PROTECTING AND UNDERSTANDING THE NATURAL RESOURCE LEGACY OF NATIONAL PARKS: A CONCEPT PAPER

INTRODUCTION

Several years after Congress created the National Park Service in 1916, an official study prepared by the Service pondered the greater meaning of the national parks. In summarizing, it declared that America's national heritage is

> richer than just scenic features; the realization is coming that perhaps our greatest national heritage is nature itself, which, when combined with great scenic beauty as it is in the national parks, becomes of unlimited value.

Approaching the 21st century, the National Park Service re-dedicates itself to the goal of preserving unimpaired for the benefit and enjoyment of the people the many and diverse natural elements and the great scenic beauty of America's national parks.

The Service now understands, though still imperfectly, the complexity of this goal. The natural world comprises millions of species, many still unknown; and the interrelationships of many of those that are known remain puzzling and mysterious.

Among this country's public lands, the national parks are given the highest level of protection. They provide unparalleled opportunity to understand the complexities of nature, while also ensuring that our generation and future generations can enjoy and learn from them.

As the new century dawns, Americans need to recognize the national parks as great natural libraries and museums where diverse people learn: some visit and enjoy the scenery; others take lessons from a national park web site; graduate students complete their projects; universities conduct research; and, armed with the knowledge of science, the National Park Service learns to better manage these majestic lands.

To achieve this broad mission the Service must simultaneously pursue a set of natural resource goals that fulfill its strategic plan.

GOALS

1. National parks are preserved so that this generation and future generations can enjoy, benefit and learn from them. (Mission Goal Ia and Ib)

2. Management of the national parks is improved through a greater reliance on scientific knowledge. (Mission Goal Ib)

3. Techniques are developed and employed that protect the inherent qualities of national parks and restore natural systems that have been degraded; and collaboration with the public and private sectors minimizes degrading influences. (Mission Goal 1a)

4. Knowledge gained in national parks through scientific research is promulgated broadly by the National Park Service and others for the benefit of society. (Mission Goals 1b & IIb)

PROGRAM

Achieving and refining these goals will require the Service to take action in a number of program areas:

1. Inventory: A consistent set of basic data on natural resources is essential in order to understand the processes which maintain and preserve the national parks. Such an inventory should lead to an understanding of species diversity, abundance and distribution. Efforts to acquire this basic information must be accelerated in all parks with significant natural resources. The expanding body of knowledge must be professionally managed, widely disseminated to the public and used to protect the parks from degradation and to rehabilitate and restore native systems. (Goals 1, 2 and 4)

2. Monitoring: Preservation depends on acquiring accurate information about the condition of natural resources, monitoring how that condition changes over time, and developing standards to evaluate any changes. Currently, a network of parks has begun testing monitoring approaches. These prototype efforts need to be evaluated. Successful standards, monitoring methods, and methods for managing and disseminating information on changes in resource condition need to be chosen. They should then be applied to all parks with significant natural resources. (Goals 2, 3 and 4)

3. Collaboration: The National Park Service must work with others to achieve mutual natural resource goals. Acquiring, applying, and promulgating scientific knowledge gained in parks to ensure their protection and enjoyment requires cooperation with public agencies, universities, gateway communities, private landowners and non-governmental organizations. Coordinated by knowledgeable Park Service personnel, these collaborative relationships--including the network of Cooperative Ecosystem Studies Units recently created in partnership with United States Geological Survey and other Federal agencies--need to be expanded. (Goals 2, 3 and 4)

4. Resource Planning: National park management must be based on a thorough understanding of natural resources and of the potential impacts of in-park or external actions on these resources. All management actions need to be in accord with current, park-based plans that protect, rehabilitate and restore resources, integrate resource considerations with all park programs, and define the park's role in a regional context. Public involvement and professional peer review are essential for all park plans and programs. (Goals 3 and 4)

5. Science in the Parks: The long-term preservation of park natural resources makes the parks reservoirs of information of great value to humanity. Thus, in addition to the use of science as a means to improve park management, parks can be centers for broad scientific research and inquiry. Research should be facilitated in parks where it can be done without impairing other park values. Grants, logistical support, cooperative studies, and other means of facilitating this wider role should be instituted at, or near, a network of parks broadly representative of regional systems. These programs should be developed and operated in collaboration with universities and other science organizations. (Goals 1, 2 and 4)

6. Fully Professional Staff: The National Park Service workforce must have the appropriate professional, technical, and leadership skills to make science-based, natural, resource-focused decisions. Resource management tools available to park superintendents must be increased significantly to meet future challenges. Professional development programs for resource managers, rangers, and park managers will be strengthened, and will also be expanded to ensure that all employees have adequate resource understanding to contribute effectively to the mission. Resources Careers will be implemented on a Service-wide basis.

Service leadership must have unimpeded access to advice from resource professionals. (Goals 1, 2 and 3)

7. Exotic Species: The presence of non-native plants, animals and other organisms poses a major and nearly universal threat to the preservation and restoration of natural habitats in the national parks. Identifying, mapping, and evaluating non-native species is critical to an effective and well-targeted effort to control exotic species. The National Park Service must act aggressively with a well-targeted effort to control exotic species where they threaten park resources. This effort must be based on current control methods, accurate data about exotic species distribution, and collaboration with surrounding landowners. (Goals 1, 2 and 4)

8. Native and Endangered Species: National parks, as some of the least manipulated environments in our country, can serve as refuges for declining species in the changing American landscape. Parks can also provide basic data by which to assess the status of plant and animal species in surrounding areas. Comprehensive surveys are needed to identify and locate rare, threatened and endangered species in parks. Protection and restoration of native plants and animals will require enhanced monitoring efforts, informed management, and collaboration with adjacent land managers and private landowners. (Goals 1 and 3)

9. Environmental Stewardship: Poorly managed human activity in the national parks can pose a threat to the preservation of natural resources. The National Park Service will comply with all environmental laws and apply the highest standards of environmental stewardship to its own operations. A system of in-park environmental audits conducted by the NPS and others, and standard procedures for park operations are necessary to demonstrate sound environmental stewardship. Sustainable development, waste reduction, recycling, the use of recycled materials should be employed to improve or sustain resource conditions. (Goals 1 and 3)

10. Air Quality: Congress has given the National Park Service affirmative responsibility to remedy and prevent damage to the air quality and related values of the units of the national park system. Sophisticated and comprehensive scientific information is essential to understand and document air quality conditions and degradation of park resources and the visitor experience due to air pollution. Efforts to monitor and understand air quality

and related values in parks must be expanded. The Park Service should enhance public awareness of regional and international sources that affect the air quality and related values in the National Park System. (Goal 3)

11. Water Resources: The protection of national park waters, watersheds, and aquatic life is fundamental to maintaining the integrity of natural resources and the quality of the visitor experience in the parks. A consistent approach to identifying and measuring progress toward meeting water quality standards is essential. Protective standards, scientific monitoring, and a program to ensure the protection of water quality, natural flows, and the health of aquatic systems is required to measure and protect this critical environmental component. The park construction program should contribute to the achievement of this goal. (Goal 3)

12. Parks for Learning: Protection of park resources requires a knowledgeable public. As stewards of the world's finest system of national parks, the Service has the responsibility to widely share its knowledge about park resources in order to enhance the public's ability to learn from, and to enjoy its national parks. The Service must apply innovative techniques to reach out to diverse publics and actively involve them in preserving and restoring when necessary the national parks. Recounting the Service's experience in natural resource preservation will teach and will inspire a greater public pride in the national parks. (Goals 1 and 4)