relevance to the rulemaking shall be placed in the docket as soon as possible after their availability.

(ii) The drafts of proposed rules submitted by the Administrator to the Office of Management and Budget for any interagency review process prior to proposal of any such rule, all documents accompanying such drafts, and all written comments thereon by other agencies and all written responses to such written comments by the Administrator shall be placed in the docket no later than the date of proposal of the rule. The drafts of the final rule submitted for such review process prior to promulgation and all such written comments thereon, all documents accompanying such drafts, and written responses thereto shall be

placed in the docket no later than the date of promulgation.

(5) In promulgating a rule to which this subsection applies (i) the Administrator shall allow any person to submit written comments, data, or documentary information; (ii) the Administrator shall give interested persons an opportunity for the oral presentation of data, views, or arguments, in addition to an opportunity to make written submissions; (iii) a transcript shall be kept of any oral presentation; and (iv) the Administrator shall keep the record of such proceeding open for thirty days after completion of the proceeding to provide an opportunity for submission of rebuttal and supplementary information.

(6)(A) The promulgated rule shall be accompanied by (i) a statement of basis and purpose like that referred to in paragraph (3) with respect to a proposed rule and (ii) an explanation of the reasons for any major changes in the promulgated rule from the proposed rule.

(B) The promulgated rule shall also be accompanied by a response to each of the significant comments, criticisms, and new data submitted in written or oral presentations during the comment period.

(C) The promulgated rule may not be based (in part or whole) on any information or data which has not been placed in the docket as of the date of such promulgation.

(7)(A) The record for judicial review shall consist exclusively of the material referred to in paragraph (3), clause (i) of paragraph (4)(B), and subparagraphs (A) and (B) of paragraph (6).

(B) Only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. If the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within such time or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule, the Administrator shall convene a proceeding for reconsideration of the rule and provide the same procedural rights as would have been afforded had the information been available at the time the rule was proposed. If the Administrator refuses to convene such a proceeding, such person may seek review of such refusal in the United States court of appeals for the appropriate circuit (as provided in subsection (b) of this section). Such reconsideration shall not postpone the effectiveness of the rule. The effectiveness of the rule may be stayed during such reconsideration, however, by the Administrator or the court for a period not to exceed three months.

(8) The sole forum for challenging procedural determinations made by the Administrator under this subsection shall be in the United States court of appeals for the appropriate circuit (as provided in subsection (b) of this section) at the time of the substantive review of the rule. No interlocutory appeals shall be permitted with respect to such procedural determinations. In reviewing alleged procedural errors, the court may invalidate the rule only if the errors were so serious and related to matters of such central relevance to the rule that there is a substantial likelihood that the rule would have been significantly changed if such errors had not been made.

(9) In the case of review of any action of the Administrator to which this subsection applies, the court may reverse any such action found to be--

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; or

(D) without observance of procedure required by law, if (i) such failure to observe such procedure is arbitrary or capricious, (ii) the requirement of paragraph (7)(B) has been met, and (iii) the condition of the last sentence of paragraph (8) is met.

(10) Each statutory deadline for promulgation of rules to which this subsection applies which requires promulgation less than six months after date of proposal may be extended to not more than six months after date of proposal by the Administrator upon a determination that such extension is necessary to afford the public, and the agency, adequate opportunity to carry out the purposes of this subsection.

(11) The requirements of this subsection shall take effect with respect to any rule the proposal of which occurs after ninety days after August 7, 1977.

(e) Other methods of judicial review not authorized

Nothing in this chapter shall be construed to authorize judicial review of regulations or orders of the Administrator under this chapter, except as provided in this section.

(f) Costs

In any judicial proceeding under this section, the court may award costs of litigation (including reasonable attorney and expert witness fees) whenever it determines that such award is appropriate.

(g) Stay, injunction, or similar relief in proceedings relating to noncompliance penalties

In any action respecting the promulgation of regulations under section 7420 of this title or the administration or enforcement of section 7420 of this title no court shall grant any stay, injunctive, or similar relief before final judgment by such court in such action.

(h) Public participation

It is the intent of Congress that, consistent with the policy of subchapter II of chapter 5 of Title 5, the Administrator in promulgating any regulation under this chapter, including a regulation subject to a deadline, shall ensure a reasonable period for public participation of at least 30 days, except as otherwise expressly provided in section[4] 7407(d), 7502(a), 7511(a) and (b), and 7512(a) and (b) of this title.

Credits

(July 14, 1955, c. 360, Title III, § 307, as added Dec. 31, 1970, Pub.L. 91-604, § 12(a), 84 Stat. 1707; amended Nov. 18, 1971, Pub.L. 92-157, Title III, § 302(a), 85 Stat. 464; June 22, 1974, Pub.L. 93-319, § 6(c), 88 Stat. 259; Aug. 7, 1977, Pub.L. 95-95, Title III, §§ 303(d), 305(a), (c), (f)-(h), 91 Stat. 772, 776, 777; Nov. 16, 1977, Pub.L. 95-190, § 14(a)(79), (80), 91 Stat. 1404; Nov. 15, 1990, Pub.L. 101-549, Title I, §§ 108(p), 110(5), Title III, § 302(g), (h), Title VII, §§ 702(c), 703, 706, 707(h), 710(b), 104 Stat. 2469, 2470, 2574, 2681-2684.)

Notes of Decisions (283)

Footnotes

1 So in original. Probably should be “this”.

2 So in original.

3 So in original. The word “to” probably should not appear.

4 So in original. Probably should be “sections”.

42 U.S.C.A. § 7607, 42 USCA § 7607

Current through P.L. 112-195 (excluding P.L. 112-140 and 112-141) approved 10-5-12End of Document

United States Code Annotated
Title 42. The Public Health and Welfare
Chapter 85. Air Pollution Prevention and Control (Refs & Annos)
Subchapter IV-A. Acid Deposition Control (Refs & Annos)

42 U.S.C.A. § 7651

§ 7651. Findings and purposes

Currentness

(a) Findings

The Congress finds that--

(1) the presence of acidic compounds and their precursors in the atmosphere and in deposition from the atmosphere represents a threat to natural resources, ecosystems, materials, visibility, and public health;

(2) the principal sources of the acidic compounds and their precursors in the atmosphere are emissions of sulfur and nitrogen oxides from the combustion of fossil fuels;

(3) the problem of acid deposition is of national and international significance;

(4) strategies and technologies for the control of precursors to acid deposition exist now that are economically feasible, and improved methods are expected to become increasingly available over the next decade;

(5) current and future generations of Americans will be adversely affected by delaying measures to remedy the problem;

(6) reduction of total atmospheric loading of sulfur dioxide and nitrogen oxides will enhance protection of the public health and welfare and the environment; and

(7) control measures to reduce precursor emissions from steam-electric generating units should be initiated without delay.

(b) Purposes

The purpose of this subchapter is to reduce the adverse effects of acid deposition through reductions in annual emissions of sulfur dioxide of ten million tons from 1980 emission levels, and, in combination with other provisions of this chapter, of nitrogen oxides emissions of approximately two million tons from 1980 emission levels, in the forty-eight contiguous States and the District of Columbia. It is the intent of this subchapter to effectuate such reductions by requiring compliance by affected sources with prescribed emission limitations by specified deadlines, which limitations may be met through alternative methods of compliance provided by an emission allocation and transfer system. It is also the purpose of this subchapter to encourage energy conservation, use of renewable and clean alternative technologies, and pollution prevention as a long-range strategy, consistent with the provisions of this subchapter, for reducing air pollution and other adverse

impacts of energy production and use.

