

INVESTING IN PARK FUTURES

THE NATIONAL PARK SYSTEM PLAN: A BLUEPRINT FOR TOMORROW



EXECUTIVE SUMMARY

National Parks and Conservation Association

PREFACE

In the beginning, the national park idea was an American dream. Early park visionaries carved out of the western wilds places of wonder and visual power—Yellowstone, Yosemite, Mount Rainier. Since then, we have added over 300 units to the family of parks, each preserving a fragment of our natural or cultural heritage. Moreover, 120 other nations have adopted this American dream as their own.

Many would say that we've done enough. But the national park system is not a numbers game, nor will it ever be complete. Quality and condition of the resources are imperatives. The system must have both a commitment to set aside the places, and the dedication to protect them in perpetuity.

This *National Park System Plan* is the first effort to guide the future of the national park dream. We are concerned with the number and quality of the sites, with the people of the Service, with the threats to the existing and future units of the system, and with the system's responsibility to and relationship with the American people.

Why should National Parks and Conservation Association formulate the *Plan*? Over the years, NPCA has both developed a close working relationship with the NPS, and maintained an independent ability to critique or defend, as needed. Based on this relationship, and because NPCA is free of political constraints, we can approach the needs of the national park system with an informed, but objective, eye.

The production of this *Plan* was necessary in order to express NPCA's concern that establishment of a great national park system does not guarantee that it will remain great forever. If the system is to survive, it will be as a result of the collective actions of many citizens, and the actions of their elected representatives in the White House and the Congress.

Therefore the Board of Trustees and the staff of the Association took up the task of looking at the mission of the system and the Service, breaking it into its essential elements, inventorying the resources, analyzing where we are versus where we want to be, and laying out objectives for the

future. The process included intensive interviews, meetings, and workshops with Park Service employees, scholars, and citizen advocates. Those involved represent hundreds of years of experience with the parks.

It is important to understand the assumptions used for the *Plan*—that there would be no catastrophic change in our nation's economy, governmental system, or environment. Further, this *Plan* analyzes and bases its recommendations on the traditional methods proven successful by the National Park Service for preservation with compatible use of the parks, acquisition of the land when authorized by Congress, direct management of the resources and visitors, and education of the public.

In addition to these proven methods, we recognize that for the future, in order for the necessary elements of our heritage now missing to be preserved, new methods will be employed. In general, we leave any detailed discussion of these new approaches to future efforts. Thus, the *Plan* does not treat such emerging concepts as greenline parks, greenways, international biosphere reserves, or national landmark parks, nor does it detail the important role of the existing state or regional parks, federal wilderness areas, or properties on the National Register of Historic Places.

Finally, the *Plan* does not include strategies for implementation, which we and other park advocates will subsequently fashion from priorities and opportunities based on an examination of allies and resources. Suffice it to say that the Association, its Board of Trustees and its entire staff, from this point forward, are dedicated to implementation of this *Plan*'s recommendations. We know we can count on others for support. We believe that implementing the *Plan* will assure future generations of Americans the unmatched opportunities for enjoyment which my children and I, and you and yours, find today in America's national park system.



Paul C. Pritchard
President

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NPCA hired several consultants during the course of the *Plan*'s preparation for particular aspects of our work. We wish to thank Tedd McCann, Stewart Brandborg, and James Massey for their help with

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THE NATIONAL PARK SYSTEM PLAN: A BLUEPRINT FOR TOMORROW

INTRODUCTION

Since the late 19th century, Americans have had a love affair with the national parks. Not only the well-known places like Yellowstone, the Statue of Liberty, and the Grand Canyon, but such equally diverse and spectacular sites as Big Bend, Mesa Verde, and Valley Forge have touched us.

In the early 1930s and thereafter, when historic areas were added to the national park system, people realized that the national parks could represent the nation's cultural heritage as well as its natural heritage. From the mid-1960s on, when Congress began to add significant numbers of new areas, particularly in the East, and primarily to serve the growing urban populations, the national park system became a concept that could truly benefit all Americans.

Although the system will never be "complete," it cannot and should not be expected to incorporate every area needing protection and wise management. Appropriate areas of national significance certainly should be added, and areas of less significance should be protected by other public agencies or private organizations.

Units of the national park system are the most protected public lands in the nation. Yet they face major threats from conditions and activities both within and outside park boundaries that, in some cases, threaten their very existence. While Yellowstone National Park is more than 115 years old, and other parks such as Great Basin have been established less than two years, these and many other units in the system have inadequately drawn boundaries. Most lands within park boundaries are publicly owned, but nearly every park still contains some privately owned lands, use of which often results in harm to the park resources.

Detailed knowledge of the natural and cultural resources of the system is essential to their wise stewardship, yet there has never been an adequate research program for the parks, and most have not developed complete inventories of the resources or means to monitor threatened species or ecosystems. While thorough planning for both resource preservation and visitor use is obviously essential, the park planning process has become internally cumbersome, and limits the opportunity for public involvement.

The popularity of the parks, as evidenced by the continuing annual increases in total park visitation, is the greatest visible sign of their enduring purpose. But this same surge in types and levels of use may threaten the future of the parks.

Education and inspiration are the two most important visitor service functions of the parks; however, the interpretation and education programs of the Service have declined in number and priority.

While the National Park Service is inextricably linked to the preservation and wise use of the national park system, the Service as an institution is strained nearly to the breaking point. Insufficient personnel, inadequate budgets, conflicting policy changes, and a sea of paperwork pull the Service down. It is cringing under political pressure from increasingly manipulative Administrations, and is suffering morale problems attributable to interference with the park professionals' ability to make key policy and personnel decisions.

To pull itself out of this web of problems, the Service needs to adopt a comprehensive long-range plan, a road map through the maze of pitfalls surrounding it in the latter 20th century, and should do so free from nonprofessional, politically appointed administrators in the Department of the Interior. By assessing its strengths and weaknesses, inventorying its assets and liabilities, and evaluating emerging trends affecting the Service and system, the NPS will be much better able to cope with whatever the future holds.

This *National Park System Plan* is written for the professionals of the National Park Service, the Congress, and the public. Readers should recognize that the *Plan* is only a beginning. We do not describe the strategies, deadlines, or timeframes for implementation—these are left for the future.

The *Plan* intentionally does not treat several important aspects of the Service and system. No special attention is given, at present, to management and protection of the urban recreation areas or the new wilderness parks in Alaska. Further, we chose not to delve deeply into either maintenance or administrative functions of the NPS.

Today, the NPS is responsible not only for administering the 339 units of the national park system, but also for overseeing government-wide grants and technical assistance programs for recreation and historic preservation. A detailed analysis of these so-called "external programs" of the Service is beyond the scope of this study.

Few of our recommendations can be achieved without the support of the American people, acting through their elected representatives, the President and the Congress. Unless substantial progress is made on the *Plan's* recommendations, the parks will deteriorate in the future. We pledge that the National Parks and Conservation Association is dedicated to the *Plan's* full implementation.



TO PRESERVE UNIMPAIRED: THE CHALLENGE OF PROTECTING PARK RESOURCES

Prior to the passage of the National Park Service Organic Act in 1916, there were virtually no resource management operations in the parks. In the years immediately following the establishment of the Service, the parks continued to suffer from logging threats, destruction of archaeological sites, irrational predator control programs, and the parks' own growing popularity. Thus, the subject of resource management has always been at the very heart of the system's history; now, with increasing threats to the integrity of the parks, skilled management of natural and cultural resources is a key to the system's future. The much-debated "preservation versus use" controversy must be constantly weighted toward preservation; only the highest level of resource protection will ensure the opportunity to enjoy the parks in the condition—and for the purposes—for which they were set aside.

Resource management consists of identifying existing and potential problems for the parks, and endeavoring to reduce or eliminate degradation. Park concerns and proposed actions are written into a management document, the park's resource management plan. Natural resource management is concerned with ecological processes and the impact of people upon these processes and resources. Cultural resources management involves substantially the same principles, though the Service's main thrust must be to slow the deterioration of historic structures and materials.

Succinctly, the paradox of resource management is that preserving naturalness within the incomplete ecosystem of a park, or preserving fragments of historic scenes, is now recognized as requiring active management rather than benign neglect. Protecting parks "unimpaired for future genera-

tions," as the Organic Act mandates, requires attention to—and often intervention in—a bewildering array of forces and factors. These include biological, cultural, geophysical, and aesthetic conditions, with a host of regulatory issues accompanying them. The mission of the Park Service requires intensive inventory, monitoring, and action projects in these subject areas. The Service also preserves the intangible aesthetic resources of the parks—scenic vistas, historical scenes and settings, solitude and quietness.



In some park system units, activities such as mining, grazing, and oil and gas development have been sanctioned by Congress as part of compromises made during designation of the park. Such factors complicate park protection. Adding to all of these concerns is the realization that environmental change, plant succession—even climatic change—continue after the legal delineation of park boundaries. Park managers are having to make increasingly complicated decisions about what to protect, and when and how to intervene on behalf of park resources.

For most of the history of the National Park Service, the “jack-of-all-trades” ranger—the stuff of Service lore and mystique—has been responsible for the well-being of the parks. The resource management accomplished by the traditional ranger most often took the form of casual wildlife sightings, patching holes in deteriorating structures, or trail maintenance. Today, the generalist, “guesstimate” approach to resource management is no longer enough. Resource management demands expert scientific advice and technical support. While the Service has begun to develop a new cadre of resource management specialists, who provide important coordination functions at the park level, the Service is still playing catch-up.

Three decades of change in post-war America produced dramatic impacts on the national park system. Americans began to rediscover their parks, setting new visitation records. Demands grew for more park facilities. Wilderness, which once buffered the parks, retreated before man’s advance,

slowly transforming most park areas into threatened ecological islands. The parks became subject to a spectrum of environmental pollutants. Moreover, the Service was led increasingly into law enforcement. New emphasis on police training caused a relative decline in the Service’s attention to natural and cultural resource management. The consequences were severe. Threats were increasing just as the Service found itself understaffed in science and resource management positions. One of the challenges of the future is to restore a sense of priority to resource management.

Resource management is currently undergoing a modest upswing in the Park Service, under the leadership of Director William Penn Mott, Jr. A significant part of the 1985 NPS “12-Point Plan” is strongly linked with resource protection. However, much more needs to be done. At the heart of these tasks is the need for the Service to rethink and refocus on the vision of its role, and to fully acknowledge resource management as the standard bearer of the national park vision.

Studies conducted by NPCA, in concert with additional investigations recently completed by the National Park Service and the General Accounting Office, conclude that meaningful progress on resource initiatives since 1981 has been mixed. Resource management responsibilities facing the Service are expanding, and greatly outweigh the present capacity of the Service to respond. The National Park Service needs a strategic program to address external threats, build internal and external commitment for protection of resources,

RECOMMENDATIONS

1. The National Park Service should seek increased funding for an aggressive, accountable resource management program. The goal for this program should be at least an additional \$50 million per year for the resource management projects identified in the \$522 million backlog. These funds should be baseline increases where possible. The needs of the parks must be clearly stated to the American public and to Congress.
2. To institutionalize the commitment to inter-agency park protection, Congress should pass a Park Protection Act similar to the one approved by the House of Representatives in 1982 and 1983.
3. The National Park Service should prepare an annual report on the status of park resources.
4. The resource management plan (RMP) should become the primary management document at the park level on which the general management plan’s decisions are based. Resource management plans should be as comprehensive and far-reaching as possible. The RMP should outline intensive, standardized

baseline data gathering and uninterrupted monitoring of park resources.

5. The Service should strive for greater consistency in prohibiting uses that are incompatible with park resource protection.
6. The Park Service should continue improving the control of environmental pollution and impacts within park borders. The NPS should codify those standards within parks which exceed standards of surrounding jurisdictions.
7. The Park Service should define more precisely the distinctions between natural resource management, cultural resource management and maintenance in order to help park managers secure funding from the proper sources.
8. Superintendents should encourage the formation of park-level resource councils or teams to include representatives of all park divisions and, possibly, outside experts. Interdisciplinary teams, including seasonals, should assist in identifying projects and mitigating or solving resource management problems. Expanded use of region-based teams of resource specialists should help parks identify,



enhance staff development in resource management, and modify organizational structures to improve resource protection. The Service still needs nothing short of a fundamental revision and realignment of policy development, from the field level all the way to the Washington level, including the formulation of legislative initiatives in Congress.

With Congressional leadership, annual appropriations for resource management have increased modestly, often over Administration objections.

From \$44 million in 1980, funding for resource management (natural and cultural programs combined) increased to \$100 million in Fiscal Year 1987. This overall increase has allowed some expansion of the resource management program, even though a significant portion of the reported increase is attributable to reclassifying some maintenance and protection projects.

Relative to other functions and expenditures in the Park Service budget, resource management still lags. One senior NPS official has referred to resource management as "an underground activity" within the Service. For example, from Fiscal Years 1982 through 1985, when the Administration requested nearly \$1 billion to fund the Park Restoration and Improvement Program (PRIP) to repair and upgrade park facilities, only about 0.6 percent was available for the critical resource problems of the parks. Congressional leaders were responsible for these added funds. In the Fiscal Year 1988 proposal, the \$105 million and 1,902 full-time employee equivalents (FTEs) requested for resource management represented 17 percent of the budget for operation of the national park system. Most of these funds are devoted to overhead and ranger activities and are not accurately accountable as resource management expenditures. Because of accounting confusions, wide-ranging sources of resource management dollars, and overlap in employee responsibilities, the Park Service has no real grasp of what exactly is being spent on resources management—the most critical NPS function in preserving the parks.

design, and implement research and action strategies.

9. In park units particularly threatened by encroachments on private lands, specific personnel should be committed to providing assistance in community planning and education about problems in the park.

10. The Servicewide resources management trainee program should be redesigned to include both natural and cultural resource tracks. The program should be expanded until all parks with such a need have trained specialists on staff. Two hundred additional resource management specialist positions should be provided within five years. Greater emphasis should be placed on hiring personnel with strong resource-related backgrounds and expertise.

11. Where suitable, resource management should become a separate division within a park, reporting directly to the superintendent.

12. Each regional office should establish positions of Associate Regional Director for Research and Associate Regional Director for Natural and/or Cultural Resource Manage-

ment. Regional offices should continue to coordinate resource management projects that affect multiple parks.

13. The Park Service should develop uniform guidelines for park resource management plan development, review, and updating. RMPs should be updated at least every two years to describe accomplishments and add new projects.

14. Resource management plans should require more rigorous justification of dollar needs, and more systematic plans for spending requested funds. Plans should require specific divisions of needs into research, monitoring, and mitigation categories.

15. The Servicewide air quality, acid rain, and water resources programs should be more closely coordinated.

16. The National Park Service should continue to improve and integrate the automated aspects of its resource management function, including further development of COMMON database modules, the Resource Information Tracking System (RITS), and Geographic Information Systems (GIS).



In a recent report on Park Service progress on implementing resource management strategies proposed in 1981, the GAO reported that “the Park Service’s strategy for better managing park resources has yet to be fully implemented . . . the Park Service has not kept track of its progress in documenting and mitigating threats it identified in 1980 . . . most problems remain and are still not well-understood or documented.” In many cases, little is known about the resources or how to ensure

their protection. Based on their sampling of parks, GAO concluded that as many as 80 percent of the threats to the parks reported in 1980 are still unresolved.

The Park Service’s need has far eclipsed present funding for resource management. Ample evidence indicates that inattention to threats facing the system may have irreparable consequences for the parks. When the National Park Service surveyed the condition of park resources in 1987 it found, for example, that of park units reporting either visibility, water quality, or mammals as primary resources, over 60 percent reported moderate or severe threats to these resources.

The professional opinions of Park Service employees regarding the condition of the parks underscore the urgent need for resource management funding:

- An NPCA survey of 256 resource management plans identified 3,979 projects (natural and cultural), totalling more than \$522 million worth of identified needs, split 60–40 percent between natural and cultural projects. Ranked in descending order according to total dollar needs in the RMPs, NPCA’s study showed that the top five categories of affected park resources were: (1) historic structures, (2) wildlife, (3) vegetation, (4) visitor aesthetics, (5) archaeological resources.
- An updated NPS *Resource Assessment* completed in 1987 found that the unfunded natural resource management project needs alone totalled over \$267 million, including 2,318 separate

17. In National Park Service areas with proposed, recommended and/or designated wilderness, the Service should monitor backcountry use and impacts, and regulate visitation so as to preserve backcountry resources and wilderness values such as solitude.

18. The National Park Service should appoint a task force drawn from the Service, the American Institute of Conservation, and the American Association of Museums to assess the NPS conservation program and prepare an action plan.

19. The position of Staff Conservator under the Chief Curator should be established. This individual would set Servicewide policies and coordinate the Service conservation programs.

20. The NPS should regionalize the conservation function, establish regional conservator positions, and utilize “zone” contracts to assist parks in meeting their needs. The NPS should reassess the need to construct a new conservation lab at Harpers Ferry.

21. The National Park Service should embrace and implement the findings of the Congres-

sional Office of Technology Assessment’s report, “Technologies for Prehistoric and Historic Preservation,” and support the establishment of a National Center for Preservation Technology, to be operated ultimately by both public and private funds.

