

UNITED STATES DISTRICT COURT
DISTRICT OF CONNECTICUT

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| COMMONWEALTH OF MASSACHUSETTS, |) | |
| STATE OF CONNECTICUT, and |) | |
| STATE OF MAINE, |) | |
| |) | |
| Plaintiffs, |) | CIVIL ACTION |
| |) | NO. |
| |) | |
| v. |) | |
| |) | |
| CHRISTINE TODD WHITMAN, in her capacity |) | |
| as ADMINISTRATOR of the UNITED STATES |) | |
| ENVIRONMENTAL PROTECTION AGENCY, |) | |
| |) | |
| Defendant. |) | |

COMPLAINT

The Commonwealth of Massachusetts and the States of Connecticut and Maine (Plaintiff States), acting by and through their respective Attorneys General, bring this civil action and allege as follows:

DESCRIPTION OF THE CASE

1. The Clean Air Act requires the Administrator of the United States Environmental Protection Agency to regulate common air pollutants that, due to their presence in ambient air from emissions from numerous and varied sources, cause or contribute to air pollution that endangers public health or welfare. Section 108 of the Act initiates the regulation of each such pollutant that, in the judgment of the Administrator, satisfies those criteria, by requiring her to include it in a “list.”

2. Carbon dioxide, a “greenhouse gas” generated by the combustion of fossil fuels, is the dominant cause of global warming and is an “air pollutant” under the Act. In May 2002,

the United States submitted to the United Nations a formal, comprehensive report that set forth, among other things, the official position of the United States on the likely impacts of global warming. The report concluded that global warming will likely produce wide-ranging and potentially devastating impacts to public health and welfare.

3. The EPA played the lead role among numerous federal agencies or departments, and the Executive Office of the President, in coordinating the preparation, review and approval of that report. Further, the EPA itself fully reviewed and officially adopted the report's findings regarding the likely impacts of global warming.

4. Notwithstanding having made a judgment that carbon dioxide causes or contributes to global warming that endangers public health and welfare, the Administrator has failed to perform her mandatory duty under Section 108 of the Act, namely to "list" carbon dioxide and, thereby, initiate its regulation under the Act. Rather, the Administrator supports implementation of "voluntary" greenhouse gas reductions and advocates using "other creative ways" to address the dangers posed by global warming.

5. The Administrator's failure to "list" carbon dioxide constitutes a failure to perform a nondiscretionary duty and is a violation of the Act for which Plaintiff States are entitled to relief. In this action, the Plaintiff States seek an order compelling the Administrator to commence the regulatory process for carbon dioxide by adding it to the list of air pollutants established under Section 108.

JURISDICTION AND VENUE

6. This Court has jurisdiction of the subject matter of this action pursuant to 42 U.S.C. §§ 7604(a)(2), 28 U.S.C. §§ 1331, 1346(a)(2), and 1361.

7. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391(b) and (e), and 1402(a)(1).

8. Each of the Plaintiff States brings this action both in its own capacity as a sovereign State and as *parens patriae* on behalf of its citizens. In addition to seeking to preserve and protect their own economic and property interests, the Plaintiff States also seek to preserve and protect quasi-sovereign interests on behalf of their citizens. Specifically, the Plaintiff States seek to secure all benefits to human health and welfare due to their citizens under the federal Clean Air Act and to protect general economic interests on behalf of their citizens.

STATUTORY BACKGROUND

9. The Clean Air Act establishes a regulatory scheme designed to protect and enhance the quality of the nation's air so as to promote the public health and welfare and the productive capacity of its population. 42 U.S.C. § 7401(b)(1).

10. The Clean Air Act regulates air pollution through a complex array of mechanisms that are aimed at regulating types of pollutants or pollution (such as "criteria pollutants," hazardous pollutants, acid rain, or stratospheric ozone) or categories of sources (such as mobile or stationary). One of the most important of these mechanisms is the use of National Ambient Air Quality Standards (NAAQS) to regulate common and widely-distributed pollutants on the basis of information on their health and/or environmental effects. Such pollutants are commonly referred to as "criteria pollutants."

11. Regulation of a criteria pollutant starts with its being "listed" pursuant to Section 108(a)(1) of the Act, 42 U.S.C. § 7408(a)(1). Section 108(a)(1) mandates that "the Administrator shall . . . publish, and shall from time to time thereafter revise, a list which

includes each air pollutant— (A) emissions of which, in [the Administrator’s] 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 [the Administrator] plans to issue air quality criteria under this section.”

12. After a criteria pollutant is “listed,” EPA must set air quality criteria, 42 U.S.C. § 7408(a)(2), and ambient air quality standards, 42 U.S.C. § 7409(a)(2), which are the levels of each listed pollutant in the ambient air that EPA deems to be protective of public health (primary NAAQS) and welfare (secondary NAAQS), 42 U.S.C. § 7409(b). Ultimately, implementation of the ambient air quality standards occurs through federally approved state plans or federal implementation plans. 42 U.S.C. §§ 7410(a) and (c).

13. Section 302(g) of the Act, 42 U.S.C. § 7602(g), broadly defines “air pollutant” to include “any air pollution agent or combination of such agents, including any physical, [or] chemical . . . substance or matter which is emitted into or otherwise enters the ambient air.”

14. Section 302(h) of the Act, 42 U.S.C. § 7602(h), defines effects on “welfare” to include, among other things, “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.”