Credits
(July 14, 1955, c. 360, Title IV, § 401, as added Nov. 15, 1990, Pub.L. 101-549, Title IV, § 401, 104 Stat. 2584.)

42 U.S.C.A. § 7651, 42 USCA § 7651

Current through P.L. 112-195 (excluding P.L. 112-140 and 112-141) approved 10-5-12 End of Document

PL 101–549, November 15, 1990, 104 Stat 2399

UNITED STATES PUBLIC LAWS
101st Congress - Second Session
Convening January 23, 1990

Additions and Deletions are not identified in this document.
8848

PL 101–549 (S 1630)
November 15, 1990
CLEAN AIR ACT, AMENDMENTS

<< 42 USCA § 7651 NOTE >>

SEC. 404. ACID DEPOSITION STANDARDS.

Not later than 36 months after the date of enactment of this Act, the Administrator of the Environmental Protection Agency shall transmit to the Committee on Environment and Public Works of the Senate and the Committee on Energy and Commerce of the House of Representatives a report on the feasibility and effectiveness of an acid deposition standard or standards to protect sensitive and critically sensitive aquatic and terrestrial resources. The study required by this section shall include, but not be limited to, consideration of the following matters:

(1) identification of the sensitive and critically sensitive aquatic and terrestrial resources in the United States and Canada which may be affected by the deposition of acidic compounds;

(2) description of the nature and numerical value of a deposition standard or standards that would be sufficient to protect such resources;

(3) description of the use of such standard or standards in other Nations or by any of the several States in acid deposition control programs;

(4) description of the measures that would need to be taken to integrate such standard or standards with the control program required by title IV of the Clean Air Act;

(5) description of the state of knowledge with respect to source-receptor relationships necessary to develop a control program on such standard or standards and the additional research that is on-going or would be needed to make such a control program feasible; and

(6) description of the impediments to implementation of such control program and the cost-effectiveness of deposition standards compared to other control strategies including ambient air quality standards, new source performance standards and the requirements of title IV of the Clean Air Act.

Approved November 15, 1990

PL 101–549, 1990 S 1630

United States Code Annotated
Title 42. The Public Health and Welfare
Chapter 97. Acid Precipitation Program and Carbon Dioxide Study (Refs & Annos)
Subchapter I. Acid Precipitation

42 U.S.C.A. § 8901

§ 8901. Introductory provisions

Currentness

(a) Congressional statement of findings and purpose

The Congress finds and declares that acid precipitation resulting from other than natural sources--

(1) could contribute to the increasing pollution of natural and man-made water systems;

(2) could adversely affect agricultural and forest crops;

(3) could adversely affect fish and wildlife and natural ecosystems generally;

(4) could contribute to corrosion of metals, wood, paint, and masonry used in construction and ornamentation of buildings and public monuments;

(5) could adversely affect public health and welfare; and

(6) could affect areas distant from sources and thus involve issues of national and international policy.

(b) Congressional declaration of purpose

The Congress declares that it is the purpose of this subchapter--

(1) to identify the causes and sources of acid precipitation;

(2) to evaluate the environmental, social, and economic effects of acid precipitation; and

(3) based on the results of the research program established by this subchapter and to the extent consistent with existing law, to take action to the extent necessary and practicable (A) to limit or eliminate the identified emissions which are sources of acid precipitation, and (B) to remedy or otherwise ameliorate the harmful effects which may result from acid precipitation.

(c) “Acid precipitation” defined

For purposes of this subchapter the term “acid precipitation” means the wet or dry deposition from the atmosphere of acid chemical compounds.

Credits
(Pub.L. 96-294, Title VII, § 702, June 30, 1980, 94 Stat. 770.)

42 U.S.C.A. § 8901, 42 USCA § 8901

United States Code Annotated
Title 42. The Public Health and Welfare
Chapter 97. Acid Precipitation Program and Carbon Dioxide Study (Refs & Annos)
Subchapter I. Acid Precipitation

42 U.S.C.A. § 8902

§ 8902. Comprehensive ten-year program

Currentness

(a) Implementation by Acid Precipitation Task Force; membership, etc., of Task Force

There is hereby established a comprehensive ten-year program to carry out the provisions of this subchapter; and to implement this program there shall be formed an Acid Precipitation Task Force (hereafter in this subchapter referred to as the "Task Force"), of which the Secretary of Agriculture, the Administrator of the Environmental Protection Agency, and the Administrator of the National Oceanic and Atmospheric Administration shall be joint chairmen. The remaining membership of the Task Force shall consist of--

(1) one representative each from the Department of the Interior, the Department of Health and Human Services, the Department of Commerce, the Department of Energy, the Department of State, the National Aeronautics and Space Administration, the Council on Environmental Quality, the National Science Foundation, and the Tennessee Valley Authority;

(2) the director of the Argonne National Laboratory, the director of the Brookhaven National Laboratory, the director of the Oak Ridge National Laboratory, and the director of the Pacific Northwest National Laboratory; and

(3) four additional members to be appointed by the President.

(b) Research management consortium; membership, responsibilities, etc.

The four National Laboratories (referred to in subsection (a)(2) of this section) shall constitute a research management consortium having the responsibilities described in section 8903(b)(13) of this title as well as the general responsibilities required by their representation on the Task Force. In carrying out these responsibilities the consortium shall report to, and act pursuant to direction from, the joint chairmen of the Task Force.

(c) Director of research program

The Administrator of the National Oceanic and Atmospheric Administration shall serve as the director of the research program established by this subchapter.

Credits
(Pub.L. 96-294, Title VII, § 703, June 30, 1980, 94 Stat. 771.)

42 U.S.C.A. § 8902, 42 USCA § 8902

Current through P.L. 112-195 (excluding P.L. 112-140 and 112-141) approved 10-5-12End of Document

United States Code Annotated
Title 42. The Public Health and Welfare
Chapter 97. Acid Precipitation Program and Carbon Dioxide Study (Refs & Annos)
Subchapter I. Acid Precipitation

42 U.S.C.A. § 8903

§ 8903. Comprehensive research plan

Currentness

(a) Preparation by Task Force for ten-year program; purposes

The Task Force shall prepare a comprehensive research plan for the ten-year program (hereafter in this subchapter referred to as the "comprehensive plan"), setting forth a coordinated program (1) to identify the causes and effects of acid precipitation and (2) to identify actions to limit or ameliorate the harmful effects of acid precipitation.

(b) Scope

The comprehensive plan shall include programs for--

(1) identifying the sources of atmospheric emissions contributing to acid precipitation;

(2) establishing and operating a nationwide long-term monitoring network to detect and measure levels of acid precipitation;

(3) research in atmospheric physics and chemistry to facilitate understanding of the processes by which atmospheric emissions are transformed into acid precipitation;

(4) development and application of atmospheric transport models to enable prediction of long-range transport of substances causing acid precipitation;

(5) defining geographic areas of impact through deposition monitoring, identification of sensitive areas, and identification of areas at risk;

(6) broadening of impact data bases through collection of existing data on water and soil chemistry and through temporal trend analysis;

(7) development of dose-response functions with respect to soils, soil organisms, aquatic and amphibious organisms, crop plants, and forest plants;

(8) establishing and carrying out system studies with respect to plant physiology, aquatic ecosystems, soil chemistry

systems, soil microbial systems, and forest ecosystems;

(9) economic assessments of (A) the environmental impacts caused by acid precipitation on crops, forests, fisheries, and recreational and aesthetic resources and structures, and (B) alternative technologies to remedy or otherwise ameliorate the harmful effects which may result from acid precipitation;

(10) documenting all current Federal activities related to research on acid precipitation and ensuring that such activities are coordinated in ways that prevent needless duplication and waste of financial and technical resources;

(11) effecting cooperation in acid precipitation research and development programs, ongoing and planned, with the affected and contributing States and with other sovereign nations having a commonality of interest;

(12) subject to subsection (f)(1) of this section, management by the Task Force of financial resources committed to Federal acid precipitation research and development;

(13) subject to subsection (f)(2) of this section, management of the technical aspects of Federal acid precipitation research and development programs, including but not limited to (A) the planning and management of research and development programs and projects, (B) the selection of contractors and grantees to carry out such programs and projects, and (C) the establishment of peer review procedures to assure the quality of research and development programs and their products; and

(14) analyzing the information available regarding acid precipitation in order to formulate and present periodic recommendations to the Congress and the appropriate agencies about actions to be taken by these bodies to alleviate acid precipitation and its effects.

