Julie Teel (CA Bar No. 208282)
CENTER FOR BIOLOGICAL DIVERSITY
P.O. Box 7745
San Diego, CA 92167
Phone: (619) 224-3400
Facsimile: (619) 224-3700
Email: jteel@biologicaldiversity.org

Brendan Cummings (CA Bar No. 193952)
CENTER FOR BIOLOGICAL DIVERSITY
P.O. Box 549
Joshua Tree, CA 92252
Phone: (760) 366-2232
Facsimile: (760) 366-2669
Email: bcummings@biologicaldiversity.org

Attorneys for Plaintiffs

IN THE UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

CENTER FOR BIOLOGICAL DIVERSITY, a non-profit corporation; GREENPEACE, Inc., a non-profit corporation; and FRIENDS OF THE EARTH, a non-profit corporation,

Plaintiffs,

v.

DR. WILLIAM BRENNAN, in his official capacity as Acting Director of the U.S. Climate Change Science Program; U.S. CLIMATE CHANGE SCIENCE PROGRAM; JOHN MARBURGER III, in his official capacity as Director of the Office of Science and Technology Policy and Chairman of the Federal Coordinating Council on Science, Engineering, and Technology; OFFICE OF SCIENCE AND TECHNOLOGY POLICY; and FEDERAL COORDINATING COUNCIL ON SCIENCE, ENGINEERING, AND TECHNOLOGY,

Defendants.

Case No.

COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

INTRODUCTION

1. Global warming is one of the most serious threats facing humanity today. The world's leading scientists agree that society's emission of greenhouse gases, primarily from burning fossil fuels for energy, is responsible for the unprecedented rate of warming observed over the past century and will lead to much greater changes in this century and beyond. These gases, including carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), cloak the earth like a blanket, absorbing solar radiation that would otherwise be radiated back into space, causing the earth's climate to warm much like the interior of a greenhouse. Global warming is leading to profound changes in the earth's climate that endanger human health and welfare and the environment. The United States, with approximately 5 percent of the world population, is the world's largest emitter of greenhouse gases, responsible for 25 percent of the global total.

2. Unless decisionmakers and the public have access to updated and scientifically sound information in an accessible format, they are without one of the most important tools to grapple with this complex, potentially overwhelming, and yet all-important issue. Congress responded to this need when it enacted the Global Change Research Act of 1990 ("GCRA"), 15 U.S.C. §§ 2921, *et seq.* In the Act, Congress acknowledged the potentially devastating consequences of human-induced global warming, which in its own words could "adversely affect world agricultural and marine production, coastal habitability, biological diversity, human health, and global economic and social well-being." 15 U.S.C. § 2931(a)(2). Congress recognized the importance of the best available scientific information to the formulation of solutions to climate change by crafting the GCRA "to provide for development and coordination of a comprehensive and integrated United States research program which will assist the Nation and the world to understand, assess, predict, and respond to human-induced and natural processes of global change." 15 U.S.C. § 2931(b).

3. The cornerstone of the GCRA is Congress's mandate that Defendants prepare a scientific assessment of its global change research (hereinafter "National Assessment") at least every four years that: (A) integrates, evaluates, and interprets the findings of the Global Change Research Program and discusses the scientific uncertainties associated with such findings; (B) analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and

water resources, transportation, human health and welfare, human social systems, and biological diversity; and (C) analyzes current trends in global change, both human-[induced] and natural, and projects major trends for the subsequent 25 to 100 years. 15 U.S.C. § 2936.

4. The National Assessment is meant to be the preeminent U.S. synthesis of climate change science. The GCRA specifies that the Assessment is to be made available to all federal agencies and branches of the government for use in formulating policy on global warming pursuant to other statutory responsibilities and obligations. 15 U.S.C. §§ 2936, 2938(b)(1),(2). The first National Assessment was transmitted to Congress on October 31, 2000 and released to the public shortly thereafter. Defendants' failure to issue the updated National Assessment by 2004 as dictated by Congress constitutes a significant violation of the law, impedes fully-informed policy and action on global warming, and has caused substantial harm to Plaintiffs and their interests.

5. Similarly, the GCRA requires Defendants to develop a National Global Change Research Plan ("Research Plan"), which must be updated at least once every three years. 15 U.S.C. §§ 2933-34. As with the National Assessment, the Research Plan must be designed to effectively advance scientific understanding of climate change by guiding the development of usable information on which to base policy decisions relating to such change. The latest Research Plan, entitled "Strategic Plan for the U.S. Global Change Research Program," was issued by Defendants on July 24, 2003. More than three years have passed since the issuance of the 2003 Research Plan, depriving the public, Congress, scientists and agency decisionmakers of this important document.