22. The National Park Service should better integrate both the natural resource management action program and the historic preservation actions recommended in historic structure preservation guides with the new Maintenance Management System (MMS).

23. The NPS Williamsport Preservation Training Center should be relocated to Harpers Ferry and placed under the Division of Employee Development and provided with base funding support.

24. The NPS should expand and provide additional support for the Historic Leasing Program. Proceeds from leasing should be deposited in a central Servicewide account and used for maintenance and repair of National Register and National Historic Landmark properties.

projects. As of August 1986, 31 parks lacked approved natural resource management plans.

The Park Service has barely begun to address the challenges posed by Alaska. The Alaska National Interest Lands Conservation Act of 1980 virtually doubled the park system, adding over 40 million acres. These vast wilderness parks represent our last opportunity to preserve large ecosystems relatively intact. Preventing resource impairment is dependent on establishing comprehensive baseline research and monitoring work prior to visitation increases. While important work is underway, the Alaskan parklands will ultimately demand a resource management program equal to or greater than the existing NPS efforts in the Lower 48.

Alaska is the metaphor for managing the over 36 million acres of wilderness in the national park system. A wilderness area within a national park unit is an overlay of the maximum preservation mandate. Yet wilderness management is not resource management "business as usual" for the Park Service or any other land management agency. Wilderness in the parks must be maintained as an *enduring* resource of inseparable parts: all uses must be subordinate to the resource, natural processes should operate freely, and the highest level of purity should be maintained. The Park Service faces perhaps its greatest challenge in preserving these primitive areas and minimizing impacts of human use.

Serious threats are not limited to the system's natural areas. In 1933, the National Park Service

became the nation's primary federal agency responsible for historic preservation. This task now includes preserving over 20,000 historic structures and 25 million artifacts and specimens in the museum collections of the Service—a collection second in size only to the Smithsonian Institution. At some NPS units, vast archival collections are critical to the unit's purposes. Yet despite the fact that historic and cultural sites comprise over two-thirds of the system's units, their concerns have traditionally been subordinate to the great natural wonders in the system. As of late 1986, 35 parks still lacked approved cultural resource management plans.

The Service's ability to respond to its conservation needs is hampered by a lack of adequate facilities and professionally trained personnel. The position of Chief Curator was not established until 1980. In January 1987, the Chief Curator estimated that completing cataloging tasks alone would require \$30 million and thirty years. A staggering backlog of archaeological work exists—over \$15 million worth, not including the Alaskan parks. The Service is woefully behind in its application of technology to object conservation and historic preservation. Work is just beginning on addressing the preservation needs of submerged cultural resources including shipwrecks and archaeological sites.

While the object conservation effort in the Service appears neglected, the preservation program for park historic structures, though underfunded, is in competent hands. Even so, valiant efforts by NPS historic architects to inventory historic and prehistoric sites in the system have resulted in the listing



on the national List of Classified Structures of only about 65 percent of the total sites. Without complete data, it is difficult to estimate the actual dollars needed to stabilize and preserve these sites. A 1982 National Park Service report estimated that over \$1 billion was needed to bring historic structures alone up to prescribed standards. In the face of these sobering facts, the Williamsport Preservation Training Center, one of the most important components of the NPS program, has yet to receive steady base funding and has graduated only a dozen or so preservation specialists, craftsmen and historical architects.

Whether natural, cultural, or both, crisis-oriented projects often receive higher priorities than requests to establish vitally important programs to collect basic, long-term ecological data; the existing resource management process offers slim hope for increases in base funds to bring staffing levels to a minimal level in most parks; inflation and the loss of well-trained seasonals undercut ongoing park-level programs; the park manager's ability to make informed decisions and *anticipate* resource problems declines. Park Service surveys show that in nearly every category of resources, managers report only marginally adequate or wholly inadequate data upon which to base decision making. The cumulative effect of these factors is that park resource integrity and employee morale suffer.

The Park Service should improve its inventorying, research and monitoring of park resources to support well-reasoned decision making; better integrate resource management operations with budgeting, maintenance, and interpretation; expand the contribution of resource specialists to park management; move beyond reactive, "brush fire" approaches to resource management projects; and aggressively look beyond its own borders to tackle threats to the parks.

Of particular importance is the Service's need to maximize use of existing authorities to defend the



parks. Prepared at the request of Congress, the 1980 *State of the Parks* report identified numerous threats to the parks arising from adjacent public lands, many managed by other federal agencies. Following the release of the *State of the Parks* report, leading members of Congress introduced the National Park Protection Act, which addressed the problem of threats to park resources arising outside park boundaries, and outside NPS control. Essentially procedural and dealing only with threats arising on adjacent federal lands, the bill would have set up steps for other federal agencies to follow when considering actions near park boundaries that might adversely affect park resources.

For actions by other agencies in the Interior Department, the bill would have required that the Secretary disapprove any proposed action which he determined would adversely affect park resources, unless he found that the proposed action was more important for the nation than the affected park resources. In situations where parks are surrounded by private lands, the bill would have authorized the NPS to provide, on request, technical assistance and planning grants to local governments to assist with land use planning for lands adjacent to the parks.

The bill passed the House in two Congresses, but died in the Senate under stiff Administration opposition. As the national park system approaches its 75th birthday, park protection legislation is needed more than ever as an integral component of a Service-wide strategy to manage the parks "unimpaired" into the 21st century and beyond.

The nation is struggling with resource shortages, toxic contamination, declining air quality, dramatic declines in species diversity, and a potentially disastrous global warming trend. Now, more than ever, we need our parks not only for their capabilities for re-creating the human spirit, but as natural laboratories and sensitive barometers of ecosystem health. Historic preservation work in the parks must also take the lead in capitalizing and promoting improved techniques. Strong support for resource management practices in the parks is simply a way to preserve our options for the future.

The Park Service, Congress and the American people need to consider seriously whether they are content to sit back and watch as forest health decline in the U.S. parks matches European levels of damage, as species populations in the parks continue to decline, as our national historic sites become mere islands in an urban maelstrom, as political intervention in the parks supersedes care and concern for the resources. The Service must ask itself if it can continue to proclaim itself the principle preservation agency of the nation when it is barely able to care for the landscapes, ecosystems, structures and objects that it owns. If the answer to these questions is no, then resource management must become a major thrust of the Park Service in the future.



RESEARCH IN THE PARKS:

AN ASSESSMENT OF NEEDS

Seventy-one years after the founding of the National Park Service, the NPS research program is underfunded, understaffed and struggling for an identity in the organization. The role of research in the National Park Service is ill-defined, primarily due to the lack of a specific legislative mandate directing the Service to engage in natural, cultural and social science as an essential element of its mission.

The organization of the research program historically has been unstable. NPCA found the research program to be fragmented and suffering from little policy guidance from the Washington Office (WASO). Regional research programs are structured inconsistently across regions and from park to park. Fragmentation and lack of consistency have created obstacles to inter-regional and interagency communication, and have resulted in duplication of efforts.

The NPS should establish an independent research arm, distinct from management and operations, to ensure objectivity, long-term continuity, and quality. This arm should integrate natural, cultural and social science divisions under an Associate Director for Research. The Associate Director for Research and the division chiefs should be nationally recognized scientists with proven leadership, management and communication skills. A National Park Research Center should be established within the office of the Associate Director for Research, to formulate policy, assess Servicewide research needs, prepare a national research strategy, set national priorities, coordinate regional programs, develop budgets, and communicate with the field, other federal and state agencies, and Congress.

Servicewide research personnel should be supervised by the divisional chief researchers at the WASO level. Regional and CPSU research personnel should be supervised by the regional chiefs of research. Park-based scientists should be supervised by regional chiefs of research for technical review. Administrative support and oversight of park-based scientists should be provided by park managers.

The NPS research program is inadequately staffed to meet current and anticipated needs. The NPS reports employing approximately 285 natural, cultural and social science researchers, about 2.3 percent of its 12,475 permanent employees. In contrast, the U. S. Forest Service employs 767 scientists and the U. S. Fish and Wildlife Service employs 509. The NPS should analyze the current expertise and distribution of research personnel and correlate this information with park, region, national and international needs. The NPS should then gradually implement a threefold increase in science staff. All such researchers should be evaluated under the OPM *Research Grade Evaluation Guide*.

Limited staffing results in many scientists being diverted into resource management and non-research administrative tasks which can result in decreased productivity and loss of grade. Low staffing also prevents the NPS research program from becoming more proactive and long-term oriented due to the need to respond to immediate "brush fire" applied research problems.

Opportunities for career advancement into NPS management are quite limited for NPS researchers. The situation is especially bleak for cultural resource specialists—research historians, ethnogra-

RECOMMENDATIONS

- 1.** Congress should enact a specific legislative mandate for NPS research which clearly defines the role of research in resource management and decision making and requires the completion of standardized Servicewide inventories of natural and cultural resources, and implementation of permanent monitoring programs.
- 2.** The NPS should include in its annual budget request, and Congress should appropriate, a separate line item for research equivalent to ten percent of the total operating budget of the National Park Service. The funds should be used to establish a Servicewide projects fund; increased park and regional base funding for research, inventory and monitoring; and establish a contingency fund for emergency needs.
- 3.** Congress should establish a Science Advisory Board of demonstrably qualified experts to provide independent, balanced and expert assessment of NPS natural, cultural, and social science research needs and programs. Regional and park specific science advisory boards should also be established.
- 4.** The National Park Service should establish an independent research arm, distinct from management and operations, to assure long-term continuity and objectivity in the NPS research program. This arm should integrate natural, cultural and social science divisions under an Associate Director for Research. Regional Chiefs of Research should report directly to the respective division chiefs at WASO. All park researchers should report to the respective Regional Chief of Research.
- 5.** The National Park Service should establish a National Park Science Center, under the direction of the Associate Director for Research, to formulate research policy, assess Servicewide research needs, prepare a national research strategy, set national priorities, coordinate regional programs, develop budgets, and communicate with the field, other federal and state agencies and Congress.
- 6.** The NPS should establish technical research centers for each major biome, using existing Cooperative Park Studies Units if possible. Topic-oriented or biome-oriented centers should be multi-organizational to foster cooperation with other agencies experiencing similar resource problems, and should be staffed with interdisciplinary science teams that could travel to individual parks to assist with special research problems. The centers could also serve as training and continuing education centers for researchers, resource management specialists and park managers.
- 7.** The NPS *Management Policies* should be revised to clearly define the national and international roles of natural, cultural and social sciences, and provide clear definitions for science, research and natural and cultural resource management.
- 8.** Park managers should be selected on the basis of their knowledge of resource management practices, their ability to manage and use science programs, and their ability to apply that knowledge when formulating budget requests. Managers should be held accountable, through performance standards, for utilizing applicable research findings in decision making.
- 9.** Research administrators should be held accountable, through performance standards, for working closely with management, structuring research programs that are responsive to short-term and long-term research and management needs, and for ensuring the scientific competence of research personnel.
- 10.** NPS should analyze the current expertise and distribution of research personnel and correlate this information with park, region, national and international needs. NPS should then gradually implement a threefold increase in natural, cultural and social science research staff. All such researchers should be evaluated under the OPM *Research Grade Evaluation Guide*.
- 11.** The Park Service should encourage and support more active publication in peer-reviewed, scientific and scholarly journals by NPS researchers.
- 12.** NPS scientists, research historians, anthropologists and other researchers should be required by managers to attend professional science meetings and conferences to keep current in their field, interact with their peers and maintain credibility.
- 13.** The NPS should grant periodic sabbaticals which provide researchers the opportunity to develop new skills and write major publications.
- 14.** The NPS should provide for effective data management by increasing the quality and use of the COMMON data base, including developing a standardized, systemwide inventory methodology for the ecological modules. Cultural resource data bases, particularly the Cultural Sites Inventory, need implementation. Funding should be provided to complete the descriptive cataloging of artifacts in the Service's museum collections.

phers, anthropologists and archaeologists. For these professionals assigned to WASO, the regional offices, and the Denver Service Center, opportunities to advance are extremely limited, as are opportunities to conduct anything but applied research.

There is a lack of NPS-sponsored training for research personnel, and their opportunities to attend professional science meetings are restricted. Attendance at such meetings is critical if NPS researchers are to remain current in their fields of expertise. The NPS should grant periodic sabbaticals which provide researchers the opportunity to develop new skills and write major publications.

Although NPS research received a significant boost from Congress in FY 1984 with the addition of funds, over Administration objections, for the air quality and visibility research and monitoring programs, funding is still inadequate to meet documented needs. In FY 1987, the NPS spent approximately \$16 million, or 2.4 percent of its \$673.8 million operating budget, on natural, cultural and social research. In contrast, the U.S. Forest Service (USFS) spent \$122 million, or 5.6 percent of its budget, on research while the U. S. Fish and Wildlife Service (USFWS) spent \$53 million on research, or 8.7 percent of its budget.

Inadequate funding has made it difficult for parks to conduct long-term research, inventory and monitoring programs. The Service should request, and Congress should appropriate, a line item for research equivalent to ten percent of the NPS operating budget. The funds should be used to establish a Servicewide projects fund; to increase park and regional base funding for research, inventory and monitoring; and to establish a contingency fund for emergency needs. Current budget restrictions may require transfer of existing funds from other NPS

budget areas to research in the short term.

Research administrators should be competent researchers with excellent administrative and communication skills. They should be held accountable, through performance standards, for working closely with management, structuring research programs that are responsive to short-term and long-term research and management needs, and for ensuring the competence of research personnel. To augment in-house research, the NPS should encourage increased research by independent researchers, enlarge the CPSU system, and expand cooperative interagency research agreements.

NPS research lacks coordination between parks and regions with similar environments. The NPS should establish technical research centers for each major biome, using existing Cooperative Park Studies Units if possible, to provide consultative services for inventory, monitoring and management planning. Subjects dealt with could include exotic species, visitor impacts, historic preservation and mitigation of threats to cultural resources. Centers should be multi-agency to foster cooperation with other agencies experiencing similar resource problems, and should be staffed with interdisciplinary science teams that could travel to individual parks to assist with special research problems. The centers could also serve as continuing education and training centers for scientists, resource management specialists and park managers.

Social science needs further expansion in funding and staffing. The NPS does not have adequate social science information to support most of its visitor use decisions. This information is vital if the NPS is to provide a quality experience to park visitors.





The quality of NPS research has been widely criticized, within and outside the Service. One factor affecting NPS research quality is the absence of a professional publications center. The publication of natural, social, anthropological and historical research results in professional, scholarly journals should be strongly encouraged.

One method for encouraging increased publication of NPS research results would be for the NPS to establish a cooperative publishing venture with one or several university presses. Not only would this provide publishing expertise, but would assure professional peer review of NPS scientific work, which has been lacking.

Factors affecting managers' utilization of research include presentation of results in non-technical terms, relevance and strength of findings, timeliness and feasibility of recommendations, budget constraints and political implications. A crucial factor in successful research is frequent interaction between management and researchers. The NPS should develop a binding contract between managers and researchers that outlines specific responsibilities at the outset of a research project. Researchers should be required to present non-technical oral and written summaries of research results at the conclusion of projects. Research contracts should provide for follow-up by researchers to assist with implementation of recommendations. Superintendents should be held accountable, through performance standards, for using research in decision making.

Communications within the National Park Service research program are often weak, limited and ineffective. Cited as causes are organizational fragmentation, incompatible data bases, lack of a directory of researchers, and absence of a communications network for scientists. A strategy is needed for developing a dialog between managers and researchers at all organizational levels.

The NPS COMMON computerized data base is one way in which communication of resource and research data can be enhanced. But cultural resource data bases generally do not interface with COMMON. While great strides have been made in the computerization of cultural resource data bases, including the List of Classified Structures (LCS), the Cultural Resources Bibliography (CRBIB)

and the Automated National Catalog System (ANCS), the Cultural Sites Inventory (CSI) has yet to be implemented. At present, data are also grossly incomplete on quality and quantity of park flora and fauna and the condition or variety of natural resources.

Regional offices often fail to communicate information to park management about research budget and personnel availability. Research conducted at one park is not effectively communicated to other parks with similar resources, which results in duplicated efforts. Communicating with the Washington Office is viewed by some as a hindrance and a burden.

To maximize research and resource management efforts, each national park unit should develop a research plan that is closely linked with the park's resource management plan. Researchers, resource management specialists and park managers should participate in identifying and defining research problems. Based on natural, cultural and social science information, plans can be developed to inventory and monitor park resources. The resource management specialists should implement that program and act as a link between the researcher and park manager.

Many NPS researchers feel physically and administratively isolated from other NPS divisions. Working relationships between research personnel and other park staff need substantial improvement. Interaction between research staff and resource management specialists or rangers performing resource management duties is fairly adequate at the park level, but interaction with the general ranger staff is poor to nonexistent. NPS researchers feel little or no opportunity exists for interaction with planning staffs either at the park or regional level, and they view this as a critical deficiency in planning processes.

The interface between research staff and interpretive staff also needs to be improved. This is vital because the Park Service, as part of its mandate, has an obligation to interpret natural and cultural resources to the public. Research can define issues of special concern where corrective action is needed. Interpretation can raise public awareness of the problems and stimulate public support for corrective action.

As we approach the 21st century, scientific management of the national parks is critical. Research and resource management must become the focus of the National Park Service. The NPS research program must be expanded and provided with adequate funding and staffing and a legislative mandate to generate the information needed for wise management of our resources.