(c) Procedures applicable

The comprehensive plan--

(1) shall be submitted in draft form to the Congress, and for public review, within six months after June 30, 1980;

(2) shall be available for public comment for a period of sixty days after its submission in draft form under paragraph (1);

(3) shall be submitted in final form, incorporating such needed revisions as arise from comments received during the review period, to the President and the Congress within forty-five days after the close of the period allowed for comments on the draft comprehensive plan under paragraph (2); and

(4) shall constitute the basis on which requests for authorizations and appropriations are to be made for the nine fiscal years following the fiscal year in which the comprehensive plan is submitted in final form under paragraph (3).

(d) Convening of Task Force

The Task Force shall convene as necessary, but no less than twice during each fiscal year of the ten-year period covered by the comprehensive plan.

(e) Submission of annual report to President and Congress by Task Force

The Task Force shall submit to the President and the Congress by January 15 of each year an annual report which shall detail the progress of the research program under this subchapter and which shall contain such recommendations as are developed under subsection (b)(14) of this section.

(f) Applicability of other statutory provisions to Task Force or plan

(1) Subsection (b)(12) of this section shall not be construed as modifying, or as authorizing the Task Force or the comprehensive plan to modify, any provision of an appropriation Act (or any other provision of law relating to the use of appropriated funds) which specifies (A) the department or agency to which funds are appropriated, or (B) the obligations of such department or agency with respect to the use of such funds.

(2) Subsection (b)(13) of this section shall not be construed as modifying, or as authorizing the Task Force or the comprehensive plan to modify, any provision of law (relating to or involving a department or agency) which specifies (A) procurement practices for the selection, award, or management of contracts or grants by such department or agency, or (B) program activities, limitations, obligations, or responsibilities of such department or agency.

Credits
(Pub.L. 96-294, Title VII, § 704, June 30, 1980, 94 Stat. 771.)

42 U.S.C.A. § 8903, 42 USCA § 8903

United States Code Annotated
Title 42. The Public Health and Welfare
Chapter 97. Acid Precipitation Program and Carbon Dioxide Study (Refs & Annos)
Subchapter I. Acid Precipitation

42 U.S.C.A. § 8904

§ 8904. Implementation of comprehensive plan; new or existing regulatory authorities, etc., not granted or modified

Currentness

(a) The comprehensive plan shall be carried out during the nine fiscal years following the fiscal year in which the comprehensive plan is submitted in its final form under section 8903(c)(3) of this title; and--

(1) shall be carried out in accord with, and meet the program objectives specified in, paragraphs (1) through (11) of section 8903(b) of this title;

(2) shall be managed in accord with paragraphs (12) through (14) of such section; and

(3) shall be funded by annual appropriations, subject to annual authorizations which shall be made for each fiscal year of the program (as provided in section 8905 of this title) after the submission of the Task Force progress report which under section 8903(e) of this title is required to be submitted by January 15 of the calendar year in which such fiscal year begins.

(b) Nothing in this subchapter shall be deemed to grant any new regulatory authority or to limit, expand, or otherwise modify any regulatory authority under existing law, or to establish new criteria, standards, or requirements for regulation under existing law.

Credits
(Pub.L. 96-294, Title VII, § 705, June 30, 1980, 94 Stat. 773.)

42 U.S.C.A. § 8904, 42 USCA § 8904

United States Code Annotated
Title 42. The Public Health and Welfare
Chapter 97. Acid Precipitation Program and Carbon Dioxide Study (Refs & Annos)
Subchapter I. Acid Precipitation

42 U.S.C.A. § 8905

§ 8905. Authorization of appropriations

Currentness

(a) For the purpose of establishing the Task Force and developing the comprehensive plan under section 8903 of this title there is authorized to be appropriated to the National Oceanic and Atmospheric Administration for fiscal year 1981 the sum of $5,000,000 to remain available until expended.

(b) Authorizations of appropriations for the nine fiscal years following the fiscal year in which the comprehensive plan is submitted in final form under section 8903(c)(3) of this title, for purposes of carrying out the comprehensive ten-year program established by section 8902(a) of this title and implementing the comprehensive plan under sections 8903 and 8904 of this title, shall be provided on an annual basis in authorization Acts hereafter enacted; but the total sum of dollars authorized for such purposes for such nine fiscal years shall not exceed $45,000,000 except as may be specifically provided by reference to this paragraph in the authorization Acts involved.

Credits
(Pub.L. 96-294, Title VII, § 706, June 30, 1980, 94 Stat. 773.)

42 U.S.C.A. § 8905, 42 USCA § 8905

Current through P.L. 112-195 (excluding P.L. 112-140 and 112-141) approved 10-5-12 End of Document

United States Code Annotated
Title 42. The Public Health and Welfare
Chapter 97. Acid Precipitation Program and Carbon Dioxide Study (Refs & Annos)
Subchapter I. Acid Precipitation

42 U.S.C.A. § 8906

§ 8906. Updated data base on acid content in precipitation; new monitoring site not required

Currentness

(a) Maintenance and availability to interested parties

(1) The National Weather Service of the National Oceanic and Atmospheric Administration shall maintain an updated data base describing the acid content in precipitation in the United States, using information from Federal acid precipitation monitoring sites.

(2) Such data shall be available to interested parties by Weather Service Forecast Offices in the National Weather Service, or through such other facilities or means as the Assistant Administrator for Weather Services, National Oceanic and Atmospheric Administration, shall direct, for those areas of the United States where and at such time as such information is presently available, within 120 days after November 17, 1988.

(3) Where other Federal agencies collect such data in the course of carrying out their statutory missions, the heads of those agencies and the Administrator of the National Oceanic and Atmospheric Administration shall arrange for the transfer of such data to the National Weather Service.

(b) Construction of section as not requiring new monitoring sites

Nothing in this section shall be construed to require any Federal agency to establish any new acid precipitation monitoring site.

Credits
(Pub.L. 100-685, Title IV, § 414, Nov. 17, 1988, 102 Stat. 4101.)

42 U.S.C.A. § 8906, 42 USCA § 8906

DECLARATIONS

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DECLARATION OF JOHN DAVIS

I, John Davis, declare as follows:

(1) I am a resident of Essex, New York. I am a member of the Center for Biological Diversity.

(2) I have been a conservationist all my life. When I was a child, my parents hiked and canoed and rowed boats and otherwise got out into nature and they encouraged my sister and I to do likewise. From an early age I became quite keen to be outdoors and my folks took me on hikes in the White Mountains, the Berkshire Mountains of Massachusetts and the Adirondack Mountains of New York.