6. Global warming is already having significant adverse effects on the United States, from melting permafrost in Alaska, to drought in the Southwest. Left unaddressed, the consequences of continued warming will likely be disastrous for the environment, the economy, and the nation as a whole. Over fifteen years ago, Congress had the foresight to direct the scientific resources of the federal government towards investigating and reporting on the likely effects of global warming on the United States. Such information is crucial to informed policy-making. Unfortunately, as the adverse effects of global warming are increasingly being felt across the country, and the need for such information has never been more urgent, this important Congressional mandate is now being ignored. Plaintiffs seek an order requiring Defendants to comply with the unambiguous mandates of the GCRA

and issue the overdue National Assessment and Research Plan by dates certain.

JURISDICTION, VENUE, AND INTRADISTRICT ASSIGNMENT

7. The Court has jurisdiction over this action to secure the performance of non-discretionary duties by the Defendants pursuant to 28 U.S.C. Section 1331 (federal question); 5 U.S.C. Sections 701-706 (Administrative Procedure Act review); and 28 U.S.C. Section 1361 (Mandamus and Venue Act). The relief requested is authorized by 28 U.S.C. Sections 2201-2202 (declaratory and injunctive relief).

8. Defendants have not remedied their violations of the GCRA and are in violation of this statute under the standards of review provided by the APA and Mandamus and Venue Act. There exists an actual controversy between the parties within the meaning of 28 U.S.C. Section 2201 (declaratory judgments).

9. Venue is proper in the Northern District of California pursuant to 28 U.S.C. Section 1391(e) as this civil action is brought against an agency of the United States and officers and employees of the United States acting in their official capacities and under the color of legal authority. Furthermore, at least one Plaintiff is incorporated in this judicial district, all Plaintiffs maintain offices in this judicial district, and no real property is involved in this action.

10. Pursuant to Local Rules 3-5(a) and 3-2(c) and (d), assignment of this case to the San Francisco or Oakland Division is appropriate because Plaintiffs reside in San Francisco.

PARTIES

11. Plaintiff CENTER FOR BIOLOGICAL DIVERSITY ("the Center") is a non-profit organization with offices in San Francisco, Joshua Tree, and San Diego, California, Phoenix and Tucson, Arizona, Silver City, New Mexico, Portland, Oregon, and Washington, D.C. The Center is a national membership organization with over 25,000 members in the United States. The Center's mission is to ensure the preservation, protection, and restoration of biodiversity, native species, ecosystems, public lands, and public health. Recognizing that global warming from society's emission of greenhouse gases is one of the foremost threats to the Center's members and their recreational, spiritual, vocational, aesthetic and other interests in the earth's environment, biodiversity, and public health, the Center's Climate, Air, and Energy Program works to reduce United States greenhouse gas

emissions and promote sound conservation strategies in order to protect these interests. The Center's work includes participating in rulemaking and project review procedures for activities that contribute to greenhouse gas emissions, such as the National Highway Traffic Safety Administration's proposed corporate average fuel economy standards for light trucks, and petitioning for the protection of species threatened by global warming under the Endangered Species Act, such as the polar bear and Caribbean corals. The Center is bringing this action on behalf of itself and its adversely affected members.

12. Plaintiff GREENPEACE, Inc. ("Greenpeace") is a California non-profit corporation with offices in San Francisco, Anchorage and Sitka, Alaska, and Washington, D.C. Its mission is to raise public awareness of environmental problems and promote changes that are essential to a green and peaceful future. There are approximately 250,000 current Greenpeace members in the United States. Since the 1980s, Greenpeace has been a lead advocacy organization working to raise awareness of global warming and the protection of wildlife, and to advocate for serious cuts in greenhouse gas emissions through local, national and global action. A recent example of Greenpeace's efforts include its advocacy and eventual lawsuit, in cooperation with Plaintiff Center for Biological Diversity, other non-profit organizations, and state attorneys general, challenging the U.S. Environmental Protection Agency's failure to regulate carbon dioxide as a pollutant under the Clean Air Act. That case is currently before the U.S. Supreme Court. Greenpeace also specializes in efforts to combat climate change in international forums. Its professional negotiators, scientists and policy experts attend world climate conferences, such as the Conferences of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC), to persuade U.S. and other decisionmakers to take action to combat climate change. Greenpeace also undertakes expeditions that document the impacts of climate change on people and ecosystems, such as its Project Thin Ice 2005, which documented climate change in the Arctic.

