



**U.S. Department of the Interior
Office of Inspector General**

AUDIT REPORT

**PROTECTION OF NATURAL RESOURCES,
NATIONAL PARK SERVICE**

**REPORT NO. 92-I-1422
SEPTEMBER 1992**

This report may not be disclosed to anyone other than the auditee except by the Assistant Inspector General for Administration, Office of Inspector General, U.S. Department of the Interior, Washington, D.C. 20240



United States Department of the Interior

OFFICE OF THE INSPECTOR GENERAL
Washington, D.C. 20240



OCT 23 1992

MEMORANDUM

TO: The Secretary

FROM: Inspector General

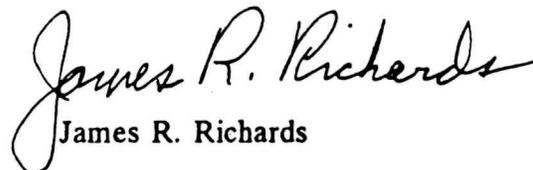
SUBJECT SUMMARY: Final Audit Report for Your Information - "Protection of Natural Resources, National Park Service"

DISCUSSION: The National Park Service's natural resource management program was ineffective in protecting and conserving natural resources in certain national parks. Specifically, we found that the Park Service did not (1) correct or mitigate on a timely basis known threats to certain parks' natural resources and (2) have a complete natural resources inventory and monitoring program to identify potential threats and provide park managers with sufficient information to track changes in natural resource conditions.

As a result, serious and irreversible degradation has occurred in some of our national parks, and the natural value and the attraction of these parks have diminished. Furthermore, the Park Service has accumulated a backlog of more than 4,700 projects, estimated to cost about \$477 million, which needed to be completed to prevent or mitigate known threats to the parks.

The report contained three recommendations for the Park Service to develop a Servicewide Natural Resource Protection Plan; to complete the Servicewide Inventory and Monitoring Project within the existing 10-year schedule; and to consider other means of accomplishing some natural resource management objectives, such as establishing a program to enlist private assistance or obtaining assistance from other Departmental offices.

The Park Service agreed with the report's finding and all three recommendations but did not prepare corrective action plans. Therefore, we have asked the Service to provide action plans for each recommendation.


James R. Richards

Attachment

Prepared by: Harold Bloom
Extension: 208-4252

cc: Solicitor
Assistant Secretary for Policy, Management and Budget
Assistant Secretary for Fish and Wildlife and Parks
Director, National Park Service
Director, Office of Public Affairs



United States Department of the Interior



OFFICE OF INSPECTOR GENERAL

Headquarters Audits
1550 Wilson Boulevard
Suite 401
Arlington, VA 22209

September 30, 1992

Memorandum

To: Assistant Secretary for Fish and Wildlife and Parks

From: Assistant Inspector General for Audits

Subject: Final Audit Report on Protection of Natural Resources,
National Park Service (No. 92-I-1422)

This report presents the results of our review of the National Park Service's protection of natural resources. The objective of this audit was to determine whether the Park Service had provided the necessary support and management emphasis to administer an effective natural resources management program and whether the program was effective in protecting and conserving the natural resources contained in parks under its management.

We found that the Park Service's protection of natural resources in selected parks was not sufficient to mitigate the degradation of those resources. Specifically, the Park Service had no assurance that known threats to natural resources were being addressed or corrected timely and had not instituted an inventory and monitoring program sufficient to allow park managers to detect or predict changes in natural resource conditions. As a result, natural resources in some parks have deteriorated or have been seriously damaged. The Park Service has a backlog of more than 4,700 resource protection projects costing about \$477 million, but in fiscal year 1992 it was able to allocate only \$93 million toward the entire natural resources management program. Further, because the Service did not have an adequate inventory and monitoring program, park managers lacked the information needed to make informed natural resource management decisions.

These deficiencies occurred because the Service emphasized visitor-oriented programs and therefore did not provide the management emphasis and support and the funding required to maintain a viable natural resources program.

