

## **POLICY DISCUSSION: AUTHORITIES AND OPPORTUNITIES IN MANAGING FOR CLIMATE CHANGE**

### **Hierarchy of Authorities** (from Management Policies 2006)

The management of the national park system and NPS programs is guided by the Constitution, public laws, treaties, proclamations, executive orders, regulations, and directives of the Secretary of the Interior and the Assistant Secretary for Fish and Wildlife and Parks. NPS policy must be consistent with these higher authorities and with appropriate delegations of authority. Many of the public laws and other guidance affecting the various facets of NPS administration and management are cited for reference purposes throughout these *Management Policies*. Other laws, regulations, and policies related to the administration of federal programs, although not cited, may also apply.

### **Brief list of Authorities to address Climate Change in National Parks**

Organic Act: "...The service thus established shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations...by such means and measures as conform to the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will **leave them unimpaired for the enjoyment of future generations.**" 16 USC § 1

"Wilderness areas...shall be administered for the use of the American people in such a manner as will **leave them unimpaired** for future use and enjoyment as wilderness..." (Wilderness Act of 1964)

**Rethinking the National Parks for the 21<sup>st</sup> Century**, NPS Advisory Board Report, 2001, recommends in part, that the NPS do the following:

- *Adopt the conservation of biodiversity* as a core principle in carrying out its preservation mandate and participate in efforts to protect marine as well as terrestrial resources. (emphasis added)
- *Advance the principles of sustainability*, while first practicing what is preached. (emphasis added)

**Secretarial Order #3226: (Jan 19, 2001)** "Evaluating Climate Change Impacts in Management Planning." This Order ensures that climate change impacts are taken into account in connection with Departmental planning and decision making.

Quote in part: "Each bureau and office of the Department will consider and analyze potential climate change impacts when undertaking long-range planning exercises, when setting priorities for scientific research and investigations, when developing multi-year

management plans, and/or when making major decisions regarding the potential utilization of resources under the Department's purview."

**Executive Order 13423, January 24, 2007** "Strengthening Federal Environmental, Energy, and Transportation Management"

Sets goals for agencies regarding vehicles, petroleum conservation, alternative fuel use, energy efficiency, greenhouse gases, renewable power, building performance, water conservation, procurement, pollution prevention, electronics management, and environmental management systems.

Calls for reducing ghg emissions through reducing "energy intensity" by 3 percent per year through 2015, relative to baseline 2003.

Also calls for reducing "water consumption intensity" by 2 percent per year through 2015

*Caution:* "Energy intensity" is defined as energy consumption per square foot of building space, including industrial or laboratory facilities. "Water consumption intensity" is not defined except it is to be done through life-cycle cost-effective measures.

The **Supreme Court decision, April 2, 2007:** The Court ruled that ghgs are pollutants under the Clean Air Act. The decision gives authority to EPA to regulate 4 greenhouse gas (ghg) emissions from new motor vehicles. Those 4 ghgs are carbon dioxide (CO<sub>2</sub>), methane, nitrous oxides, and HFCs. NPS concern is that once ghgs become a regulated air pollutants, then we have to evaluate how it would affect air quality related values (AQRVs). See the following excerpts from Clean Air Act Amendments, 1977:

"...**preserve, protect and enhance the air quality** in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value." (Clean Air Act as amended in 1977)

"...Congress declares as a national goal the **prevention of any future, and the remedying of any existing, impairment of visibility** in mandatory class I Federal areas which impairment results from manmade air pollution." (Clean Air Act as amended in 1977)

**Management Policies 2006**

The Underlying Principles of NPS Management Policies 2006 state that NPS policies will:

- comply with current laws, regulations, and executive orders;
- prevent impairment of park resources and values;
- ensure that conservation will be predominant when there is a conflict between the protection of resources and their use;
- maintain NPS responsibility for making decisions and for exercising key authorities'
- emphasize consultation and cooperation with local/state/tribal/federal entities;

- support pursuit of the best contemporary business practices and sustainability;
- encourage consistency across the system –“one national park system”
- reflect NPS goals and a commitment to cooperative conservation and civic engagement;
- employ a tone that leave no room for misunderstanding the National Park Service’s commitment to the public’s appropriate use and enjoyment, including education and interpretation, of park resources, while preventing unacceptable impacts;
- pass on to future generations natural, cultural, and physical resources that meet desired conditions better than they do today, along with improved opportunities for enjoyment.

While the Policies don’t explicitly direct NPS to address climate change, there are no apparent barriers. The following excerpts show where we could address climate change as part of policy:

### **1.8 Environmental Leadership**

Given the scope of its responsibility for the resources and values entrusted to its care, the Service has an obligation to demonstrate and work with others to promote leadership in environmental stewardship. The Park Service must set an example not only for visitors, other governmental agencies, the private sector, and the public at large, but also for a worldwide audience. Touching so many lives, the Service’s management of the parks presents a unique opportunity to awaken the potential of each individual to play a proactive role in protecting the environment.