Biosphere reserves should be created to extend the zone of protection around national parks and provide the framework for increased interagency and international cooperative research. National parks must become the integral link in protecting biological diversity and cultural heritage through the World Conservation Strategy.



PARKS AND PEOPLE: A NATURAL RELATIONSHIP

In the early days, national park visitation was encouraged as a means of building widespread public support for the parks and the fledgling Service. Under the leadership of Stephen T. Mather, the first director of the Service, the parks became popular vacation spots for the wealthy and the adventurous. Today, with their base of public support well established, national parks are more popular than ever as vacation destinations for all people. According to the NPS' *1986 Statistical Abstract*, visits to national park areas increased by 27 percent between 1979 and 1986. During 1986 alone, the Service experienced a seven percent increase in recreation visits over the 1985 level.

Not only are the parks experiencing an increase in sheer numbers of visitors, but these visitors are seeking a wider range of recreational activities. "Windshield" tours of scenic vistas are still the most popular way to see the parks, but kayaking, canoeing, bicycling, cross-country skiing and other active pursuits are becoming increasingly popular.

As a result of these trends, some park areas are so crowded on weekends and holidays that the qualities for which they were established are threatened. This popularity has brought a growing realization that national parks are among the nation's last strongholds of wildness and history—and that, as development encroaches on park boundaries, the parks are fast becoming natural and cultural oases surrounded by civilization.

With park resources as well as the quality of the visitor experience threatened by America's love affair with its national parks, the NPS faces an impending crisis. As the Service continues to attempt to walk the tightrope between preservation and public enjoyment, it must recognize that,



in an era of increasing pressures on resources, it will need a longer and longer balancing pole. And, in seeking to protect resources, the Service cannot shut out its most important constituency—the public. The Service needs to adopt long-term management policies and practices that minimize conflicts between preservation and use.

VISITOR MANAGEMENT

To manage visitor use of the parks effectively, NPS must have good baseline information about park visitors. Yet present data about park visitor levels, attitudes, and needs is wholly inadequate. Improvement of visitor data and other social science research is a goal of the NPS *12-Point Plan*. The Park Service and others are conducting limited studies of visitor use patterns to meet this goal, but much remains to be done.

Despite the inadequacy of NPS visitor use statistics, the Service is required by law to set visitor capacities for all of the units of the park system via its general management planning process. To date, the Service's response to this mandate has been

scattered and inconsistent. Few parks have sought to identify and manage the impact of the vast majority of visitors who never stray from the easily accessible "frontcountry." NPCA has recently completed development of a scientific procedure for the NPS for assessing and managing visitor impacts. This process could greatly assist in park planning decisions and should be employed by the NPS.

There are a variety of alternatives available to the NPS to help manage the impact of visitors. These include altering how a visitor uses a park

and/or boosting the resources' tolerance to visitor activity. Some visitor management options include education and interpretation, encouraging off-season use, promoting lesser-known parks, imposing a differential fee structure (it would cost more to enter the park during peak periods), and establishing public transportation systems. The Service might consider rationing overnight use by limiting the length of overnight stays. Resource management options include site hardening, channeling use, and developing facilities such as boardwalks.

Recommendations

- 1.** The National Park Service should define a consistent, long-term visitor management policy that explicitly articulates its mission of preservation with compatible use, and achieves the ultimate goal of resource preservation.
- 2.** The NPS should undertake a systemwide effort to assess visitor impacts on park resources and implement appropriate visitor impact management processes, such as those developed by NPCA.
- 3.** The Service should strive to identify trends in park visitation to help it meet the needs of growing park user groups such as foreign and older visitors.
- 4.** The Service needs to improve the methods of access to, and circulation within, parks by visitors on existing road systems. A primary emphasis should be the expeditious development of public transportation systems in those areas where transportation studies have been completed.
- 5.** The NPS needs to identify uses that are inappropriate to the park setting, and to work with land managers of other public agencies and representatives of the private sector to deflect these activities to more appropriate sites outside the parks. Care needs to be taken at cultural and historic park units to prevent recreational use from intruding on the historic scene.
- 6.** The Service should provide guidelines on appropriate visitor behavior through educational and interpretive programs in the parks.
- 7.** The National Park Service should develop and implement a consistent, standardized technique, including the use of "indicator" parks, for measuring visitation and visitor use patterns at park units.
- 8.** Existing NPS administrative and concession facilities that are inappropriately located should be removed or relocated. When new parks are established, NPS and concession facilities should be located away from primary or fragile park resources.
- 9.** The provision of the Concessions Policy Act that grants possessory interest to concessioners should be revised to allow it only when it is advantageous to the government to do so and, in appropriate instances, the government should seek to acquire concession facilities.
- 10.** The provision of the Concessions Policy Act that instructs the Service to grant a preferential right of renewal to concessioners should be amended to make the preferential right discretionary, and allow the Service to negotiate the terms of the provision in concessioner contracts.
- 11.** A training program should be developed by the National Park Service to introduce concessioners and their employees to the philosophy, policy, traditions, and mandate of the National Park Service and individual parks.
- 12.** The Visitor Facility Fund should be reauthorized by Congress before it expires in 1989. The NPS should continue to apply revenue from franchise fees toward rehabilitation of government-owned visitor facilities.
- 13.** The NPS should require concessioners to discontinue sale of all merchandise, clothing, and souvenirs that do not relate to the visitors' experience in the park.
- 14.** The strengths and weaknesses of the Service's historic leasing program need to be examined. The goal of preservation must be the primary thrust of the program, with revenue pooled in a Servicewide fund to be used for maintenance and repair of National Register properties.
- 15.** The National Park Service should continue existing programs, such as the Industrial Heritage Project, to build partnerships with the tourism industry and undertake new partnerships where appropriate.
- 16.** The Service should develop a model local outreach program to demonstrate the importance of a strong relationship with adjacent local communities. A community outreach specialist working within the region and/or individual parks would be responsible for a variety of activities related to regional information transportation and community relations.
- 17.** The National Park Service should continue to work with the private sector to examine the feasibility of a nationwide information and reservation system.

Finally, it is widely recognized that many of the large national parks have exceeded their carrying capacity for private automobiles. Public transportation programs in portions of Yosemite, Grand Canyon, Everglades, Denali, Dinosaur and other parks have helped mitigate visitor impacts and should be implemented in other units.

APPROPRIATE USE

In any recreational setting where people are given widespread access to resources, there are bound to be conflicts among users, regardless of the level of crowding. These conflicts involve a variety of issues. Mountain bikers and hikers have clashed over the NPS policy of allowing bikes on trails within Point Reyes National Seashore. At Grand Canyon National Park, the issue of scenic airplane and helicopter tours has become a major public controversy. And at Valley Forge National Historical Park, the Boy Scouts of America sought to have thousands of Scouts camp in a portion of the park's historic zone despite the vehement objections of NPS staff and historic preservationists.

Many types of conflicts are so commonplace that they receive little attention. Tent campers often do not want to camp in the shadow of recreational vehicles, and backpackers are offended by horse manure on trails. Similar issues are raised by the use of snowmobiles, hang gliders, and motorboats in national park areas.

Visitor misuse or abuse is involved in some conflicts. A small minority of visitors can impair the experience of the majority by removing park resources such as wildflowers, cactus, pottery shards, bullets, petrified wood, and other natural and cultural resources. Spraying graffiti, littering, trampling vegetation, and cutting standing timber for firewood also impair visitor enjoyment.

While many visitors with diverse tastes manage to co-exist with relative good nature, some conflicts become bitter. What standards should exist to determine appropriate and inappropriate uses of the parks, and what use should predominate in a conflict situation? To some, these determinations are solely matters of personal taste, but they require policy decisions that will have distinct consequences.

Two perennial mistakes of the Service in judging appropriate use are its unwillingness to make value judgements about which competing uses provide a "high quality" visitor experience, and its assumption that the parks should allow a wider spectrum of recreational uses than is appropriate for maintaining resource quality. The national parks were meant to foster resource-based appreciation of park values. The Service is justified in making firm judgements about types and levels of use that are appropriate to assure resource protection. Sometimes the key NPS concern over types and levels of use is related not to resource damage, but to disturbance of more contemplative uses, such as solitude and silence.



VISITOR SERVICES

In national parks, services for visitors are provided by a combination of the public and private sector—the National Park Service, concessioners, historic lessees, and nonprofit cooperating associations. These entities interact to provide roads and trails, restrooms, information and interpretation, camping and lodging, food and groceries, gas stations, gift shops, and other services. The location and design of their facilities can either enhance or detract from the visitor's impression of a national park. Overcrowded restrooms, high-priced restaurants and tacky gift shops can all leave visitors with a negative impression of the park, and undermine visitor appreciation of the area.

It is particularly important that facilities located in the parks not impair park resources. The Service's facilities should be designed to harmonize with the park. Facilities located in historic structures should show special sensitivity to their historic fabric. New construction of administrative offices, housing, visitor centers and other structures should be kept to a minimum and located away from primary or fragile resources. In historic parks, adaptive use of existing structures is often appropriate, except for the principle historic structures of a site. The Service should not continue to strive for maximum accommodation of visitors—by widening roads or enlarging parking lots, for example—when such additional use exceeds park carrying capacities or impairs park resources.

Concessioners operate in about one-third of the units of the national park system in a generally competition-free environment, where their prices, product and placement are regulated by the Service. While most concession operations are small-scale and oriented toward specific services, some are operated by large corporations. Some concessioners have invested large sums of money in facilities and services for park visitors. Historically, though, their role has been controversial.

In 1965, Congress enacted the Concessions Policy Act in response to growing conflicts between preservation and use. Among its provisions, the Act requires the NPS to limit concessions to those necessary and appropriate to the parks' purposes. This "necessary and appropriate" clause has left wide latitude for discretionary judgment by NPS managers and has generated dispute.

Between 1975 and 1980, the Park Service made great strides in professionalizing its management of concessions and in assuring adequate contract compliance. However, several reforms are still needed to protect park resources. These will be particularly important in light of the current increase in private sector involvement in visitor services and education.

NPCA has long argued that concession facilities should only provide visitors with services essential to their basic comfort and convenience. Entertainment-oriented facilities such as game rooms, downhill ski areas, and other attractions are inappropriate to the national park setting and should be removed. In addition, NPCA believes that certain other facilities are inappropriate because of their location adjacent to primary or fragile park resources, as in the case of Crater Lake Lodge and the Mammoth Cave Hotel. Other facilities are architecturally disharmonious and inappropriate to their setting. The NPS is beginning to remove some inappropriate facilities at the North Rim of the Grand Canyon, but relocation needs exist at a number of other parks. Choosing sites for future structures and relocating existing concession facilities should be based on clear guidelines.

Merchandise offered by concessioners for sale within the parks should relate to park resources or to the visitor experience in the parks. Too often, visitors are confronted with an array of tacky merchandise embossed with the park name. Rather, native handicrafts and locally-made goods should be offered by concessioners where feasible.

As provided in the Concessions Policy Act, some concessioners are granted possessory interest—equity in their facilities—that aids them in obtaining financing for facility construction. As a result, upon contract termination, the Service must compensate concessioners for their interest in facilities if the government purchases the facilities, or if another private investor does not pay fair market value for the operation. Even in instances where a concessioner is not fulfilling its contract obligations, possessory interest discourages the NPS from terminating a concessioner, because of the large Congressional appropriations often needed for a buy-out.

In addition, the Service must grant satisfactory concessioners a preferential right to contract renewal. The NPS should vigorously enforce the annual performance evaluation upon which renewal is based. Without this, the preferential renewal provision amounts to a perpetual contract. In addition, the Congress should amend the Concessions Policy Act to make granting of a preferential right discretionary on the part of the Service.

For the privilege of operating in the national parks, concessioners usually are required to pay the Service a franchise fee based on their annual gross receipts. For the past few years, this franchise fee revenue has gone into a special account that assists with upkeep of government-owned visitor facilities. This program, currently administered by the Service's Denver Service Center, needs improvement. NPCA supports an examination of this program and the continued use of franchise fees for this purpose.

The *12-Point Plan* contemplates integration of interpretive messages into concession facilities and services throughout the system. The emerging role of concessioners in providing some of the interpretation for national park visitors is controversial, as is their role in managing other visitor services such as campgrounds, which have traditionally been the domain of the NPS.

In addition to the National Park Service and concessioners, cooperating associations also play a significant role in providing visitor services. They have a long history of partnerships with the National Park Service through publication sales and through fundraising activities for the parks. However, the relationship between concessioners and cooperating associations has too frequently been strained because some concessioners view association sales as unfair competition.

Finally, the Service's historic leasing program allows structures of secondary importance to be leased to individuals and organizations who have the resources to preserve them. Since the program began in 1980, more than 75 properties have been leased. Administration of the program has been hampered by a number of problems, including skepticism on the part of some park professionals.

TOURISM AND REGIONAL PLANNING

Visitor use of national parks is affected in a number of ways by the services and activities outside of park boundaries. Among these is the travel and tourism industry that can help the Service foster visitation and appropriate use. In addition, the parks can benefit from a strong relationship with nearby local communities. Good community relations can facilitate efforts to encourage appropriate growth in local communities and can develop a strong local constituency for the parks.

The National Park Service plays a key role within the broader tourism industry. National parks have long been ranked among the foremost travel attractions in the United States. Park tourists contribute to local economies through purchase of meals, accommodations, souvenirs and transportation. Relatively little data exists on the magnitude of the economic contribution of the parks to regional economies, but it is thought to be substantial, particularly in many of the Western states. The most direct beneficiaries of this revenue are the communities near the parks.

Over the years, the Service's attitude toward tourism has fluctuated between hostility and active encouragement. However, given the growing importance of tourism to regional and national economies, it is critical that the National Park Service confront the problems and seize the opportunities presented by tourism.

The Service has worked increasingly with travel and recreation industries since 1980. The NPS Travel Industry Working Group, established in 1981, meets periodically to discuss tourism-related issues. Members of the group also work with the Service on various projects on an individual basis.

Although the travel industry and the conservation community share an interest in visitor use of parks, to date there has been little cooperation on issues of mutual concern. NPCA has been exploring ways to bridge this gap through meetings with tourism industry leaders. NPCA believes that attempts to boost tourism must also strive to assure the quality of a tourist's experience. Thus, resource protection must be a primary goal, along with provision of quality services.



Tourism, by its very nature, is a regional activity and requires planning in a regional context. The National Park Service's *Management Policies* explicitly allow such regional planning. Further, the *12-Point Plan* calls for cooperation "with state and local governments in providing complementary park experiences and expanded opportunities for diverse recreational uses."

Congress, too, set the stage for a new era in tourism development, regional preservation planning and economic development when it established the American Industrial Heritage Project. This approach to planning, particularly preservation planning, holds great promise for application in many areas of the United States.

A good working relationship with local communities near parks is essential to a coordinated regional planning effort. The impact of local communities on nearby parks is significant. Local residents provide a steady base of visitation and potential support for

parks. Their wants, needs, and attitudes influence the park. It is their livelihoods that are affected most directly by the Service, and their businesses that will benefit most from tourists attracted to the national parks. On the other hand, development projects undertaken in communities can sometimes impair park resources and undermine the attractiveness of parks as tourism destinations. If the economic base of a community continues to shift away from industrial development and toward tourism, as has been occurring around Arches and Canyonlands National Parks, for example, the community is likely to capitalize on economic opportunities provided by the park. Good planning is essential to assure that the park continues to serve appropriate recreation needs.

A good way to provide additional protection for national park units and increase recreational opportunities is to establish greenline parks and greenways in conjunction with national parks. Greenline parks are broad landscape areas protected through a variety of techniques. Similarly protected, greenways are corridors, such as streams, roadways, trails, and wildlife migration routes, which can link park units together. A close working relationship with local communities can help foster both of these types of protection strategies.

A major component of regional recreation planning is providing adequate information about the park and its amenities. The public often finds it virtually impossible to obtain accurate, up-to-date information on a variety of park locations. Nor is it possible to make reservations for the majority of national park campgrounds or backcountry sites. Visitors must arrive early in hopes of finding space available. Use of computers has helped the travel industry and will eventually alter the way the National Park Service handles information and makes reservations. The National Park Foundation has recently completed a study of a nationwide information and reservations system for national parks. Other studies have made clear the need for both information systems at the regional or state level and consolidated information banks for public and private sector facilities.



The ever-increasing interest in and use of the parks presents the National Park Service with new challenges that it cannot ignore. The Service has been accused at times of being anti-people in its approach to providing visitor opportunities and services within parks. Too often, the Service has simply buried its head in the sand and refused to confront the difficult issues of user conflicts, appropriate use, concessions policy, tourism, and adjacent land development. The recommendations in this volume are stepping stones toward an understanding of park visitor needs, a definition of appropriate visitor use and services, and a better perception of the role of national parks within the spectrum of recreational opportunities.



INTERPRETATION: KEY TO THE PARK EXPERIENCE

The 1916 Act establishing the National Park Service calls for resource preservation and compatible visitor use of the national parks. Interpretation helps visitors to understand and appreciate park resources and encourages visitor uses that do not harm the resources. However, this vital activity is not an agency priority, due to the absence of legislative language that directly confirms the NPS's responsibility to provide it. Interpretation should be recognized as a function of management equal to all others. It should no longer be—as it has been in the past—the first activity to be reduced when managers are faced with budget limitations.

