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NATIONAL PARKS

Park Service Needs Better Information to Preserve and Protect Resources

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Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to discuss our views on the National Park Service's knowledge of the condition of the resources that the agency is entrusted to protect within our National Park System. As you know, the Park Service is the caretaker of many of this nation's most precious natural and cultural resources. The agency's mission, as mandated by the Congress, is to provide for the public's enjoyment of these resources while, at the same time, preserving and protecting these great treasures so they will be unimpaired for the enjoyment of future generations. The 374 units that now make up the National Park System cover over 80 million acres of land and include an increasingly diverse mix of sites ranging from natural areas such as Yellowstone and Yosemite National Parks to urban areas such as Gateway National Recreation Area in Brooklyn, New York, to national battlefields, national historic sites, national monuments, and national preserves.

Over the years, in response to a variety of concerns raised by this Subcommittee and other congressional committees, we have reported on several aspects of resource management within the National Park Service. My testimony today is based primarily on the findings of three recent reports,[1] which generally focused on what the Park Service knows about the condition of the resources entrusted to it.

In brief, Mr. Chairman, our work has shown that although the National Park Service acknowledges, and its policies emphasize, the importance of managing parks on the basis of sound scientific information about resources, today such information is seriously deficient. Frequently, baseline information about natural and cultural resources is incomplete or nonexistent, making it difficult for park managers to have clear knowledge about what condition the resources are in and whether the condition of those resources is deteriorating, improving, or staying the same. At the same time, many of these park resources face significant threats, ranging from air pollution, to vandalism, to the development of nearby land. However, even when these threats are known, the Park Service has limited scientific knowledge about the severity of them and their impact on affected resources. These concerns are not new to the Park Service, and, in fact, the agency has taken steps to improve the situation. However, because of limited funds and other competing needs that must be

[1]National Park Service: Activities Outside Park Borders Have Caused Damage to Resources and Will Likely Cause More (GAO/RCED-94-59, Jan. 3, 1994), National Parks: Difficult Choices Need to Be Made About the Future of the Parks (GAO/RCED-95-238, Aug. 30, 1995), and National Park Service: Activities Within Park Borders Have Caused Damage to Resources (GAO/RCED-96-202, Aug. 23, 1996).

completed, the Park Service has made relatively limited progress to correct this deficiency of information. There is no doubt that it will cost money to make more substantial progress in improving the scientific knowledge base about park resources. Dealing with this challenge will require the Park Service, the administration, and the Congress to make difficult choices involving how parks are funded and managed. However, without such an improvement, the Park Service will be hindered in its ability to make good management decisions aimed at preserving and protecting the resources entrusted to it.

Information About Park Resources Is Essential for Effective Management

The National Park System is one of the most visible symbols of who we are as a land and a people. As the manager of this system, the National Park Service is caretaker of many of the nation's most precious natural and cultural resources, ranging from the fragile ecosystems of Arches National Park in Utah to the historic structures of Philadelphia's Independence Hall and the granite faces of Mount Rushmore in South Dakota.

Over the past 30 years, more than a dozen major studies of the National Park System by independent experts as well as the Park Service itself have pointed out the importance of guiding resource management through the systematic collection of data—sound scientific knowledge. The recurring theme in these studies has been that to manage parks effectively, managers need information that allows for the detection and mitigation of threats and damaging changes to resources. Scientific data can inform managers, in objective and measurable terms, of the current condition and trends of park resources. Furthermore, the data allow managers to make resource management decisions based on measurable indicators rather than relying on judgment or general impressions.

Managing with scientific data involves both collecting baseline data about resources and monitoring their condition over time. Park Service policy calls for managing parks on this basis, and park officials have told us that without such information, damage to key resources may go undetected until it is so obvious that correcting the problem is extremely expensive—or worse yet, impossible. Without sufficient information depicting the condition and trends of park resources, the Park Service cannot adequately perform its mission of preserving and protecting these resources.