15. Section 302(z) of the Act, 42 U.S.C. § 7602(z) defines “stationary source” to be “any source of an air pollutant except those emissions resulting directly from an internal

combustion engine for transportation purposes or from a nonroad engine or nonroad vehicle as defined in section 7550 of this title.”

16. Section 304(a)(2) of the Clean Air Act, 42 U.S.C. § 7604(a)(2), provides that any person may commence a civil action on his own behalf against the Administrator based on an alleged failure of the Administrator to perform any nondiscretionary act or duty under the Act.

FACTUAL BACKGROUND

A. Global Warming

17. The burning of fossil fuels releases gases into the ambient air that trap heat in the earth’s atmosphere and, therefore, are commonly called “greenhouse gases.” The emission of such greenhouse gases, including primarily carbon dioxide, alters the chemical composition of the earth’s atmosphere.

18. During pre-industrial times, the atmospheric concentration of carbon dioxide was 280 parts per million (per volume) (“ppmv”). Today, the concentration of carbon dioxide in the atmosphere is roughly 370 ppmv. Carbon dioxide emitted from the combustion of fossil fuels caused or contributed to this drastic change in the atmosphere’s composition.

19. “Global warming” or “climate change” are the terms commonly used to refer to the change of climate that is attributed directly or indirectly to human activities that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods. The parties to the international treaty formally titled the United Nations Framework Convention on Climate Change (UNFCCC), and informally called the “1992 Rio Treaty,” including the United States, adopted this definition of “climate change.”

20. Global warming is occurring and is causing a host of complex and inter-related impacts to ecosystems, human health, welfare, and the economy.

21. There is no longer any reasonable scientific controversy as to the fact that the presence of carbon dioxide in the ambient air from human activities causes or contributes to global warming that is reasonably anticipated to endanger public health or welfare.

B. Carbon Dioxide is the Dominant Cause or Contributor to Global Warming

22. Carbon dioxide is a heavy, odorless, colorless gas. It is a physical substance with a particular chemical make-up. A carbon dioxide molecule is composed of one carbon atom and two oxygen atoms.

23. The dominant greenhouse gas emitted by human activities in the United States is carbon dioxide.

24. In the United States, a variety of human activities involve the combustion of fossil fuels. Among them are the following: the generation of electricity by power plants and industrial facilities, the operation of internal combustion engine vehicles (such as passenger cars, trucks, motorcycles and buses), and production of heat for use in residential, commercial, and industrial buildings.

25. In the United States, carbon dioxide accounts for roughly 82% of total annual greenhouse gas emissions, and fossil fuel combustion accounts for roughly 98% of total carbon dioxide emissions. The United States electric industry accounts for 10% of total worldwide manmade carbon dioxide emissions.

26. Carbon dioxide remains in the atmosphere long after it is emitted. Present day emissions will cause continued global warming, and its associated impacts, for more than a century.

27. Recognizing the problem of global warming, in 1988, the World Meteorological Organization and the United Nations Environment Programme established the Intergovernmental Panel on Climate Change (IPCC). The highly-respected IPCC has come to be the leading objective source of scientific information and analysis on global warming. The role of the IPCC is to assess on a comprehensive, objective, open and transparent basis the scientific, technical and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts and options for adaptation and mitigation. The IPCC completed its Third Assessment Report in 2001. The IPCC bases its assessments on peer reviewed and published scientific and technical literature.

28. In the Third Assessment Report, the IPCC projects that the atmospheric concentration of carbon dioxide in the year 2100 will be between 490 and 1250 ppmv (which includes a variation of -10 to + 30% to account for uncertainties). The IPCC further projects that significant adverse effects on ecosystems, human health, and socioeconomic systems will occur even at the lower end of this projected range and will become progressively more extreme at the higher end. The IPCC further projects that attaining stabilization at a level of 450 ppmv requires carbon dioxide emissions to drop below 1990 levels within a few decades and continue to decrease steadily thereafter.

29. The United States projects that total net carbon dioxide emissions in the United States will increase by 43% by 2020.

30. Each year, the concentration of carbon dioxide in the atmosphere increases by about 1.5 ppmv.

31. Reducing carbon dioxide emissions through effective regulation will halt this increase and stabilize atmospheric concentrations of carbon dioxide. Such stabilization will lessen the adverse impacts of global warming and, thereby, produce substantial benefits to public health, welfare and the economy in the Plaintiff States and elsewhere.

C. Carbon Dioxide is an “Air Pollutant”

32. On at least three occasions, the EPA has declared that carbon dioxide is subject to regulation under the Act as an air pollutant.

33. On March 11, 1998, during hearings on EPA’s Fiscal Year 1999 appropriations, Representative Tom DeLay asked then-Administrator Carol M. Browner whether the EPA had authority to regulate carbon dioxide emissions. She replied that the Clean Air Act provides such authority and agreed to Representative DeLay’s request for a legal opinion on this point.

34. In a memorandum dated April 10, 1998, EPA General Counsel Jonathan Z. Cannon provided to Administrator Browner the requested legal opinion, which again stated that greenhouse gases, including carbon dioxide, are air pollutants subject to regulation under the Act. Exhibit A, attached hereto, is a true and accurate copy of this memorandum.

35. On October 6, 1999, EPA General Counsel Gary S. Guzy, in testimony to Congress, reiterated the EPA’s official position that carbon dioxide is an air pollutant subject to regulation under the Act. Exhibit B, attached hereto, is a true and accurate copy of this testimony as downloaded from EPA’s website.