The audit report contained three recommendations to correct the deficiencies noted during our audit. We recommended that the Park Service (1) develop a Park Servicewide Natural Resource Protection Plan; (2) complete the Servicewide Inventory and Monitoring Project within the existing 10-year schedule; and (3) consider other means of accomplishing some natural resource management objectives, such as establishing a program to enlist private assistance or obtaining assistance from other Departmental offices.

The August 31, 1992, response (Appendix 3) from the Associate Director, National Park Service, stated general agreement with the draft audit report's finding and recommendations and commented on the information presented in the draft report. We modified the report as appropriate based on the Service's comments. The response, however, did not provide an action plan, including target dates and titles of officials responsible for implementing the recommendations. Therefore, we have requested the Service to provide this information (Appendix 4).

In accordance with the Departmental Manual (360 DM 5.3), we are requesting a written response to this report by November 23, 1992. The response should provide the information requested in Appendix 4.

The legislation, as amended, creating the Office of Inspector General requires semiannual reporting to the Congress on all audit reports issued, actions taken to implement audit recommendations, and identification of each significant recommendation on which corrective action has not been taken.

A handwritten signature in cursive script that reads "Harold Bloom".

Harold Bloom

CONTENTS

	Page
INTRODUCTION	1
BACKGROUND	1
OBJECTIVE AND SCOPE	1
PRIOR AUDIT COVERAGE	2
FINDING AND RECOMMENDATIONS	5
NATURAL RESOURCES PROTECTION	5
APPENDICES	
1. OFFICES AND PARK UNITS VISITED OR CONTACTED DURING AUDIT	14
2. PRIMARY PROBLEMS/THREATS TO THE NATURAL RESOURCES AT THE PARK UNITS VISITED	16
3. NATIONAL PARK SERVICE RESPONSE	17
4. STATUS OF AUDIT REPORT RECOMMENDATIONS	23

INTRODUCTION

BACKGROUND

A park's natural resources include plants, animals, water, air, soil, topographic features, geologic features, and paleontologic resources, all of which compose a park's ecosystem. The purpose of the National Park Service's Natural Resources Management Program is to protect and preserve these natural resources. To achieve this, each park is supposed to develop a resource management plan, which describes and evaluates the park's current natural and cultural resources, identifies threats and deficiencies to the park's resources, and includes project statements to mitigate the threats or deficiencies. About 250 park units have significant resources that require a natural resources component within resource management plans. Parks are required to update project statement accomplishments annually and to update resource management plans every 4 years.

In accordance with the National Park Service Organic Act of 1916, the Park Service is responsible for managing the parks to "conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." The National Park Service's Management Policies of 1988 provide the overall foundation for management action and establish the strategic policy. Chapter 4 of the Management Policies states that the Park Service will manage the natural resources of the park system "to maintain, rehabilitate, and perpetuate the inherent integrity of the resources." Further, the Management Policies state that the Park Service will assemble baseline inventory data about the natural resources within the park system and will monitor these resources at regular intervals to detect or predict changes.

The National Park Service's Natural Resources Management Guideline (NPS-77) provides more detailed directions for park managers so that natural resource management activities planned and initiated at park units comply with Federal regulations and Department of the Interior and Park Service policy.

The Park Service's Natural Resources Directorate has four divisions (air quality, geographic information systems, water resources, and wildlife and vegetation) that establish policy and provide technical assistance to the parks regarding natural resource issues. For fiscal year 1992, the Servicewide budget for the Natural Resources Management Program was about \$92.7 million, which supported about 1,100 personnel.

OBJECTIVE AND SCOPE

The objective of this audit was to determine whether the Park Service had provided the support and the management emphasis needed to support a viable Natural Resources Management Program that has been effective in protecting and

conserving the parks' natural resources. Specifically, we determined whether (1) the Park Service had mitigated threats to the natural resources in the parks on a timely basis and (2) the Park Service's natural resources inventory and monitoring activities were sufficient for management to protect and conserve the parks' natural resources.