Information on the Condition of Many Park Resources Is Insufficient

While acknowledging the importance of obtaining information on the condition of park resources, the Park Service has made only limited progress in developing it. Our reviews have found that information about many cultural and natural resources is insufficient or absent altogether. This was particularly true for park units that feature natural resources, such as Yosemite and Glacier National Parks. I would like to talk about a few examples of the actual impact of not having information on the condition of park resources, as presented in our 1995 report.[2]

Cultural Resources

Generally, managers at culturally oriented parks, such as Antietam National Battlefield in Maryland or Hopewell Furnace National Historic Site in Pennsylvania, have a greater knowledge of their resources than managers of parks that feature natural resources. Nonetheless, the location and status of many cultural resources—especially archaeological resources—were largely unknown. For example, at Hopewell Furnace National Historic Site, an 850-acre park that depicts a portion of the nation's early industrial development, the Park Service has never conducted a complete archaeological survey, though the site has been in the park system since 1938. A park official said that without comprehensive inventory and monitoring information, it is difficult to determine whether the best management decisions about resources are being made.

The situation was the same at large parks established primarily for their scenic beauty, which often have cultural resources as well. For example, at Shenandoah National Park in Virginia, managers reported that the condition of more than 90 percent of the identified sites with cultural resources was unknown. Cultural resources in this park include buildings and industrial artifacts that existed prior to the formation of the park. In our work, we found that many of these sites and structures have already been damaged, and many of the remaining structures have deteriorated into the surrounding landscape.

The tragedy of not having sufficient information about the condition and trends of park resources is that when cultural resources, like those at Hopewell Furnace and Shenandoah National Park, are permanently damaged, they are lost to the nation forever. Under these circumstances, the Park Service's mission of preserving these resources for the enjoyment of future generations is seriously impaired.

[2]Appendix I lists the 12 park units we visited while conducting this review. These units represent a cross section of the units within the park system. However, because they are not a randomly drawn sample of all park units, they may not be representative of the system as a whole.

Natural Resources

Compared with the situation for cultural resources, at the parks we visited that showcase natural resources, even less was known about the condition and trends that are occurring to natural resources over time. For example:

— At California's Yosemite National Park, officials told us that virtually nothing was known about the types or numbers of species inhabiting the park, including fish, birds, and such mammals as badgers, river otters, wolverines, and red foxes.

— At Montana's Glacier National Park, officials said most wildlife-monitoring efforts were limited to four species protected under the Endangered Species Act.

— At Padre Island National Seashore in Texas, officials said they lacked detailed data about such categories of wildlife as reptiles and amphibians as well as mammals such as deer and bobcats. Park managers told us that—except for certain endangered species, such as sea turtles—they had inadequate knowledge about whether the condition of wildlife was improving, declining, or staying the same.

This lack of inventory and monitoring information affects not only what is known about park resources, but also the ability to assess the effect of management decisions. After 70 years of stocking nonnative fish in various lakes and waterways in Yosemite, for example, park officials realized that more harm than good had resulted. Nonnative fish outnumber native rainbow trout by a 4-to-1 margin, and the stocking reduced the numbers of at least one federally protected species (the mountain yellow-legged frog).

Information on Threats to Park Resources Is Also Limited

The Park Service's lack of information on the condition of the vast array of resources it must manage becomes even more significant when one considers the fact that many known threats exist that can adversely affect these resources. Since at least 1980, the Park Service has begun to identify threats to its resources, such as air and water pollution or vandalism, and to develop approaches for dealing with them.[3] However, our recent reviews have found that sound scientific information on the extent and severity of these threats is limited. Yet preventing or mitigating these threats and their impact is at the core of the agency's mission to preserve and protect the parks' resources.

[3]State of the Parks - 1980: A Report to the Congress, U.S. Department of the Interior, National Park Service (May 1980).

We have conducted two recent reviews of threats to the parks, examining external threats in 1994 and internal threats in 1996. Threats that originate outside of a park are termed external and include such things as off-site pollution, the sound of airplanes flying overhead, and the sight of urban encroachment. Protecting park resources from the damage resulting from external threats is difficult because these threats are, by their nature, beyond the direct control of the Park Service. Threats that originate within a park are termed internal and include such activities as heavy visitation, the impact of private inholdings within park grounds, and vandalism. In our nationwide survey of park managers, they identified more than 600 external threats, and in a narrower review at just eight park units, managers identified more than 100 internal threats.[4] A dominant theme in both reports was that managers did not have adequate information to determine the impact of these threats and correctly identify their source. For the most part, park managers said they relied on judgment, coupled with limited scientific data, to make these determinations.

For some types of damage, such as the defacement of archaeological sites, observation and judgment may provide ample information to substantiate the extent of the damage. But for many other types of damage, Park Service officials agree that observation and judgment are not enough. Scientific research will generally provide better evidence about the types and severity of damage occurring and any trends in the severity of the threats. Scientific research also generally provides a more reliable guide for mitigating threats.