(3) My awareness of acid deposition and the damage it causes began to develop from a very young age. For example, over 35 years ago I climbed Mount Mitchell, the tallest peak in the Black Mountains of western North Carolina and the highest peak east of the Mississippi River, with my father. I still distinctly remember feeling a mix of emotions when I attained my loftiest summit to that point in my boyhood but found there a road all the way up from the bottom and trees dying of acid deposition. I remember feeling a profound mix of excitement and sadness and also a sense of insult, that after all this effort and this hike, we arrived at the summit to find trees dying. I also remember that it was hazy because of smog. In addition, my mother, Mary Byrd Davis, conducted research on old-

growth forests of the Eastern United States. As part of this work, she would identify places that had never been logged, some of which had been harmed by acid deposition. When I was a child my aunt bought a forested property in Appalachia impacted by acid deposition.

(4) I have worked on acid deposition issues throughout my professional career as well. I attended St. Olaf College in Minnesota, where I graduated Phi Beta Kappa with a degree in environmental ethics. From 1991 until 1996, I edited the journal *Wild Earth*, a periodical dedicated to conservation, science, and wilderness proposals. From 1997 through 2003, I was the biodiversity and wilderness program officer for the Foundation for Deep Ecology, dedicated to supporting education and advocacy on behalf of wild Nature. At the Foundation for Deep Ecology, we gave several grants to organizations for work on acid deposition. I recommended these grants because I was aware of the severe damage of acid deposition on the Adirondack Park at that time. From 2005 to 2010, I served as director of conservation for the Adirondack Council, the largest citizen environmental group in New York State that works full time to protect the Adirondack Park, a six-million-acre natural treasure. At the Adirondack Council, I was also involved in efforts to reduce acid deposition.

(5) For the past decade, I have served as land steward for the Eddy Foundation, a non-profit environmental foundation that purchases and preserves

wildlands in the eastern Adirondacks of northern New York State. One of our primary goals is to protect and restore a wildlife corridor which will link the Champlain Valley with the foothills and mountains to the west. Acid deposition impacts the work I am currently doing and will continue to do with the Eddy Foundation because the wildlife corridor will have less ecological and other value if the trees are dying. The value of the wildlife corridor is also greatly diminished when the streams are acidified and damaged. The impacts of acid deposition are particularly pronounced in the Adirondack High Peaks and the western Adirondacks which we are working to protect as part of a larger wildlife corridor, or Eastern Wildway.

(6) I also currently volunteer with the Adirondack Council to help achieve one of their main goals which is preservation of the Bob Marshall Wilderness Complex in the western Adirondacks. This is one of the areas of the Northeastern United States where we have the best chance of restoring wolves and cougars to the wild. This area is quite hard hit by acid deposition. For example, brook trout populations are being harmed, and maple trees are failing to regenerate. I do volunteer field work in this area whenever I can. One of the things I do as a volunteer is try to find ways to help places be wilder, by hiking or mountain biking roads that cut into forest preserves to see if the back-country roads might be closed someday. I paddle the rivers and streams to get a sense of how healthy they are,

paying attention to the health of the fish populations. I also informally serve as an advisor to other groups working for protection to help better protect these areas. I will continue these activities in the future. This wild area will have a lot less value if we do not address the crisis of acid deposition.

(7) The New York State Constitution's "Forever Wild" clause is one of the strongest land protection provisions in the country. By mandate of the New York Constitution, state lands within the Adirondack and Catskill parks cannot be logged or developed. This clause was put in place over 100 years ago by people with remarkable foresight including Lewis Marshall, the father of Bob Marshall. Every time the state acquires land, it goes into a category of lands called the "Forest Preserve" and it is strictly protected from logging. The "Forever Wild" clause has stood the test of time and has meant that at least by some measures, the Adirondack Park is the most intact landscape in the Eastern United States. Yet at the same time, this area has been hard hit by acid deposition. It is a real problem. In some respects we're getting wilder, the forests are growing back after being cut a century ago, and we are adding Forest Preserve lands to the park, but that positive trajectory is held back in significant ways and in quite a few places by acid deposition. We need to reduce acid deposition in order to fully protect these lands.

(8) Following my mother's death in 2011, the Eastern Ancient Forest Fund to protect old growth forest was created in her honor. It is necessary but not

sufficient to protect these forests from threats like logging and development. We also need to protect them from pollution, including acid deposition, because these forests will have a lot less value if the lakes, streams, and trees are being undermined by acid deposition.

(9) As an adult I have travelled for professional and personal reasons through many areas impacted by acid deposition. Most recently, I completed a 7,600-mile human-powered trek from the Everglades of Florida to Canada's Gaspe Peninsula, in pursuit of my vision of restoring and connecting wild places so animals have enough room to survive. I walked, bicycled, and paddled through many areas impacted by acid rain on this journey, including the Smoky Mountains of North Carolina and Tennessee, White Mountains of New Hampshire, and the Adirondacks. For example, in June, 2011, I travelled through the Appalachian Mountains of West Virginia, an area which I hope will be protected in the future as the new High Allegheny National Park. This is a beautiful area, but damaged by human activities including acid deposition: brook trout, an indicator species, have been lost from many streams due to logging, aquatic acidification, and acid mine drainage. I spent quite a bit of time hiking above 4,000 feet in elevation, and sometimes above 6,000 feet, and found many areas where acid deposition is undermining forest health and weakening the trees. In September, 2011, I travelled through the White Mountains of New Hampshire, also among the hardest hit by

acid deposition. While progress in pollution reduction has been made over the past three decades and has slowed acid deposition and tree death, nonetheless impacts continue here, and trout populations have been eliminated from some streams.

(10) I will continue all of my conservation and recreational activities in the future, in the Adirondacks and in other areas impacted by acid deposition. For example, in the future I will visit lakes impacted by acid rain including Lake Lila in the western central Adirondacks, Cranberry Lake, Wolf Pond and Big Sand Lake in the western Adirondacks, and Big Moose Lake in the southwestern Adirondacks. Cranberry Lake, Wolf Pond, and Big Sand Lake are in the proposed Bob Marshall Wilderness where I visit particularly often to support the creation of this new wilderness area.

(11) In January, 2013, I will begin my next long-distance journey, TrekWest, a 10-month, 5,000-mile personal migration along the spine of the Rocky Mountains from Mexico to Canada. My dream is for a connected and protected Western Wildway, a lifeline for animals that need healthy ecosystems and safe passage across large landscapes.

(12) On this trek I will travel through high elevation areas of the western United States impacted by acid deposition, including Rocky Mountains National Park. Acid deposition has impacted even remote and otherwise protected areas by, for example, changing the plant composition in alpine meadows, changing the

algae composition in alpine lakes, and subjecting alpine lakes to seasonal acid pulses, decreasing water quality and harming biological diversity. These impacts decrease the wild and untrammeled nature of these areas, harming my goal of protecting them in as wild and intact a state as possible.

(13) I am aware that emissions reductions requirements under the Clean Air Act over the past several decades have lessened the harm from acid deposition that would otherwise have occurred. Yet harm to the forests, streams, ecosystems and species that I have described above continues even though the entire country currently meets the existing secondary national ambient air quality standards for oxides of sulfur and oxides of nitrogen. I am also aware that this year the EPA refused to tighten these national standards so as to reduce the impacts of acid deposition on the ecosystems, species, and places described above. EPA's failure to tighten these national standards means that acid rain will continue to impact the forests, streams, ecosystems and species that I have discussed above. These impacts will harm my professional and personal goals to protect these areas and resources, and my personal enjoyment of them as well.