This program audit was conducted from November 1991 through April 1992 at the Park Service's headquarters and the Natural Resources Wildlife and Vegetation Division, both in Washington, D.C.; the Rocky Mountain Regional Office, the Natural Resources Air Quality Division, and the Geographic Information Systems Division, all in Lakewood, Colorado; and the Natural Resources Water Resources Division, in Fort Collins, Colorado. We also judgmentally selected and contacted 5 regional offices and 33 park units (see Appendix 1) that represented the overall diversification of the National Park system. Based on the information obtained from these offices and park units, we visited 14 park units (see Appendix 2) that had, according to park or regional office personnel, "significant" natural resource problems or problems that resulted in the deterioration or destruction of natural resources.

During our field visits to the park units or offices, we interviewed Park Service managers, park unit superintendents, and natural resource personnel to determine the progress being made in protecting the natural resources. In addition, we reviewed financial and natural resource data and were accompanied on field trips by natural resource personnel.

As part of our review, we evaluated the system of internal controls related to the protection of natural resources to the extent we considered necessary to accomplish the audit objective. The most significant internal control weakness identified by our review was Park Service's lack of sufficient inventory and monitoring of the parks' natural resources. This weakness is discussed in the Finding and Recommendations section of this report. Our recommendations, if implemented, should improve Park Service's internal controls in this area.

Our audit was made in accordance with the "Government Auditing Standards," issued by the Comptroller General of the United States. Accordingly, we included such tests of records and other auditing procedures that were considered necessary under the circumstances. In addition, we reviewed the Secretary's Annual Statement and Report to the President and the Congress for fiscal year 1991, required by the Federal Managers' Financial Integrity Act of 1982, to determine whether any reported weaknesses were within the objective and scope of our audit. We determined that none of the reported weaknesses were directly related to the objective and scope of our audit.

PRIOR AUDIT COVERAGE

During the past 5 years, the General Accounting Office has issued two reports that addressed Park Service's management of natural resources.

The first report, "Limited Progress Made in Documenting and Mitigating Threats to the Parks" (No. GAO/RCED-87-36), issued in February 1987, discussed the lack of a Servicewide information system for resource management and the limited progress made in documenting and mitigating resource management problems. The report recommended that the Park Service enforce its requirements to have parks prepare and update resource management plans in accordance with established guidance and criteria, ensure that resource management plans are based on adequate information, establish basic accountability for park resources, and use resource management plans for preparing annual budget requests. The Park Service agreed with the focus of the report's recommendations and has made progress in improving the use of resource management planning documents.

The second report, "Protecting Parks and Wilderness From Nearby Pollution Sources" (No. GAO/RCED-90-10), issued in February 1990, addressed the progress Federal agencies were making in protecting parks and wilderness areas from air pollution. The report concluded, in part, that the Park Service did not have sufficient inventory data on its natural resources to determine whether proposed pollution-emitting facilities near the parks would have an adverse impact on the parks' resources. The report further stated that the Park Service would need about \$14.4 million over a 5-year period to develop an adequate inventory of air quality data, including visibility and vegetation data, to protect the 48 "Class I parks." The General Accounting Office did not make any recommendations to the Park Service regarding this part of the report.

During the past 5 years, the Office of Inspector General has issued one audit report related to the Park Service's management of natural resources. The report "Natural and Cultural Resources Programs, National Park Service" (No. 89-55), issued in March 1989, concluded that the Park Service had not effectively implemented Congressionally authorized programs to help meet the Nation's estimated \$14.6 billion total need for historic preservation assistance, had not properly reviewed and monitored park projects to ensure that construction or project activities did not adversely affect cultural resources, and had not implemented adequate guidelines and procedures for conducting inventories of its natural and archeological park resources. The report recommended establishing an insured loan program, requesting funds for rehabilitation grants, prioritizing immediate preservation needs, revising existing guidelines for protecting cultural resources, and establishing inventory guidelines for the Park Service's natural and archaeological resources. Regarding natural resources management, the Park Service has since issued draft guidelines and procedures for conducting natural resource inventories.