THE SURVIVAL OF THE PARKS

The very survival of the parks depends on interpretation that incorporates critical resource management issues. Interpretive programs that describe the park and how to see it, but also point out the activities that threaten park resources, help visitors see the larger connections: if national park resources are impaired, then the broader environment may be even more seriously threatened. Awareness of critical resource issues can lead to an understanding of park policy and can foster park protection and conservation activities beginning at the community level.

A key to addressing critical resource issues is the cooperation of resource managers and interpreters toward this common goal. Yet, the communication aspects of interpretation have been emphasized more than the subject matter. One reason for this is that seasonal employees and volunteers, rather than permanent employees, provide much of the Service's hands-on interpretation. Given the vagar-



ies of seasonal work—the constraints of the seasons, the changing work force at each park from year to year—it is difficult to ensure the availability of the necessary expertise to interpret substantive park issues. Lack of control and inadequate training have too often reduced the interpretive function to giving general information. Resource managers and researchers, who are in a position to improve the substance of interpretation, often do not furnish the facts to interpreters and interpreters often are not fully receptive to integrating information from the resource specialists. Resource management and interpretive planning are often fragmented.

ENVIRONMENTAL EDUCATION

Environmental education is an extension of interpretation that seeks to make appreciation of the natural and cultural world an active, first-hand learning experience. Environmental education focuses chiefly on youngsters, but it is a lifelong process.

In the "environmental decade" of the 1970s, the NPS focused on the role of the parks in environmental education. Funds were specifically provided in the budget for curriculum development, each park was expected to provide some environmental education, and an Office of Environmental Education was established. Though the environmental education effort at the policy level has since faded, vestiges of it have survived under a variety of names in pockets of the national park system. Everglades National Park, for example, has maintained a successful program with schools in south Florida, and Yellowstone National Park has developed a new curriculum to be used with area schools. These

programs can be models for fostering a Servicewide recommitment to environmental education.

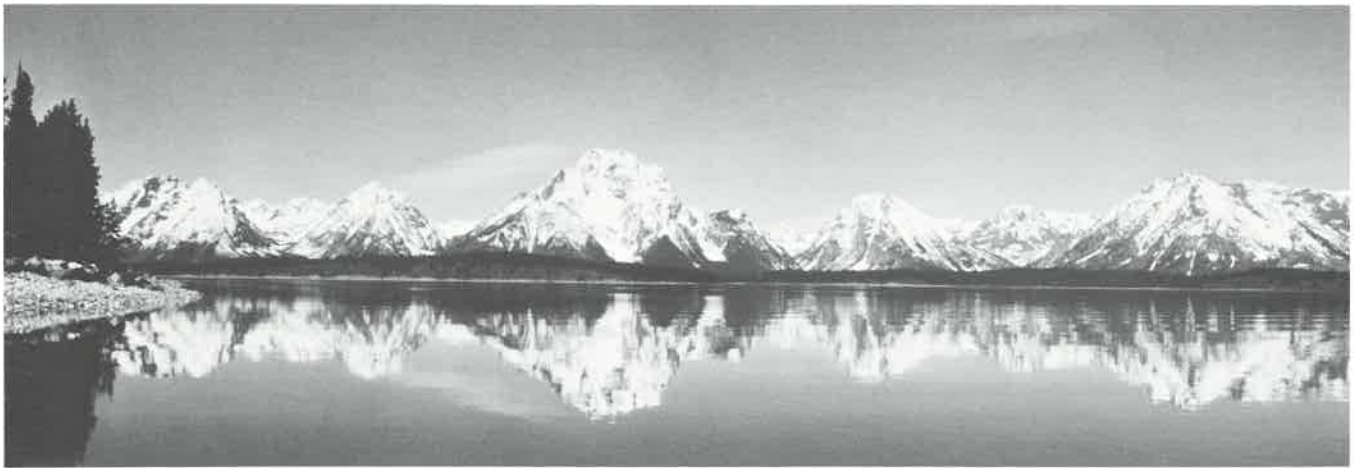
The NPS could also benefit from greater interaction with environmental education professionals and centers outside of the Service. Joint ventures in environmental education can evolve at the park level and focus on appropriate site-specific themes. The future of the parks hinges upon successful, cooperative environmental education efforts.

INTERPRETIVE EVALUATION

One of the most serious concerns voiced by interpreters is that their programs are given a low prior-

RECOMMENDATIONS

1. Congress should enact legislation to mandate NPS interpretation.
2. The NPS should clearly define the minimum or "core mission" levels of interpretation that should be available to all visitors and develop a consistent mechanism to determine if parks meet these minimum levels.
3. The NPS should amend performance standards for park superintendents and regional directors to hold them accountable for supporting quality interpretive services.
4. The NPS should hire interpreters who have the knowledge and educational background to understand the resources they interpret and skills in the techniques of communication.
5. The NPS should endorse a policy that reaffirms the role of the parks in fostering environmental education.
6. The NPS should manage and classify interpretive positions to establish career opportunities where interpreters can still advance, maintain public contact duties, and continue to develop resource management expertise to become master interpreters.
7. The NPS should ensure that seasonal employees receive the training and supervision necessary to provide high quality interpretation.
8. The NPS should encourage interpreters to be active in professional organizations, especially the newly forming national and international interpreters' associations.
9. Resource managers, research staff, and interpreters should cooperate more closely to integrate critical resource issues into interpretation. Interpreters' position descriptions and performance standards should specify activities that involve research and resource management related to park themes, and resource specialists should receive interpretive skills training.
10. Two permanent interpretive positions in the Washington Division of Interpretation should be established by the NPS to provide a liaison with the Natural and Cultural Resource Management Divisions.
11. The NPS should add an interpretive component to resource management plans and research reports, and encourage resource specialists to participate in interpretive planning and training.
12. Social science research should provide interpreters with information that will directly benefit the planning and design of interpretive programs.
13. The National Park Service should develop and utilize criteria for evaluating interpretation that reflect the multi-dimensional attributes and impacts of interpretive services.
14. The NPS should make a commitment to high quality recruitment efforts, coordination, training and careful supervision for successful volunteer programs that do not replace responsibilities of park staff.
15. The NPS should restrict fundraising efforts to activities that will augment normal park operations.
16. Each park should relate its specific interpretive programs to systemwide themes while continuing its primary focus on the unique resources for which that park has been set aside.
17. A cyclic maintenance fund should be established for interpretive facilities and exhibitry, and the rehabilitation of the numerous deteriorating or outdated park exhibits should be undertaken immediately.
18. The NPS should define an explicit role for high quality concession interpretation that does not conflict with the appropriate roles of cooperating associations and field schools.



ity by park managers. In order to attract the attention of park managers and build cooperation with other park divisions, interpretation must provide some accountability and communicate its needs to management. One tool of accountability is establishing criteria to evaluate interpretive programs. Currently, diverse opinions about interpretive evaluation exist within the NPS that range from denying its usefulness to fully supporting it. The NPS has not developed a strategy to build consensus on evaluation and devised acceptable criteria. Criteria should incorporate both quantitative and qualitative features of interpretive programs, utilizing well-designed survey instruments and observational techniques.

EXPANDING ROLES

Today, interpreters are expanding their role and focusing their efforts more on park management duties. They are managing volunteers, raising funds for programs, encouraging the active support of visitors and community neighbors, and generally doing more with less. As interpreters are pressed to diversify their talents, they are becoming involved in so many different activities that their primary duty—to interpret park features—is becoming secondary. Interpreters are doing less interpreting.

An increasingly prominent responsibility of the interpreter is to incorporate systemwide themes into park programs. The Bicentennial of the Constitution and air quality are two recent examples of such initiatives. Broad themes presented through systemwide interpretive programs do serve a unifying purpose. However, these Servicewide initiatives should not eclipse individual park themes.

Local communities are becoming more involved in park management, so it is increasingly important for the NPS to educate local citizens about park values. Activities that communicate the park's need for assistance from its neighbors can promote good community relations. For example, programs that inspire oral history accounts from local citizens are effective in some areas. Many parks are helping citizens form park and regional "friends groups" to provide a focus for local community support.

Although all park employees can contribute to outreach, the superintendent should play the leadership role, and can be given support by the interpreters, if sufficient staffing and funding are provided.

Park managers are realizing that matching interpretive programs to visitation patterns and visitor demands is an important part of park management and can help build support for the park idea. Unfortunately, some park areas have carried this idea too far, bending over backwards to win support, but compromising too much in the process.

Identifying specific visitor needs, and tailoring interpretive programs to meet those needs, requires knowledge of visitor use patterns and their impacts on the resources. Unfortunately, the gathering of information on visitor desires and other social science research ranks even lower than interpretation on the NPS scale of budget priorities.

When the Volunteers in the Parks (VIP) Program was established 17 years ago, the idea was for volunteers to provide parks with "extras" that would enhance the overall park experience. Today, many parks rely on volunteers to provide living history presentations, lead park tours, and staff visitor centers. Interpretation accounts for the biggest slice of VIP hours, although volunteers also become involved in maintenance and resource management. Contrary to regulations, in extreme cases, park operations may hinge on the availability of volunteers.

A successful volunteer program also requires high-quality recruitment and selection efforts, coordination, training and careful supervision. Currently, the people managing volunteer programs are interpreters who should be spending their time doing front-line interpretation and who have had little or no supervisory training.

The high percentage of volunteers used for interpretation also reflects the attitude that interpretation is not important and requires little professional development and skill. Since interpreters are called upon to develop program topics that reflect concern for complex and sensitive resource issues, an emphasis on the use of volunteers for interpretation is unwise.

In addition to recruiting and managing volunteers, interpreters are being pressed into fundraising activities to fill holes in the budget. Active fundraising has sometimes provided desperately needed materials and support to parks. However, the parks should not be expected to raise money for their own basic operations. The need for fundraising reveals a low Service priority for interpretation. Managing fundraising activities and agreements is time-consuming and requires special skills. Interpretive programs that generate contributions could also leave the visitors with a stronger impression of the park's financial problems than an appreciation of its natural and cultural resource themes.

The expanded scope of activities demanded of interpreters raises questions about the interpretive profession in the NPS. The dilution of interpretation proceeds apace, because interpretation's "core mission" responsibilities have never been defined and managers are rarely held accountable for high quality interpretation. The impact of interpretation's changing duties is not being recognized by the Service. Short-term agency priorities are subverting the long-term benefits of allowing and encouraging interpreters to concentrate on their craft.



INTERPRETIVE PROFESSIONALISM

Interpretation based on direct, personal contact with visitors is the basis of the profession, but is not rewarded with opportunities for career advancement. Membership and participation in professional associations is not encouraged. The promotion structure of the NPS as well as management demands force field interpreters to abandon direct visitor contact in order to advance their careers. A newsletter that helped interpreters throughout the Service exchange ideas was discontinued. Quality interpretation requires resource knowledge derived from academic education, interaction with other park personnel, good communication skills and a high degree of motivation and enthusiasm.

EXHIBITS AND PUBLICATIONS

Interpretation includes the use of exhibits and publications to complement face-to-face programs. The NPS has a large capital investment in visitor centers

intended to orient visitors to the park and present an overview of resource themes. Brochures, handbooks, movies, slide shows, videotapes, wayside exhibits and trail guides are all valuable interpretive tools. These items have to be produced, maintained and updated; yet funding has been inadequate. The Service estimates that it will take more than \$60 million to bring all interpretive facilities up to standard.

INTERPRETATION'S COUNTERPARTS

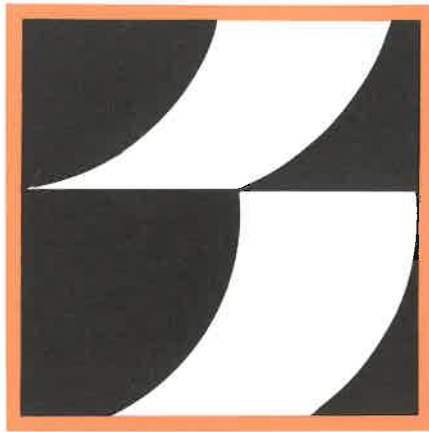
The NPS cooperates with the private sector to augment its interpretive efforts. For almost as long as the Park Service has existed, nonprofit cooperating associations have provided publications, interpretive program support, research support, and donations. Now, dependence on cooperating associations is growing as parks request higher levels of assistance from the associations. An overreliance on these associations may emerge as a significant issue in the near future. The NPS expects that cooperating associations will always be available to help in a financial emergency, funding efforts such as park brochures, gift catalogs and land acquisition. This approach can spread association efforts very thin.

Concessions present newly emerging opportunities for interpretation. In the business of providing lodges, hotels, restaurants, gift shops, tour guide services and other amenities for visitors, concessioners can also supply basic park information and some interpretation and can point out NPS interpretive programs. Many park visitors have more contact with concession employees than with NPS personnel. With appropriate quality control, cooperation, and enlightened concessioners, concession operations could better support park interpretation.

In some parks, through contractual or cooperative agreements, private, nonprofit field schools provide formal classes and workshops for students, visitors and park neighbors. Catering to those who have time for an in-depth park interpretive experience, field programs complement park programs. Some parks, such as Yellowstone and Yosemite, have well established field schools. With monitoring and quality control, the concept could be expanded to additional national parks, including cultural areas.



Interpretation provides the essential opportunity for visitors to establish a connection with park resources. The future of interpretation in the Park Service hinges on consensus within the agency that interpreters are essential both to the protection of the parks and to visitor enjoyment. Interpretation plays a key role in preserving the national park idea for the future, a vital responsibility of the National Park Service.



PARK BOUNDARIES: WHERE WE DRAW THE LINE

NPCA's Boundary Study arose from a long-standing need to examine the adequacy of the boundaries of existing natural and cultural areas. One purpose was to analyze each unit of the national park system to determine if boundary adjustments were needed either to incorporate significant resources outside of boundaries, or to better protect resources already within. Another purpose was to examine the process by which boundaries are established, and determine if it is an effective method to ensure the protection of resources. There is a general belief that once a park is established, the preservation of resources within it is assured. Through this study, NPCA has determined that the boundaries of parks do not reflect the distribution of the primary resources, ensure their long term preservation, or provide for their most efficient management.

The park-specific recommendations contained in the report have been developed from extensive surveys, site studies, and interviews with National Park Service personnel, resource scientists, and conservation professionals. Using both maps and descriptions, the study illustrates the inadequacies of the boundaries of nearly 200 of the units of the national park system. The proposed adjustments are neither exhaustive nor absolute. Nevertheless they are, without exception, additions which will enhance the Park Service's ability to preserve America's heritage in perpetuity.

On a park-by-park basis, thousands of potential adjustments have been discussed by the National Park Service, Congress, private organizations and individuals over the years. To date, more than 500 boundary revisions have been authorized for nearly 200 of the parks. Though many of these adjust-



ments have been relatively minor in size, most of them, especially in the last 20 years, have incorporated significant resources which existed outside park boundaries.

Distinct from traditional efforts to amend boundaries for parks, this report emphasizes the importance of protecting resources in perpetuity, regardless of present perceptions of political and economic feasibility.

The role of the national park system and the science of resource management have undergone dramatic transformations since the agency was formed in the early part of the 20th century. Park managers now understand that for any particular resource there is a large and complex resource system with which it interacts. Physical, biological and cultural resources are inextricably related. The summer wildlife of Yosemite cannot be protected without

protecting its lower elevation, winter habitat as well. Nor can the historic scene in Cuyahoga Valley National Recreation Area be preserved without an understanding of the dynamics of the watershed. The protection of one component is essential to the conservation of the whole.

Even if, in the beginning, there had been an understanding of the complexity of natural and cultural systems, it is doubtful that important related areas would have been included. There was simply no need. Far removed from the cities and largely inaccessible to development, the early parks were protected naturally by their isolation or conveniently buffered by compatible land use. The early planners of the national park system could not have predicted the tremendous growth that this country would sustain, or the significance of the role that the park system would play in the preservation of America's heritage. They could not have imagined the rapid development of new technologies or the pressures that would come to bear on the parks.

NPCA's study revealed that most of the boundary adjustment needs stem from the failure to include primary resources within the park's boundaries. The chronic failure of legislation to include significant resources is due largely to the lack of a consistent process to aid Congress in the establishment of park boundaries. There are no guiding principles and no established objectives. Complete resource

data is rarely gathered before a boundary is sought. The lack of a consistent process for determining boundaries based upon resource-oriented criteria means that economic and political concerns, albeit important, often override resource needs, with the result that the boundary does not contain all the pertinent resources.

A few innovative boundary strategies have been devised over the years. At Shenandoah National Park, Congress developed three separate boundaries. The first was a 250,000-acre boundary considered to be the minimum suitable for establishing a national park; the second was a 385,000-acre boundary identified for eventual acquisition; the third was a 521,000-acre boundary designated as the maximum area within which properties could be accepted by donation. The utility of this approach was that not only did it give the Park Service a legal boundary from which to base its operations, but also provided a boundary that defines the entire primary resource. That the park has yet to fulfill its 250,000-acre minimum boundary does not diminish the importance of having laid out boundaries that would adequately protect resource systems.