D. The Administrator has Made a “Judgment” under Section 108(a)(1)(A)

36. On March 3, 2001, at the G8 Environmental Ministerial Meeting Working Session on Climate Change in Trieste, Italy, in what EPA refers to as one of the Administrator’s “Major Speeches,” the Administrator stated the following:

Increasingly, there is little room for doubt that humans are affecting the Earth’s climate, that the climate change we’ve seen during the past century is the result of human activity, and that we must continue our efforts to stop and reverse the growth in the emission of greenhouse gases. If we fail to take the steps necessary to address the very real concern of global climate change, we put our people, our economies, and our way of life at risk. . . . Lastly, I am sure you know that President Bush has initiated a review of U.S. climate policy. I am very personally involved in that review.

Remarks of Governor Christine Todd Whitman, Administrator, United States Environmental Protection Agency (March 3, 2001), at 1-2, 5. Exhibit C, attached hereto, is a true and accurate copy of the full text of this speech as downloaded from EPA’s website.

(a) UNFCCC and the *Climate Action Report*

37. On June 12, 1992 at the Earth Summit in Rio de Janeiro, President George H.W. Bush signed UNFCCC on behalf of the United States. On October 15, 1992, the United States Senate ratified UNFCCC. On March 21, 1994, with 166 signatories and 50 ratifications, UNFCCC entered into force.

38. The objective of UNFCCC, as set forth in Article 2, is “to achieve . . . stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to

ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.”

39. UNFCCC establishes general commitments of each party, which include, in Article 4.1(j), the duty to communicate to the decision-making body, known as the Conference of the Parties (COP), information related to that party’s implementation of UNFCCC.

40. UNFCCC establishes specific commitments that apply to each developed country that is a party, such as the United States. Article 4.2(a) requires each such party “to adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs. These policies and measures will demonstrate that developed countries are taking the lead in modifying longer-term trends in anthropogenic emissions consistent with the objective of the Convention” UNFCCC, Art. 4.2(a) (footnote omitted).

41. To promote progress to that end, Article 4.2(b) requires each party that is a developed country to communicate detailed information on its policies and measures referred to in Article 4.2(a) and on its resulting projected emissions and removals of greenhouse gases, with the “aim” of returning, either individually or jointly, their anthropogenic emissions of carbon dioxide and other greenhouse gases to their 1990 levels.

42. UNFCCC requires each party to communicate to the COP certain information related to that party’s implementation of the commitments set out in Article 4. Specifically, Article 12.1 requires each party to include in its communication: (a) a national inventory of anthropogenic emissions and removals; (b) a general description of steps taken or envisaged by

the party to implement UNFCCC; and (c) “[a]ny other information that the Party considers relevant to the achievement of the objective of the Convention [UNFCCC] and suitable for inclusion in its communication”

43. On or about May 28, 2002, the U.S. Department of State – in its role of executing the foreign relations of the United States – propounded to the United Nations the *U.S. Climate Action Report 2002, Third National Communication of the United States of America Under the United Nations Framework Convention on Climate Change, (Climate Action Report)*, as prepared by the EPA in coordination with other federal agencies and departments, to satisfy obligations of the United States under Articles 4 and 12 of UNFCCC. Exhibit D, attached hereto, is a true and accurate copy of the *Climate Action Report* as submitted to the United Nations by the United States on or about May 28, 2002 and as originally published on the EPA’s website. (In September 2002, the EPA published a slightly modified version of the *Climate Action Report* on its website that contained no material changes from the official version submitted to the United Nations in May 2002.)

(b) Preparation of the *Climate Action Report*

44. The EPA conducted two formal notice and public comment periods on the *Climate Action Report*.

45. On March 19, 2001, the EPA published a formal notice that solicited public comments on issues that would be included in the *Climate Action Report*. 66 Fed. Reg. 15470-71. Exhibit E, attached hereto, is a true and accurate copy of this notice.

46. On November 15, 2001, the EPA published a second formal notice that solicited public comments, this time on the draft text of the *Climate Action Report*. 66 Fed. Reg. 57456-57. Exhibit F, attached hereto, is a true and accurate copy of this notice.

47. The EPA played the lead role among at least 12 federal agencies or departments and the Executive Office of the President in coordinating the preparation, review and approval of the *Climate Action Report*.

48. The EPA conducted at least two rounds of extensive federal governmental review and comment on all chapters of the *Climate Action Report*, including Chapter 6, which sets forth findings regarding the likely impacts to public health and welfare of global warming.

49. The EPA itself fully reviewed and officially adopted the findings contained in Chapter 6 of the *Climate Action Report*.

50. The final round of the federal governmental review that EPA conducted on the *Climate Action Report* included the following two stages: an interagency comment period and a separate period for review and clearance by the Executive Office of the President.

51. Prior to its submittal to the United Nations, the *Climate Action Report* received all necessary approvals within the EPA.

52. Prior to its submittal to the United Nations, the *Climate Action Report* received all necessary approvals of the United States.

53. The *Climate Action Report* presents the official position of the EPA.

54. The *Climate Action Report* presents the official position of the United States.

(c) Findings of the *Climate Action Report*

55. Chapter 6 of the *Climate Action Report* “present[s] judgments about the relative plausibility of outcomes” in the event that projected climate changes occur. *Climate Action Report* at 82.