In April 1992, the report "National Parks for the 21st Century, the Vail Agenda," which assessed organizational and policy issues that threaten the park system, was issued to the Director, National Park Service. The report was produced as part of the National Park Service's 75th Anniversary Symposium, assembled at Vail, Colorado, during October 1991. The Committee, consisting of Park Service and private sector officials, identified six strategic objectives that the Park Service needs to address to more effectively manage the park system. The strategic objectives

were resource stewardship and protection, access and enjoyment, education and interpretation, proactive leadership, science and research, and professionalism. The report also discussed natural resource protection issues, including the Park Service's role in protecting resources from external threats, in protecting and maintaining resources within the parks, and in conducting scientific and research work.

FINDING AND RECOMMENDATIONS

NATURAL RESOURCES PROTECTION

The National Park Service has not effectively protected and conserved natural resources in certain national parks. Specifically, the Park Service did not ensure that known threats to natural resources were addressed or corrected on a timely basis, did not have a complete natural resources inventory to identify potential threats, and did not have a monitoring program sufficient to assist park managers in managing their natural resources. The National Park Service's Management Policies of 1988 state that the Park Service is "to maintain, rehabilitate, and perpetuate the inherent integrity of the park system's natural resources." The deficiencies occurred because the Park Service gave greater priority and emphasis to visitor-related issues and consequently was not able to provide adequate oversight and funding to protect and conserve natural resources. As a result, natural resources in some parks have deteriorated or have been irreversibly damaged or destroyed, and the Park Service has a backlog of 4,700 projects,¹ with an estimated cost of about \$477 million, that need to be completed in order to prevent or mitigate known threats to the parks. In comparison, the total Park Service natural resources management budget in fiscal year 1992 was about \$93 million. Also, the ability of park managers to protect natural resources from future threats has been adversely impacted.

Mitigation of Threats

The Park Service has not always prevented or corrected known natural resource degradation in the National parks. The Park Service's "Final Guideline for Resource Management Plans," issued on March 15, 1989, states that parks with natural resources are to evaluate the current condition of the natural resources, identify deficiencies and threats to the natural resources, and prepare a project statement to correct the deficiencies and threats. However, the 14 park units we visited had a backlog of 346 project statements, which required about \$41 million in funds in order to prevent or mitigate threats to the natural resources. Servicewide, there were more than 4,700 individual projects, requiring about \$477 million to complete, that were needed to prevent or correct natural and cultural resource problems.

Examples of natural resource degradation in the park units we visited are presented as follows:

- Hagerman Fossil Beds National Monument, Idaho, has lost significant fossil bed deposits that are the primary attraction at the site. This occurred because water used to irrigate farmlands adjacent to Monument boundaries has saturated the soil

¹These 4,700 projects were listed in a Service data base that included only 200 of the 250 park units containing significant natural resources.

and caused landslides that damaged the fossil beds (Figure 1). Although the Park Service was aware of the landslide problems prior to establishing the Monument in November 1988, it used about two-thirds of the Monument's budget to prepare the initial planning documents for the Monument, so that insufficient funds were left for use in correcting the landslide problem. Two major landslides have occurred since 1988. More timely funding of a remediation plan man not have prevented subsequent landslides, but a more timely response would have hastened development and implementation of a solution to the problem. However, funds for developing a solution to prevent further landslides were not received until January 1992. Since 1988, 75 acres of fossil beds have been destroyed which may have been mitigated of prevented had the Park Service acted in a more timely manner.



Figure 1. Hagerman Fossil Beds National Monument in November 1991. (National Park Service photo)

- At Padre Island National Seashore, Texas, currents from the Gulf of Mexico periodically bring debris ashore on approximately 65 miles of beach, including areas of high visitor use (Figure 2). Most of the debris consists of styrofoam pieces, plastic bottles, and wooden materials. Park officials said that the debris is caused by the dumping of refuse from ships at sea and offshore oil platforms. This problem was reported in the Park Service's 1981 resource management plan for Padre Islands, but other than removing hazardous materials containers washed ashore, minimal action has been taken to remove the debris. The presence of debris has been the greatest complaint registered by visitors to Padre Island. Park Service personnel at Padre Island estimated that it would cost about \$100,000 for a first-time cleanup of the debris and about \$50,000 thereafter annually to maintain a clean seashore. Neither the Padre Island resource management budget nor its

maintenance budget for fiscal year 1992 contained sufficient funding to accomplish the cleanup. As a result, visitors to Padre Island are subjected to unsightly beaches and the threat of injury by glass or sharp objects hidden in the sand.