Unfortunately, Shenandoah was an exception in park planning and design. The absence of a uniform, resource-based process for establishing park boundaries over the last 115 years has led to a park

RECOMMENDATIONS

1. Congress and the National Park Service should review the site-specific recommendations contained in this boundary study and, to the maximum extent practicable, move to implement the additions to the authorized park boundaries.
2. When a park is authorized, the purposes of the park should be explicitly defined by Congress. Once the park is established, the NPS should identify primary natural and/or cultural resources using information from scientists and historians, regardless of political or economic constraints. The farthest range of park-related resources should define the "authorized" boundary of the park and serve as a logical limit to the interest and authority of the Park Service. From within the authorized boundary, Congress and park planners should develop a legal boundary, or acquisition boundary, that would serve as a land base from which the Park Service would administer the site.
3. The National Park Service should work with state and local governments to identify a zone of influence for each unit in the system, in order to maximize the ability of park managers to conserve the related resources of the park. Park planners and resource specialists should inventory the types and trends of land use within this zone and document their impact on park-related resources. Authority should be granted to NPS by Congress to provide incentives for cooperation (i.e. planning grants to local governments).
4. The National Park Service should establish a biosphere reserve around each natural area unit of the system which meets UNESCO/MAB criteria.
5. A boundary analysis should be incorporated into the regular planning process of each park's general management plan as a statutory requirement.
6. When drawing the boundaries of proposed parks, planners should attempt to align the boundaries along easily identifiable, natural topographic features, such as geographic divides, or human made features, such as roads, but should take the entire natural and cultural scene into account.
7. Following the model of United States Geological Survey topographic quadrangle maps, the Park Service should develop a standardized format for park maps that specifies data on land ownership boundaries, topography, hydrography, vegetation, roads and buildings, prominent physical features, and significant historic resources both within and adjacent to the park. Every park should have available copies of maps of their authorized boundary. Every regional office should have maps for every park within the region. Both the Denver Service Center and the Washington Office should have a map of every unit in the system.



system with inadequate boundaries that are difficult to identify and manage. The criteria for establishing boundaries often seems to vary even within a single park. The boundary of Death Valley National Monument, for example, follows natural terrain features, section lines and state boundaries in a seemingly random fashion, leaving out significant natural resources and even excluding the northern portion of the valley proper.

As this study shows, a significant number of primary resources found within national parks are jeopardized by the development and uses of adjacent areas. Virtually all of the professionals who were contacted during this study expressed concern about lands adjacent to parks. Today, parks are increasingly becoming islands amid a sea of development. Documentation of the types and effects of adjacent land use is being developed at several of the more embattled parks, including Everglades National Park and Yellowstone National Park. In addition to the big natural areas, Revolutionary War and Civil War battlefields—particularly those in northern Virginia, Pennsylvania and Maryland, are rapidly being encroached upon by urban sprawl. With the possible exception of Pea Ridge, there is not a single battlefield site free from development pressures.

Traditionally, park planning documents have not addressed boundary issues. Boundary studies, which are rare in the history of the Park Service, are usually initiated by a regional office or by Congress, and address individual units. Yet nothing could be more appropriate to a park's general management plan than an analysis of the existing park boundary. This analysis should identify the natural/cultural system of which the park is a part and determine the adequacy of the boundary to protect park resources.

In the early 1980s, the Chairman of the House Subcommittee on National Parks requested a boundary evaluation for every cultural unit in the system, but the study was stopped by the Administration and never completed. However, the study did produce a process designed to address the adequacy of boundaries and needs of park managers to adjust their boundaries.

The reluctance of the Park Service to consider boundary issues in the past has been a grave oversight, if not a breach of its legal responsibility. Regardless of the natural or cultural patterns of the park-related resources, it has been generally held by the Park Service that if resources lie outside the authorized boundary they are not an official management concern. There is a tendency for policy makers to follow range and township survey lines or other man-made lines instead of prominent topographic features of the land.

It is vitally important that boundaries be easily identifiable. At times the presence of a nearby road, river or mountain ridge can serve as a natural boundary for a park. An easily defined boundary is instrumental in enhancing visitor appreciation, ensuring wise management of the park resources and preventing conflicts between land management agencies and adjacent land owners.

Map inaccuracy is also a common problem. One of the most popular sources for park maps is the United States Geological Survey (USGS). The USGS is the nation's central mapping agency and relies solely on information provided by the Park Service when illustrating park boundaries. But many of the maps depict inaccurate boundaries or are outdated.

Lastly, there is no central office within the National Park Service that keeps up-to-date maps of the authorized boundaries of every unit of the national park system. Furthermore, most of the maps prepared by the National Park Service are essentially schematic maps and are of little value to non-NPS individuals. For visitors, planners, and scientists both within and outside the park, it is essential that the National Park Service provide maps that show the park boundary in an accurate and easy-to-use format.

At various times in the past, pieces of park legislation have recognized that park boundaries are imperfect and that activities outside park boundaries can and do affect park resources. These areas outside park boundaries, variously known as "zones of influence" or "areas of concern," have never actually been identified on a map, much less on the ground, for any of the parks. Although there has been much talk about the concept, only the leg-

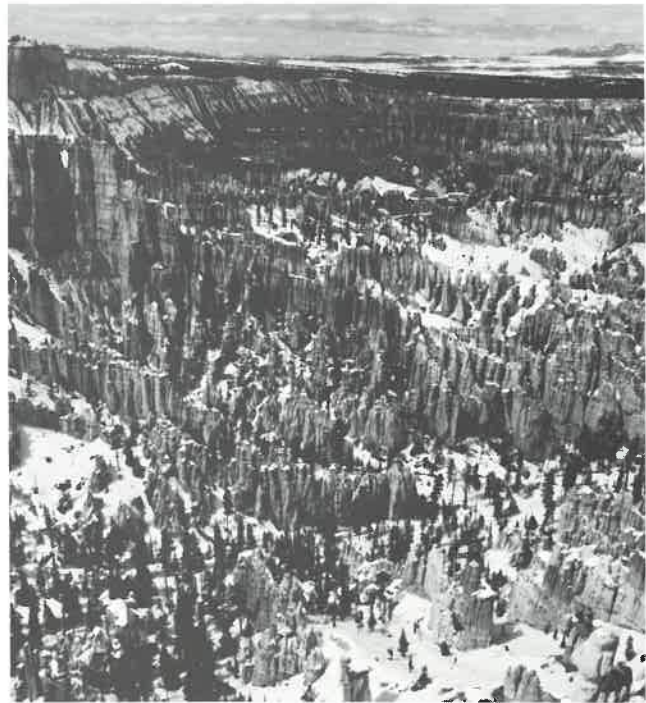
isolation establishing the Santa Monica Mountains National Recreation Area comes close to identifying such areas.

A similar idea was contemplated in the Clean Air Act and its implementing regulations. Called the "integral vista," it recognized that one reason for the establishment of many of the parks was to protect scenery, both natural and cultural, which extends beyond park boundaries. Such is true in the legislative history of Acadia, Shenandoah, Rocky Mountain, and Canyonlands national parks, among others.

Perhaps the closest existing concept to the "area of concern," although it covers only a narrow segment of the units of the park system, is the International Biosphere Reserve (IBR), a designation of the Man and the Biosphere (MAB) program of the United Nations Educational, Scientific, and Cultural Organization (UNESCO). This IBR designation has already been applied to 25 units of the system, and in several instances it extends beyond park boundaries to include adjacent federal, state and private lands. Essentially, the concept includes in-depth scientific study and intense management of the designated area, with the park serving as a "core" protected area. Surrounding lands are developed for human use, but managed compatibly. The IBR program envisions designation of at least one such area in each biosphere or major ecosystem around the world.

For the natural area units of the national park system, the biosphere reserve program offers a framework within which the "zone of influence" concept could be implemented. Following an intense, systemwide study by the NPS, biosphere reserves should be designated around each qualified natural area unit of the system, in close cooperation with adjacent federal, state, and private landowners.

Although the concept of a zone of influence transcends the traditional view of NPS responsibility, NPCA has concluded that simply adjusting the boundaries will not be enough to ensure adequate protection for park resources and the visitor experience.



Many boundary changes are needed, as clearly indicated by this study. However, detailed investigation of specific sites outside park boundaries must be undertaken. The National Park Service should immediately begin an evaluation of lands around the parks which have significant potential for adversely affecting park resources. Both the statement for management and the general management plan should address this issue.

NPCA does not feel that it would be necessary for NPS to control or dictate land use practices on these adjacent lands. If other agencies controlling adjacent federal lands, such as the Bureau of Land Management and the U.S. Forest Service, are willing to take the needs of adjacent park resources into account in their decision making, then simple cooperative agreements between these agencies and the NPS would suffice. On adjacent private lands, NPS should have the necessary tools, funds, and expertise to assist local governments in developing zoning codes that are compatible with park resource protection. Only in rare instances would the NPS have to resort to acquiring easements from unwilling sellers, although use of this tool may become commonplace on a willing seller basis.

Park resources are clearly threatened by incompatible land uses on some lands adjacent to parks. When the National Park Service or some private organization, such as NPCA, sounds the alarm about a particular adjacent land threat, the initiator is often taken by surprise, resulting in an unnecessarily large displacement of time and money, and the involvement of politics and the media. If a "zone of concern" were established around a park, mapped, and well publicized, potential users of these adjacent lands would know beforehand that the rules were somewhat different within the zone. Such knowledge could be sufficient to minimize potential use conflicts.



PLANNING AND PUBLIC INVOLVEMENT: CONSTITUENCY BUILDING FOR THE PARKS

NPS planning procedures are established in *NPS-2*, the *Planning Process Guideline*, which was developed in 1978 at a time of intense public interest in NPS planning decisions, but has since been scaled back.

Simultaneously, the power and control of the consolidated technical services office, the Denver Service Center (DSC) grew enormously. Although DSC has no authority to make final decisions, the pressure on superintendents and regional directors to obligate funds often forces them to accept undesirable designs or planning recommendations.

As prescribed in *NPS-2*, the planning process begins with preparation of a statement for management (SFM) for a park unit. SFMs are to be reviewed and updated every two years to ensure their currency. Although this procedure has obvious merit, it also tends to foster a continuous planning program, which in turn tends to perpetuate an ongoing development program. Perhaps more importantly, the SFM fails to focus on the myriad issues, constraints, and threats arising outside park boundaries. The idea of the NPS dealing routinely or effectively with matters outside its boundaries is still quite alien to the Service, but is critical to survival of the parks and their resources.

The instructions for developing the SFM are vague concerning provisions for review and assessment of the park's information base. They do not specify who will decide, for example, whether the visitor use or resource data are adequate and cur-



rent. Based on this information, major issues will be identified and recorded. Integration of research data, resource management needs and planning priorities are critical.

Public input would be especially useful in developing the inventory and analysis of environmental considerations in and near the park. It is critical that factors directly or indirectly affecting park resources, ecosystems and public use be identified at this stage; that the interested public be invited to participate in this activity; and that the information gathered be carefully reviewed to include in the document all factors having potential impacts.

Following completion of the SFM, preparation of a general management plan (GMP) begins. This is the major step in planning the interior management

of a park, but it should also require information on adjacent land uses. The GMP section of *NPS-2* should require NPS to take actions on the plans of other federal land managing agencies, who often have land management plans or responsibilities for areas near the parks. This information should also be included in the GMP. Similar concerns should be included when the adjacent lands are state, local, or private, as well.

In addition, any planning that is initiated is usually based on the assumption that development of some magnitude will result. Only rarely is serious consideration accorded the alternative of taking "no action" as a result of planning. Both of these problems are to a degree inherent in the current planning process, and in organization and funding of the planning and design functions within the NPS.

RECOMMENDATIONS

1. The National Park Service should amend *NPS-2* to require that:
 - baseline inventory data be completed, both on visitors and resources, before major construction projects can be undertaken;
 - the statement for management include a major focus on activities occurring outside park boundaries;
 - specific opportunities for public involvement be provided in the SFM;
 - the general management plans also evaluate the possible effects of activities occurring outside park boundaries on management objectives and planning decisions;
 - an alternatives document be prepared and offered to the public for comment prior to the draft GMP stage of the process.
2. The planning, compliance, and design/construction functions of the Denver Service Center should be reorganized into three separate units: Planning; Compliance/Clearance; and Design/Construction.
3. The new Office of Planning, Office of Compliance/Clearance, and the remaining Denver Design Center should be base funded.
4. The NPS should establish a Design Review Board made up of distinguished private sector experts.
5. The National Park Service should reinstitute *NPS-3*, the *Public Involvement Guideline* and amend it to provide for public involvement training.
6. The National Park Service should develop a model Citizen Participation Program to be coordinated by an individual in the Office of the Director.

The NPS' current organizational structure for planning and design is a major factor contributing to improper development in some parks. The situation is akin to a private citizen who wishes to have a new home constructed. Picture him hiring an architectural firm, giving it carte blanche to plan, site, design, and construct the home—after first allowing the firm to decide whether the family even needs a new home. The firm decides or greatly influences the extent of damage to environmental resources that will be permitted at the site, and also heavily influences the final plans, costs, and inspections. The situation sounds extremely unlikely, but this is precisely the way the DSC manages park construction projects.

Further contributing to the problem is the fact that the DSC is "project funded." Under this arrangement, DSC's operating funds for all salaries and office expenses depend on and fluctuate directly with the magnitude of the NPS development/construction program. DSC's funding is based on a percentage of the NPS construction budget. To cover DSC's personnel and overhead costs, NPS applies an automatic percentage of the funding for any given construction project, as follows: 25 percent of the net construction amount for design services and planning; 15 percent of the net construction amount for contract supervision; and 16 percent of the net construction amount for contingencies.

In order to ensure sufficient funding or appropriations to cover this total added cost of 56 percent per project, DSC increases its estimates for all proposed construction projects proportionately. This procedure, in effect, shields the extent of the DSC costs from the public and the Congress by providing them with only "gross" estimates for construction project work.

Given this situation, DSC personnel find themselves in the position of having to recommend decisions on park development and construction based on alternatives in which they have a vested interest. An employee in this position ordinarily would not recommend a "no action" alternative that would put DSC staff out of work. Additionally, common sense dictates that generally an architect, given a problem to solve, would think in terms of an architectural solution, thus perpetuating decisions favoring construction.

NPCA's analysis has indicated clearly that a strong case can be made that these NPS organizational problems tend to promote and foster excessive development. To resolve these inherent conflicts, the Denver Service Center should be broken up into three distinct components, each of which is primarily base funded. The three new components would be as follows:

Planning: The planning function should be pulled out of DSC, and corresponding personnel should be transferred to the NPS regional offices, under an Associate Director for Planning in the Washington Office and corresponding regional associate directors for planning. These staff members,

working closely with park superintendents and the public, would be charged with preparing all advance and preliminary plans, including general management plans and development concept plans, and with carrying out a much enhanced public review and involvement process. With no personal stake in development, and subject to increased public review, these individuals could more objectively determine and recommend any necessary current or future development needs of the parks.

Compliance/Clearance: All environmental, historical and other compliance and clearance functions should be divorced from the Associate Director for Planning and should be handled instead by an independent office in the Washington headquarters and in corresponding regional offices, answering to the Director and regional directors, respectively. This Office of Compliance would be similar in autonomy and independence to the Office of Equal Employment Opportunity, both in Washington and in the regions. The Office would conduct all appropriate compliance reviews and procedures, and act as a check and balance on both the planning and design/construction functions.

Design/Construction: The design and construction functions, and associated technical support, should remain the sole purpose of the DSC, which either could be base funded, or could remain project-funded, if forced to compete with the private sector to "win" the bid for the design of any particular development proposal contained in a separately approved GMP/DCP. Since design/construction functions constitute over 90 percent of the DSC workload, the overall dislocation created by this proposal would be minimal.

If the DSC is to remain project-funded under this scaled back responsibility, it should have no direct authority in approving final design, or any influence over what projects are proposed, or over the magnitude and scope of a particular project.

The DSC Manager should report directly to the Director or Deputy Director. The DSC "team lead-

ers" should have their annual performance ratings completed by the DSC Manager, with review and comment from the appropriate NPS regional director(s).

DSC staff should consist of a core group of professional architects and engineers of the levels and types necessary to coordinate and supply these support services. NPS regions should be able to contract for the services of either the DSC or a private sector firm, whichever is appropriate, especially in years of peak construction, to avoid hiring additional permanent staff for short periods.

More fundamentally, the NPS should make a major shift in emphasis away from an era of park development to one of more comprehensive and scientifically-founded resource protection and preservation.

PUBLIC INVOLVEMENT

Public involvement in NPS decision making was incorporated in a document referred to as the *Public Process Review Guideline, NPS-3*, which came soon after *NPS-2*, in 1978. In 1982, *NPS-3* was withdrawn for reasons never explained to the public, and only a few portions of it were incorporated into *NPS-12*, the *Environmental Compliance Guideline*.

The National Environmental Policy Act mandates public participation in the environmental impact statement process. However, it is increasingly rare for the NPS to seek public involvement via an environmental assessment or environmental impact statement. According to the DSC Annual report for 1986, it completed a total of 217 planning projects in 1986, up from 201 in 1985, yet only 20 environmental assessments were done in 1986, compared to 35 in 1985. In the mid-1970s, the NPS automatically prepared a full EIS for each GMP, thus ensuring several major opportunities for public involvement. This practice was discontinued in the early 1980s.