56. Chapter 6 of the *Climate Action Report* sets forth “Key National Findings” regarding the likelihood of various specific adverse effects of global warming to public health and welfare. In presenting and discussing such findings, the *Climate Action Report* uses the term “likely” in that chapter to indicate that an impact is “more plausible than other outcomes” and the term “very likely” to indicate that an outcome is “much more plausible than other outcomes.” *Id.* at 83. Chapter 6 of the *Climate Action Report* uses the term “projection” to refer to “potential outcomes that would be expected” in the event that some future conditions occur. *Id.* at 84 n.1.

57. Specifically, Chapter 6 finds that each of the following impacts, among others, on public health or welfare are likely to occur, are very likely to occur, or are projected to occur in the United States as a result of carbon dioxide induced global warming:

- (a) increases in temperatures in the contiguous United States of up to 5-9° F on average during the 21st century;
- (b) rises in sea levels of up to 4-35 inches during the 21st century;
- (c) increases in frequency of heavy precipitation events;
- (d) increases in the severity of extreme weather, such as hurricanes;
- (e) losses of sensitive ecosystems such as barrier islands, alpine meadows, coral reefs, and coastal wetlands;

(f) accelerated extinctions and shifts of species of plants and animals on land, shifts in distributions of species of fish and shellfish that are dependant on estuaries, and changes in the timing, locations, and perhaps viability of migration paths and nesting and feeding areas for marine mammals and other marine resources;

(g) increases in frequency and intensity of fires;

(h) increases in degradation of surface water quality;

(i) changes in snowpacks;

(j) dramatic increases in heat index in summer;

(k) increases in frequency and severity of heat waves;

(l) increases in threats to buildings, roads, power lines, and other

infrastructure in climate sensitive areas.

58. In addition, Chapter 6 finds that each of the following impacts, among others, on public health or welfare are at risk of occurring, or are matters of concern, in the United States as a result of carbon dioxide induced global warming:

(a) changes in agricultural practices due to changes in requirements for, and supplies of, irrigation water and increases in the need to use fertilizers and pesticides;

(b) increases in events of contamination of water supplies by bacteria, infectious viruses, or toxic red tides;

(c) increases in flooding;

(d) increases in droughts;

(e) increases in a range of negative health impacts including heat-related illnesses and deaths;

(f) increases in infectious diseases and illness spread by insects, ticks, rodents and water-borne vectors that are sensitive to rainfall, temperature, and other weather variables; and

(g) increases in ozone-related respiratory illnesses due to an increase in the formation of ozone that will result from increased temperatures.

E. The Administrator has Failed to “List” Carbon Dioxide

59. The Administrator has not revised the list of air pollutants established under Section 108 of the Act, 42 U.S.C. § 7408, to include carbon dioxide.

60. In March 2001, the Administrator provided the following reason for not regulating carbon dioxide under the Clean Air Act:

The President has been clear that the Administration does not believe the government should impose mandatory carbon dioxide emissions reductions on power plants at a time when the cost of energy is soaring in this nation. . . . I share the President’s optimism that we will be able to develop technologies, market incentives, and other creative ways to address global climate change and I fully intend to support him in that effort.

Statement by EPA Administrator Christie Whitman on Climate Change (March 16, 2001), at 2.

Exhibit G, attached hereto, is a true and accurate copy of the Administrator’s statement as downloaded from the EPA’s website.

61. On February 20, 2002, the Administrator announced a program called “Climate Leaders.” The Administrator described this program as a “voluntary partnership between government and industry” under which company participants agreed to complete a greenhouse gas inventory and work with EPA to set an emissions reduction target. *EPA Administrator Launches Climate Leaders Program, Charter Members Commit to Greenhouse Gas Inventories*

and Emissions Reduction Targets (February 20, 2002), at 2. Exhibit H, attached hereto, is a true and accurate copy of this announcement as downloaded from EPA's website.

62. On September 30, 2002, after submittal of the *Climate Action Report* to the United Nations, the Administrator reiterated her commitment to the Climate Leaders program as the means by which EPA would seek to reduce greenhouse gas emissions. *EPA Administrator Whitman Celebrates Climate Leaders Sixth-Month Anniversary* (September 30, 2002). Exhibit I, attached hereto, is a true and accurate copy of the Administrator's press release as downloaded from EPA's website.

63. On February 12, 2003, the Administrator announced the launch of the Administration's "Climate VISION" ("Voluntary Innovative Sector Initiatives: Opportunities Now") program. She announced that this program would be "a voluntary, public-private partnership to pursue cost-effective initiatives that will reduce the projected growth in America's greenhouse gas emissions," and that the program would be "administered through the Department of Energy's policy and international program." *Bush Administration Launches "Climate VISION,"* EPA Headquarters Press Release (February 12, 2003), at 2. Exhibit J, attached hereto, is a true and accurate copy of this EPA press release as downloaded from EPA's website.

64. The Administrator has not issued air quality criteria for carbon dioxide.

F. The Administrator's Failure to Initiate Regulation of Carbon Dioxide under the Act Is Harming the Plaintiff States

65. The Plaintiff States will suffer harm to their economic and property interests due to reasonably anticipated effects of global warming. In addition, the public health and welfare

and economic interests of the residents of the Plaintiff States will suffer harm due to reasonably anticipated effects of global warming. Such harms will be more wide-ranging and more severe due to EPA's failure to mitigate the effects of global warming through the regulation of carbon dioxide.

