

**In The
Supreme Court of the United States**

COMMONWEALTH OF MASSACHUSETTS, ET AL.,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY, ET AL.,

Respondents.

**On Writ Of Certiorari To The
United States Court Of Appeals
For The District Of Columbia Circuit**

**BRIEF OF THE U.S. CONFERENCE OF MAYORS,
NATIONAL ASSOCIATION OF COUNTIES,
INTERNATIONAL MUNICIPAL LAWYERS
ASSOCIATION, AMERICAN PLANNING
ASSOCIATION, THE CITY OF SEATTLE, THE
CITY OF ALBUQUERQUE, THE CITY OF
BURLINGTON, AND THE CITY AND COUNTY
OF SAN FRANCISCO AS *AMICI CURIAE*
IN SUPPORT OF PETITIONERS**

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INTEREST OF THE *AMICI CURIAE*¹

Local officials are acutely aware of the need to reduce global warming pollutants now. Over the last 18 months, mayors of 275 cities in 42 States, representing more than 48 million Americans, have signed the U.S. Mayors Climate Protection Agreement (*available at* <http://www.ci.seattle.wa.us/mayor/climate/>). These mayors have agreed to reduce greenhouse gas emissions in their own communities to seven percent below 1990 levels by 2012. Each of the individual municipal *amici* on this brief is a signatory to the Agreement.

Our municipal leaders recognize, however, that they cannot do the job alone. To achieve the reductions needed to prevent grave injury from global warming, the U.S. Environmental Protection Agency must lead the way, and not shirk its responsibilities as set forth in the federal Clean Air Act. Through this brief, *amici* urge the Court to direct EPA to adhere to the plain text of the Act, treat greenhouse gases as air pollutants subject to regulation under Section 202, and apply the legal standard set forth in that provision. The particular interests of each *amicus* are described below.

* * * * *

The U.S. Conference of Mayors represents more than 1,100 cities with populations of 30,000 or more. The Conference promotes the development of effective urban

¹ The parties have consented to the filing of this brief, and letters reflecting that consent have been filed with the Clerk. This brief was not authored in whole or in part by counsel for a party, and no person or entity other than *amici*, their members, and their counsel made a monetary contribution to the preparation or submission of this brief.

policy, strengthens federal-city relationships, and creates a forum in which mayors can share ideas and information. In June 2005, the Conference endorsed the U.S. Mayors Climate Protection Agreement, which urges federal, State, and local officials to enact policies to reduce global warming pollution.

The National Association of Counties (NACo) was created in 1935, and its membership totals more than 2,000 counties, representing over 80 percent of the nation's population. NACo acts as a liaison with other levels of government, works to improve public understanding of counties, serves as a national advocate for counties, and helps counties find innovative solutions to the challenges they face. NACo is involved in several special projects to protect the environment and promote sustainable communities.

The International Municipal Lawyers Association (IMLA) is a non-profit, professional organization that has been an advocate and legal resource for local governments since 1935. IMLA members include attorneys from more than 1,400 municipalities across the country. It serves as the legal voice for the nation's local governments. In view of the grave threat to municipalities posed by global warming, IMLA has a vital interest in the legal issues raised by this case.

The American Planning Association (APA) is a public interest organization founded in 1978 to advance the art and science of planning at the local, regional, State, and national levels. It represents more than 38,000 planners, officials, and citizens involved in formulating and implementing planning policies and land use regulations. The American Planning Association has adopted two policy

guides that highlight the role and responsibility of planners and the planning profession in addressing climate change issues: its Energy Policy Guide adopted in 2004 (*available at* <http://www.planning.org/policyguides/energy.htm>), and its Policy Guide on Planning for Sustainability adopted in 2000 (*available at* <http://www.planning.org/policyguides/sustainability.htm>). The APA encourages its members to combat global warming in several ways, including the design of transportation systems that promote sustainability by reducing dependence on fossil fuels.

The City of Seattle, the largest city in the Pacific Northwest, launched the U.S. Mayors Climate Protection Agreement and has been actively addressing global warming since the early 1990s. Seattle is particularly vulnerable to climate change because its municipal water supply and hydroelectric system are both fed by annual snowpack accumulations in the Cascade Mountains, which have already declined by 50 percent since 1950. Actions to reduce climate pollution emissions are one of the City's highest priorities. Indeed, the City's municipally owned utility, City Light, is the only electric utility in the country that is essentially climate neutral, an achievement made possible by the City's clean hydroelectric supply, reliance on energy conservation, and investments in carbon offsets.

The City of Albuquerque is especially concerned about global warming because warmer climate patterns threaten Albuquerque's ability to rely on nearby rivers for municipal, industrial, and residential use. Albuquerque also is host to the world's most photographed annual event – the International Balloon Fiesta – a 10-day celebration in October that attracts half a million visitors and depends heavily on the cool, clear mornings of a traditional Rocky

Mountain fall. Albuquerque is greatly reducing its own greenhouse gas emissions through the use of alternative fuel vehicles, green building standards, and other innovative programs.

The City of Burlington is particularly concerned about global warming because the forested areas that surround the City face serious threats from insects that can survive in northern climates with slight temperature increases. Damage to these forests will threaten Burlington's maple sugar industry, ski industry, and fall foliage tourism, all of which are integral to the local economy. Burlington has instituted many improvements to reduce greenhouse gas emissions, including transportation initiatives and energy conservation strategies.

San Francisco, which has a population of approximately 777,000, is concerned about global warming because of its harmful effects on San Francisco's power and water supplies, property, and infrastructure. San Francisco has instituted many measures to reduce greenhouse gas emissions, including renewable energy programs and aggressive initiatives to reduce municipal emissions. But because these measures cannot, by themselves, solve the problem of global warming, San Francisco encourages and supports the efforts of other governmental entities to reduce greenhouse gas emissions.