Adequate public review opportunities need to be reestablished to cover the work of all three new organizational levels—Planning, Compliance, and Design/Construction. If the NPS errs at all regarding public review, it should err on the side of more public involvement in its planning, development and construction programs.

Preparation of the general management plan is currently the only step in the planning process that requires public involvement (it requires a 30-day minimum period for public comment). The problem with public comment is often not *what* is received, but *when* it is solicited. The “General Procedures” portion of the GMP section of *NPS-2* states that the GMP *may be* preceded by an alternatives document to elicit public views on issues and alternatives. This is the opportune time for public involvement, and the wording needs to be strengthened to require public input at this point unless unusual circumstances justify excluding it. Another excellent opportunity for public involvement is during the issue analysis stage, but *NPS-2* makes no provision for it.

Design plans for all construction and reconstruction projects proposed within a park unit need to be subjected to a required, minimum 30-day public review process. As a means to assure competent technical advice from the outside, a Design Review Board should be established. That board would meet three or four times a year to review designs in the preliminary stages, before large expenditures of time and money have been absorbed by the project.

The board should include not only distinguished architects and landscape architects, but also architectural critics of stature. Members of the American Institute of Architects, or its College of Fellows, and the American Society of Landscape Architects would be appropriate participants. In reviewing new designs for park structures, sensitivity by the board to park surroundings is imperative.

The strategy for the Park Service in carrying out a wider public involvement program could be quite simple. First the NPS should open lines of communication with supporters and critics. Without open and honest dialogue, the park becomes a target of controversy which usually develops into rhetoric and chaos. Consequently, the NPS needs to develop a model Citizen Participation Program.

NPCA believes that in large part the continued success of the NPS depends on its ability to build a strong working relationship with the American people. The recent policy decision from the Director, via the *12-Point Plan*, to expand citizen participation programs is, in part, a response to a growing public concern and need for public involvement in park protection and management decisions.

Building a successful working partnership with the American people requires that the NPS provide timely and useful information to a broad spectrum of interests—community leaders, citizen activists, civic, religious, and business groups. Equipped with good information, the public can support its half of



the partnership through constructive involvement in park decision making.

Citizen participation programs provide a means to help avoid counterproductive criticism, unfavorable media coverage, and political overreaction, through development of trust-based working relationships and open dialogue between the NPS and concerned citizens.

A principal element in development of this program would be the guidance drawn from those seasoned field staff who have been most successful in building sound working relations with the public. These personnel can provide direction in defining techniques that work versus those that do not work, and in tailoring programs to the needs of the local people at each park setting.

Action plans should be developed for regions and parks in which highly sensitive or controversial problems exist, to assure systematic sharing of relevant information with the public. By developing and maintaining open lines of communication, park personnel could build the public's understanding of issues and emerging conflicts. The citizens can then effectively contribute their ideas, and suggest actions for resolving these concerns. In-service peer training would be the ideal means for the NPS to establish a cadre of citizen involvement experts so that each park, either on site or through the regional office, would have access to this talent.

NPS should assign coordination for citizen involvement to a central location, preferably in the Office of the Director. The Service should implement the *12-Point Plan* recommendation for each park to establish a “friends group,” and it should regularly convene open meetings with citizen groups at the national, regional and park levels.

To accomplish this, *NPS-3* should be resurrected and amended to include provision for expanding public involvement opportunities. It should also carefully set out the various steps the NPS should take to develop a public involvement training program for NPS staff at all levels who are—or should be—involved with the public.



LAND ACQUISITION: COMPLETING THE PARKS

Few people realize that there are more than two million acres of private land, estimated to be worth more than \$2 billion, inside the boundaries of units of the national park system. Privately owned lands exist inside some of our oldest and best known national parks, including Yosemite and Grand Teton.

Although it is not necessary to purchase immediately all the private land inside park boundaries in fee, it will be necessary to acquire a large portion of these lands and to ensure that the remaining land is adequately protected. Private land can present a number of serious problems for a park. It can, for example, be developed, the trees can be logged, energy exploration and development can occur, and serious erosion can take place. The development of just a few critically-located acres can have a significant negative effect on park values and use.

Much has been written and done in the past 22 years on the subject of federal land acquisition. By enacting the landmark 1965 Land and Water Conservation Fund (LWCF) Act, Congress began a new era in the planned management of public lands at all levels of government by establishing a specific account in the Treasury which provides funds for land acquisition.

The Fund is credited each fiscal year with \$900 million, primarily from outer continental shelf leasing revenue. However, Congress must appropriate an amount from the Fund to be spent each year. Because of budget concerns in recent years, this has been only about \$250 million annually. The current Administration has always asked for much less. The amount authorized but not appropriated annually has built up over the years and currently totals more than \$5 billion. The recent report of the

President's Commission on Americans Outdoors recognized the need for a higher and more stable level of funding, and recommended that Congress consider establishing a dedicated trust fund which would provide a minimum of \$1 billion per year to replace the present Land and Water Conservation Fund.

For purposes of NPCA's *National Park System Plan*, we chose to set aside most aspects of federal land acquisition policy and procedure, and instead look at three specific issues of particular concern today. First, we examine the presence of habitat of



threatened or endangered species of plants and animals in or around national park system units as one means of setting NPS acquisition priorities. Second, we discuss the especially acute problem of privately held mineral rights within many national park system units. Finally, we describe one land protection tool, the land exchange, which could be better utilized for completing needed park acquisition.

ACQUISITION OF THREATENED AND ENDANGERED SPECIES HABITAT

The acquisition of threatened and endangered species habitat should be a top acquisition priority of the NPS. Conservation of these species and their habitat is mandated by Congress. When scientists determine that crucial habitat exists on land within a park, park managers should be encouraged—

through NPS policies and with appropriations for land acquisition—to acquire habitat that is not owned by the NPS. Natural resource inventories would assist park managers in determining where park boundaries need to be expanded, and land acquired, to conserve essential habitat. The mandate and the need are evident.

Five hundred years after Columbus came to the new world, America's flora and fauna are seriously depleted. More than 140 species of vertebrate and invertebrate animals and approximately 60 species of plants have been declared extinct. Another 204 plant species are probably extinct. America's national parks, which include almost 80 million acres, do not have adequate data on the plant and animal species in the parks—where they are, how many there are, and what habitat they need to flourish—to conserve the species and their habitat. Conservation requires expertise, funds, and data.

RECOMMENDATIONS

Land Acquisition

1. The Administration should request and Congress should appropriate at least \$150 million annually for NPS land acquisition.
2. Congress should enact legislation that transforms the Land and Water Conservation Fund into a true trust fund providing adequate and reliable funding annually.

Acquisition of Threatened and Endangered Species Habitat

3. The Administration should request of Congress an additional \$10 million appropriation to mark the 500th anniversary of Columbus' arrival with a Service-wide, standardized inventory of the listed species of post-Columbian America (all federal listed threatened and endangered species, federal listed candidate species, state and local listed species, and those species rare or unique to a park) within park units.
4. The National Park Service should amend the "Directive on Threatened and Endangered Plants and Animals" in the NPS *Management Policies* manual to include the identification of state and local listed species. The NPS should revise the current Directive to replace the word "may" with the word "will" so that it reads: "Active management programs, where necessary, *will* be carried out to perpetuate the natural distribution and abundance of threatened or endangered species and the ecosystem on which they depend, in accordance with existing Federal laws."
5. Park managers should conserve listed species through NPS acquisition of private land within and adjacent to parks that contains habitat crucial to species survival. Conservation easements are acceptable when they can assure adequate conservation of listed species.

6. The NPS should encourage the owners of land in and adjacent to parks to permit the NPS to inventory their land for listed species. When park ownership is not possible or unnecessary for effective listed species management, cooperative agreements can commit the NPS and the owner to a joint conservation effort.

7. Congress should reauthorize the Endangered Species Act, and strengthen it by effective amendments that will help federal agencies conserve listed species and biological diversity.

8. Each NPS regional office, through a regional coordinator, should develop policies and request funding to encourage cooperation on species conservation and management both among the parks and with other agencies and private landowners.

9. To ensure conservation of the listed species in any proposed park unit, each regional office should, during the planning process, coordinate the efforts of NPS planners and park staff with the present landowners, the staff of the state natural heritage inventory, and private sector groups committed to species preservation.

10. The NPS should actively manage listed species and their habitats. This includes NPS acquisition of habitat crucial to species survival and utilization of data provided by standardized, systemwide inventories stored in ecological data bases.

Acquisition of Mineral Rights

11. Congress should act to limit or restrict patents to claims in NPS units and provide NPS units the same level of protection afforded some Forest Service lands where the patent conveys the minerals only, while the surface remains federally owned.

12. The Bureau of Land Management (BLM) and the NPS should amend the regulations for oil and

The National Park Service is short on all three.

The Administration should request of Congress an additional \$10 million appropriation to compile a Servicewide, standardized inventory of the "listed species" within national park units, as part of the national celebration of the 500th anniversary of the arrival of Columbus. The "listed species" of post-Columbian America include federal listed threatened and endangered species, federal listed candidate species, state and local listed species, and those designated in the "NPS Directive on Threatened and Endangered Plants and Animals" as species rare or unique to a park.

The "NPS Directive On Threatened and Endangered Plants and Animals" contained in the 1978 NPS *Management Policies* manual specifies that the NPS identify "all threatened and endangered spe-

cies within the parks' boundaries and determine their habitat requirements" and also identify "plant and animal species considered to be rare or unique to a park." This identification has not been completed. And the broad scope of activity implied by the Directive's phrase, "within park boundaries," has not been pursued in the more than two million acres within park boundaries that are not owned by the federal government. The Directive needs revived implementation.

A Servicewide, standardized inventory of listed species is the beginning of their protection; it should be followed by systematic monitoring of the numbers and condition of species. Inventorying and monitoring enable park managers to know what species are present, to be alert to changes in the parks' ecosystems, and to anticipate threats to the

gas leases and for leases of solid minerals so that the BLM must also obtain NPS consent before issuing permits to lessees for drilling, or other permits for any lease within the boundary of any NPS unit where leasing is allowed by law.

13. The NPS and the BLM should take the steps necessary to invalidate leases in those few NPS units where mineral leases were issued contrary to law.

14. The existing regulations that govern the conduct of activities in connection with nonfederally owned oil and gas should be amended to make it clear that these regulations should be applied only as interim protective measures in those NPS units, containing nonfederal mineral rights, where Congress never specifically authorized nonfederal oil and gas activity. Plans should be made for acquisition of the mineral rights.

15. Regulations that govern the conduct of activities in connection with nonfederally owned minerals, other than oil and gas, should be clarified as interim protective measures in all units of the system, except Big Cypress and Big Thicket National Preserves.

16. All NPS general management plans and land protection plans should state that mineral activities, in the absence of Congressional authorization, are prohibited within NPS units.

17. All regulations relating to NPS areas should be amended to specify that the NPS regulates mineral activities within NPS units in connection with nonfederal oil and gas, not just those activities where access is on, through or across federally owned or controlled lands or waters.

18. The Office of Surface Mining in the Department of the Interior should adopt a definition of valid existing rights that precludes nonfederal coal surface mining within NPS units and protects parks from development on adjacent lands.

19. The NPS should apply its existing regulation authority to all mineral activities connected with mining claims within NPS units, including mineral activities on patented claims in Alaska, access to which is not across federal parklands.

20. Regulations governing the development of oil and gas owned by entities other than the federal government should be applied to any unit of the national park system containing nonfederal oil and gas rights that existed before the unit became part of the park system.

Land Exchanges

21. Congress should amend FLPMA and other relevant statutes to allow a standard of comparable or equivalent value to be used in determining exchange appraisals when the public interest, or intangible values, outweigh exact dollar measurements.

22. Congress should provide for mandatory arbitration or other dispute resolution for determination of appraisal value in exchanges.

23. The NPS, and other federal agencies engaging in land exchanges, should provide ample and early opportunity for public involvement in proposal review.

24. The NPS and other federal agencies should cooperate in the formation of interagency exchange teams to facilitate complex or difficult exchanges.

25. Federal land managing agencies should inventory their lands to determine those lands which are excess to their agency mission, and could be available for exchange.

26. Congress should require the General Services Administration to establish a pool of excess federal lands, which are not offered for sale for a period of time, which can be made available to federal land managing agencies for use in exchanges.

species. Inventories and the systematic monitoring of the species provide park managers with information about species' habitat requirements. Next, the NPS must conserve that habitat. While the NPS should conserve all significant natural resources in the parks, listed species habitat should be a top acquisition priority. When that habitat occurs on any of the two million acres of privately-owned land within park boundaries, short-term protection of the species' habitat depends on the cooperation of the landowners and will necessitate educating some of them about the importance of conserving listed species. When the landowners are committed to species conservation, the NPS can work with them to formalize that preservation interest through a cooperative agreement that commits the NPS and the owner to a joint conservation effort. Over a longer period, the surest method to conserve listed species habitat is NPS purchase of the land: land privately owned within parks, land added to parks through boundary adjustments, and land in areas newly designated as national parks. In most cases, park managers cannot actively manage the crucial habitat unless the NPS owns the land. Effective conservation and management are difficult under the present circumstances because they depend upon the varied interests and management styles of individuals within the NPS.

Determined and well-funded work on listed species conservation is required in order for the NPS to fulfill its obligations under the Endangered Species Act. That work must be a component of a strengthened NPS resource management program which includes standardized inventories and systemwide, park-based ecological data bases. The NPS needs to raise the acquisition of listed species habitat to a high priority and to approach Congress boldly with requests for the appropriations necessary to fulfill its habitat conservation responsibilities.

ACQUISITION OF MINERAL RIGHTS

Surprising as it might seem to many Americans, approximately 3,000 mining claims and six million

acres of mineral rights are held within units of the national park system. These mineral rights are either severed from the surface land or are part of tracts owned in fee title by nonfederal entities. States, local governments, individuals, partnerships, corporations and Indian Tribes all possess some nonfederal mineral rights within NPS units.

The presence of such a large unacquired backlog of mineral rights poses serious problems to the integrity of the national park system. There is not a single NPS unit for which mineral extraction is a purpose. There are several units where Congress allowed mineral development on federal land if, and only if, such development would not harm the park's resources. Where private mineral-bearing lands exist, unless the government buys out these mineral rights, the NPS will increasingly face proposals to develop them. Park resources and visitor experiences will suffer if the rights are developed.

A wide variety of laws govern mineral entry on federal lands in general, and on national park lands in particular. Among these are the Mining Act of 1872, the Mineral Leasing Act of 1920, the Geothermal Steam Act of 1970, and the Surface Mining Control and Reclamation Act of 1979. These and other laws regulate and, in certain cases, promote mineral activity on federal lands. However, the legislation that expanded Redwood National Park in 1978 contained an important section that amended the 1970 Act for Administration of the NPS to state that activities in derogation of park values shall not be permitted unless specifically authorized or directed by Congress. Mineral development is such an activity.

In the early 1970s, concern intensified over the significant harmful effects of mining in some NPS areas, especially Death Valley National Monument. This concern led to passage of the Mining in the Parks Act of 1976, which closed to new mining claims, previously allowed under the 1872 Mining Act, the last six NPS units that had remained open under their enabling legislation or other acts. This law also directed the Secretary of the Interior to regulate, in all park areas, all activities connected





with the exercise of mineral rights to mining claims. This authority to regulate mineral activity is equally applicable to both unpatented and patented mining claims.

The primary method the NPS uses to enforce the Mining in the Parks law is a set of regulations that includes a provision requiring a plan of operations for all mineral exploration and development activities proposed for patented and unpatented mining claims. The NPS also requires operators to post a bond to ensure that reclamation is completed and that performance conforms to the plan. The regulations permit claimants to exercise their rights provided that specified standards can be met that safeguard the resources and values of national park system units.

In some NPS areas such as Lake Mead National Recreation Area, Congress specifically provided for the possibility of mineral activity to continue. Conservationists would have preferred that no mineral activity be allowed in these areas. However, when these parks were established, Congress decided that the value of existing claims or potential for future development, or both, was so high that prohibiting mineral activity was not possible.

A number of other laws and regulations that apply to mineral activity in the parks are complex and often conflicting. Problems result from the activities allowed by these laws, and from the bureaucracy's interpretation of, and failure to enforce, the laws. Overriding all of these laws is the Fifth Amendment to the U.S. Constitution that protects private property rights, including mineral rights, from confiscation without due process and just compensation.

The best protection against the severe negative effects resulting from mining in NPS units is acquisition. Mineral rights, which are a property right, can be purchased by the National Park Service in order to protect a park's resources. Because sufficient funds are not now being made available to purchase all of the mineral rights in the parks, regu-

latory tools, in addition to acquisition, will have to be relied upon to protect the parks.

LAND EXCHANGES

It is apparent, viewing federal land ownership patterns in 1987, that federal land management laws and policies are often undermined by the intermingled ownership patterns that have resulted from land sales or other transfers of ownership.

Exchanges represent only one consolidation/acquisition option, and should not be viewed as a panacea for all federal government land consolidation or land acquisition needs. Exchanges should not be considered a substitute for direct federal land purchases in general, but clearly there are instances where exchange is the best tool for improving the land status of a unit of the national park system.