66. The EPA's "Global Warming" website describes numerous specific harmful impacts that are likely or reasonably anticipated to occur in the Plaintiff States due to global warming. Exhibits K, L, and M, attached hereto, are true and accurate copies of the EPA's Global Warming "State Impacts" website pages for Plaintiff States Massachusetts, Connecticut, and Maine, respectively.

67. By 2100, average temperatures in Massachusetts could increase by about 4° F (with a range of 1-8° F) in winter and spring and about 5° F (with a range of 2-10° F) in summer and fall. By 2100, average temperatures in Connecticut could increase by about 4° F (with a range of 2-8° F) in all seasons. By 2100, average temperatures in Maine could increase by about 4° F (with a range of 2-8° F), slightly less in spring and fall and slightly more in summer and winter.

68. By 2100, precipitation in Massachusetts is estimated to increase by about 10% in spring and summer, 15% in fall, and 20-60% in winter. By 2100, precipitation in Connecticut is projected to increase by 10-20% (with a range of 0-40%), with slightly less change in spring and summer and slightly more in winter. By 2100, precipitation in Maine is projected to increase by 10% in summer and fall (with a range of 5-15%) and increase by 30% in winter (with a range of 10-50%).

69. In each of the Plaintiff States, the amount of precipitation on extreme wet or snowy days is likely to increase, and the frequency of extreme hot days is likely to increase because of the general warming trend.

(a) Public Health

70. In each of the Plaintiff States, higher temperatures and increased frequency of heat waves may increase the number of heat-related deaths and the incidence of heat-related illnesses.

71. By 2050, it has been projected that heat-related deaths in Boston during a typical summer could increase 50%, from close to 100 heat-related deaths per summer to over 150. It has also been projected that a 2° F warming could increase heat-related deaths in Hartford during a typical summer by about 20%, from close to 40 heat-related deaths per summer to near 50. EPA notes that both of these studies may not have fully accounted for “increased air conditioning use,” but also notes that along with any such “increased use of air conditioners, air pollutant emissions from power plants also will increase.”

72. In each of the Plaintiff States, a temperature increase of 4° F, with no other change in weather or emissions, could increase concentrations of ground-level ozone, a major component of smog, by 4%.

73. Current ground-level ozone concentrations exceed national ozone health standards throughout Massachusetts, Connecticut, and in Portland, Maine and the southern counties of Maine. All of Massachusetts and Connecticut are classified as “serious” non-attainment areas for ozone, and EPA has proposed re-classifying the southern three counties in Maine as a “serious” non-attainment status.

74. Ground-level ozone aggravates respiratory illnesses such as asthma, reduces existing lung function, and induces respiratory inflammation. In addition, ambient ozone reduces crop yields and impairs ecosystem health.

75. Respiratory and eye allergies increase in warm, humid conditions.

76. Warmer temperatures and wetter conditions will likely increase the risk of transmission and/or incidence of diseases including malaria, dengue fever, Eastern equine encephalitis, and Lyme disease in the Plaintiff States because ticks, their rodent hosts, and mosquito populations will likely increase due to the warmer temperatures and increased vegetation.

77. Warmer seas will likely contribute to the increased intensity, duration, and extent of harmful algal blooms (so-called red tides), which will affect each of the Plaintiff States. These blooms damage habitat and shellfish nurseries, are toxic to humans, and carry bacteria like those causing cholera. Brown algal tides and toxic algal blooms already are prevalent in the Atlantic, and warmer ocean waters will likely increase their occurrence and persistence along the coasts of the Plaintiff States.

78. The combination of warmer winters, warmer water temperatures, and heavy precipitation will likely reduce water quality and increase outbreaks of pathogens such as *cryptosporidiosis* and *giardia* in waters of the Plaintiff States.

79. Each Plaintiff States will likely incur substantial out-of-pocket costs in responding to public health disasters caused by global warming. The Plaintiff States will likely expend funds to provide health care to indigent residents and to initiate programs to protect the

public and contain such health emergencies. The Plaintiff States may need to undertake new or more intensive programs to control mosquito populations or treat local water supplies.

80. Each Plaintiff State will also likely incur costs associated with health-related effects that will be suffered by its employees. Each Plaintiff State will also incur costs in the form of lost tax revenues associated with any losses in productivity and work days of public and private sector employees.

(b) Coastal Resources

81. The Plaintiff States each have significant coastal shorelines. Each Plaintiff State owns coastal property that will be harmed, injured or lost due to impacts of sea level rise attributable to global warming.

82. Massachusetts owns over 100 miles of coastal shoreline and 18 coastal parks. Among the many coastal resources owned and operated by Massachusetts are the following: Salisbury Beach State Reservation (which is a 521 acre park including 3.8 miles of beach along the Atlantic Ocean), Scusset Beach State Reservation (which includes 1.5 miles of frontage along the Cape Cod Canal), Sandy Point State Reservation (which is a 77 acre park at the southern tip of Plum Island and is a classic Atlantic Ocean barrier island), Waquoit Bay National Estuarine Research Reserve (which includes 2,700 acres of open waters, barrier beaches, marshlands and uplands on the south shore of Cape Cod), Horseneck Beach State Reserve (which includes nearly 600 acres of barrier beach and salt marsh at the western end of Buzzards Bay, with a 2 mile long beach), Boston Harbor Islands State Park (which includes 17 islands), Webb State Park (which is a 36 acre peninsula), Myles Standish State Forest (which is the largest publicly owned recreation area in southeastern Massachusetts and includes several

ecologically significant coastal plain “kettle” ponds). Massachusetts will likely suffer injury from the destruction, loss or injury to these, and similar, State-owned coastal properties, as well as to economic interests related to the services or uses associated therewith.