SUMMARY OF ARGUMENT

Respect for State and local authority requires adherence to the broad plain meaning of the federal Clean Air Act. The cumulative position of various federal agencies is that EPA has no legal authority to regulate greenhouse

gas emissions from motor vehicles under the Clean Air Act, and that the federal Energy Policy and Conservation Act of 1975 preempts States from controlling these emissions under State law. These positions are exceedingly unfair to States and municipalities, who will be the first responders to the disasters caused by global warming. EPA's position also directly threatens the ability of States to adopt greenhouse gas standards for motor vehicles under section 209(b) of the Clean Air Act. Moreover, without federal leadership, State and local efforts to address global warming will be entirely inadequate to protect critical State and local interests.

Global warming is not merely a future threat, but a present deadly reality, claiming the lives of up to 150,000 people each year due to malnutrition, malaria, and other maladies. In addition to these ongoing public health consequences, global warming is likely to mean more disasters such as intense hurricanes and storm surges crashing into America's eastern seaboard, one of the fastest growing parts of the country. Municipalities also must grapple with the less cataclysmic but still threatening challenges of climate change: more smog; sudden rainstorms that overwhelm and pollute municipal water supplies and flood transportation networks; and droughts that disrupt hydropower transmission and deplete local reservoirs.

The continuing and threatened impacts of global warming highlight the remarkable nature of Respondents' assertion that *none* of the States, cities, and national organizations that filed this litigation has standing. But Petitioners' injury does not turn on whether global warming reaches some catastrophic level. Rather, Petitioners already are injured and will suffer more injury with each

additional increment of human-induced global warming. EPA has the power to redress these injuries by mandating reductions in greenhouse gases under Section 202 of the Clean Air Act. All of the necessary elements for standing have plainly been met here.



ARGUMENT

Amici agree with the textual exegesis and legal analysis provided by Petitioners, and there is no need to repeat those arguments here. Instead, we explain why this case is of particular concern to local officials and planners, who are the first responders to the serious harm that global warming is causing and will continue to cause, and why Respondents' contentions threaten the interests of municipalities and their residents.

I. PRINCIPLES OF FEDERALISM AND RESPECT FOR STATE AND LOCAL AUTHORITY COMPEL ADHERENCE TO THE BROAD PLAIN MEANING OF THE FEDERAL CLEAN AIR ACT.

In interpreting other federal environmental statutes, the Court sometimes has invoked principles of federalism to support a narrow reading of federal authority. *E.g.*, *Solid Waste Agency of N. Cook County v. United States Army Corps of Eng'rs*, 531 U.S. 159, 174 (2001). In many situations, however, an adequate federal presence is essential to promote federalism, preserve State sovereignty, and protect State and local interests. *E.g.*, *Rapanos v. United States*, 126 S. Ct. 2208, 2246-47 (2006) (Kennedy, J., concurring) (observing that adequate federal protection

of intrastate tributaries and wetlands promotes State interests due to the interstate harm caused by their destruction). In this case, respect for State and local authority requires adherence to the broad plain meaning of the federal Clean Air Act, for several reasons.

First, the positions of various federal agencies regarding greenhouse gas regulation have left State and local officials in an untenable position. In an administrative proceeding not at issue in this litigation, the National Highway Traffic Safety Administration (NHTSA) recently asserted that the federal Energy Policy and Conservation Act of 1975 (EPCA) preempts State and local officials from regulating greenhouse gas emissions from motor vehicles. *See* 71 Fed. Reg. 17566, 17654-70 (April 6, 2006) (discussing preemption under 49 U.S.C. § 32919(a)). Thus, the cumulative position of EPA and NHTSA is that EPA cannot regulate greenhouse gas emissions from motor vehicles under the Clean Air Act, and EPCA preempts other levels of government from doing so under State law.

Worse still, in setting fuel efficiency standards, NHTSA does not consider the harm threatened by global warming. Specifically, NHTSA does not count the benefits of reducing greenhouse gases in its cost-benefit analysis for federal corporate average fuel economy (CAFE) standards. *See id.* at 17638 (rejecting proposals to consider the value of greenhouse gas reductions in setting CAFE standards).

Thus, unlike the typical case in which a federal agency disavows legal authority, which normally would leave the matter to our State and local officials, EPA's position here takes on far greater significance. We disagree with NHTSA's assertion regarding preemption, but

until a court rules differently, adequate federal control of greenhouse gas emissions from motor vehicles is even more urgent due to the prospect of States being unable to regulate them. The cumulative impact of the EPA and NHTSA positions is exceedingly unfair to State and local officials, who will be the first responders to the disasters caused by global warming (see Section II, *infra*).

Second, an unduly constrained reading of the federal Clean Air Act would curtail the regulatory authority of every State. Although Section 209(a) of the Act preempts State standards relating to the control of motor vehicle emissions, Section 209(b) allows California to adopt such standards subject to EPA approval, and it authorizes every other State to adopt standards identical to California's. See 42 U.S.C. §§ 7543(a) & (b). Under this authority, California has promulgated greenhouse gas emission standards for mobile sources, and several other States have adopted those standards.² If greenhouse gases are deemed "air pollutants" under the Clean Air Act, the waiver authority under Section 209 would provide a safe harbor and authorize these State standards notwithstanding NHTSA's reading of EPCA discussed above. But unless the appeals court's ruling below is reversed, all of these standards will likely be rendered inoperative, and all States will likely be prohibited from using Section 209 to address greenhouse gas emissions from motor vehicles.