13. Plaintiff FRIENDS OF THE EARTH ("FoE") is a nonprofit environmental advocacy organization founded in 1969 with offices in San Francisco, California and the District of Columbia. FoE has approximately 30,000 members across the nation. FoE's mission is to defend the environment and ensure a healthy and just world. FoE's efforts include encouraging better stewardship of natural resources, reduction in greenhouse gas emissions, and responses to climate change. FoE uses a range of

approaches to achieve these goals including scientific research, public outreach, participation in administrative proceedings, and strategic litigation. For example, in 2002 FoE, with Greenpeace and four cities, filed suit against the Export-Import Bank (Ex-Im) and the Oversees Private Investment Corporation (OPIC) for providing financial assistance to oil and other fossil fuel projects without first evaluating the projects' global warming impacts. In addition, FoE's Bluewater Network team advocates for the adoption of local, state, and federal policies to compel the implementation of clean, efficient vehicle technologies, the production and use of renewable fuels, and other greenhouse gas emissions reductions measures.

14. Plaintiffs and their members live, recreate, research, photograph, work, and otherwise enjoy and value species, habitats, air quality, public health, water supply, water quality, and other resources affected by global warming. As described more fully below, Plaintiffs and their members are harmed by the failure of Defendants to produce the overdue 2004 National Assessment. First, by failing to issue the National Assessment, Defendants have deprived Plaintiffs not only of the information contained in the Assessment itself, but also of the opportunity to participate in the development of the Assessment through public notice, commenting, and hearings. Second, if the updated 2004 National Assessment were available, Plaintiffs and their members would use this information in several important ways. For example, the National Assessment would enable Plaintiffs to identify the species, habitat, communities, ecosystems, and regions most at risk from climate change. Plaintiffs would then focus their efforts on participating in Congressional and agency decisionmaking processes that will have the greatest impact on these vulnerable areas and ensure that the decisionmakers are proceeding with the best available scientific information. Plaintiffs would also use this information to educate the public about the specific impacts of climate change on different regions, species, habitats, and communities in the U.S. and actions they can take to support measures designed to reduce greenhouse gas emissions and facilitate the adaptation of people and the environment to inevitable amounts of climate change. Third, an updated National Assessment would provide Congress and federal departments and agencies with more thorough, accurate information with which to make better-informed decisions that protect Plaintiffs' interests by preventing and mitigating impacts to species, habitat, air quality, public health, water supply and quality, and other resources at risk from

climate change. The absence of an updated National Assessment results in uninformed, unwise, and ultimately legally and procedurally deficient federal agency decisionmaking. Such flawed decisionmaking directly and adversely harms Plaintiffs and their interests. Similarly, the lack of an updated Research Plan deprives Plaintiffs of the statutorily-conferred right to participate in its development and to use the information it contains. As the 2003 Research Plan emphasized, "Because of the pervasiveness of the effects of climate variability and the potential consequences of human-induced climate change and response options, citizens and decisionmakers in public and private sector organizations need reliable and readily understood information, including a clear understanding of the reliability limits of such information, to make informed judgments and decisions." Plaintiffs' members are, and unless the relief requested herein is granted, will continue to be adversely affected by Defendants' failure to produce the National Assessment of climate change impacts on the U.S. and updated Research Plan as required by the GCRA.

15. Defendants are responsible under the GCRA for producing the National Assessment and Research Plan, and their inaction related to the National Assessment and Research Plan are the source of Plaintiffs' injuries. Granting the requested relief by compelling issuance of the overdue National Assessment and Research Plan would redress the injuries described above.

16. Defendant FEDERAL COORDINATING COUNCIL ON SCIENCE, ENGINEERING, AND TECHNOLOGY was established pursuant to 42 U.S.C. Section 6651. The Council is chaired by the Director of Defendant Office of Science and Technology Policy. 42 U.S.C. § 6651(c). The GCRA places primary responsibility for preparing and submitting the National Assessment and Research Plan on the Federal Coordinating Council on Science, Engineering, and Technology. 42 U.S.C. § 2936.

17. Defendant OFFICE OF SCIENCE AND TECHNOLOGY POLICY ("OSTP") is a federal agency within the Office of the President. The GCRA designates the Director of OSTP as the chairman of the Federal Coordinating Council for Science, Engineering, and Technology, which is responsible for producing the National Assessment and Research Plan. 42 U.S.C. § 6651(c).

18. Defendant JOHN H. MARBURGER, III is the Director of the OSTP and is thus by statute Chairman of the Federal Coordinating Council on Science, Engineering, and Technology. 42 U.S.C. § 6651(c). Exec. Order 12039, 43 Fed. Reg. 8095 (Feb. 24, 1978), at § 5. As Chairman of the

Federal Coordinating Council on Science, Engineering, and Technology, Dr. Marburger is responsible for carrying out the responsibilities of the GCRA, including production of the National Assessment and Research Plan.

19. Defendant U.S. CLIMATE CHANGE SCIENCE PROGRAM is a federal agency established by President Bush in 2002 and tasked with carrying out all actions and obligations required by the GCRA, including preparation of the National Assessment and Research Plan.