83. The rising sea level attributable to global warming will likely adversely affect the coast of Massachusetts, which is an important resource with over 1,300 miles of shoreline. Massachusetts’ coastline includes stretches of rocky shore, barrier beaches, productive estuaries, fragile salt marshes, tidal flats, and dozens of islands. Barrier beaches, salt marshes, and other wetland resource areas buffer the coast from storms, waves, and flooding. At Boston, sea level already is rising by 11 inches per century, and it is likely to rise another 22 inches by 2100. Rising sea levels are taking a toll on Massachusetts’ coastal upland. Each year, an average of 65 acres of upland is submerged by a combination of rising seas and subsiding land. Much of this loss occurs along the south-facing coast between Rhode Island and the outer shore of Cape Cod, including the islands of Nantucket and Martha’s Vineyard. Coastal land that has been lost because of erosion by storm waves or wetland erosion is not included in the estimate of annual average land lost from submersion.

84. The coastal beaches and tidal marshes of Massachusetts are especially sensitive to the effects of sea level rise and changes in river flows. Sea level rise will likely inundate coastal wetlands, destroying habitat for commercial and game species as well as migratory birds and other wildlife. Barrier beach island refuges such as the Monomoy National Wildlife Refuge south of Cape Cod and the Parker River National Wildlife Refuge in northeastern Massachusetts will likely be threatened or lost. These refuges provide important habitat for migratory birds,

including the threatened piping plover and the endangered roseate tern. Harbor and gray seals, which use beaches as refuge in the winter, will also likely lose habitat as sea levels rise.

85. Connecticut owns many miles of coastal shoreline and has numerous coastal parks that line Long Island Sound. Among the many coastal resources owned and operated by Connecticut are the following: Hammonasset Beach State Park (919 acres and over 2 miles of beach), Sherwood Island State Park (234 acres), Rocky Neck State Park (708 acres), and Bluff Point Coastal Reserve (806 acres). Specifically, Bluff Point was designated a “Coastal Reserve” by a special act of the Connecticut legislature in 1975 to establish the area “for the purpose of preserving its native ecological associations, unique faunal and floral characteristics, geological features and scenic qualities in a condition of undisturbed integrity.” Connecticut will likely suffer injury from the destruction, loss or injury to these, and similar, State-owned coastal properties, as well as to economic interests related to the services or uses associated therewith.

86. Along much of Connecticut’s coast, sea level is likely to rise another 22 inches by 2100. Connecticut’s coastline contains valuable residential development and important wetlands ecosystems that would be vulnerable to flooding from sea level rise. In particular, Connecticut has extensive tidal flats and diverse nontidal freshwater marshes. Connecticut’s freshwater marshes will likely to be harmed by saltwater intrusion.

87. The State of Maine owns numerous coastal parks and preserves. Among these are the 529 acre Popham Beach State Park in Popham and the 770 acre Reid State Park in Georgetown (both of which include barrier beaches, sand dunes, salt marshes and uplands), the 183 acre Moose Point State Park between Searsport and Belfast, the 274 acre Roque Bluffs State Park in Roque Bluffs and the 888 acre Cobscook Bay State Park in Dennysville (which provides

habitat for over 200 different species of birds its forest, meadow, marsh and marine habitat). These areas are important ecological and recreational resources, and are popular tourist destinations. Maine will likely suffer injury from the destruction, loss or injury to these, and similar, State-owned coastal properties, as well as to economic interests related to the services or uses associated therewith.

88. Maine has almost 3,500 miles of tidally influenced shoreline, consisting of rocky peninsulas and harbors, pocket beaches, islands, and complex estuaries. Because of the steep profile that is characteristic of the Maine coastline and a lack of low-lying land to be colonized by new marshes, there is likely to be a net loss of marshes in Maine under accelerated sea level rise. At Rockland, sea level already is rising by 3.9 inches per century, and it is likely to rise another 14 inches by 2100.

89. Sea level rise will likely lead to flooding of low-lying property, loss of coastal wetlands, erosion of beaches, saltwater contamination of drinking water, and decreased longevity of low-lying roads, causeways, and bridges in the Plaintiff States. In addition sea level rise will likely increase the vulnerability of coastal areas to storms and associated flooding.

90. Possible responses to sea level rise include building walls to hold back the sea, allowing the sea to advance and adapting to it, and raising the land (e.g., replenishing beach sand and elevating houses and infrastructure). Each of these responses will be costly, in out-of-pocket costs and/or in lost land and structures.

91. The Plaintiff States will likely incur substantial economic losses responding to impacts to their coastlines due to sea level rise attributable to global warming. The EPA estimates that the cumulative cost of sand replenishment to address a 20-inch sea level rise along

the Massachusetts coast by 2100 will be between \$490 million and \$2.6 billion. EPA estimates that cumulative costs through 2100 to address a 20-inch sea level rise along Connecticut's and Maine's coastlines will be \$0.5-\$3 billion and \$200-\$900 million, respectively.