As Justice Kennedy has recognized, "the States maintain permanent staffs within special agencies" to implement the federal Clean Air Act, and these State

² See Cal. Code Regs., tit. 13, §§ 1900, 1961, 1961.1 (2006); 71 Fed. Reg. 17566, 17655 (April 6, 2006) (discussing the California standards).

employees “no doubt take pride in their own resourcefulness, expertise, and commitment to the law.” *Alaska Dep’t of Env’tl. Conservation v. EPA*, 540 U.S. 461, 516 (2004) (Kennedy, J., dissenting). By ignoring the plain text of the Act, EPA disrespects the States that have adopted California’s greenhouse gas standards under a straightforward reading of the Act, essentially “relegating [them] to the role of mere provinces or political corporations, instead of coequal sovereigns entitled to the same dignity and respect.” *Id.* at 518.

Finally, global warming is exactly the kind of national and international issue that the Founders would have recognized as requiring a national response. Federalism, properly viewed, does not maximize State authority at the expense of federal authority, but instead ensures that each level of government has the appropriate authority necessary to promote the welfare of our citizens. Given the enormity of the problem posed by global warming, it does no violence to principles of federalism to give full effect to the broad authority set forth in the Clean Air Act. As John Jay put it, the Founders at the Constitutional Convention believed “that a national government competent to every national object, was indispensably necessary.”³

States and localities already are taking significant steps to reduce greenhouse gas emissions. For example, many U.S. municipalities have reduced greenhouse gas emissions from municipal fleets by purchasing alternative-fuel vehicles, downsizing their fleets, and optimizing

³ A Citizen of New York (John Jay), *Address to the People of the State of New York* (Apr. 15, 1787), in 17 DOCUMENTARY HISTORY OF THE RATIFICATION OF THE CONSTITUTION 101, 111 (Merrill Jensen, John P. Kaminski & Gaspare J. Saladino eds., 1976).

vehicle travel.⁴ Cities and counties also have turned to wind power, solar power, and other renewable sources of electricity to reduce fossil fuel consumption.⁵ In the absence of federal leadership, however, these efforts will not reduce climate pollution enough to avoid devastating injury to local communities.

Moreover, “free-rider” inequities arise because the States that do little to address global warming still benefit from the sacrifices made by other States and municipalities. In *Rapanos*, Justice Kennedy observed in concurrence that federal protection of wetlands and non-navigable waterways promotes the interests of all States because it protects them from pollution and flooding caused by environmental degradation in upstream States. *See Rapanos*, 126 S. Ct. at 2246-47. In the same way, federal regulation of greenhouse gas emissions will promote the interests of all States by protecting them from the threat of global warming and reducing the free-rider inequities arising from the relative inattention of certain States.

II. UNLESS OUR NATION TAKES ADEQUATE STEPS TO CONTROL GREENHOUSE GASES NOW, GLOBAL WARMING WILL CONTINUE TO CAUSE DEVASTATING HARM TO LOCAL COMMUNITIES ACROSS THE COUNTRY.

Global warming is not merely a future threat, but a present deadly reality. The World Health Organization

⁴ *See* International Council for Local Environmental Initiatives (ICLEI), U.S. Cities for Climate Protection Campaign, Green Fleets, <<http://www.greenfleets.org/LocalGovernmentExamples.html>>.

⁵ *See* ICLEI, Green Power Options, <<http://www.greenpowergovs.org/>>.

estimates that anthropogenic (human-produced) warming already is killing up to 150,000 people each year due to malnutrition, malaria, and other maladies.⁶ In addition to these ongoing public health consequences, global warming also is causing immediate harm to the environment.⁷ And the overwhelming scientific consensus is that global warming will significantly worsen.

Conservative predictions indicate that average global temperatures will climb between 4.5 and seven degrees Fahrenheit by the end of the century.⁸ These numbers might seem small, but small shifts in global temperature can have enormous effects. Indeed, there is only about a ten degree increase between today's average global temperature and that at the height of the last ice age.⁹ The

⁶ See Jonathan Patz *et al.*, *Impact of Regional Climate Change on Human Health*, 438 NATURE 310, 310 (Nov. 17, 2005) (World Health Organization estimates that "warming and precipitation trends due to anthropogenic climate change of the past 30 years already claim over 150,000 lives annually"); *id.* at 313 (citing A.J. MCMICHAEL *ET AL.*, COMPARATIVE QUANTIFICATION OF HEALTH RISKS: GLOBAL AND REGIONAL BURDEN OF DISEASE DUE TO SELECTED MAJOR RISK FACTORS 1543-1649 (World Health Organization, Geneva, 2004)).

⁷ J. Alan Pounds *et al.*, *Widespread Amphibian Extinctions from Epidemic Disease Driven by Global Warming*, 439 NATURE 161, 165 (Jan. 12, 2006) (global warming already has helped cause the loss of many species and poses "an immediate threat to biodiversity.").

⁸ U.S. DEPARTMENT OF STATE, U.S. CLIMATE ACTION REPORT 2002, at 82 (May 2002) [hereinafter CLIMATE ACTION REPORT], <<http://www.epa.gov/globalwarming/publications/car/index.html>>; accord Richard A. Kerr, *News Focus: Three Degrees of Consensus*, 305 SCIENCE 932, 932 (Aug. 13, 2004) ("almost all the evidence points to 3°C [or 5.4°F] as the most likely amount of warming for a doubling of CO₂ * * * by century's end.").

⁹ ELIZABETH KOLBERT, FIELD NOTES FROM A CATASTROPHE 107 (2006).

