

Briefing Statement

Bureau: National Park Service
Issue: Managing Parks in the Face of Climate Change
Office: NPS Sustainability Program and Air Resources Division
Date: May 5, 2006

Background: The effects of climate change are being noted in many of our national parks. Global warming is causing glaciers to melt at an accelerated pace and it is now predicted that all of the Glaciers of Glacier National Park will be gone by 2030. Unpredictable weather patterns and rising sea levels are causing significant concern in many coastal parks about how to protect increasingly vulnerable natural and cultural resources. Rising ocean temperatures are now believed to be largely responsible for the declining health of coral reefs in Biscayne Bay and other marine parks. Resident animal breeding habits are changing due to the earlier arrival of spring, and animals and plants are moving into regions they never existed before due to changing habitats. The National Parks, because of their location and the unique resources they protect, are places where the effects of these changes are particularly noticeable.

The President's February 2002 Climate Change Initiative committed the United States to a comprehensive strategy to reduce the greenhouse gas intensity of the American economy (how much we emit per unit of economic activity) by 18 percent by 2012. It also establishes multi-agency programs to (1) continue to investigate Global Climate Change and the associated impacts and (2) accelerate the development and deployment of key technologies that can achieve substantial greenhouse gas emissions reductions. There are a number of NPS activities that are underway in response to the challenge of climate change, but these responses are mostly underdeveloped and require considerable future planning and implementation. The activities can generally be categorized in the following ways:

Green House Gas Emissions Measurement - The NPS Climate Friendly Parks Program is a partnership with the US Environmental Protection Agency that is beginning to measure our park emissions and develop sustainable strategies to mitigate these emissions. To date, inventories and action plans have been completed at Gateway NRA, Glacier NP, Zion NP, Everglades NP, Glacier Bay NP & Preserve, Delaware Watergap NRA, Yosemite NP, and Great Smoky Mountains NP. A tool has been developed that will allow all parks to quantify their emissions. This tool is called the Climate Leadership in Parks Tool (CLIP), and is undergoing final development and testing. Emission reduction opportunities identified during Climate Friendly Park workshops are then integrated into each park's Environmental Management System plan so as to be able to track our "Climate Friendly Progress."

Sustainable Operations - Sustainable operations enable NPS to implement environmental solutions to operational challenges, fulfilling our stewardship mandate at the same time. Fifteen parks have sustainable action plans. These plans include actions to reduce energy use, water use, sustainable planning design and construction of facilities, intelligent transportation management. Concessioners are participating as well, and are required to have Environmental Management Systems in place.

Resource adaptation – Some parks have begun to think about what the effects of climate change will mean to park management. In some cases, these effects are being considered in General Management Plans (Apostle Islands NL) and in Natural Resource Management Plans.

Research – Limited climate change research is being undertaken in parks, usually by US Geological Survey staff or Universities. It is not comprehensive or well coordinated. The NPS Research Learning Centers have begun to coordinate climate change research in parks. Needed is an inventory and assessment of existing research for each eco-region that can help us understand the state of the knowledge regarding climate change impacts to parks. The NPS Inventory and Monitoring/Vital Signs Program will track park resources that are sensitive to climate change impacts, and will be how we will document the changes.

Education and Outreach - The overall NPS message addresses how climate change is impacting our resources and how we are trying to manage in anticipation of these changes. A small number of parks have begun to interpret the effects of climate change. The Alaska Regional Office has produced a Climate Change brochure for the "Earth To Sky" module which includes effects of climate change. The Climate Friendly Parks Program is working on a tool to allow more parks to interpret Climate Change in parks. Climate Friendly Parks Workshops have been completed at Gateway NRA, Glacier NP, and Zion NP, Everglades NP, Glacier Bay NP & Preserve, Delaware Watergap NRA, Yosemite NP and Great Smoky Mountains NP.

Other Activities Underway: The Climate Change Guidance Group within the division of Natural Resources Stewardship and Science is working to (1) refine the questions regarding the existing knowledge of climate change and impacts to parks, (2) focus our message on climate change, and (3) gather information needed to define what is natural and unimpaired for future generations in light of a changing climate.

EPA and NPS will continue to fund park inventories and workshops through an Interagency Agreement with EPA. EPA and NPS will share the costs and activities in this program; annual NPS funding has been \$50K per year (emissions inventory money) and EPA's contribution up to 150K per year. However, NPS has no funds allocated for FY07 for this program.

The Government Accountability Office (GAO) has begun a review looking at the potential vulnerabilities of selected federal lands to climate change. This work is being conducted at the requests of Senators John Kerry and John McCain. Specifically, GAO plans to examine (1) whether any statutory authority or other guidance exists directing the Park Service, the Bureau of Land Management, and the Fish and Wildlife Service to manage or prepare for the potential impacts of climate change on the lands they manage, (2) the extent to which the three agencies fulfill these obligations, and (3) what actions, if any, are being undertaken or planned by these agencies to mitigate or adapt to the potential impacts of climate change.

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