National Park Service exchange authority is found in three separate bodies of law. The most noted is the Federal Land Policy and Management Act of 1976 (FLPMA). While FLPMA principally guides the actions of the Bureau of Land Management (BLM), the agency designated as the managing agency for the general federal domain, it also partially governs NPS exchanges. While the NPS is not given the lead role in the process, the Act does not preclude the NPS from initiating an exchange proposal, the ultimate goal of which is the acquisition of parkland in exchange for realty administered by BLM.

Another authority for NPS exchanges is found in the provisions of the Land and Water Conservation Fund Act of 1965 as amended. LWCF grants the Interior Secretary the power to exchange "any lands under his administrative jurisdiction" for nonfederal land located within a unit of the national park system. Language in this act limits this authority in two ways; it requires that the lands acquired and disposed of by exchange be located within the same state; and that for parks established since January 1, 1965, "the Secretary may not alienate property administered as part of the national park system in order to acquire lands by exchange."

A third type of NPS exchange authority is provided by the many individual measures establishing units of the national park system, nearly all of which authorize acquisition by exchange.

The final codified NPS land exchange authority narrowly addresses cultural resources found within the national park system. The National Historic Preservation Act amendments of 1980 provide authority whereby the NPS may acquire property through an exchange in order to ensure the preservation of the historic property.

Other than codified authority, the only other alternative open to the NPS land manager seeking to utilize the exchange method is to solicit Congressional help, in the form of a special Act of Congress specifically directing a particular exchange to take place.

General guiding principles for federal land exchanges laid down by FLPMA require that the exchange as a whole must be deemed to be in the “public interest;” the lands to be exchanged must be of equal value, or cash up to 25 percent of the value may be used as an equalization payment; and since exchanges are voluntary, there must be a willing seller/willing buyer situation.

For exchanges which would result in the acquisition of lands to further the goals of the national park system, the public interest test would probably be satisfied. The equal value test, however, can be much more difficult. In particular, many past exchanges involving national parklands have encountered problems with land values determination. This is attributable to the complexity of placing a precise value on the scenic, natural, cultural, scientific and other resources of the system. Traditional appraisal techniques, which rely heavily on comparable sales of land to determine values, can be difficult to apply to parklands especially when the properties being exchanged are dissimilar. How does one place a precise value on grizzly bear habitat or on Anasazi ruins?

More creative options should be explored to equitably divide the actual costs of exchanges between the participants. For example, administrative costs could be figured into the exchange values, and the division of costs determined on the basis of benefits derived.

The four major federal agencies which regularly participate in land exchanges should pool resources to form regional interagency exchange teams. Such teams would be composed of land exchange experts who could work collectively on complicated exchange issues for more than one agency, district, national forest, refuge or park. Used as “troubleshooters,” the teams could augment the staff of the agency at the local level, and facilitate complex, multi-agency exchanges.

Over time, appraisals have proven to be the most

critical element in the exchange process, and are often the point of contention in failed exchange efforts. Congress should modify the requirement for exact value exchanges to permit adjustment in cases where the public interest outweighs exact dollar measurements. In such cases, use of a “comparable value” or “equivalent value” standard would be more appropriate. In fact, Congress has already taken this approach for the conservation system lands in Alaska.

In addition, special emphasis should be placed on the use of some form of mandatory arbitration, or some other form of dispute resolution, in cases where parties cannot agree on an appraisal within a reasonable time. This dispute settlement procedure would apply only to the issue of appraised value, and not to whether the exchange should be consummated, which must be left to the parties to decide.

Public involvement should be a regular, required step in the normal process of every exchange considered by federal land managing agencies. In the early stages, the proposal should be informally packaged and presented to the interested public for comment. An annual report summing up all federal agency exchanges should be presented annually to Congress.

In order for a federal land exchange to be viable, there must be public lands readily identified and available for exchange. Federal agencies should inventory their lands to identify which lands are necessary for them to carry out their statutory mission, and which lands may be excess.

Under current law, all federal agencies are required to transfer excess lands to the General Services Administration, which usually sells these lands to the highest bidder. It would be far better if, when federal lands are declared excess, they were first set aside in an Excess Lands Trust—a pool of federal lands available to any agency for exchange purposes.





NEW PARKS: NEW PROMISE

The preservation of nationally significant natural and cultural areas needs to be an ongoing responsibility of Congress and the National Park Service. Though the composition of the system illustrates the inability of government, under changing political conditions, to follow faithfully an ideal program through many years, and though the pace of expansion has slowed, the Service and the Congress still have an unswerving charge to lead in the assessment of new units.

Critics of new federal land conservation sometimes ask: Why add new areas to the national park system? The primary justification should be to preserve nationally significant ecosystems, landforms and sites important to our history to the maximum extent possible. If the system is to be truly representative of our diverse heritage, it still has a long way to go.

In 1972, at the direction of Director George B. Hartzog, the Park Service completed a review of the system's composition which judged the adequacy of representation of the nation's natural regions and broad themes of American history. This *National Park System Plan* concluded that, in order to achieve representation of all facets of American history, a minimum of 196 additional areas should be added to the system. Major gaps were also identified in the representation of natural regions and natural history themes, such as plains, plateaus and mesas, river systems and lakes, coral islands, estuaries, tropical ecosystems, grasslands, and eastern deciduous forests. NPCA-sponsored research completed in 1987 on the system's potential representation of major terrestrial and wetland ecosystems concluded that the present NPS classification system lacks "enough detail to be useful for



surveying ecosystem diversity" in the parks. Even so, this research suggested that the national park system lacks potential representation of 42 percent of all ecosystems defined by the method employed in the 1972 *NPS Plan*.

Though the system saw continued expansion during the 1970s, including the tremendous additions in Alaska which addressed several of these gaps, the vision for the composition of the system is now obscured. Since 1981, only four new units have been added, and one has been subtracted. A formalized new areas study program has been terminated. In 1976, Congress directed the NPS to submit reports annually on at least 12 potential new areas, but appropriations for the annual studies ceased in 1981 after critics claimed it led to uncontrolled expansion.

Recommendations

1. Forty-six natural areas should be brought under the protection of the national park system as soon as possible. These areas are but a starting point toward renewing the Service's commitment to improving representation of natural regions and natural history themes. This list includes: Tallgrass Prairie (OK), Jemez Mountains (NM), Florida Keys (FL), Michigan Peninsula (MI), Siskiyou (OR), Great Plains (ND, KS, SD, or WY), Blackrock Desert (NV), Escalante Canyons (UT), Atchafalaya Basin (LA), Luquillo Forest (PR), Currituck Banks (NC), Mojave Desert (CA), Hells Canyon (OR), Big Sur (CA), Kauai (HI), Loess Hills (IA, NE), Sonoran Desert/Pinacate (AZ), Lower Altamaha River (GA), San Juan Mountains (CO), Lake Tahoe (NV), Owyhee Canyonlands (OR, ID, NV), Mobile-Tensaw Bottomlands (AL), Nipomo Dunes (CA), Sawtooth Mountains (ID), Arctic Wildlife Refuge (AK), Mt. Edgecombe (AK), Mona and Monita Islands (PR), Two-Hearted River (MI), American Samoa (American Samoa), City of Rocks (ID), Cobscook Bay (ME), Connecticut River (CT, VT, NH, MA), Machias River (ME), Kings Range/Cape Mendocino (CA), Mississippi River (MN, WI, IA, MO), Montauk (NY), Chesapeake Bay (VA, MD, DE, PA), Amicalola River (GA), Oregon Coast (OR), Gauley River (WV), Ruby Mountains or Monitor Valley (NV), Smith River (CA), Nebraska Sandhills (NE), San Rafael Swell (UT), Purgatoire River (CO), Blackwater River (MD) or Black River (NC), and Sweetwater Basin (WY).
2. The National Park Service, through its external historic preservation programs, the National Historic Landmark Program and direct management, should invigorate its historical additions, especially in the areas of industrial, labor, architectural/art and ethnic history. At least 40 sites of national significance should be added to the system as soon as possible. Examples of key additions include: Wounded Knee (SD), Lindenmeier (CO), Taliesin (WI), Leopold Homestead (WI), U.S.S. Olympia (PA), Attu Island (AK), West Mesa (NM), Anasazi Sites (CO), Mark Twain Home (CT), Gray Ranch/Casas Grandes Sites (NM), Caddo Culture Sites (TX), Trinity Test Site (NM), Poverty Point (LA), Cahokia Mounds (IL), John Deere Home (IL), Fort Robinson (NE), Landing Beaches and Airfield (Saipan), Salt River Bay (VI), Hagerman Fossil Beds (ID), Robert Frost Farm (VT), John Marshall Home (VA), Yuma Crossing (AZ), South Pass District (WY), Principio Iron Works (MD), Anheuser Busch brewhouse (MO), Mesabi Iron Mine (MI), Fulsom Site (NM), Zuni-Cibola Complex (NM), Truk Lagoon (U.S. Trust Territories), Levi Coffin House (IN), Thomas Cole House (NY), Jimmy Carter (GA), Richard M. Nixon (CA), Cape Kennedy Launch Site (FL), Bushy Run Battlefield (PA), Rhode Island Battlefield (RI), Walt Whitman House (NJ), Sharktooth Hill (CA), Willa Cather Home (NE), and Walt Disney Home (CA).
3. The National Park Service should revise and keep up-to-date the *National Park System Plan* completed in 1972 to reflect new additions, pin-point gaps, and identify potential areas to fill these gaps.
4. The National Park Service should revise the criteria for judging potential parklands to reflect the possibility of restoring nationally significant but damaged ecosystems.
5. The National Park Service should maintain an inventory of potential additions to the system, periodically reporting to Congress under "Section 8" authority on opportunities to incorporate areas. Criteria for nomination to this register should be broad-based and similar to those for the National Registers of Natural Landmarks and Historic Places.
6. The National Park Service should examine the status of "affiliated areas." All affiliated areas should meet the same criteria for national significance as do regular units. The NPS should reassess the system to determine whether any existing units would serve the system better by being placed in "affiliated area" status.
7. The National Park Service should work with Congress to establish a standardized method of assessing the merit of proposed additions, which should include provisions for mandatory hearings before appropriate Congressional committees, and an NPS study of alternatives, with public involvement, prior to new designations.
8. The National Natural Landmark Program should be reorganized and transferred from its current position under the Associate Director for Cultural Resources to a new position under the Associate Director for Natural Resources. Both the Natural and Historic Landmark Programs should become the basis for adding qualified sites to the national park system.
9. The National Park Service should establish a new category of national ecological reserves devoted to a more comprehensive approach to protecting biological diversity and fostering scientific research.
10. The National Park Service should more vigorously monitor the protection of nationally significant resources, both natural and cultural, under management by other federal agencies, state and local government, or private interests. Such areas which are not well protected by other agencies should be considered for inclusion in the national park system.
11. The National Park Service should seek to identify and include within the national park system representative marine and estuarine ecosystems.

Congress should mandate a higher level of cooperation between the Service and NOAA and/or the transfer of the Marine Sanctuary and Estuarine Reserve programs out of the Department of Commerce.

12. The National Park Service, and other federal agencies, should work with the other signatory nations of the Antarctic Treaty of 1959 to establish an international park on Antarctica.

When the National Historic Landmarks Program was established by the Historic Sites Act in 1935, it served to qualify and disqualify historic sites for inclusion in the national park system. National historic landmarks (NHL) are buildings, structures, historic districts and sites that are acknowledged as among our country's most important historic and cultural resources. Over 1,700 NHLs commemorate or illustrate important aspects of American history and culture. However, the NHL program needs revitalization. There is programmatic overlap between the National Register of Historic Places and the NHL program. Current monitoring and inspection procedures do not adequately assess threats to NHLs. Some landmarks ultimately belong in the national park system. A wide variety of NPS-initiated historic preservation programs also play a critical role in identifying significant historic areas and exploring alternatives to their inclusion in the system. Efforts such as the Industrial Heritage Project, which coordinates regional planning in western Pennsylvania, will be models for future action and will strengthen the Service's role as a leader of national historic preservation efforts.

The National Natural Landmark (NNL) Program has not reached its potential. It lacks personnel and adequate support monies. Established by Secretarial Order in 1962 and administered by the National Park Service, it was envisioned originally as a valuable source of candidate areas for the system. The NNL program identifies and recognizes outstanding examples of natural features, without providing for federal acquisition of the areas. Over 3,000 potential landmarks have been identified and 586 have been designated. At least 400 have potential as national park system areas. However, the NNL program is limping along on an underfunded budget without policy support at higher levels. Unable to adequately inventory, monitor, or protect these sites, the program needs substantial invigoration if it is to play a supporting role in the NPS new areas study process.

The whole category of "affiliated areas," which now includes more than 30 sites, needs evaluation. Affiliated areas, though usually not federally owned, are intended to be sites of national significance, but are not full-fledged units of the system. They have a vital role to play in the protection of smaller historic sites and areas currently protected by means other than federal ownership and management, yet there is still no set of criteria for designation.

Continued expansion is needed if the system is to keep pace with the continually increasing public demand for new parkland. From 1950 to 1982, total visitation at national park system areas increased more than tenfold, from 33 million to nearly 330 million. National Park Service statistics for 1986 indicate that recreation visits climbed to 281 million, a 7 percent increase from the previous year. The system might receive 450-500 million visits per year by the year 2010.





Selection of new park areas requires the utmost care. As the National Park Service has expanded from managing an initial core of vast natural areas into the management of a variety of sites, it has faced both good and bad proposals. Horace Albright, the second Director of the Service, wrote in 1930 that “promotion of unfit national parks must be challenged, since otherwise a spurious stamp of ‘sterling’ on local scenery without national distinction will quickly depreciate the value of the whole system.” Indeed, designation as a unit of the system is to be held precious, since the value of designation is not judged by the best qualified unit, but by the least.

Federal agencies other than the National Park Service manage natural areas and cultural sites of preeminent national value. Dozens of designated wilderness areas, such as the Bob Marshall in Montana, the Superstition Mountains in Arizona, and the Eagles Nest in Colorado are of national park quality. Places like White Mountain National Forest in New Hampshire are commonly mistaken for national parks. Other areas have designations that confuse distinctions between federal land systems. The Forest Service, for example, manages Misty Fjords and Admiralty Island National Monuments in Alaska, Sawtooth National Recreation Area in Idaho, and Hells Canyon National Recreation Area in Oregon/Idaho. Bureau of Land Management lands in the western United States contain fantastic—and largely uninvestigated—archaeological remains. The National Oceanic and Atmospheric Administration (NOAA), an agency of the U.S. Department of Commerce, oversees two

coastal zone management programs that target nationally significant resources: the National Marine Sanctuary Program and the National Estuarine Research Reserve Program. The latter has 16 designated estuarine research reserves, the former system currently includes seven designated marine sanctuaries.

The National Park Service has a proper and important role to play in monitoring—and where appropriate, managing—such areas. Though designated wilderness provides a high level of land-use protection, the need for vigilance never abates. Where Congress has acknowledged the national significance of an area, and where such units are not well protected, the Park Service may be the best land management agency for the job. Since the national park system has only a few protected marine areas, it is critical that the Service expand its efforts to bring more marine parks under preservation stewardship.

Over its history, the national park system has witnessed a substantial broadening of purposes, as the Service assumed responsibility for numerous historic sites, including such resources as battlefields, ranches, factories and ships, as well as urban recreation areas. Numerous units east of the Mississippi have joined the original core of Western parks. Also, Redwood, Shenandoah and Great Smoky Mountains national parks have demonstrated the feasibility of restoring partially damaged ecosystems. Parks such as Cuyahoga, Gateway and Golden Gate National Recreation Areas have led the Service into providing recreational opportunities for millions of urban Americans as well.

The role of the system continues to evolve. Growing environmental awareness has made it possible for the system to play a pivotal role in the development of the UNESCO Man and the Biosphere Program, and in the protection of biological diversity. In the future, the Park Service should take a more active role in protecting all significant terrestrial and marine ecosystems, through the establishment of a system of national ecological reserves.

Yale historian Robin W. Winks, a former chairman of the National Park Service Advisory Board, has said that the choice of national park system sites reflects the priorities of the nation: “The true test of national character is in what people choose, by conscious act, in the face of contending choices, to preserve. These visible symbols of the past, survivors of a fierce competition for national attention, make tangible the past that would otherwise remain obscured.”

As development and other man-made impacts sweep across the landscape, time is running out to save the remaining outstanding examples of natural America for future generations; the nation will need to move swiftly to identify and protect the historic heritage of America. It is essential to afford the National Park Service an appropriate means of protecting our remaining—and emerging—areas of national significance.



THE NATIONAL PARK SERVICE: ITS ORGANIZATION AND EMPLOYEES

ORGANIZATION

As the system has developed over the years, its size and scope have greatly influenced the structure and growth of the Service. New areas have increased the diversity of the resources represented in the system. The addition of a significant number of historical and cultural areas beginning in the 1930s generated the need to hire employees with cultural resource backgrounds. In the 1960s and 1970s, the addition of parks in urban areas created new recreational, natural and cultural resource demands. Increased visitation, as well as expanded recreational use of the parks, placed added pressure on employees to provide for the safety and protection of visitors.