United States is likely¹⁰ to warm between three and nine degrees Fahrenheit during this century.¹¹

The harm caused by global climate change will be especially challenging for State and local officials, who will serve as the first responders to the calamities global warming will bring. As has been made tragically clear in the United States in the wake of recent disasters, State and local officials are responsible for orderly evacuations from fires and floods, and they must plan and reconstruct neighborhoods or entire cities afterwards. Global warming is likely to mean more disasters like intense hurricanes and high storm surges crashing into America's eastern seaboard, which is one of the most urbanized parts of the country and one of the fastest growing.

Municipalities also must grapple with the less cataclysmic but still threatening challenges of climate change, such as higher temperatures that lead to more smog and federal sanctions for violating clean air standards; or sudden ferocious rainstorms that overwhelm and pollute municipal water supplies and flood transportation networks; or droughts that disrupt hydropower transmission and deplete local reservoirs. As discussed in more detail

¹⁰ In the scientific dialogue on climate change, the words "likely" and "very likely" have particular meaning. For example, in the Climate Change Impacts Reports prepared for the federally sponsored U.S. Global Change Research Program, "likely" indicates a likelihood of around 60 to 80 percent, and "very likely" indicates a likelihood of around 80 to 100 percent. See NATIONAL ASSESSMENT SYNTHESIS TEAM, CLIMATE CHANGE IMPACTS ON THE UNITED STATES: THE POTENTIAL CONSEQUENCES OF CLIMATE VARIABILITY AND CHANGE, REPORT FOR THE U.S. GLOBAL CHANGE RESEARCH PROGRAM 5 (2001) [hereinafter CLIMATE CHANGE IMPACTS], <<http://www.usgcrp.gov/usgcrp/Library/nationalassessment/foundation.htm>>.

¹¹ CLIMATE ACTION REPORT, *supra* note 8, at 84.

below, State and local officials across the United States face one or more of these challenges.

A. Local Officials Must Deal With Threats To People And Infrastructure From Flooding, Storm Surges, And Wildfires, All Of Which Will Worsen Because Of Global Warming.

Increasing sea levels are one of the most certain aspects of climate change.¹² The Intergovernmental Panel on Climate Change (IPCC) has high confidence (a 67-95% degree of certainty) that higher sea levels around North America will lead to “enhanced coastal erosion, coastal flooding, loss of coastal wetlands, and increased risk from storm surges, particularly in Florida and much of the U.S. Atlantic coast.”¹³ The IPCC projects a rise of sea levels across the globe of three inches to almost three feet by 2100.¹⁴

Rising sea levels affect coastal communities in several ways. First, low-lying areas may be permanently underwater as seas rise. In the New York City area, for example, “[a] one-foot rise in sea level would bring about on average 120 feet of erosion and submergence absent costly measures

¹² *Id.* at 156.

¹³ IPCC, CLIMATE CHANGE 2001: IMPACTS, ADAPTATION, AND VULNERABILITY, CONTRIBUTION OF WORKING GROUP II TO THE THIRD ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 4 n.6, 16 [hereinafter WORKING GROUP II] (James J. McCarthy *et al.*, eds., 2001), <<http://www.ipcc.ch/pub/wg2SPMfinal.pdf>>.

¹⁴ IPCC, CLIMATE CHANGE 2001: THE SCIENTIFIC BASIS, CONTRIBUTION OF WORKING GROUP I TO THE THIRD ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 16 (J.T. Houghton *et al.*, eds., 2001), <http://www.grida.no/climate/ipcc_tar/wg1/pdf/WG1_TARFRONT.PDF>.

to defend or restore the beaches. This kind of erosion would result in the loss of a significant portion of the beaches of New Jersey, New York City and Long Island.”¹⁵ A five to eight-inch rise in sea level would cause the loss of “thousands of acres” of beachfront land in Long Island and New Jersey.¹⁶

Rising sea levels also mean higher storm surges (since the surge starts from a higher waterline). By the turn of the next century, New York City’s 100-year floods could instead occur every 19 years, and overwhelm the city’s airports, highways, subways, and tunnels. As a result of sea level increases, weaker, more frequent storms in the future probably will do more damage than powerful, extraordinary storms do today. If a category three hurricane hit New York City, “surge levels could rise 25 feet above mean sea level at JFK airport and 21 feet at the Lincoln tunnel.”¹⁷

Baltimore, Maryland, also has infrastructure at serious risk from rising sea levels and flooding. According to one city official, “if the predictions of current, scientifically accepted global climate change models relating to changes in annual precipitation and sea level changes occur, those changes would have significant costly impacts to Baltimore City. * * * Impacted infrastructure would include storm drains, utility conduits, underground at grade parking and sanitary sewage conveyance and treatment facilities. This entire public and private infrastructure is designed and built around the existing sea

¹⁵ C.A. Standing App. 234-235 (Oppenheimer Decl.).

¹⁶ *Id.* at 235.

¹⁷ CLIMATE CHANGE IMPACTS, *supra* note 10, at 118, 122.

level.”¹⁸ Both Santa Cruz, California, and Boston, Massachusetts, would see formerly 100-year floods every ten years if sea level rises just one foot.¹⁹

Natural and human-induced changes, including the destruction of marshes, barrier islands, and wetlands over the last several decades, make the U.S. Gulf Coast particularly susceptible to damage from rising sea levels. By 2010, 73 million people will live in the nation’s most hurricane-prone counties, most of them in the Southeast United States. They will be in the path of more destructive storms because climate change probably will increase the intensity, if not the frequency, of Atlantic hurricanes.²⁰ Allstate Insurance Corporation no longer issues new policies to homeowners in Florida, Louisiana, the New York City area, and the Texas Gulf Coast because of the high risk of hurricane destruction.²¹ Like private homes, public property – roads, sewers, schools, police stations – is also at risk.

Wildfires are yet another natural threat to human life and property that global warming will exacerbate. Scientists have documented a sudden, sharp upsurge in wildfires in the western U.S., with more frequent large

¹⁸ C.A. Standing App. 38-40 (Conrad Decl.).