Figure 2. Gulf of Mexico currents bring debris ashore periodically at Padre Island National Seashore. (National Park Service photo)

- Because of easy access from nearby New York City parkways, refuse consisting of piles of household trash, building materials, and automotive parts and tires were deposited throughout the Gateway National Recreation Area, New York (Figure 3). This has been a problem since the Area was established in 1972.



Figure 3. Gateway National Recreation Area in February 1992. (Office of Inspector General photo)

Service personnel stated that a one-time cleanup costing an estimated \$600,000 and additional park ranger patrols could solve the refuse problem, but no funds were allocated for cleanup and enforcement efforts. The illegal dumping of household and commercial waste poses a threat to visitors, wildlife, and the environment.

- At Canyonlands National Park, Utah, past cattle-grazing practices within the Park and current trespass-grazing activities have negatively impacted the soil and natural vegetation. Cattle grazing was phased out of the Park in 1983, but the Park's resource management personnel estimated that about 75 percent of the 337,000 acres in the Park were affected by cattle grazing. Further, this grazing had a significant adverse impact on approximately 1,000 acres of Park land. Many of the 1,000 acres were severely trampled by cattle and require artificial regeneration to restore natural growth. (For comparison purposes, Figure 4 shows an area affected by cattle grazing, and Figure 5 shows an area of the Park that has never been grazed.) In addition, trespass grazing from adjacent lands has also been a threat to the Park's soil and vegetation. The Park Service has tried to mitigate the trespass-grazing problem by erecting fences along its boundaries, but progress has been slow, with only 8 miles of fence installed in the last 7 years. The Park Service still needs to install an additional 10 miles of fence, at a cost of \$50,000, to protect the Park lands from trespass cattle grazing. Park personnel have not eliminated the cattle-grazing threats to the Park because the Park Service has not provided sufficient funds to plant the required vegetation or to install the remaining 10 miles of fence. As a result of not providing adequate funding to correct the cattle-grazing issues, the Park has experienced a reduction in the amount and diversity of plant cover, exotic (not native to the area) plant species have been introduced, and soil has eroded and topsoil has been lost.



Figure 4. Canyonlands National Park in December 1991. This area was severely overgrazed and may never regenerate naturally. (Office of Inspector General photo)



Figure 5. Canyonlands National Park in November 1991. This area has never been grazed and still contains native grasses. (National Park Service photo)

We believe that the Park Service needs to take all necessary actions to correct or mitigate the deterioration of natural resources. One option that the Park Service might consider is to publicize the extent of degradation, especially from litter and common refuse disposal. This could lead to private citizen-sponsored efforts such as an adopt-a-park program² to elicit the public's cooperation in correcting known problems. Also, natural resources expertise could be obtained from other Department of the Interior bureaus, such as the U.S. Geological Survey, the U.S. Fish and Wildlife Service, or the Office of Surface Mining Reclamation and Enforcement. For example, the U.S. Geological Survey's expertise in water resources and the Office of Surface Mining's knowledge of mine reclamation could address the deterioration issue.

Inventoring and Monitoring

We found that the 33 park units we visited or contacted did not have adequate natural resource inventories. As a result, resource managers in these units did not have the baseline data necessary for changes in natural resource conditions to be monitored effectively. The Park Service also evaluated the adequacy of natural resource inventories Servicewide during a 1991 survey and estimated that only

²This program would be similar to the Adopt-a-Highway Program already established in many states. This program is based on private organizations' or citizens' volunteering to pick up trash alongside the Nation's highways.

20 percent of the park units had an adequate inventory of their natural resources. Further, the General Accounting Office, in its February 1987 report, concluded that none of the National park units had developed natural resource inventory data sufficient to properly manage the units' natural resources.