The widening diversity of park visitors and their expectations has sparked development of new approaches to interpretation and visitor services. As parks have become a focus of concern to nearby communities, the NPS has had to hone its public relations and outreach skills.

ORGANIZATIONAL REALITIES

At the heart of the organizational framework of the National Park Service are a central office in Washington, D.C., ten regional offices and several professional support centers. The support centers include land acquisition offices, training centers, a planning and design center, an interpretive design center, archaeological centers, cultural resource preservation centers, an interagency fire management office, and an interagency law enforcement training center. These geographically diverse com-

ponent parts contribute to a decentralized organizational framework.

The parks, their resources, and visitors are the basis for the system and the Service. Central offices and administrative support centers exist only to assist the parks: the parks are the key to carrying out the mission. Central office functions should respond to park needs—not vice versa—except when transcendent environmental problems dictate a coordinated response.



RECOMMENDATIONS

1. To separate the NPS from the conflicting mandates inherent in a department responsible for exploitation of resources, and to free the Service to pursue its congressionally mandated mission, Congress should enact legislation making the NPS an independent agency.
2. The NPS should conduct a personnel management analysis of central offices to eliminate duplicated or superfluous activities.
3. Washington headquarters and regional offices should bring in personnel from the field on temporary assignments, whenever feasible, to develop communication and understanding and to ensure that central office personnel do not lose touch with field operations. Talented field personnel on assignment in regional offices or Washington should be provided with a "time contract" guaranteeing return placement to a field position after a certain number of years.
4. Despite the decentralized nature of park operations, major areas of concern such as air quality require a highly centralized policy/research/monitoring office which the NPS should establish close to the Washington Office.
5. The National Park Service should undertake a full assessment of the current staffing at each park and office, define all core mission responsibilities and determine how much staffing is necessary to meet them.
6. The NPS should write position descriptions which allow for integration of generalist and specialist duties within certain positions. The NPS should create more positions that require specialized education and experience.
7. The term "ranger" should be used as a common colloquial title to cover a variety of specific types of jobs, both generalist and specialist.
8. Transfers back and forth between professional series and the park ranger series should be encouraged as an option for employees.
9. Managers and their employees should be trained to coordinate job responsibilities with position classification procedures to achieve effective and flexible position management, and should be held accountable for the results.
10. The NPS should develop a clear recruitment procedure. When employees retire or resign, the positions should be filled, restructured or reallocated, not eliminated.
11. The NPS should persuade the Office of Personnel Management to add specific post-secondary requirements to the park ranger qualification standards and raise the grade structure of the GS-025 series.
12. The NPS should carefully assess the education and experience that employees bring to the Service and then provide appropriate training to augment them.
13. Every employee should participate in a training experience that provides an orientation to the NPS including Service mission, heritage, and operations.
14. Greater opportunities for career mobility should be provided within a park, or within parks that are thematically similar, so that employees with specialized expertise can remain where their knowledge is of greatest benefit, rather than being forced to move to another park to gain advancement.
15. All supervisors and managers should recognize the relationship between position descriptions, performance appraisals and classification standards, and ensure that they are closely coordinated and fully utilized.
16. The National Park Service should establish a career management program that includes career counseling and identifies, for the agency as well as the employee, the career options that can be pursued at various points in individual careers.
17. Washington, regional and park managers should apply a careful, measured approach to geographic mobility, considering the following needs: the need to retain some experts at a park, the need to establish strong, positive relationships between the parks and the surrounding community, the need to encourage experience in park operations and administration, and the need to develop managers who are knowledgeable about resources.
18. Park managers should become sensitive to situations that may provide competitive opportunities for two-career couples, and dual career counseling should be provided in each region.
19. The NPS should establish a centralized fund to pay moving costs of employee transfers between regions, instead of charging the costs to the parks and regions.
20. Qualified specialists who seek management jobs should have the opportunity to transfer into a management job, serve as an apprentice without being required to take a lower GS rating, gain experience, and then compete for higher management positions.
21. Regional directors should be accountable, through performance evaluations, for their effectiveness in encouraging managers who are performing below acceptable levels to become more productive.
22. Central and regional office NPS employees should periodically take assignments in the field to

gain a perspective on the work of the Service at the visitors' level. Conversely, experience in a central office job through a permanent assignment or a temporary detail should be a priority in considering candidates for park superintendencies.

23. Position descriptions and career ladders for specialists in professional series should be structured so as to permit achievement of grade and salary levels parallel to park managers.

THE POLITICAL ENVIRONMENT

In implementing its mandate, the NPS is confronted by the reality that its policies are heavily influenced by other organizations within the federal government. The Department of the Interior, the Office of Personnel Management, the Office of Management and Budget and the Congress all have a hand in shaping NPS policies.

Whenever a new administration comes to power, new political appointees may attempt to mold the existing bureaucracies to conform to the "new" political philosophy. The career employees—the "bureaucrats" whose experience extends over many years—provide consistency while political appointees come and go. Each succeeding administration, however, leaves its mark. The nature of the national park system requires that even short-term political appointees take a long-term view. Yet political change and fragmented direction have thwarted the NPS from effectively translating mission into policy.

In recent years, the NPS, has not been able to make the best use of its resource management expertise. The Department of the Interior has suppressed recommendations of NPS staff that advocate preservation, seeking to substitute proposals that reflect a "multiple use" and recreational philosophy. The Department has clamped down on dissenting agency opinions, and has placed restrictions on those testifying before the Congress as to their professional opinions about the state of the the parks' resources.

In recent administrations, the Department has reined the Service tightly, diluting much of the independent power that had traditionally been granted to the Director. The popularity of the national parks inspires political appointees to curb the NPS's independence and limit its clout.

Departmental interference compromises the National Park Service's ability to make policy and organizational improvements. The Department has changed NPS reorganization plans to reflect its own views rather than to serve the needs of the parks. Park Service career professionals are often overlooked when high-level NPS management positions become available, and the Department sometimes places in these positions people who are more sympathetic with the political philosophies of the administration in power. Career professionals, including superintendents, are at times faced with risking their career by remaining loyal to the traditional mission and philosophy of the Park Service, or bowing to Department pressures. Situations vary with every administration but, in general, the political influences wielded by the Department have denied the NPS long-term continuity and direction, and have created policies destructive to the system.



Continued placement of the National Park Service under the Department of the Interior increasingly inhibits its potential to meet the challenges of the expanding park system while remaining true to its traditional mission.

Because of the increasing politicization of the Park Service, there is an urgent need to make the NPS an independent agency, responsible directly to Congress and the President. The current arrangement thwarts rational, consistent, and appropriate long-term policymaking. As an independent agency, the NPS would be free to speak professionally on behalf of the resources and could therefore more effectively address differences with the Interior Department agencies whose missions conflict with resource preservation.

In order to assure effective, professional management decision making once the NPS is removed from the confinement of the Interior Department, several statutory changes in its organizational framework will be needed. First, Congress will need to write specific professional criteria for the selection of succeeding Directors. Appointment of the Director by the President, with advice and consent of the Senate, will help to ensure that each new Director has the necessary education and experience to lead the Service. Much like the Smithsonian Institution, the NPS should have a statutorily established Board of Regents, one-half appointed by the President, and one-half by the Congress. This body should reflect a blend of scientific expertise, business acumen, and citizen preservation advocacy, with an overriding commitment to the fundamental purposes of the national park system.

Perhaps the most salutary effect of independence for the NPS will be the ability of the Director to articulate the real needs and problems of the Service and the system. The Director would be able to provide, both to the President and to the Congress, an assessment of and full justification for the fiscal needs of the system. While the Service would still have to compete against all other federal agencies for funding, it would be able to compete without the filters and constraints of Interior Secretaries, who historically have reduced NPS funding requests to fit their own priorities.

Critics of independence for the NPS have argued that the Service needs the "protection" of a large department, complete with a cabinet Secretary who can argue for the Service in the White House. History has shown, however, that the Secretary has rarely benefited the Service in this capacity. More often, the Service has taken its concern to the public and the Congress, either publicly or privately, to overcome obstacles placed before it by political appointees of the Department. Far from being a weak, ineffective advocate, as an independent agency, the Service would be able to present its concerns forcefully, and draw on its widespread public popularity and visibility to achieve its goals far more easily than at present.



PERSONNEL

Behind the grand romanticism of the National Park idea stand the individual employees of the National Park Service. Carrying out the mission of the National Park Service requires park rangers, planners, architects, engineers, exhibit professionals, biologists, historians, museum and collections specialists, landscape architects, and maintenance workers, to name a few. Over the past 71 years, these employees have developed a strong sense of family and tradition.

INTEGRATING SPECIALISTS AND GENERALISTS

One of the most controversial issues in the National Park Service today is the use of specialists versus the use of generalists. Park rangers are noted for being "generalists," with careers involving diverse duties that expose them to resource issues, visitor services and overall park administration. This broad-based approach to park management reaches back into the earliest years of the Park Service. Specialists, on the other hand, are employees in a wide range of professional resource-specific occupations.

In the past, the generalist role was sufficient to protect resources and provide for visitor enjoyment. Today, though, resource protection requires sophisticated knowledge, active management strategies, and a long-term perspective. Resource specialists are needed to identify and prioritize park resource needs and coordinate resource management with other park employees. While a generalist approach can play a role in the management of resources and visitors, the NPS needs an expanded complement of resource personnel with specialized education and experience, such as biologists, geologists, archeologists, and curators.



Many park rangers have a solid educational background and experience, often in a resource field. Yet their official position description does not have a post-secondary education requirement and it is not legally considered a "professional" job. In other agencies such as the Fish and Wildlife Service, employees are required to have an undergraduate education in a resource field. The Park Service, which is responsible for the preservation of the nation's most valuable natural and cultural treasures, does not require employees who come in most direct contact with the resource to have any technical education.

Park rangers generally have, and should continue to have, resource protection responsibilities, such as monitoring and reporting threats to resources. However, the pressures of other demands too often pull them away from extensive resource protection duties. Lack of staff positions exacerbates the problem, so that resource management is neglected in favor of visitor protection duties, such as law enforcement or search and rescue. Voluminous paperwork is another burden that holds park rangers behind a desk and away from the resources. Because generalization provides the greatest flexibility in dealing with brush fires and crises, management often rejects the need for designated experts.

The term "park ranger," strongly associated with the traditions of the Service, has become the name of an OPM position (GS-025 Park Ranger) that reads like a narrower component of the organization's identity. The idea of the park ranger generalist should not be abandoned through specialization. The term can be used as an organizational title assigned to a variety of positions. Within classification procedures, park ranger responsibilities can be combined with specialist requirements by specify-

ing the percentages of duties. A park ranger-historian can receive a classification and grade commensurate with the professional historian position if more than 50 percent of his/her duties fall within this classification. Placing specialist and generalist duties within a given position will provide a professional approach to resource and visitor management and a stronger justification for attention to the resources.

There is room for both specialists and generalists in the Park Service, with a flexible mix of jobs. The mix can be defined by each park according to its mandate, types of resources, visitation level, and activities inside and outside the park.

RECRUITMENT

The availability of resource experts depends on the hiring strategies used by the NPS. However, there is no understandable, systematic hiring or intake process in the NPS, particularly for the park ranger series. The absence of a "map" to point the way to employment, together with the absence of a requirement for academic training, means that people can join the Service from a wide variety of backgrounds. Some people spend two or more years in a clerical position in order to be in line to apply for their first park ranger job. For qualified seasonal employees who want a permanent job with the NPS, this is particularly frustrating.

The Service claims that recruitment is unnecessary because so few people are hired each year. Yet a sensible process for getting into the Service would provide the agency with more control over the qualifications of potential employees. The 50-75 permanent rangers currently hired annually will make important resource decisions in the future. This alone validates the need for an intake process.



Currently, the opportunity to match park needs with employee expertise is not guaranteed. Further, there appears to be a sharp decline recently in the number of people applying for NPS jobs. The NPS needs an active, targeted recruitment process to attract the highest caliber employees.

TRAINING AND EMPLOYEE DEVELOPMENT

NPS training programs produce qualified employees with up-to-date knowledge and skills, and attitudes about training are changing: the Division of Training became the Division of Employee Development in 1987. Park and regionally-based courses, workshops and correspondence courses have been added to supplement the courses provided by the Mather Training Center at Harpers Ferry, West Virginia and the Albright Training Center at Grand Canyon, Arizona.

Regionally-based teams that help employees develop skills, individual self-paced training modules, and other innovations have come about in reaction to high travel expenses, the time employees spend away from their parks, and the limited number of course slots available through the training centers. Without coordinated long-term planning, however, the primary responsibility of training may be overlooked: matching employee development needs with mission needs.

Training demands are determined to some extent by the educational background and experience that employees bring to the Service. Training dollars and time are being spent to give employees educational experiences that could be prerequisites to being hired. A trained biologist obviously needs more and different training than someone with little or no resource experience. Likewise, if the Park Service would seek to hire people who already have attained some expertise in interpretation, NPS interpretive courses could concentrate on practical park needs. On the other hand, orientation to the NPS is one example of training that the NPS is responsible for providing.

NPS responsibilities are dynamic and changing. The best focus for training is to help employees deal with changes in park protection and visitor management strategies.

CAREER MOBILITY

In the NPS, opportunities for career advancement have fallen short of expectations. A short supply of opportunities has created morale problems. It is not unusual for employees to remain at one grade level, with the same responsibilities and pay, for five to ten years. Some employees leave the Service because they cannot support their families, or they are attracted to better positions in other agencies or the private sector.

Currently, generalists are advancing very slowly. A bottleneck exists at the GS-5 level where one-fourth of park rangers are stuck because there are

too few GS-7, 9 and 11 positions for them to move into. Generalist and specialist employees advance along different paths. For the most part, in order to advance, generalists become managers in parks and central offices where they develop policy, supervise employees, administer budgets, etc. The diverse park experiences they gain throughout their careers are supposed to prepare them for these responsibilities.

The slow career advancement of generalists has several causes, ranging from a low employee attrition rate to the system's expansion within the last 10–20 years without an equal expansion of the workforce. Other causes include a low retirement rate, position classification inconsistencies, and a lack of funds for moving and promoting people.

Slow advancement has created hardships. In 1986, 100 out of 964 GS-4 and GS-5 rangers left the Service. Although this turnover is similar to that of the general federal work force, the costs it represents in lost training and experience is the price the NPS pays for stifled promotion opportunities. The NPS is no longer able to attract or retain the very best people at the entry level.

The use of classification procedures and the organization of duties to emphasize variety will remove some of the obstacles to advancement in one career track: the park ranger series.

The problem of career mobility for specialists also requires attention. The highest grades for specialists who remain in their area of expertise do not match those of managers. Professional expertise is not given the same recognition as management. At an early point in their career, specialists should be made aware of opportunities to move back and forth between job series to obtain the skills necessary for future management jobs. (A historian can become a park ranger and then a historian again, through different park assignments. (For employees who want to focus on a generalist career and still develop resource expertise, the reverse is true, provided they have the necessary background.) Specialists who seek management positions should be able to move laterally into operational jobs and then compete for top management jobs. At the same time, employees need the opportunity for career advancement within a specialty.

Further, without the funds and positions needed to make multiple career paths work, career advancement will continue to be a problem.

GEOGRAPHIC MOBILITY

The national park system is well known for its widely diverse resources. Management issues in the huge wildness of the Alaskan parks contrast starkly with those of the military or historic sites. Traditionally, NPS employees have been expected to be mobile so they could be exposed to park management approaches involving a great variety of park settings. Geographic mobility—moving from park to park every two to three years—has been important.

Since the 1970s, however, the frequency of geographic moves has declined greatly due to the rising costs of moving and the resulting burden on already tight budgets. Inadequate increases in the number of park staff positions has also added to the problem.

The need for a better balance of specialists and generalists may affect the ability of some employees to move around within the system. Traditional attitudes about geographic mobility need to be re-examined in light of increased specialization.

As local citizens become more involved in the management and planning of national parks, the need for park employees to build relations with nearby communities should also be considered in weighing the benefits of geographic mobility. Park managers and regional directors will need to guard against employees becoming so close to a community that they lose sight of NPS interests. A carefully measured approach to geographic mobility is necessary.

Personal situations such as two-career families, home ownership or children's needs also influence employee attitudes toward geographic mobility. Frequent transfers tend to be difficult for married couples with mutual NPS careers or for people who want the financial equity that a home provides. Geographic mobility requires the individual employee to make some personal choices, and the NPS needs to examine ways to accommodate employee concerns as much as possible.

Along with these difficulties, geographic mobility has its benefits. Geographic moves can remove employees from stressful isolated areas. Geographic transfers between regions also nurture cooperation, innovation and communication among employees systemwide.

MANAGEMENT DEVELOPMENT

Many NPS employees point to a lack of good managers in the system as a root cause of employee concerns. They call for better management accountability to ameliorate such situations as poor career counseling, inaccurate employee performance appraisals, and inadequate strategies for handling conflicts among park divisions and between the park and the surrounding community. Within the NPS, there is no career management framework to ensure that employees attain a full range of management skills. After a recent NPS task force studied the problem of developing better managers, a program was designed to deal with the issue that deserves the full support of the NPS.

In addition to instituting a formal development program for managers, it is important that the NPS also build management accountability into its evaluation of employee performance: poor managers are ignored and generally allowed to continue in their positions.



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