¹⁹ CALIFORNIA CLIMATE CHANGE CENTER, OUR CHANGING CLIMATE: ASSESSING THE RISKS TO CALIFORNIA 12 (2006), <<http://www.energy.ca.gov/2006publications/CEC-500-2006-077/CEC-500-2006-077.PDF>>; C.A. Standing App. 197-198 (Kirshen Decl.).

²⁰ CLIMATE ACTION REPORT, *supra* note 8, at 100-01; *see also* Kevin E. Trenberth and Dennis J. Shea, *Atlantic hurricanes and natural variability in 2005*, 33 GEOPHYSICAL RESEARCH LETTERS L12704 (2006).

²¹ Spencer S. Hsu, *Insurers Retreat from Coasts*, WASH. POST, Apr. 30, 2006, at A1; *see also* Anthony Ramirez, *Allstate to Pare Home Policies Near Shore*, N.Y. TIMES, Mar. 10, 2006, at B4.

wildfires, longer-burning fires, and longer fire seasons, starting in the mid-1980s. It is not clear whether the current rise in wildfire frequency and ferocity is attributable to global warming, but researchers note that “virtually all climate model projections indicate that warmer springs and summers will occur over the region in coming decades. These trends will reinforce the tendency toward early spring snowmelt and longer fire seasons. This will accentuate conditions favorable to the occurrence of large wildfires * * *.”²²

Wildfires require a massive municipal response, going well beyond fire and police departments. When the largest wildfires in California history swept through the San Diego region in late October 2003, the City of San Diego set up three evacuation centers. City staff assessed 400 damaged structures in 72 hours after the fire stopped. The City’s transportation department removed damaged trees, distributed 14,000 sandbags, and placed screens on storm drains to keep out fire debris.²³ While much of the cost of responding to the fire was covered by federal disaster aid, the City lost about \$2 million in waived fees associated with reconstruction, and was not reimbursed for other lost revenues, or the replacement of trees, shrubs, and ground-cover destroyed by the fire.²⁴

²² A.L. Westerling *et al.*, *Warming and Earlier Spring Increases Western U.S. Forest Wildfire Activity*, SCIENCE EXPRESS RESEARCH ARTICLES, July 6, 2006, at 1, 4.

²³ Michael T. Uberuaga, *Initial 30-Day Post-Fire Overview* (Dec. 3, 2003) (The City of San Diego Manager’s Report No. 03-242), <http://clerk-doc.sannet.gov/RightSite/getcontent/local.pdf?DMW_OBJECTID=09001451800ab1e5>.

²⁴ Lisa Irvine, *Update on the Costs and Reimbursement for the October 2003 Cedar Fire* (Mar. 26, 2004) (The City of San Diego (Continued on following page)

Whether to fire or flood, the crucial first hours of disaster response are a local responsibility. Global warming will increase the likelihood of natural disasters, and therefore increase the demands on local and county officials, employees, services, and budgets.

B. Local Officials Must Deal With The Effects Of Deadly Heat Waves and Heat-Related Air Pollution.

Not surprisingly, the Intergovernmental Panel on Climate Change notes that very hot days and more heat waves are “very likely” (a 90-99 percent chance) to occur as a result of climate change.²⁵ Increased temperatures present enormous challenges to county and local governments, and can have devastating effects on human health, particularly in urban areas.

Heat waves are a major global warming challenge for municipal governments – one that is present now, not looming in the future. In early August 2006, the chief of the climate-analysis branch of the National Center for Atmospheric Research said that “[t]here are very good reasons to believe that the current U.S. heat wave is at least partly caused by global warming.”²⁶ Urban areas are doubly at risk of heat waves because they trap heat, meaning residents cannot recover from intense heat

Manager’s Report No. 04-067), <http://clerkdoc.sannet.gov/RightSite/getcontent/local.pdf?DMW_OBJECTID=09001451800ae4e0>.

²⁵ WORKING GROUP II, *supra* note 13, at 7.

²⁶ Juliet Eilperin, *More Frequent Heat Waves Linked to Global Warming*, WASH. POST, Aug. 4, 2006, at A3.

overnight, and because they tend to be home to poor and vulnerable populations.²⁷

Major cities are already devoting resources to combating heat waves, recognizing that these events demand the same response as hurricanes, floods, or terrorist attacks. During an excruciatingly hot period in late July and early August this year, the city of New York opened more than 350 cooling centers, relied on back-up generators to avoid power failures, and activated the city's Emergency Operations Center. All towns in Rhode Island had to open at least one public cooling facility. Chicago officials tried to avert the same consequences of a 1995 heat wave that killed 700 people;²⁸ in 2006, they evacuated more than 1000 residents after a power failure in high-rise apartments and opened scores of cooling centers.²⁹

The July 2006 heat wave in California was the likely cause of more than 160 deaths, making it more deadly than the Loma Prieta earthquake of 1989 and Northridge earthquake of 1994. In the State's hottest inland regions, county morgues were over their capacity. Public officials called the heat wave "an invisible natural disaster."³⁰

The EPA estimates that, under one climate change scenario, "excess weather related mortality" in a single year would mean the death of 1250 people in New York City, 600 people in St. Louis, and between 200 and 300

²⁷ CLIMATE ACTION REPORT, *supra* note 8, at 106.

²⁸ CLIMATE CHANGE IMPACTS, *supra* note 10, at 106.

²⁹ Amanda Paulson, *When heat hits, city hall comes to the rescue*, CHRISTIAN SCIENCE MONITOR, Aug. 3, 2006, at 1.