(14) EPA's failure to tighten the standards harms my professional and personal goals in other ways as well. Improving the standards would raise awareness of this important problem, which has largely been forgotten. Just putting the problem of acid deposition back in the spotlight would have great value

by reminding people the problem is still here. Right now I do not often hear of opportunities to reduce acid deposition. Greater awareness would almost certainly spur greater action. Further, if those of us involved in protection of Eastern forests had more opportunities to comment on how to reduce acid rain pollutants, it would be very helpful to our efforts. This is because if we protect the land but fail to reduce the pollution, we still lose the ecological values. If the EPA had tightened the standard, then pollution sources such as coal fired power plants that contribute to acid deposition in sensitive regions like the Adirondacks would likely need to take further steps to reduce their emissions of oxides of sulfur and oxides of nitrogen. I and others working to protect these areas would have the opportunity to participate in these processes. The EPA's failure to tighten the national standards for oxides of sulfur and oxides of nitrogen deprives me of these opportunities.

(15) It is my understanding that EPA can protect ecosystems from the harmful effects of acid deposition, raise awareness of the issue, and create additional opportunities for participation in efforts to reduce the acid rain pollutants by strengthening these standards. This action would protect all of my professional and personal interests described above. I rely on the Center for Biological Diversity to represent my interests in this issue and in this litigation.

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

Executed this 26th day of November, 2012.

John Davis John Davis

DECLARATION OF GREGORY GORMAN

I, Gregory Gorman, declare as follows:

1. I am a resident of Hamburg, New Jersey, Sussex County. I am a member of Clean Air Council.

2. The Clean Air Council is a non-profit environmental organization headquartered in Philadelphia, Pennsylvania. For more than 40 years, the Council has fought to improve air quality across Pennsylvania. The Council works through advocacy, regulatory oversight and legal action to protect the environment and public health from the harmful effects of air pollution.

3. I kayak in many locations in Pennsylvania, including the Juniata River and Shawnee State Park in Bedford County, the lakes in Bald Eagle State Park and Black Moshannon State Park in Centre County, and the lake in Parker Dam State Park in Clearfield County.

4. Members of my family like to fish, and enjoy the diverse species of fish present throughout Pennsylvania. I fish for trout, bass, panfish, and other species with my grandchildren, grandnieces, and grandnephews.

5. I enjoy hiking through the Pennsylvania state parks mentioned above. I also enjoy photographing elk, bears, raptors and waterfowl, among other wildlife.

6. I am aware of the effects of acid deposition on waters, including decreases in populations of fish and other biota, higher fish mortality, reduction in species diversity, and ecosystem effects. I am concerned that these and other impacts of acid deposition on the rivers, lakes, and woods I enjoy, such as those in Pennsylvania mentioned above, will decrease my enjoyment of kayaking, fishing, hiking, and wildlife photography.

7. I am aware that on April 3, 2012, EPA has refused to tighten national standards that could have reduced the impacts of acid rain on ecosystems. I am concerned that EPA's failure to act means continued impacts that acidify water bodies and harm fish and other wildlife. These impacts will diminish my enjoyment of affected areas and their ecosystems.

8. It is my understanding that EPA can protect ecosystems from the harmful effects of acid deposition by strengthening these standards. This action would increase my enjoyment of areas affected by this acid deposition.

9. I visit family members and spend time outdoors in Bedford and Clearfield Counties every year at Christmas, Easter, and in the summer, and will visit them again at Christmastime

this year. I also go to Bedford County every October for the fall foliage festival, and to hike in the woods.

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

Executed this 15th day of November, 2012.

Gregory L. Gorman

DECLARATION OF MOLLIE MATTESON

I, Mollie Matteson, declare as follows:

1. I live in Richmond, Vermont. I am a member of the Center for Biological Diversity. I support the Center because it is effective at protecting endangered species and the places they need to live. I care deeply about all wildlife and plant life and other life on the Earth. This is very important to me.

2. I also work as a Conservation Advocate for the Center. Among other things, I work on protecting forests, particularly on public lands, that provide habitat for species I care about. One of the primary threats to forests in the northeastern United States is acid deposition.

3. I have personally witnessed the impacts of acid deposition on the species and ecosystems of the Northeast. For example, I live within 5 miles of a trailhead to the top of Camel's Hump, one of the highest summits in Vermont, and the highest wild peak in the state, with only foot trails to the top. Some of the earliest studies on acid rain and its impacts on forests were conducted on this mountain, by a professor at the University of Vermont. I first hiked to the top of this mountain with my two sisters, when I was a high school student. Some 15 years later, I carried my baby daughter on my back up to the summit of Camel's Hump. I now live, and have lived for the last 10 years, within a few miles of this mountain, and I usually hike to the summit once a year. I last climbed to the peak

this past July. The forests on Camel's Hump, like all the taller peaks in the Green Mountains of Vermont, exhibit an abundance of dead trees at the higher elevations. I understand that frequent and prolonged exposure to acidic mountain fog, more so than actual acid "rain," is what damages and kills these trees, primarily red spruce. For 30 years, I have visited the forests on Camel's Hump, and witnessed the toll acid deposition has taken on the health and diversity of its high-elevation forests. I have observed similar degradation of high mountain forests on all the Northeast peaks I have climbed, including summits in the White Mountains and a dozen or so of the highest peaks in the Adirondacks. I usually climb at least one or two of the 46 highest peaks in the Adirondacks every summer. This past August, for example, I climbed to the highest summit in New York, Mt. Marcy, with my 15-year old son. I had previously climbed this mountain when I was a sophomore in college. My son and I observed many areas of dead trees on the slopes of Mt. Marcy. I know that acid deposition remains an enormous problem for the high elevation forests of the Northeast. I feel a sense of sadness that so many years after I first learned of acid rain as a young person in college, this issue has not been resolved and my own teenage son is now having to learn about it and witness it.

4. Damage from acid deposition impacts both my work and my personal life. For example, I go on at least one multi-day canoe trip every year in the Adirondacks with my family and friends. One of the most meaningful aspects of

these trips is seeing and hearing loons. I always look forward to the first sighting of a loon on every paddle trip. To me, loons are the iconic species of the Adirondack lakes. I feel a deep sense of happiness when I hear a loon calling while I am camped at night on the shore of a wild Adirondack lake. The impacts of acid deposition on Adirondack lakes includes harm to fish, which may become less abundant and diverse as a result of lower pH in lakes. Loons depend on fish for food, and with fewer fish, there will be less food available to support robust populations of loons. If the number of loons in the Adirondacks diminishes because of acid deposition, and my sightings and contact with loons on my trips become less frequent, I will experience a profound loss. One of the fish species at risk from acid deposition is the native strain of brook trout found in Little Tupper Lake and nearby waterbodies. The Little Tupper Lake heritage strain of brook trout is one of only a handful of native brook trout strains still found in the Adirondacks. Brook trout were once found in 95 percent of Adirondack streams and ponds and lakes, but today, only about 10 native strains remain. I mourn the loss of the native brook trout strains in the Adirondacks and when I have visited Little Tupper Lake, I have felt joy and satisfaction knowing that a beautiful native fish still lives there.

5. In the future I will continue to visit lakes and areas that are harmed by acid deposition. For example, I plan to visit the St. Regis Canoe Area and Little Tupper Lake next summer. I have also visited Weller Pond in the last two years,

and intend to return there in the next 2-3 years. According to the Adirondack Lake Assessment Program, the acidity status of Weller Pond is endangered or threatened and other water quality measurements indicate a moderate sensitivity to other acidic inputs. I have also visited Polliwog Pond in the last three years, and plan to return there within the next 2-3 years. According to the Adirondack Lake Assessment Program, the acidity status of Polliwog is endangered, with extreme sensitivity to future acidic inputs.