20. Defendant DR. WILLIAM BRENNAN is Deputy Assistant Secretary of Commerce for International Affairs and Acting Director of the Climate Change Science Program. As Acting Director of the Climate Change Science Program, Dr. Brennan is responsible for carrying out the mandates of the GCRA, including administering the U.S. Global Change Research Program and preparing and submitting the National Assessment and Research Plan.

LEGAL FRAMEWORK

21. In enacting the Global Change Research Act (GCRA), Congress built upon an existing framework of legislation addressing the threat of climate change as a result of manmade pollution. *See, e.g.* the Global Climate Protection Act of 1987, 15 U.S.C. §§ 2901, *et seq.*. The purpose of the GCRA is "to provide for development and coordination of a comprehensive and integrated United States research program which will assist the Nation and the world to understand, assess, predict, and respond to human-induced and natural processes of global change." 15 U.S.C. §2931(b).

22. In the GCRA, Congress emphasized that the consequences of human-induced changes to the climate could "alter world climate patterns and increase global sea levels" and therefore "adversely affect world agricultural and marine production, coastal habitability, biological diversity, human health, and global economic and social well-being." 15 U.S.C. § 2931(a)(2).

23. In order to address the threats posed by climate change, the GCRA sets forth a comprehensive program for global change research and understanding in the United States. The Act directs the Federal Coordinating Council on Science, Engineering, and Technology to achieve the following objectives: (1) serve as the forum for developing the National Global Research Plan pursuant to section 2934 of the Act and for overseeing its implementation; (2) improve cooperation among Federal agencies and departments with respect to global change research activities; (3) provide

budgetary advice; (4) work with academic, State, industry, and other groups conducting global change research to provide for periodic public and peer review of the Program; (5) cooperate with the Secretary of State in providing representation at international meetings and conferences on global change research in which the United States participates and in coordinating the Federal activities of the United States with programs of other nations and with international global change research activities such as the International Geosphere-Biosphere Program; (6) consult with actual and potential users of the results of the Program to ensure that such results are useful in developing national and international policy responses to global change; and (7) report at least annually to the President and the Congress on Federal global change research priorities, policies, and programs. 15 U.S.C. § 2932(e).

24. The GCRA establishes the United States Global Change Research Program ("Program"), which is implemented pursuant to a National Global Change Research Plan ("Research Plan"). 15 U.S.C. §§ 2933-34. The Research Plan establishes global change research goals and priorities for a ten-year period, but must be updated "at least once every three years." *Id.* at 2934(a). The Research Plan must be designed to effectively advance scientific understanding of global change and provide usable information on which to base policy decisions relating to global change. It must also describe specific activities, including research, data collection and data analysis, to achieve such goals and priorities. The Research Plan is also required to identify and address relevant programs, activities, reports and studies of federal agencies and departments, the National Research Council, and other entities. The Research Plan must make recommendations for the coordination of the global change research activities of the United States with such activities of other nations and international organizations. Finally, the Research Plan is required to estimate, to the extent practicable, federal funding for global change research activities to be conducted under the Plan. 15 U.S.C. § 2934(b).

25. The Research Plan must contain, though is not limited to, certain enumerated research elements. 15 U.S.C. § 2934(c). It must also contain recommendations for collaboration within the federal government and among nations to: establish, develop, and maintain information bases, including necessary management systems which will promote consistent, efficient, and compatible transfer and use of data; create globally accessible formats for data collected by various international sources; and combine and interpret data from various sources to produce information readily usable by policy

makers attempting to formulate effective strategies for preventing, mitigating, and adapting to the effects of global change. 15 U.S.C. § 2934(d).

26. In developing the Research Plan, Defendants "shall consult with academic, State, industry, and environmental groups and representatives." 15 U.S.C. § 2934(f). No less than 90 days before Defendants submit the Plan or "any revision thereof" to Congress, "a summary of the proposed Plan shall be published in the Federal Register for a public comment period of not less than 60 days." *Id.*

27. The latest Research Plan, entitled "Strategic Plan for the U.S. Global Change Research Program," was issued by the CCSP and Subcommittee on Global Change Research on July 24, 2003, over three years ago.

28. The GCRA also requires the Federal Coordinating Council on Science, Engineering, and Technology to prepare, not less frequently than every four years, a scientific assessment (hereinafter "National Assessment") that: (1) integrates, evaluates, and interprets the findings of the Program and discusses the scientific uncertainties associated with such findings; (2) analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; and (3) analyzes current trends in global change, both human-[induced] and natural, and projects major trends for the subsequent 25 to 100 years. 15 U.S.C. § 2936.