Two examples will help illustrate this point. In California's Redwood National Park, scientific information about resource damage is helping mitigation efforts. Scientists used research data that had been collected over a period of time to determine the extent to which damage occurring to trees, fish, and other resources could be attributed to erosion from logging and related road-building activities. On the basis of this research, the park's management is now in a position to begin reducing the threat by advising adjacent landowners on better logging and road-building techniques that will reduce erosion.

The second example, from Crater Lake National Park in Oregon, shows the disadvantage of not having such information. The park did not have access to wildlife biologists or forest ecologists to conduct scientific research identifying the extent of damage occurring from logging and its related activities. For example, damage from logging, as recorded by park

[4]Appendix II lists the eight park units we studied during this review.

staff using observation and a comparison of conditions in logged and unlogged areas, has included the loss of habitat and migration corridors for wildlife. However, without scientific research, park managers are not in a sound position to negotiate with the Forest Service and the logging community to reduce the threat.

Enhancing Knowledge About Resources Will Involve Difficult Choices

The information that I have presented to you today is not new to the National Park Service. Park Service managers have long acknowledged that to improve management of the National Park System, more sound scientific information on the condition of resources and threats to those resources is needed. The Park Service has taken steps to correct the situation. For example, automated systems are in place to track illegal activities such as looting, poaching, and vandalism, and an automated system is being developed to collect data on deficiencies in preserving, collecting, and documenting cultural and natural resource museum collections. For the most part, however, relatively limited progress has been made in gathering information on the condition of resources. When asked why more progress is not being made, Park Service officials generally told us that funds are limited and competing needs must be addressed.

Our 1995 study found that funding increases for the Park Service have mainly been used to accommodate upgraded compensation for park rangers and deal with additional park operating requirements, such as safety and environmental regulations. In many cases, adequate funds are not made available to the parks to cover the cost of complying with additional operating requirements, so park managers have to divert personnel and/or dollars from other activities such as resource management to meet these needs. In addition, we found that, to some extent, these funds were used to cope with a higher number of park visitors.

Making more substantial progress in improving the scientific knowledge base about resources in the park system will cost money. At a time when federal agencies face tight budgets, the park system continues to grow as new units are added—37 since 1985, and the Park Service faces such pressures as higher visitation rates and an estimated $4 billion backlog of costs related to just maintaining existing park infrastructures such as roads, trails, and visitor facilities. Dealing with these challenges calls for the Park Service, the administration, and the Congress to make difficult choices involving how national parks are funded and managed. Given

today's tight fiscal climate and the unlikelihood of substantially increased federal appropriations, our work has shown that the choices for addressing these conditions involve (1) increasing the amount of financial resources made available to the parks by increasing opportunities for parks to generate more revenue, (2) limiting or reducing the number of units in the park system, and (3) reducing the level of visitor services. Regardless of which, if any, of these choices is made, without an improvement in the Park Service's ability to collect the scientific data needed to properly inventory park resources and monitor their condition over time, the agency cannot adequately perform its mission of preserving and protecting the resources entrusted to it.

This concludes my statement, Mr. Chairman. I would be happy to respond to any questions you or other Members of the Subcommittee may have.

National Park Units GAO Visited in 1995

Park unit	Location
Antietam National Battlefield	Maryland
Bandelier National Monument	New Mexico
Denali National Park and Preserve	Alaska
Glacier National Park	Montana
Harpers Ferry National Historical Park	Maryland, Virginia, and West Virginia
Hopewell Furnace National Historic Site	Pennsylvania
Lake Mead National Recreation Area	Nevada and Arizona
Padre Island National Seashore	Texas
Pecos National Historical Park	New Mexico
Shenandoah National Park	Virginia
Statue of Liberty National Monument and Ellis Island	New York and New Jersey
Yosemite National Park	California

National Park Units GAO Studied in 1996

Park unit	Location
Arches National Park	Utah
Crater Lake National Park	Oregon
Gettysburg National Military Park	Pennsylvania
Indiana Dunes National Lakeshore	Indiana
Lake Meredith National Recreation Area	Texas
Minute Man National Historical Park	Massachusetts
Olympic National Park	Washington
Saguaro National Park	Arizona

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