6. I have long worked to protect the Bicknell's thrush, a species which is greatly harmed by ongoing acid deposition. In 2010, I prepared and filed a listing petition under the Endangered Species Act for the Bicknell's thrush. The Bicknell's thrush is range-limited; it lives only in the northeastern U.S. and eastern Canada. It lives in high elevation spruce-fir forests in the Northeast, and these forests are imminently threatened by acid deposition as well as other threats such as increasing temperatures, other impacts of climate change, and intensive logging, including clearcutting and pre-commercial thinning. The Bicknell's thrush is so closely associated with the montane Spruce-fir forest of the Northeast that it is considered an indicator of the ecological health of this ecosystem. The Bicknell's thrush has already suffered population declines of 7-19 percent. Because it depends upon a habitat type that is naturally patchy and restricted, it is at particular risk from the ongoing impact of acid deposition and other threats.

7. The red spruce forest in the Northeast, critically important habitat for the Bicknell's thrush, has been harmed and is suffering ongoing harm due to acid deposition. Bicknell's thrush needs those trees for nesting, feeding, cover and thus the forest, the thrush, and my interests in the preservation of the Bicknell's thrush are harmed by ongoing acid deposition.

8. Acid deposition can also affect the Bicknell's thrush directly by altering available soil calcium levels. Acid precipitation leaches calcium ions from forest soils. Reduced calcium availability can affect the abundance and quality of invertebrate prey that Bicknell's thrush relies on. High levels of acid deposition have been linked to reductions in the size and abundance of snails, earthworms, millipedes, and other invertebrate prey. The corresponding reduction in dietary calcium consumed by breeding Bicknell's thrush compromises breeding females' ability to form eggshells and provide the nutrients necessary to nestlings' developing skeletal structures. The abundance of invertebrates in forests with high acid deposition is reported to be up to eight times less than in forests not exposed to acid deposition.

9. The ongoing effects of acid deposition, if nothing further is done to reduce this impact, will continue to harm the species. Because acid deposition directly threatens Bicknell's thrush habitat, reducing acid deposition is a direct and measurable action we can take to protect the species and give it a better chance of

surviving.

10. I have done volunteer fieldwork for two out of the last four summers for Mountain Bird Watch, a monitoring program for high-elevation songbirds here in the Northeast. In the course of this fieldwork, I have hiked up to a mountain ridge on Morse Mountain, in Vermont, and performed a survey for Bicknell's thrush and four other high-elevation bird species. The survey is performed by listening for bird songs. In 2009, I heard two Bicknell's thrush during this survey, and sighted one at close range at the end of the survey. In 2010, I heard one Bicknell's thrush after I had completed the survey.

11. The Bicknell's thrush is a species that is unique to the northeastern United States and eastern Canada. It is not found anywhere else in the world. This species is emblematic to me of the unique community of species that live in this part of the world, which is an important part of the world to me. The prospect of this species fading away is personally extremely painful to me, and its loss would also represent a profound change in the nature of the habitat in which it lives. I particularly love the high elevation areas of this region. As a result of acid deposition these places are likely to change dramatically. This is a very painful possibility for me to consider.

12. I plan to participate again in surveys for the Bicknell's thrush in June 2013 in the subalpine zone of the Adirondack mountains of New York and/or the

Green Mountains of Vermont . In addition to taking part in the survey program, I am planning to return frequently to these areas in the future. For example, I plan to spend time in the high peaks of the Adirondacks by summer 2013 at the latest.

13. The high mountain wilderness areas of the Northeast are incredibly important to me. They are some of the most beautiful and wild areas in the United States, and also provide some of the best habitat for the Bicknell's thrush. Acid deposition causes widespread tree mortality, and seeing that I feel a great loss, both because of the aesthetic loss and loss of scenic beauty and knowing there is less habitat there for species that I care about.

14. I am aware that the Environmental Protection Agency (EPA) is required to set the secondary National Ambient Air Quality Standards (NAAQS) at the level necessary to protect the public welfare from the effects of sulfur and nitrogen pollution, including acid deposition. Further limits on the allowable amount of oxides of sulfur and oxides of nitrogen would help protect the species, ecosystems, and resources I have discussed above, and protect my interests in the continued existence and health of these species and ecosystems.

15. The EPA's failure to propose a strengthened secondary NAAQS for oxides of sulfur and oxides of nitrogen also deprived me of the opportunity to review and evaluate the standard with reference to areas and species that I am working to protect. Were the EPA to propose improved standards, I would be able

to provide comments to the agency on them, including how they could be best applied to protect to protect species like the red spruce and the Bicknell's thrush.

16. The EPA's failure to strengthen the secondary NAAQS for oxides of sulfur and oxides of nitrogen also deprives me of additional opportunities to advocate for decreased emissions of these pollutants. For example, for the past five years I have been following biomass power plant issues very closely, and I have commented on Clean Air Act permits for proposed biomass plants. For example, I submitted comments on a state air permit for a biomass energy plant proposed by Laidlaw LLC in northern New Hampshire. Biomass power plants tend to emit large quantities of nitrogen oxides as well as smaller quantities of sulfur oxides, both of which contribute to acid deposition. Biomass plants in New Hampshire and Vermont may affect nearby Class I airsheds in federally designated wilderness areas on the White Mountain National Forest. These wilderness areas contain some of the best habitat for Bicknell's thrush in the United States. They also contain some of the most spectacular mountain scenery in eastern North America. The nationally renowned Appalachian Trail runs right through this high mountain area in the Presidential Range of the White Mountains. Biomass air pollution will contribute to acid deposition in the high elevation forests where the red spruce and Bicknell's thrush live. Were the EPA to strengthen the secondary NAAQS for oxides of sulfur and oxides of nitrogen, proposed biomass plants

would need to demonstrate that they would not contribute to a violation of the new standard. I would then have the opportunity to comment on this important issue, and an additional avenue to advocate for reductions in these pollutants, when air permits for biomass plants in my region are proposed and processed.

17. I rely on the Center to protect the species and ecosystems discussed above as well as my interests in them, including by bringing the current case challenging the EPA's failure to strengthen the secondary NAAQS for sulfur and nitrogen pollution.

I declare under penalty of perjury that the foregoing is true and correct and was executed on November 21, 2012, at Richmond, Vermont.

Mollie Matteson

DECLARATION OF ELIZABETH NORCROSS

I, Elizabeth Norcross, declare as follows:

1. I am a resident of Arlington, Virginia. I am a member of the National Parks Conservation Association (NPCA), and have been a member of NPCA since 2003.

2. I am currently adjunct faculty in eco-theology at Wesley Theological Seminary in Washington, D.C. I also co-founded and currently direct the Green Seminary Initiative, dedicated to infusing case for the earth into theological education and equipping religious leaders with the tools to lead their congregations in confronting the ecological challenge. I also developed a spiritual study guide to Ken Burns' film, "The National Parks: America's Best Idea."

3. After obtaining a Master of Forestry from Duke University, I worked as professional staff for the United States Senate National Parks and Forests Subcommittee, where I helped draft and move legislation to protect National Parks, National Forests, and wild and Scenic Rivers. During this time, I became aware of a variety of threats to parks, including acid deposition.

4. I next worked as Vice President of Conservation for American Rivers, a conservation organization dedicated to the protection of rivers and riverine habitat. In this work, I became aware of the impact of acid deposition on plant life in riparian areas and on waterways and riverine creatures.

5. I hike in and near Shenandoah National Park, which is next to my second home in Luray, Virginia. I hike in this area once or more each month, and record these hikes in hiking logs. I hiked in Shenandoah National Park on October 21, 2012. I plan to return to Shenandoah National Park again at the end of November of 2012.

6. Among my hikes in this area are the South Fork of the Shenandoah River, an area not within Shenandoah National Park, and Jeremy's Run, which is in the Park. My husband fishes in these areas.