29. The first National Assessment was transmitted to Congress on October 31, 2000.

30. All of the findings of the Program, including the National Assessment and Research Plan, must be made available to "all Federal agencies and departments" in "responding to human-induced and natural processes of global change pursuant to other statutory responsibilities." 15 U.S.C. § 2938(b)(2). The findings of the Program must also be made available to the Environmental Protection Agency for use in the formulation of a coordinated national policy on global climate change pursuant to the Global Climate Protection Act of 1987. 15 U.S.C. § 2938(b)(1).

FACTUAL AND PROCEDURAL BACKGROUND

I. The National Assessment and Research Plan

31. In order to carry out the obligation of the Federal Coordinating Council on Science,

Engineering, and Technology to produce the first National Assessment, a National Assessment Synthesis Team was formed in 1998 under the Federal Advisory Committee Act. The Team was charged with, among other responsibilities, integrating key findings on climate change impacts on the U.S. into a National Assessment Synthesis Report, augmented as appropriate with additional analyses and material from the scientific literature.

32. On June 12, 2000, a draft of the first National Assessment under the GCRA was made available for public review and comment for a period of sixty days.

33. The final 2000 National Assessment was transmitted to Congress on October 31, 2000. This 600-page report entitled *Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change* and its associated 154-page summary sought to identify the key climatic vulnerabilities of particular regions and economic sectors of the country in the context of the changes in the nation's environment, resources, and economy.

34. On Friday, December 1, 2000, a notice of availability of the final 2000 National Assessment was published in the Federal Register. The notice provided a link to the report on the internet and also stated that the report was available for public inspection and use at the Library of Congress.

35. The submission of the last National Assessment October 31, 2000 triggered a deadline of no later than October 31, 2004 for the submission of the next National Assessment.

36. In 2002, President Bush reorganized federal climate research in the United States. Part of this reorganization included the creation of the Climate Change Science Program, which was tasked with complying with the GCRA's statutory requirements and improving government-wide management of climate science and climate-related technology development.

37. On July 24, 2003, the Climate Change Science Program issued its Research Plan pursuant to Section 2934 of the GCRA, entitled "Strategic Plan for the U.S. Global Change Research Program."

38. According to the Climate Change Science Program's 2003 Research Plan, the Program would "focus interagency attention on the ongoing development of synthesis and assessment products." At last count, Defendants plan to issue 21 separate synthesis and assessment products during the period

2006-2008. The 2003 Research Plan did not provide for the issuance of the National Assessment required by Section 2936 of the GCRA by the October 31, 2004 due date.

39. On April 14, 2005, in response to a request by Senator John Kerry and Senator John McCain concerning whether or not the Climate Change Science Program was acting consistently with the requirement of the GCRA, the U.S. Government Accountability Office (GAO) issued a report concluding that the National Assessment had not been submitted by the 2004 statutory deadline and that the other GCRA requirements for the National Assessment would likely not be met under the Climate Change Science Program's current plan for compliance. The GAO also concluded that the form of the reports planned by the Climate Change Science Program, and the intervals between publishing them, would make it difficult for the Congress and others to effectively use the information as the basis for making climate policy.

40. On November 3, 2005, Plaintiffs submitted a letter to Defendants requesting full compliance with the GCRA and production of the overdue National Assessment. On February 10, 2006, Defendant Climate Change Science Program denied this request, stating that in lieu of a single report issued by 2004, it planned to issue 21 synthesis and assessment products over the next several years pursuant to its 2003 Research Plan. On July 24, 2006, the three-year deadline for Defendants to update the 2003 Research Plan passed with no sign that Defendants would comply with this statutory mandate either.

41. On September 6, 2006, Plaintiffs submitted a follow-up letter reiterating that continued violation of the GCRA, including the lack of an updated National Assessment, thwarts the ability of Congress and all federal agencies to use the best available information in decisionmaking that implicates global warming avoidance, mitigation, and adaptation. To date, Plaintiffs have not received any further communication from Defendants.

II. The Impacts of Global Warming on the United States

42. It is widely accepted by the world's leading scientific experts that human-induced increases in greenhouse gas concentrations are the major factor responsible for the 1ºF increase in global average temperature that occurred over the 20th century. Defendants' 2000 National Assessment noted that rising concentrations of greenhouse gases caused by human activities are contributing

significantly to the recent warming and that the current global warmth is "unprecedented." More recent reports in this rapidly advancing field reinforce this statement.

43. In 2001, for example, the Intergovernmental Panel on Climate Change ("IPCC"), which was established by the World Meteorological Organization and the United Nations Environment Programme in 1988, released its *Third Assessment Report – Climate Change 2001*. The Third Assessment Report presented the consensus view of literally hundreds of scientists on numerous key issues. The IPCC report stated that over the last two centuries, it is virtually certain that human activities have increased amounts of important greenhouse gases, primarily carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_20), in the atmosphere to levels not seen in all of prior human experience, and likely not seen for 3 million years. In addition, the average temperature at the surface of the earth has increased by about 0.6° C (1° F) since 1861, snow and ice cover have decreased, global average sea level has risen between 10 and 20 cm during the 20th century, and there is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities.