³⁰ Amanda Covarrubias, *California Heat Wave Deaths Prompt Health Study*, L.A. TIMES, Aug. 3, 2006, at B1.

people in Atlanta, Dallas, and Los Angeles.³¹ Municipal governments are responsible for averting as many of these deaths as possible, and the costs they incur in doing so will be, at least in part, costs of global warming.

Warmer weather also exacerbates pollution, particularly ground-level ozone or smog, which is already a major health concern in our nation's cities and counties. Ozone forms when volatile organic compounds (VOCs), emitted by dry cleaners, cars, chemical plants, refineries, and other industrial sources, react with nitrogen oxides, emitted by vehicles and power plants, on hot and sunny days. A warmer climate means more days on which ozone is likely to form. For example, if temperatures rise three to 5.5 degrees, the number of days conducive to ozone formation in Los Angeles will rise by about 25 percent; if temperatures rise 5.5 to eight degrees, the number of ozone-conducive days increases by 75 percent.³² Hot weather can also create a vicious cycle of ozone pollution: energy usage spikes on hot days (in part because more people use air conditioning), leading to the emissions of more ozone-forming pollutants from power plants.³³

Currently, 462 counties, home to more than 158 million people, exceed federal standards for ozone levels.³⁴ Global warming, by making ozone formation more likely,

³¹ U.S. EPA, *Average Annual Excess Weather-Related Mortality for 1993, 2020, and 2050 Climate*, slide <<http://yosemite.epa.gov/OAR/globalwarming.nsf/content/ResourceCenterPresentationsImpacts.html>>.

³² CALIFORNIA CLIMATE CHANGE CENTER, *supra* note 19, at 5.

³³ JA 233 n.18 (MacCracken Decl.); *see also* Janet Wilson, *Intense Heat Begets Intense Smog*, L.A. TIMES, Aug. 3, 2006, at A15.

³⁴ U.S. EPA, *Green Book, 8-Hour Ozone, 8-Hour Ozone Nonattainment Area/State/County/Report*, <<http://www.epa.gov/oar/oaqps/greenbk/gnca.html>>.

will make compliance with federal standards even more difficult, and non-compliance carries severe penalties for state and local governments. States have to go through the difficult process of revising their state air quality plans to find more ways to reduce ozone levels.³⁵ Local governments have to adopt vehicle inspection programs, impose alternative fuel requirements on vehicle fleets, require area gas stations to sell less-polluting gasoline, and enact measures to reduce car and truck travel.³⁶ Local governments also suffer indirectly when the stringent pollution restrictions imposed on high ozone areas discourage industries from building or expanding facilities there; local governments lose tax revenues and job opportunities for residents.³⁷

C. Local Officials Must Deal With Water Scarcity And Water Pollution That Are Exacerbated By Global Warming.

In 2000, researchers working under the auspices of the U.S. Department of Energy came to the disturbing conclusion that “even with a conservative climate model, *current* demands on water resources in many parts of the West will not be met under plausible future climate conditions, much less the demands of a larger population and a larger economy.”³⁸ For instance, the Colorado River

³⁵ C.A. Standing App. 1-7 (Kwetz Decl.).

³⁶ JAMES E. MCCARTHY, CONGRESSIONAL RESEARCH SERVICE, CLEAN AIR ACT: A SUMMARY OF THE ACT AND ITS MAJOR REQUIREMENTS, CRS-5-CRS-7 (2005).

³⁷ Kim McGuire, *Memphis area's air upgraded by EPA Huckabee: County is 'open for business,'* ARK. DEMOCRAT-GAZETTE, Sept. 14, 2004.

³⁸ Tim Barnett *et al.*, *The Effects of Climate Change on Water Resources in the West: Introduction and Overview*, 62 CLIMATIC CHANGE (Continued on following page)

Reservoir system will fail to provide enough water to Southern California and inland areas by 2050. Hydroelectric power from the Colorado River will drop by as much as 40 percent.³⁹

The linchpin of water resources in much of the West is mountain snowpack. Snow acts as a natural frozen reservoir, holding winter precipitation, then releasing it in the spring and summer as water runoff. In the Rockies, snowpack supplies 85 percent of the water supply.⁴⁰ Snowmelt is a major source of drinking water for San Francisco⁴¹ and other California municipalities,⁴² and likely constitutes about 35 percent of California's overall surface water supply.⁴³

Pacific Northwest cities like Seattle also depend on snowpack for drinking water. Between 1950 and 2000, the region's temperature rose, and snowpack accumulations at

1, 6 (2004), <http://www.uwyo.edu/enr/enrschool/ENR4900_5900/Barnett%20et%20al.%202004.pdf>.

³⁹ *Id.* at 6-7.

⁴⁰ Gregory Zimmerman *et al.*, *Climate Change: Modeling a Warmer Rockies and Assessing the Implications*, in 2006 COLORADO COLLEGE STATE OF THE ROCKIES REPORT CARD 89, 97 (Walter Hecox *et al.*, eds., 2006), <<http://www.coloradocollege.edu/stateoftherockies/06ReportCard/Climate%20Change,%20updated%2005-01-05.pdf>>.

⁴¹ SAN FRANCISCO PUBLIC UTILITIES COMM'N, 2005 SFPUC WATER QUALITY REPORT 4 (2006), <http://www.sfwater.org/detail.cfm/MC_ID/13/MS_ID/166/MTO_ID/299/C_ID/3056>.

⁴² Jennifer Steinhauer, *Clinton Foundation to Work to Reduce Greenhouse Gases*, N.Y. TIMES, Aug. 2, 2006, at A3.