Environmental leadership will be demonstrated in all aspects of NPS activities, including policy development; park planning; all aspects of park operations; land protection; natural and cultural resource management; wilderness management; interpretation and education; facilities design, construction, and management; and commercial visitor services. In demonstrating environmental leadership, the Service will (1) fully comply with the letter and the spirit of the [National Environmental Policy Act](#) and the [National Historic Preservation Act](#), and (2) continually assess the impact its operations have on natural and cultural resources so that it may identify areas for improvement. The Service will institute a Service-wide environmental auditing program that will evaluate a broad array of NPS activities to ensure that they meet the highest standards for environmental protection and compliance. The program will also screen for opportunities to implement sustainable practices and tangibly demonstrate the highest levels of environmental ethic.

Here are 4 excerpted sections in their entirety that specifically address "renewable energy" in Chapter 9 of the Policies.

#### **9.1.1.6 Sustainable Energy Design**

Any facility development, whether it is a new building, a renovation, or an adaptive reuse of an existing facility, must include improvements in energy efficiency and reduction in greenhouse gas emissions for both the building envelope and the mechanical systems that support the facility. Maximum energy efficiency should be achieved using solar thermal and photovoltaic applications, appropriate insulation and glazing strategies, energy-efficient lighting and appliances, and renewable energy technologies. Energy-efficient construction projects should be used as an educational opportunity for the visiting public.

All projects that include visitor centers or major visitor services facilities must incorporate LEED (Leadership in Energy and Environmental Design) standards to achieve a silver rating.

### **9.1.5.3 Utility Lines**

Where feasible, NPS utility lines will be placed underground, except where such placement would cause significant damage to natural or cultural resources (such as historic structures or cultural landscapes). When placed aboveground, utility lines and appurtenant structures will be located and designed to minimize their impact on park resources and values. Whenever possible and visually acceptable, all utilities will share a common corridor and be combined with transportation corridors. Cost-effectiveness, reliability of service, and visual impact will be considered when deciding whether to install utility lines aboveground or underground. To minimize the impact of on-grid utility lines, consideration will be given to long-term, cost-effective, renewable-energy applications, such as the use of photovoltaic, wind, fuel cell, and/or bio-fuel technologies (either as stand-alones or as hybrid systems), particularly in remote areas.

*(See Potential Wilderness 6.2.2.1)*

### **9.1.7 Energy Management**

The National Park Service will conduct its activities in ways that use energy wisely and economically. Park resources and values will not be degraded to provide energy for NPS purposes. The Service will adhere to all federal policies governing energy and water efficiency, renewable resources, use of alternative fuels, and federal fleet goals as established in the Energy Policy Act of 1992. The Service will also comply with applicable executive orders, including Executive Order 13123 (Greening the Government through Efficient Energy Management), and Executive Order 13149 (Greening the Government through Federal Fleet and Transportation Efficiency).

All facilities, vehicles, and equipment will be operated and managed to minimize the consumption of energy, water, and nonrenewable fuels. Full consideration will be given to the use of alternative fuels. Alternative transportation programs and the use of bio-based fuels will be encouraged, where appropriate. Renewable sources of energy and new developments in energy-efficiency technology, including products from the recycling of materials and waste, will be used where appropriate and cost-effective over the life cycle. However, energy efficiencies will not be pursued if they will cause adverse impacts on park resources and values.

To conserve energy, park personnel and visitors may be provided with opportunities for in-park public transportation or trails and walks for nonmotorized transport. As an environmental leader, the Service will interpret for the public the overall resource protection benefits from the efficient use of energy, and will actively educate and motivate park personnel and visitors to use sustainable practices in conserving energy. The Service will also pursue partnership efforts with the Department of Energy and others to further develop and meet NPS energy conservation goals.

*(See Air Quality 4.7.1; Lightscape Management 4.10; Resource Issue Interpretation and Education 7.5.3; Maintenance 9.1.4; Transportation Systems and Alternative Transportation 9.2; Trails and Walks 9.2.2; Sustainable Energy Design 9.1.1.6. Also see Director's Order #13A: Environmental Management Systems)*

## **9.4 Management Facilities**

Where authorized by Congress, management facilities will be located outside park boundaries whenever the management functions being served can be adequately supported from such a location. When management facilities must be located inside the park, they will be located away from primary resources and features of the park and sited so as to not adversely affect park resources or values or detract from the visitor experience. Historic properties will be used to the maximum extent practicable, provided that the use will not affect their significance.

Modular, precut, or prefabricated structures may be used for management facilities, including administrative offices, employee housing, and maintenance structures, when products meeting design requirements are available. Standard plans will be modified to (1) reflect regional and park design themes and harmonize with the natural surroundings; (2) preserve the natural and cultural environments; (3) provide for resource conservation; (4) provide for energy efficiency or the use of renewable energy sources; (5) limit chemical emissions; and (6) foster education about sustainable design.