44. The IPCC's Third Assessment Report concluded that global average temperatures will most likely rise between 1.4° - 5.8°C (2.5°- 10.5 ° F) over the period 1990 to 2100 and sea level will rise between 10 and 90 cm in this century depending on levels of population growth, economic growth, technological innovation, and other factors that will influence overall greenhouse gas emissions.

45. Since the release of the Third Assessment Report in 2001, the scientific understanding of global warming and ability to predict its impacts have improved. As this understanding has advanced, so too has the urgency of the warnings from scientists about the consequences of our greenhouse gas emissions.

46. The 2004 *Arctic Climate Impact Assessment* revealed that entire ecosystems and human ways of life are at risk. Average Arctic temperatures have risen at almost twice the rate as the rest of the world in recent decades, with average winter temperature in parts of Alaska up 3-4° C (5-7° F) in just the past 50 years. In the next century, winter temperatures over the Arctic Ocean may increase by up to 10° C (18° F). As temperatures go up in the Arctic, sea ice is rapidly disappearing. National Aeronautics and Space Administration (NASA) scientists predict that if current rates of decline in sea ice continue, the Arctic could be ice-free in the summer well before the end of this century. A summer

ice-free state in the Arctic has not been witnessed for at least a million years.

47. While the increase in greenhouse gases and warming experienced in the past century are relatively modest compared to what is expected in this century, the warming to date has already wrought profound changes on the Earth's climate. Scientists have found convincing evidence that 20th century human-induced global warming has already affected plants and animals around the world. Surveys of over 1,600 species have found that more than half of these species are already experiencing changes in one of three categories: (1) earlier timing of spring events and later autumn events; (2) extension of species' range poleward or upward in elevation; and (3) a decline in species adapted to cold temperatures and an increase in species adapted to warm temperatures.

48. Global warming represents the most significant and pervasive threat to biodiversity worldwide, affecting both terrestrial and marine species from the tropics to the poles. One leading study quantified the future extinction risk from global warming by examining over 1,100 species covering 20 percent of the world's surface area. Under a "maximum warming scenario" (which will be achieved if greenhouse gas emissions are not significantly reduced from current levels), about 35 percent of these species would be committed to extinction by the year 2050. If greenhouse gas emissions are reduced significantly, to achieve a "minimal warming scenario," 18 percent of these species are still predicted to be committed to extinction by mid-century.

49. The existing and projected impacts of climate change on humans are similarly grim. The World Health Organization estimates that as of the year 2000, 154,000 deaths every year are attributable to global warming. Deaths from factors like dehydration and heat stroke associated with more frequent heat waves are projected to triple in many urban centers in the U.S. In the Harvard Medical School publication *Climate Change Futures: Health, Ecological, and Economic Dimensions*, experts examined the likely consequences for human health if worldwide greenhouse gas emissions continue on current trajectories. Key findings included the following: (1) warming favors the spread of disease; (2) extreme weather events create conditions conducive to disease outbreaks; (3) climate change and infectious diseases threaten wildlife, livestock, agriculture, forests and marine life, which provide us with essential resources and constitute our life-support systems; and (4) coastal human communities, coral reefs, and forests are particularly vulnerable to warming and disease, especially as

the return time between extremes shortens. The report also noted that, "[w]hile no one event is diagnostic of climate change, the relentless pace of unusually severe weather since 2001 – prolonged droughts, heat waves of extraordinary intensity, violent windstorms and more frequent '100 year' floods – is descriptive of a changing climate." These extreme weather events have had catastrophic impacts, both in terms of loss of life and economic costs.

50. One of the most troubling recent findings is that the 2001 IPCC projection for sea level rise is almost certainly a significant underestimate. Melting of the Greenland ice sheet has accelerated far beyond what scientists predicted even just a few years ago, with melting in 2004 occurring at 10 times the rates observed in 2000. The IPCC's predictions of between 10 and 90 cm of sea level rise this century assumes no contribution from melting of the Greenland or Antarctic ice sheets. Sea level rise in line with these underestimates would still inundate substantial areas of the coast and have far-reaching consequences. Yet just 2-3°C of additional warming would likely cause sea levels to rise by at least 18 feet (6 m) within a century, which would flood vast areas and displace millions of people.