⁴³ Michael Floyd *et al.*, *Potential Impacts of Climate Change on California's Water Resources*, in PROGRESS ON INCORPORATING CLIMATE CHANGE INTO MANAGEMENT OF CALIFORNIA'S WATER RESOURCES TECHNICAL MEMORANDUM REPORT, 2-1: 2-22 (California Dept. of Water Resources 2006), <<http://baydeltaoffice.water.ca.gov/climatechange/DWRClimateChangeJuly06.pdf>>.

many measuring sites in the Cascade Mountains decreased by more than 40 or 50 percent.⁴⁴ “Clearly, regional warming has played a role in the decline in SWE [snow water equivalent, a measure of snowpack] * * *.”⁴⁵

Global warming could cause the Sierra Nevada snowpack in California to drop by 70 to 90 percent; even if global warming emissions are cut sharply and the temperature rises just a few degrees, snowpack losses will be 35 to 45 percent.⁴⁶ According to the Chief Hydrologist of the California Department of Water Resources, “a decrease in the snow pack would decrease the spring runoff * * *. Less spring runoff would make it more difficult to refill winter reservoir flood control space during the late spring and early summer, thus potentially reducing the amount of water available during the dry season. Lower early summer reservoir levels would also adversely affect hydroelectric power production and lake recreation.”⁴⁷ The Rockies and Cascades also face significant snowpack reductions.

⁴⁴ P.W. Mote, *Trends in snow water equivalent in the Pacific Northwest and their climatic causes*, 30 GEOPHYSICAL RESEARCH LETTERS 1601, 3-1 to 3-4 (2003); P.W. Mote *et al.*, *Variability and Trends in Mountain Snowpack in Western North America, Proceedings of the 15th Conference on Global Climate Variations and Change* 5.1 (2004).

⁴⁵ Mote, 30 GEOPHYSICAL RESEARCH LETTERS, at 3-4. The author notes that “regional warming at the spatial scale of the Northwest cannot be attributed statistically to increases in greenhouse gases. However, as greenhouse gases continue to accumulate, regional warming is likely to continue as well, and questions of cause will recede.”

⁴⁶ CALIFORNIA CLIMATE CHANGE CENTER, *supra* note 19, at 3, 6.

⁴⁷ C.A. Standing App. 242 (Roos Decl.).

While the West struggles with water scarcity, other regions could face unusual floods and the resulting contamination of the water supply. Heavier rainfall in certain areas is a likely result of climate change.⁴⁸ Heavy rainfall means more storm water runoff, as the inundated ground cannot absorb the rainwater racing across it. Heavy rains also increase the possibility of human exposure to water-borne diseases like cryptosporidium.

III. DUE TO THE CONTINUING AND THREATENED INJURIES RESULTING FROM GLOBAL WARMING, NEW YORK CITY AND BALTIMORE HAVE STANDING IN THIS CASE.

The foregoing discussion of continuing and threatened impacts of global warming highlights the remarkable nature of Respondents' assertion that *none* of the States, cities, and national organizations that filed this litigation has standing to challenge EPA's refusal to use Section 202 to reduce greenhouse gas emissions. Only one of the plaintiffs below needed standing for a decision on the merits in this case, and we agree with D.C. Circuit Judge David Tatel that the State of Massachusetts has plainly demonstrated standing. Pet. App. A-23 to A-26.

The municipal *amici* on this brief are concerned about the scope of Respondents' standing argument and its implications for municipal plaintiffs in future cases. We therefore offer the following observations regarding the standing of two municipal Petitioners – the City of New York and the Mayor and City Council of Baltimore – and

⁴⁸ CLIMATE ACTION REPORT, *supra* note 8, at 108.

show they have demonstrated all the elements necessary for standing.

A. Municipal Petitioners Have Shown Injury-in-Fact.

The standing affidavits submitted in this case document ongoing and potential injuries from global warming that are numerous and profound, particularized and imminent. These affidavits show injury-in-fact many times over.

Because of global warming, New York area governments will have to deal with more frequent and more damaging storms, more flooding, more erosion, and a correspondingly dramatic increase in the City's spending on storm-damaged infrastructure caused by rising sea levels. C.A. Standing App. 267 (Joint Decl. of Solecki *et al.*). Local authorities will also face "an increase in summer-season heat stress morbidity and mortality, particularly among the elderly poor," and an increase in the incidence of vector-borne diseases and photochemical air pollutants such as smog. *Id.* at 268.

The City of Baltimore documents similar and equally devastating injuries from higher temperatures, including greater concentrations of ozone, a higher frequency of floods, and higher storm surges. C.A. Standing App. 36-39 (Conrad Decl.). As a result of these injuries, Baltimore would face greater costs in repairing and building new infrastructure and adverse effects on its tourism industry and economy. *Id.*

B. Municipal Petitioners Have Shown Causation and Redressability.

Recognizing that global warming is real and already causing injury-in-fact to Petitioners, Respondents do not contest this element. Instead, they argue that because U.S. motor vehicles are one of many sources of greenhouse gases, and action here by EPA might lower global emissions by only a relatively small amount, Petitioners have failed to show either causation or redressability.

Specifically, Respondents assert that Petitioners have not demonstrated standing because they “failed to establish that the injuries they allege from global warming are traceable to greenhouse gas emissions from new vehicles in the United States – rather than to greenhouse gas emissions from other sources in the United States, greenhouse gas emissions from vehicles or other sources elsewhere in the world, or entirely different factors – and that a decision to require regulation of emissions of greenhouse gases from new motor vehicles in the United States would redress their injuries.” Fed. Respondent Cert. Opp. at 12.