92. The Plaintiff States will also likely incur substantial costs to repair or rebuild public transportation, roads, and sewer infrastructure damaged by inundation of coastal or low-lying areas or storm events.

(c) Water Resources

93. Western Massachusetts drains to the Connecticut River, and the eastern parts of the State drain directly to the Atlantic Ocean. Relatively little of the flow of the Connecticut River originates in Massachusetts, but it is the source of much of the water supply for the Boston metropolitan area. The flow of the Connecticut River is strongly affected by winter snow accumulation and runoff from Vermont and New Hampshire. A warmer climate will lead to earlier spring snowmelt, resulting in higher streamflows in winter and spring and lower streamflows in summer and fall. Warmer summer temperatures will likely increase water quality problems because of increased evaporation (which concentrates pollutant levels) and more favorable conditions for algae and other water organisms.

94. In Connecticut, the Connecticut River is susceptible to changes in winter snow accumulation, which would be reduced in a warmer climate. Peak spring streamflows in the Connecticut River will likely occur several weeks earlier if the climate were to warm about 4°F. The Housatonic and Thames rivers will likely see similar changes.

95. Warmer summer temperatures and longer summers will likely exacerbate water quality problems in rivers such as the Androscoggin in Maine, where industry is significant and

pollution has traditionally been a problem. Streamflow reduction and warmer temperatures will likely reduce habitat for cold water fish. This will likely also reduce water supplies in areas such as southwestern coastal Maine, which is experiencing growing water demands due to population growth and increased tourism.

96. The Plaintiff States will each likely incur substantial costs, suffer lost revenues and suffer general economic harm due to measures they will need to undertake to protect the quantity and quality of water supplies or otherwise respond to changes in water resources within their States.

(d) Agricultural Resources

97. In Massachusetts, agriculture is a \$390 million annual industry. There are over 6,100 farms, on roughly 570,000 acres of land, employing over 12,400 workers. The total value of fruit production in Massachusetts exceeds \$148 million and ranks eighth in the nation. Massachusetts ranks second in the nation for cranberry production and third for wild blueberry production. Agriculture in Massachusetts generates \$21 million in income tax revenue annually. Global warming will likely cause Massachusetts crop yields to fall by as much as 45%.

98. In Connecticut, agriculture is a \$500 million annual industry. The principal crops are silage and hay, and very little of the agricultural land is irrigated. Crop yields in Connecticut will likely decrease considerably, possibly by almost 40%. Total acres farmed would remain about the same, but farm income could decrease by about 50%.

99. In Maine, production agriculture is a \$500 million annual industry, half of which comes from crops and the other half from livestock, mainly poultry and dairy. Very few of the farmed acres are irrigated. The major crops in the State are potatoes and hay. Global warming

will likely reduce potato yields. Hay and pasture yields will likely decrease considerably as temperatures rise beyond the tolerance level of the crop.

100. The Plaintiff States will each likely incur substantial costs, suffer lost revenues and suffer general economic harm due to declines in agricultural productivity, changes in agricultural practices within their States or measures they will need to undertake related to such changes.

(e) Forest Resources

101. Trees and forests are adapted to specific climate conditions, and as climate warms, forests will change. These changes will likely include changes in species, geographic range, and health and productivity. As conditions in the Plaintiff States become drier, the current range of forests will likely be reduced and replaced by grasslands and pasture. Even a warmer and wetter climate will likely lead to changes; trees that are better adapted to warmer conditions, such as oaks and pines, would prevail. Under these conditions, forests will likely become more dense.

102. Even if the extent of forested areas in the Plaintiff States changes little because of climate change, a warmer climate will likely change the character of those forests. Maple-dominated hard-wood forests will likely give way to forests dominated by oaks and pine, which are species more tolerant of higher temperatures. As the number of maple trees declines, the brilliant autumn foliage will be diminished. Across Massachusetts and Connecticut, as much as 30-60% of the hardwood forests will likely be replaced by warmer climate forests with a mix of pines and hardwoods.

103. The spruce-fir forests in Maine (and other New England states) are near the southern limit of their extent. These forests are sensitive to climatic stresses and have experienced significant declines in recent decades. Across Maine, as much as 35-60% of the hardwood forests will likely be replaced by warmer-climate forests with a mix of pines and hardwoods and, in some areas in the southeast, by grassland and pasture. The extent and density of the spruce and fir forests at higher altitudes, which support a large variety of songbirds, also will likely be reduced by as much as 40-50%.

104. Forests and woodlands support much of the wildlife in Massachusetts. Climate change will likely result in changes in these ecosystems. Changes in rainfall and runoff will likely change sediment levels in streams and wetlands, thus affecting fish and aquatic habitats.

105. The State of Maine is blanketed by northern hardwood/pine forests in the south and a mosaic of hardwood/spruce and higher elevation spruce-fir forests in the north and east. Maine's aquatic resources include the St. John River, a section of which is the longest free-flowing river segment in the northeastern United States and home to over 30 species of rare plants, including the endangered Furbish's lousewort. The State's long coastline harbors estuarine barrier islands and marshes that provide habitat for endangered species such as bald eagles, peregrine falcons, piping plovers, and roseate terns. The conifer forests found in higher elevations in the White Mountains will likely be especially vulnerable to climate change. Climate change will likely hasten the expansion of broad-leaved forests into these pine forests, a transition that is already taking place as a result of selective and intensive logging. The ranges of spruce grouse, gray jays, boreal chickadees, snowshoe hares, marten, and moose will likely be affected by reduced pine forests and shifts in forest types. The already high threat of insect pest

outbreaks in the northern forest will likely be exacerbated by warming-induced changes in the timing of spring frosts. If precipitation and runoff increase, the increased flooding of sensitive riparian areas will likely destroy valuable and unique aquatic and riverine habitats. Similarly, sensitive coastal ecosystems will likely be damaged by increased tidal floodings associated with increases in severe storms.