51. California is particularly vulnerable to climate change. As the 2000 National Assessment and the 2006 State of California Climate Action Team Report summarized, a few of the consequences of climate change already occurring and expected to worsen in California include: (a) impacts on the health of Californians due to increases in the frequency, duration, and intensity of conditions conducive to air pollution formation, oppressive heat, and wildfires; (b) rising temperatures that will diminish snow accumulation in the Sierra Nevada and other mountain catchments in California; (c) impacts on California agriculture directly through increasing temperatures and rising CO_2 concentrations and indirectly through changes in water availability and pests; (d) increasing sea levels during the next century that will impact California's open coast and estuaries; (e) modification of the natural fire regimes in ways that could have social, economic and ecological consequences; (f) alterations in the extent and character of forest and other ecosystems, particularly in the alpine ecosystems, which may disappear altogether; and (g) loss of biodiversity.

52. Dr. James E. Hansen, Director of the National Aeronauics and Space Administration (NASA) Goddard Institute for Space Studies and NASA's top climate scientist, recently stated that just ten more years on current greenhouse gas emissions trajectories will commit the planet to large-scale

disastrous climate impacts for humans and other species. According to Hansen, global warming of more than 1°C (1.8°) relative to 2000 temperatures will constitute dangerous climate change as judged from likely effects on sea level and extermination of species.

53. Despite the scientific consensus that global warming is occurring and will have significant societal and environmental effects around the world, greenhouse gas emissions continue to increase both globally and domestically. The 2000 National Assessment noted that human activities will cause the atmospheric CO_2 concentrations to rise between 2 and 3 times its pre-industrial level by the end of the 21st century unless very significant control measures are initiated. Dr. Hansen recently predicted that operating under a business-as-usual CO_2 emissions scenario will yield global warming of at least 2-3°C (3.6-5.4°F) above the 2000 level by 2100. The control measures necessary to avert these emissions levels and their consequences have yet to be initiated.

III. Congress' Intended Role for the National Assessment of Climate Change Impacts on the United States and Research Plan

54. In order to enable federal agencies and departments to respond to the threats posed by climate change, Congress specified that all of the research findings of the U.S. Global Change Research Program under the GCRA, including the National Assessment, must be made available to "all Federal agencies and departments" in "responding to human-induced and natural processes of global change pursuant to other statutory responsibilities." 15 U.S.C. § 2938(b)(2). The findings of the Program must also be made available to the Environmental Protection Agency for use in the formulation of a coordinated national policy on global climate change pursuant to the Global Climate Protection Act of 1987 (15 U.S.C. § 2901 note). 15 U.S.C. § 2938(b)(1).

55. Defendants' failure to produce the 2004 National Assessment impairs the ability of federal agencies and departments to carry out their statutory duties that affect or are affected by climate change. These decisionmakers and other stakeholders are deprived of the updated synthesis of climate science and improved understanding of the U.S. implications of climate change, which Congress intended them to have so that they would be equipped to make fully informed decisions relating to mitigation of and adaptation to climate change.

56. Plaintiffs have participated in and continue to participate in numerous agency decisions

that affect or are affected by climate change and are impeded by the lack of an updated National Assessment. These decisions include:

(a) The National Highway Traffic Safety Administration's recent rulemaking for corporate average fuel economy standards for light trucks, responsible for a substantial amount of U.S. greenhouse gas emissions;

(b) The U.S. Environmental Protection Agency's draft Scoping Document for the Chuitna Coal Project Supplemental Environmental Impact Statement, which encompasses a one billion-ton coal mine and associated support facilities west of Anchorage and will operate for at least 25 years;

(c) The U.S. Department of Energy's rulemakings on replacement fuel goals and alternative fuel vehicle acquisition requirements under the 1992 Energy Policy Act;

(d) Petitions before the U.S. Fish and Wildlife Service to list species at risk from global warming under the U.S. Endangered Species Act, including the polar bear, staghorn and elkhorn corals in the Caribbean, and the Kittlitz's murrelet;

(e) Habitat Conservation Plans approved by the U.S. Fish and Wildlife Service in exchange for permits to "take" species listed as threatened or endangered under the Endangered Species Act during otherwise lawful activities, including the Western Riverside County Multiple Species Habitat Conservation Plan;

(f) Numerous public land and resource management plans, including the Forest Service's Management Plan for the Los Padres, Angeles, San Bernardino, and Cleveland National Forests and the National Park Service's Everglades National Park General Management Plan;

(g) The U.S. Bureau of Land Management's Programmatic Environmental Impact Statement for development of oil shale and tar sands resources in Colorado, Utah, and Wyoming, which result in higher greenhouse gas emissions than even conventional petroleum development;

(h) Legal petitions requesting the National Park Service, U.S. Forest Service, U.S. Fish and Wildlife Service, and National Oceanic and Atmospheric Administration to initiate planning and mitigation measures to address global warming impacts on America's national parks, forests, wildlife refuges, and marine sanctuaries; and

(i) The U.S. Minerals Management Service's development of a five year plan for offshore

development of oil and gas resources, the Draft Environmental Impact Statement for which relies on the outdated 2000 National Assessment as "a guide in describing qualitatively any potential regional climate change impacts."