7. Beyond the physical activity of hiking, I am an eco-theologian and naturalist and therefore rely on the entire experience of my hike to observe and view the whole ecosystem and its various wildlife species. The Appalachian region is extremely diverse biologically and depends on healthy water and air and other natural resource components to remain that way. I am fortunate enough to be able to visit this area during all seasons.

8. I am aware of the effects of acid deposition on waters in and near Shenandoah National Park, including decreases in populations of fish and other biota, higher fish mortality, and reduction in species diversity. When I see oaks and hemlocks under stress in the Park, I am concerned that I am seeing the effects of acid rain. From a faith perspective, I am quite concerned that we are not meeting our responsibilities to be participants in, and stewards of, what I consider the gift of the creation. Furthermore, since water plays such an essential role in

Christian ritual and tradition, our spiritual experience is degraded by the degradation of the waters and all the creatures that live in them. I am concerned about the degradation of the waters in and around the Shenandoah National Park, which was itself set apart to be kept sacred and apart from the impacts of industry.

9. I am aware that on April 3, 2012, EPA has refused to tighten national standards that could have reduced the impacts of acid rain on ecosystems. I am concerned that EPA's failure to act means continued impacts that acidify water bodies and harm fish and other wildlife. These impacts will diminish my enjoyment of affected areas and their ecosystems as well as my spiritual experience of them.

10. It is my understanding that EPA can protect ecosystems from the harmful effects of acid deposition by strengthening these standards. This action would increase my enjoyment of areas affected by this acid deposition.

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

Executed this 15th day of November, 2012.

Elizabeth Norcross

DECLARATION OF JUSTIN RUSSELL

I, Justin Russell, hereby declare and state:

1. I am the Membership Coordinator for the Clean Air Council (Council), a member-supported non-profit corporation organized and existing under the laws of the Commonwealth of Pennsylvania. In that capacity I am familiar with the Council's mission, which is "Protecting Everyone's Right to Breathe Clean Air." Working to reduce Pennsylvania's exposure to harmful air pollution is a core part of the Council's mission. I am familiar with the Council's work to improve air quality in Pennsylvania.

2. I have been the Membership Coordinator for the Council since March 26, 2012. My duties as Membership Coordinator include: managing databases that contain information on members and prospective members, supervising membership campaigns and processing membership renewals and working with major donors and foundations that support the Council. My work requires me to be familiar with the Council's purpose, organization and activities, as well as the environmental interests and concerns of Council members.

3. In my capacity as the Membership Coordinator for the Council, I have access to current information about all of the Council's members and board members, including their primary residential address.

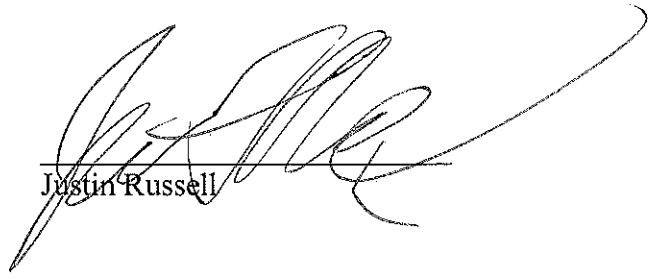
4. Based on my review of that information, I declare that the Council has approximately 4,930 members. Those members live throughout Pennsylvania, Delaware and New Jersey. Members of the Council also live in Arizona, California, Colorado,

Indiana, Maine, Massachusetts, Maryland, Michigan, North Carolina, Oregon, Texas, and Virginia.

5. Council members live, work, recreate and breathe in areas of Pennsylvania that are affected by oxides of nitrogen and sulfur. EPA's failure to adopt stronger secondary national ambient air quality standards for oxides of nitrogen and sulfur to protect public welfare as required by the Clean Air Act threatens the welfare of these Council members.

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

Executed on 11/26, 2012.



Justin Russell

DECLARATION OF KIERÁN SUCKLING

I, Kierán Suckling, declare as follows:

1. I am Executive Director of the Center for Biological Diversity. I have personal knowledge of the facts and statements contained herein and, if called as a witness, could and would competently testify to them. This declaration is made in support of the Center for Biological Diversity et al.'s Petition for Review in this case.

2. The Center for Biological Diversity (the "Center") is a non-profit corporation with offices throughout the country. The Center works to protect wild places and their inhabitants. 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 physical health and spiritual welfare of generations to come. In my role as Executive Director, I am familiar with and oversee all aspects of the Center's work.

3. The Center works on behalf of its members, who rely upon the organization to advocate for their interests in front of state, local and federal

entities, including the EPA and the courts. The Center has approximately 39,000 members nationwide.

4. The Center has developed several different practice areas and programs, including the Climate Law Institute (formerly, our "Climate, Air, and Energy Program"), an internal institution with the primary mission of curbing global warming and other air pollution, and sharply limiting their damaging effects on endangered species and their habitats, and on all of us who depend on clean air, a safe climate, and a healthy web of life. One of the Climate Law Institute's top priorities is the full and immediate use of the Clean Air Act to reduce air pollution.

5. The Center has long worked to reduce oxides of sulfur and oxides of nitrogen as well as other air pollution to protect public health and the environment. In 2005 we filed suit against the EPA for failing to review and revise the air quality criteria for oxides of nitrogen and sulfur oxides and the national ambient air quality standards (NAAQS) for these pollutants. *Center for Biological Diversity, et al. v. EPA*, No. 05-1814 (LFO) (D.D.C. filed September 12, 2005). This case resulted in a court-ordered settlement agreement setting forth deadlines for the EPA to update these critically important standards. On February 9, 2010, EPA issued updated primary NAAQS for nitrogen dioxide. Primary National Ambient Air Quality

Standards for Nitrogen Dioxide; Final Rule, 75 Fed. Reg. 6474 (February 9, 2010). On June 22, 2010, EPA issued updated primary NAAQS for sulfur dioxide. Primary National Ambient Air Quality Standard for Sulfur Dioxide; Final Rule, 75 Fed. Reg. 35520 (June 22, 2010). When EPA declined to revise the secondary NAAQS for oxides of nitrogen and sulfur, Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Sulfur; Final Rule, 77 Fed. Reg. 20218 (April 3, 2012), we filed this case to challenge that decision.

6. We have taken and continue to take many other actions to limit air pollution. For example, we have moved to intervene in the case *State of Alaska v. Clinton et al.*, No. 12-cv-142 (D. Alaska, filed July 13, 2012), in which the State of Alaska is challenging a rule promulgated by the EPA that will reduce the emission of oxides of sulfur by requiring the use of low-sulfur fuel in ships. Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder; Final Rule 75 Fed. Reg. 22895 (April 30, 2010). We also filed suit in 2010 against EPA for failing to meet numerous deadlines for limiting dangerous particle pollution, including failing to determine whether areas in five western states are complying with existing air-pollution standards and failing to ensure that states are implementing legally required plans to meet the standards, and again

reached a settlement setting forth deadlines for EPA to carry out these important duties. *Center for Biological Diversity v. Jackson*, No. cv-10-1846 (N.D. Cal., filed April 28, 2010). In addition, we have mounted challenges to the Clean Air Act permits issued by EPA for drill ships to drill for oil in the Chukchi and Beaufort Seas. *Resisting Environmental Destruction on Indigenous Lands v. EPA*, No. 12-70518 (9th Cir., filed February 17, 2012) *(Discoverer*); *Alaska Wilderness League v. EPA*, No. 12-71506 (9th Cir., filed May 16, 2012) (*Kulluk)*. These petitions challenge the failure to control emissions of carbon monoxide, nitrogen oxides, volatile organic compounds, and particulate matter from the vast fleet of supply ships that accompany the drill ships, the decision to exclude areas around the drill ships from any pollution controls whatever, and violations of an hourly emissions standard for nitrogen dioxide.