106. The Plaintiff States will each likely incur substantial costs, suffer lost revenues and suffer general economic harm due to losses in tourism revenue associated with the loss of the vibrant foliage season and changes in bird and wildlife populations.

107. The Plaintiff States will each incur substantial costs, suffer lost revenues and suffer general economic harm due to declines or changes in productivity within the forest sector and measures they may need to undertake in response to such declines or changes.

G. Notice of this Action

108. On January 30, 2003, the Plaintiff States mailed to the Administrator by certified mail, return receipt requested, a letter that provided notice to her of the Plaintiff States' intent to bring this action. Exhibit N, attached hereto, is a true and accurate copy of this notice letter and the return receipt.

109. The postmark date of the notice letter is January 30, 2003. The return receipt indicates that the Administrator received such notice on February 12, 2003.

110. The notice letter states Plaintiff States' belief that the Administrator has "a mandatory duty under existing law to begin to regulate carbon dioxide as a 'criteria air pollutant' pursuant to Section 108 of the Clean Air Act" and that the "failure to do so is a violation of the Act." The notice letter further states the Plaintiff States' intent "to commence an action against

[the Administrator] under Section 304 to compel compliance with the mandatory duty to list carbon dioxide as a criteria air pollutant under Section 108.”

111. On March 28, 2003, the Plaintiff States re-transmitted the notice letter to the Administrator with an addendum that included additional addresses and contact information of the persons giving notice. Exhibit O, attached hereto, is a true and accurate copy of the cover letter, re-transmitted notice letter and addendum, and the return receipt.

112. The postmark date of the re-transmitted notice letter and addendum is March 28, 2003. The return receipt indicates that the Administrator received such notice on April 2, 2003.

113. The Plaintiff States have provided notice to the Administrator in accordance with the applicable regulations prior to 60 days before filing this action.

CAUSE OF ACTION
Failure to Perform a Nondiscretionary Duty
Pursuant to CAA § 304(a)(2)

114. The Plaintiff States reallege and incorporate by reference the allegations of paragraphs 1-113 as if they were restated in full.

115. Carbon dioxide is a “physical, [or] chemical . . . substance or matter” within the meaning of Section 302(g) of the Act, 42 U.S.C. § 7602(g).

116. The human activities set forth in paragraph 24, above, produce carbon dioxide as a result of the burning of fossil fuels. Such carbon dioxide is “emitted into or otherwise enters the ambient air” within the meaning of Section 302(g) of the Act, 42 U.S.C. § 7602(g).

117. Carbon dioxide is an “air pollutant” within the meaning of Section 302(g) of the Act, 42 U.S.C. § 7602(g).

118. The Administrator has made a “judgment” that emissions of carbon dioxide cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare within the meaning of Section 108(a)(1)(A) of the Act, 42 U.S.C. § 7408(a)(1)(A).

119. Power plants and industrial facilities that generate electricity from the burning of fossil fuels are “stationary sources” of carbon dioxide within the meaning of Sections 108(a)(1)(B) and 302(z) of the Act, 42 U.S.C. §§ 7408(a)(1)(B), 7602(z).

120. Internal combustion engine vehicles, such as passenger cars, trucks, motorcycles and buses are “mobile sources” of carbon dioxide emissions within the meaning of Section 108(a)(1)(B).

121. Carbon dioxide is present in the ambient air as a result of “numerous or diverse mobile or stationary sources,” within the meaning of Section 108(a)(1)(B) of the Clean Air Act, 42 U.S.C. § 7408(a)(1)(B).

122. By failing to revise the list of air pollutants under Section 108(a)(1) of the Act, 42 U.S.C. § 7408(a)(1), to include carbon dioxide, the Administrator has failed to perform a nondiscretionary duty within the meaning of Section 304(a)(2) of the Act, 42 U.S.C. § 7604(a)(2).

123. By so violating Section 304(a)(2) of the Clean Air Act, 42 U.S.C. § 7604(a)(2), EPA is unlawfully increasing the likelihood of harming the economic interests of the Plaintiff States, is unlawfully increasing the likelihood and severity of damage to property owned by each of the Plaintiff States, is unlawfully denying residents of each of the Plaintiff States the benefits due them under the federal Clean Air Act, and is unlawfully subjecting residents of each of the Plaintiff States to increased risks of harm to human health, welfare, and general economy that are associated with the continued unregulated emissions of carbon dioxide.

PRAYER FOR RELIEF

WHEREFORE, the Plaintiff States request that this Honorable Court:

1. Order the Administrator to revise the list of air pollutants pursuant to Section 108(a)(1) of the Act, 42 U.S.C. § 7408(a)(1), to include carbon dioxide.
2. Award the Plaintiff States their costs of this action and attorneys' fees; and
3. Grant such other relief as the Court deems just and proper.

Respectfully Submitted,

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* Motion for Admission *Pro Hac Vice* pending

Dated: June 4, 2003