57. There are countless additional important federal agency actions occurring across the country without the benefit of the updated National Assessment, including federal agency review of coal-fired power plants and coal mines to fuel the plants. The U.S. Department of Energy's National Energy Technology Laboratory recently estimated that there will be 154 GW of new coal capacity by 2030, or the equivalent of 309 500 MW coal-fired power plants.

58. As with the lack of an updated National Assessment, the failure of Defendants to issue a revised Research Plan impairs not only the development of the critical climate change research, but also the policy decisions of federal agencies and other decisionmakers that Congress intended to be based on the findings of that research. The Research Plan is required to cover a ten-year period and establish "the goals and priorities for Federal global change research which most effectively advance scientific understanding of global change and provide usable information on which to base policy decisions relating to global change" 15 U.S.C. § 2934(b). It is the findings from this research that Congress then directs Defendants to synthesize for federal agencies and other decisionmakers in the National Assessments produced every four years pursuant to Section 2936. Absent an updated Research Plan, there is no assurance that this important research will be carried out and incorporated into the National Assessment and other relevant planning, policy and decision documents.

CLAIMS FOR RELIEF

First Claim for Relief

(Violation of the Global Change Research Act, 15 U.S.C. § 2936)

59. Each and every allegation set forth in the Complaint is incorporated herein, by reference.

60. Defendants have violated the GCRA's requirement to produce a National Assessment of climate change on the United States at least every four years. 15 U.S.C. § 2936.

61. Defendants' failure to timely issue the National Assessment by 2004 violates 15 U.S.C. Section 2936 and constitutes agency action unlawfully withheld, unreasonably delayed, and contrary to law and agency action that is arbitrary and capricious within the meaning of the APA. 5 U.S.C. §§

706(1), (2). Defendants' violation of 15 U.S.C. Section 2936 also constitutes the failure to perform a nondiscretionary duty within the meaning of the Mandamus and Venue Act. 28 U.S.C. § 1361.

Second Claim for Relief

(Violation of the Global Change Research Act, 15 U.S.C. § 2934)

62. Each and every allegation set forth in the Complaint is incorporated herein, by reference.

63. Defendants have violated the GCRA's requirement to produce an updated National Global Change Research Plan at least every three years. 15 U.S.C. § 2934.

64. Defendants' failure to timely issue the Research Plan by July 24, 2006 violates 15 U.S.C. Section 2934 and constitutes agency action unlawfully withheld, unreasonably delayed, and contrary to law and agency action that is arbitrary and capricious within the meaning of the APA. 5 U.S.C. §§ 706(1), (2). Defendants' violation of 15 U.S.C. Section 2934 also constitutes the failure to perform a nondiscretionary duty within the meaning of the Mandamus and Venue Act. 28 U.S.C. § 1361.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs request that this Court enter judgment providing the following relief:

1. Declare Defendants in violation of the GCRA's requirement to produce a National Assessment of climate change impacts on the United States at least every four years pursuant to 15 U.S.C. Section 2936;

2. Declare Defendants in violation of the GCRA's requirement to produce an updated National Global Change Research Plan at least every three years pursuant to 15 U.S.C. Section 2934;

3. Order Defendants to produce the National Assessment of climate change impacts on the United States by a date certain pursuant to 15 U.S.C. Section 2936;

4. Order Defendants to produce an updated National Global Change Research Plan by a date certain pursuant to 15 U.S.C. Section 2934;

5. Retain jurisdiction over this action to ensure compliance with the Court's decree;

6. Award Plaintiffs their costs of litigation, including reasonable attorneys' fees pursuant to the Equal Access to Justice Act; and

7. Grant such other relief as the Court deems just and proper.

CORPORATE DISCLOSURE STATEMENT

Pursuant to Civil L.R. 3-16, the undersigned certifies that as of this date, other than the named parties, there is no such interest to report.

Dated: November 14, 2006.

Respectfully submitted,

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Julie Teel (CA Bar No. 208282)
CENTER FOR BIOLOGICAL DIVERSITY
P.O. Box 7745
San Diego, CA 92167
Phone: (619) 224-3400
Facsimile: (619) 224-3700
Email: jteel@biologicaldiversity.org

Brendan Cummings (CA Bar No. 193952)
CENTER FOR BIOLOGICAL DIVERSITY
P.O. Box 549
Joshua Tree, CA 92252
Phone: (760) 366-2232
Facsimile: (760) 366-2669
Email: bcummings@biologicaldiversity.org

Attorneys for Plaintiffs