7. These examples are illustrative of our advocacy in this area, not exhaustive.

8. The Center and its members have an interest in the EPA's full compliance with the Clean Air Act in reviewing and revising the secondary NAAQS for oxides of sulfur and oxides of nitrogen. The EPA's actions challenged here impair the Center's ability to carry out its mission and our members' ability to protect their interests in multiple ways.

9. First, the EPA's decision not to strengthen the secondary NAAQS for oxides of sulfur and oxides of nitrogen means that sensitive ecosystems and species will receive less protection from the impacts of acid deposition. This harms these ecosystems and species, as well as our interests in protecting them. Simply stated, the EPA's refusal to strengthen the standards allows sulfur and nitrogen pollution to continue to be emitted at levels known to cause harmful depositional effects in sensitive ecosystems, and thus harms both the Center's and our members' interests in reducing deposition-related environmental harm.

10. Second, the lack of an updated secondary NAAQS for oxides of sulfur and oxides of nitrogen means that there will be fewer opportunities for agencies to take steps to reduce these pollutants, fewer opportunities for the Center and our members to advocate for greater reductions, and less information available to the Center and our members regarding this important problem and how to solve it. For example, the EPA's failure to revise existing standards means that the entire country remains in attainment of those standards, with important implications for the Clean Air Act's new source review program. If the standard were strengthened, some or all of the most acid-sensitive areas would not meet the new standard, triggering additional permitting requirements through the non attainment new source

review program. And in areas still attaining the new standard, permits issued to new sources under the prevention of significant deterioration program would have to demonstrate that emissions will not cause or contribute to violations of the standard. The Center, our staff, and our members would thus have the opportunity to comment on these permit reviews and to advocate for greater reductions in these pollutants. In addition, a strengthened standard would require some states to update their state implementation plans in order to achieve greater reductions and meet the new standards. A strengthened standard would also almost certainly lead to more rigorous analysis by agencies required to demonstrate conformity with these plans when approving projects. All of these processes would lead to greater participation opportunities and greater information availability to the Center and its members regarding the impacts of acid deposition and ways to reduce these pollutants.

11. The processes mentioned above are vital sources of information about acid deposition, sources of sulfur and nitrogen pollution, and solutions to reduce it. The Center uses the information obtained from processes like these in numerous ways. For example, we use it to communicate to our members, the media, the public, and our elected representatives about this problem, because greater awareness of these impacts is an important step in

our efforts to reduce and eliminate them. By depriving the Center and its members of multiple opportunities for such participation, the EPA's failure to update the secondary NAAQS for oxides of sulfur and oxides of nitrogen severely harms the Center's ability to carry out our mission.

12. EPA's failure to strengthen the secondary NAAQS for oxides of sulfur and oxides of nitrogen also deprives the Center and its members of other benefits that would flow from increased attention to and awareness of the issue. For example, further action to address acid deposition would almost certainly result in significant media coverage of the issue, heightening public awareness and support for solutions and bolstering our efforts to solve this problem and protect the species and ecosystems harmed by it.

13. The Center's members rely on the organization to compel EPA to comply with its existing legal duties and to advocate for the strongest possible air pollution controls. The Center's members also rely on the organization to compel EPA to comply with the provisions of the Clean Air Act and to operate lawfully.

14. EPA's failure to comply with the Clean Air Act in adopting the rule challenged here harms the interests of the Center and its members. These interests include the substantive interests of the organization and its

members in protecting species and ecosystems threatened by acid deposition. These interests also include procedural and informational interests advanced by the Clean Air Act's permitting programs, interests directly threatened by EPA's violations challenged here.

15. If EPA had followed the law, I believe that the agency would have strengthened the secondary NAAQS for oxides of sulfur and oxides of nitrogen. This would have protected both the substantive and procedural interests of the Center and its members discussed herein.

16. If this court were to rule for Petitioners in this action, the harm to the Center and its members that have resulted from the agency's illegal actions would be redressed.

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

Executed on November 19, 2012, at Tucson, Arizona.

Kierán Suckling

DECLARATION OF MARK A. WENZLER

I, MARK A. WENZLER, hereby declare and state:

1. I am the Vice President for Climate and Air Quality Programs at National Parks Conservation Association ("NPCA"), a nonprofit corporation organized and existing under the laws of the District of Columbia.

2. I am familiar with NPCA's mission, which is to protect and enhance America's National Parks for present and future generations. Improving air quality-related values in national parks, including ecosystem health, is germane to NPCA's mission.

3. I have led NPCA's air quality program since April 2005. Since that time NPCA's air quality program and my work have focused on protecting and strengthening federal laws and regulations relating to air quality in the national parks, and enforcing those laws and regulations in the state and federal court systems. A major focus of NPCA's air quality program and my work has been and continues to be protecting national parks' air, land, water, vegetation and wildlife by strengthening and enforcing statutory and regulatory mandates relating to air pollution. The involvement of NPCA's members is critically important to the success of NPCA's air quality program.

4. In my capacity as Vice President for Climate and Air Quality Programs at NPCA I have access to current information about all of NPCA's members and board members, including their primary residential addresses. I am also aware, through membership survey data, that many NPCA members frequently visit national parks, that air quality in the parks is important to many NPCA members, and that many NPCA members support NPCA's work to improve air quality in the national parks. According to a February 2006 survey of a representative sample of NPCA's approximately 321,686 members at the time, 62 percent of

NPCA members visit the national parks often, and 49 percent of NPCA members list wildlife and nature viewing as their main activity while visiting the parks. Seventy-six percent of NPCA members believe the national parks are faced with serious threats, including air pollution. Eighty-six percent of NPCA members believe that air and water pollution that originates outside the parks is causing serious damage inside the parks.

5. Based on my review of the membership information, I declare that as of October 31, 2012 NPCA had 345,796 members nationwide. Those members live in all 50 states, the District of Columbia, and the U.S. territories of American Samoa, Guam, Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands.

6. The Environmental Protection Agency's (EPA) final rule entitled "Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Sulfur," 77 Fed. Reg. 20,218 (April 3, 2012) considers the effects of oxides of nitrogen and sulfur on sensitive aquatic and terrestrial ecosystems. I am aware that in promulgating these standards EPA determined that its existing secondary standards for these pollutants were not requisite to protect public welfare from these adverse effects, but that EPA nonetheless decided to leave the pre-existing standards unchanged. 77 Fed. Reg. at 20262.

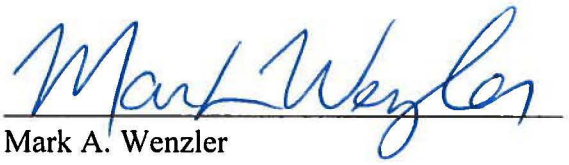
7. Many of NPCA's members frequently visit national parks. One of the reasons they travel to national parks is to view and enjoy their forests, streams, rivers, lakes, fish and wildlife. I am aware that these natural values have been impaired and continue to be impaired by air pollution in many national parks. Many of NPCA's members are concerned about the role that air pollution plays in impairing the natural values of the national parks.

8. I am informed and I believe that EPA's rule will not adequately prevent and/or remedy impairment of national parks' vegetation and other natural resources by the airborne

deposition of NO2 and SO2. The EPA's rule harms NPCA's members because it fails to prevent and/or remedy impairment of national parks that NPCA members visit. NPCA members' enjoyment of national parks will be diminished unless EPA promulgates secondary National Ambient Air Quality Standards for oxides of nitrogen and sulfur that will prevent and/or remedy impairment of national park natural resources.

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

Executed on November 27, 2012



Mark A. Wenzler
Vice President, Climate & Air Quality Programs
National Parks Conservation Association