*(See Park Management 1.4; Environmental Leadership 1.8; Use of Historic Structures 5.3.5.4.7; Accessibility for Persons with Disabilities 8.2.4; Facility Planning and Design 9.1.1; Accessibility for Persons with Disabilities 9.1.2. Also see Director's Orders #89: Acquisition and Management of Leased Space; and #90: Value Analysis)*

The section on "Weather and Climate" is less useful, however:

### **4.7.2 Weather and Climate**

Earth's climate has changed throughout history. Although national parks are intended to be naturally evolving places that conserve our natural and cultural heritage for generations to come, accelerated climate change may significantly alter park ecosystems. Thus, parks containing significant natural resources will gather and maintain baseline climatological data for reference.

Because any human attempt to modify weather has the potential to alter the natural conditions in parks, the Service will not conduct weather-modification activities, the Service will seek to prevent weather modification activities conducted by others from affecting a park's weather, climate, and resources.

*(See NPS-conducted or –sponsored Inventory, Monitoring, and Research Studies 4.2.1; Miscellaneous Management Facilities 9.4.5)*

HOWEVER, the Policies 2006 addresses planning for natural resource management, evaluating impacts to natural resources, restoration of natural systems, plant and animal population management principles, genetic resource management principles, definition of native and exotic species, management of native plants and animals, restoration of native plant and animal species, management of threatened or endangered plants and animals, management of natural landscapes, maintenance of altered plant communities, management of exotic species, introduction or maintenance, or removal of exotic species, pest management pesticides, fire management, water quality water rights (quantity), floodplains, watershed and stream processes, geologic processes, shorelines and barrier islands, caves, karst, geothermal and hydrothermal resources, soil resource management--and more—and many if not all of these things are *symptoms* of climate change. What we need is direction to manage our resources with climate change in mind. (example: Pacific West Region—superintendents received direction from the regional director, and that region now leads the NPS in its progress in managing park resources in the face of climate change.)

### **Where we are now**

GAO will publish in July 2007, a Report to Congress titled, “*Agencies Should Develop Guidance for Addressing the Effects on Federal Land and Water Resources.*” In the draft report, GAO found that federal land managers on the ground (in parks, on refuges, and in forests) **need** guidance from respective Washington offices that directs them to address climate change. (See example of Pacific West region, above)

Congress is drafting climate change bills faster than we can review them all. Many of the draft bills include such actions for federal agencies as requirements to conduct and report ghg emissions inventories, to reduce ghg emissions from federal operations, and to plan and manage for impacts due to climate change.

### **The Climate Friendly Parks as template for NPS policy:**

The Climate Friendly Parks program stems from a partnership between the U.S. Environmental Protection Agency (EPA) and the National Park Service and works to educate, communicate, and mitigate climate change and air pollution by:

- Educating every park employee about climate change and air pollution and the role each person can take in addressing the problem

- Identifying a strategy for each Climate Friendly Park to reduce its emissions of greenhouse gases and criteria air pollutants in order to help mitigate the effects of climate change and air pollution.
- Empowering every park employee to communicate to the public how climate change and air pollution affect their park's natural resources, how the park is dealing with these effects, and the difference each person can make in being stewards of our climate and other natural resources.

We've added a fourth goal, to assess the risks to parks from climate change, and plan adaptation strategies for parks to use in managing in the face of a changing climate.

The program uses environmental management planning to quantify, plan, and track ghg emissions reductions (also a component of EO 13423, and at least one House bill).

As part of the national climate friendly parks program, we are planning to do an NPS-wide ghg emissions inventory, using existing data on electricity and fuel use by parks. As each park completes its own inventory, we can enhance the national inventory, track improvement by park, and set realistic goals for reducing ghgs and increasing energy efficiency and sustainability.

### **Interdivisional-interdisciplinary climate change group**

One of the reasons that the Climate Friendly Parks idea has worked is the blending of disciplines that are put to the task. We have natural resources, facilities, and education all bent to the same task. I suggest that in addition to guidance from WASO, we need to form a group that has the following expertise in order to implement the guidance:

*Natural resources*—knowledge of impacts and adaptations historical ecosystems and pehnology. Need both a scientist and a management type

*Cultural resources*—knowledge of impact and adaptations, and historic interaction of culture and climate (what was in like when George crossed the Potomac?) also need both a scientist and a management type

*Facilities mgmt* – they keep the data on electricity and fuel use and sustainable design and energy efficiency

*Environmental Management Systems*: this is how we'll track any progress we make

*Education/interpretation*: Our best tool to educate our visitors and to gain support.

*Policy & law*: to tell us why we can or can't do something really cool and forward thinking.

*Sociologist:* to assist us in making appropriate decisions by helping to integrate biological, social, and economic analyses

Who else?

This group would meet no less than once a month, to give guidance to parks regarding managing in a world with a changing climate while complying with all the directives, laws and policies noted above.