This challenge to Petitioners’ standing mischaracterizes both the injury shown by Petitioners and the science of global warming. Global warming is not like the dam in *Lujan v. Defenders of Wildlife*, 504 U.S. 555 (1992), which either would be built, causing injury, or not. With global warming, injury is a matter of degree. The issue is not whether the earth will be hotter; it already is. The question is how hot the earth will get. It is not whether the seas will rise, or the glaciers will recede, or the ice caps will melt; it’s how much. Petitioners’ injury does not turn on whether global warming will reach some catastrophic level. They are already injured and will suffer more injury

with each additional increment of human-induced global warming.

The determinant in the “how hot?” and “how much?” equation is the concentration level of greenhouse gases. Greenhouse gases “act in a manner roughly equivalent to adding a blanket over the earth.” JA 229 (MacCracken Decl.). The thicker the blanket, the warmer the earth. *Id.* (“[t]he higher the concentrations of greenhouse gases, especially CO₂, CH₄, and N₂O, the greater will be the trapping of heat and the increase in surface temperature.”); *see also* C.A. Standing App. 233 (Oppenheimer Decl.) (discussing the different consequences if atmospheric concentration of CO₂ is stabilized at 400 parts per million versus 450 parts per million).

Certain greenhouse gases linger in the atmosphere for a very long time. Carbon dioxide, for example, “has a residence time of roughly 50-200 years.” Pet. App. A-73. As a result, emissions – and emission reductions – of carbon dioxide are cumulative. If EPA acts now to reduce these emissions from U.S. mobile sources, the achievable reductions in emissions will grow over time. In the end, the effect of EPA action would be like removing a very thick blanket from the earth’s atmosphere.

Alone, EPA action under Section 202 will not stop global warming altogether. But EPA could mandate emission reductions that reduce the concentration of greenhouse gases in the atmosphere and thereby delay and moderate, to a significant extent, the impacts of global warming. *See* JA 225-226 (MacCracken Decl.) (“[a]chievable reductions in CO₂ and other greenhouse gases from U.S. motor vehicles would significantly reduce the build-up in atmospheric concentrations of those gases and delay and moderate many of the adverse impacts of global

warming.”); C.A. Standing App. 232 (Oppenheimer Decl.) (“actions by the United States to reduce its emissions can materially affect ambient levels of CO₂ and other GHGs in the atmosphere.”). This is all that is necessary for standing under Article III.

Respondents rely heavily on an analogy to cases such as *Lujan v. Defenders of Wildlife*, 504 U.S. 555 (1992), *Simon v. E. Ky. Welfare Rights Org.*, 426 U.S. 26 (1976), and *ASARCO Inc. v. Kadish*, 490 U.S. 605 (1989), for the proposition that standing is lacking where a defendant is responsible for only a part of a larger injury. This reliance is misplaced. In each of those cases, the problem was not the quantum of redress, but rather whether a court order would bring redress at all.

In *Lujan*, for example, the plaintiffs asserted that their interests in the preservation of endangered species would be injured if agencies such as the Agency for International Development (AID) could fund overseas projects without consulting with the Secretary of the Interior about potential impacts on endangered species. *See Lujan*, 504 U.S. at 562. A plurality of the Court concluded that redressability was too speculative because of questions about whether (1) agencies such as AID would be bound by an order by the Secretary demanding consultation, (2) consultation would lead to a decision by AID not to fund any particular project, and (3) a decision by AID not to fund a project would result in any modification to the project, given that AID funding was “less than 10% of the funding” for the project at issue. *Id.* at 571. The plurality concluded that, “[a]s in *Simon*, 426 U.S., at 43-44, it is entirely conjectural whether the non-agency activity that affects respondents will be altered or affected by the agency activity they seek to achieve.” *Id.*

No conjecture is required here. EPA has the power to mandate significant reductions in greenhouse gas emissions through the Section 202 authorization of “standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines.” 42 U.S.C. § 7521(a)(1).⁴⁹ Any such action by EPA would lower the concentration of greenhouse gases in the atmosphere, reduce the greenhouse effect, and help redress Petitioners’ injuries. No action by third parties could plausibly stand in the way. While not necessary to find standing here, the reality is that third parties beyond EPA’s control – namely foreign governments and vehicle manufacturers selling overseas – almost certainly will follow EPA’s lead, greatly *increasing* the redress to Petitioners. JA 239 (MacCracken Decl.); JA 244-245 (Walsh Decl.).

⁴⁹ There is, of course, some level of uncertainty introduced by the limited nature of the relief sought by Petitioners. Petitioners are not asking for an order requiring EPA to regulate greenhouse gases under Section 202. Rather, they seek a remand to EPA for the determination required by Section 202: whether mobile sources of greenhouse gases “cause, or contribute to, air pollution which may be reasonably anticipated to endanger public health or welfare.” 42 U.S.C. § 7521(a)(1). While the science of global warming points to only one answer to this question, it is possible that EPA could, on remand, decide that the statutory standard is not met. This uncertainty stems from the procedural nature of the right asserted by Petitioners in this case – they are asking simply that EPA follow the mandatory procedures established in Section 202. As this Court recognized in *Lujan*, Petitioners have standing to demand compliance with such procedures even if they “cannot establish with any certainty” that following them will result in EPA taking meaningful action to reduce greenhouse gas emissions. *Lujan*, 504 U.S. at 573 n.7.

The stakes in this case are as concrete and momentous as any the Court will face this Term. New York City and Baltimore have shown that EPA has refused to follow the plain language of the Clean Air Act and, in doing so, exposed the cities and their inhabitants to severe injury and a grave risk of a diminished future. The truth about redressability is that if the United States is going to seriously confront the problem of global warming, there is no better place to begin than the transportation sector, which constitutes a large and growing percentage of U.S. greenhouse gas emissions. For these reasons, there can be little doubt that this dispute is a “case or controversy” under Article III.



CONCLUSION

The judgment of the court of appeals should be reversed.

Respectfully submitted.

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