Based on its 1991 survey, the Park Service initiated a 10-year strategic inventory and monitoring project to ensure that park units inventoried their natural resources and established uniform natural resource monitoring techniques. The Park Service estimated that the project would cost \$172 million and would be completed in 2001. This project was funded at \$1.9 million in fiscal year 1992, and funding was programmed at \$4.4 million for fiscal year 1993. However, the Park Service recently reduced the programmed project funding for fiscal year 1993 to \$1.9 million. Because of this funding reduction, the project completion date may not be met. But more importantly, the Service's failure to expeditiously complete the project will impede the Service's ability to detect or predict adverse changes to its natural resources and will prevent park managers from making informed decisions regarding natural resource issues. We found the following instances in which the inventorying of natural resources and the establishment of an adequate monitoring program would benefit park units:

- The March 1989 Exxon Valdez oil spill damaged approximately 860 miles of Alaskan coastline at Kenai Fjords National Park, at Katmai National Park and Preserve, and at Aniakchak National Monument and Preserve. However, these three park units could not assess the extent of the damage from the oil spill because of insufficient natural resource inventory and monitoring data prior to the oil spill. Although the parks tried to perform preassessments of their natural resources before the oil reached the parks' coastlines,³ the preassessments were of limited value and were not used to determine losses or damage to the parks. Additionally, because of the park units' inadequate natural resource inventories and monitoring, the oil spill's long-term effect is difficult to estimate.

- Biscayne Bay, in Biscayne National Park, Florida, is being polluted by an active solid waste landfill and by a former toxic waste dump adjacent to the Park (Figure 6). The South Dade Landfill was established in 1978 to dispose of garbage from nearby south Florida cities. In 1990 Dade County officials notified the Park Superintendent that ammonia toxins had been leaking from the landfill and contaminating Biscayne Bay since 1985. This condition had been undetected by Park personnel, even though they were collecting and analyzing water samples from the Bay that contained levels of un-ionized ammonia that were one thousand times the recommended levels.⁴ Water Resources Division scientists stated that Park personnel were not testing the waters for the types of toxins present and that

³The oil spill reached marine resources and park coastlines of different parks at different times.

⁴The Environmental Protection Agency's permissible criterion is 0.035 parts per million, and the level found in Biscayne National Park waters was 32 parts per million un-ionized ammonia.

discolored Park vegetation and reports from local fishermen of sick shrimp and crabs in Biscayne Bay were "probably" the result of Park waters polluted by the landfill and the dump.



Figure 6. Biscayne National Park in March 1992. The South Dade Landfill, which reaches a height of 200 feet, is the light colored area at the rear of the photograph, and the Park and Biscayne Bay are in the center and foreground, respectively. (National Park Service photo)

- At Crater Lake National Park, Oregon, the native Bull Trout are in danger of becoming extinct. The decline in the Bull Trout population has resulted from the introduction of Brook Trout, which has subsequently caused a decline in Bull Trout habitat and breeding stock. A survey performed in 1947 indicated that about 3,000 Bull Trout were in the Park's Sun Creek. However, the Service performed the first monitoring of Sun Creek in 1989 (42 years later) and found only 130 Bull Trout left in the Creek. Park officials are uncertain whether the Bull Trout can maintain its gene pool and recover from such a small remaining population. Further, 10 additional creeks within the Park could potentially be in the same condition as Sun Creek, but the Park Service has not monitored the Bull Trout populations in these creeks. The Park Service may have been able to prevent the Bull Trout's decline or started recovery efforts earlier if an adequate monitoring program had been established at the Park.

While the preceding examples indicate the need for natural resource inventories and adequate monitoring program, some park units are taking actions to protect their natural resources. For example, Shenandoah National Park, Virginia, has had some success in protecting its air quality. This occurred because Park managers effectively

implemented inventorying and monitoring activities. For example, during the past 5 years approximately 25 coal-fired power plants were proposed for construction near the Park. By using the Park's baseline inventory and monitoring data, Park management demonstrated that the proposed power plants would significantly increase air pollution and would contribute to vegetative and water quality degradation within the Park. As a result, the Park Service was successful in obtaining offset reductions in existing power plant emissions and cooperation from the power plants by having some of the new plants comply with stringent air pollution control requirements.

The Park Service's failure to mitigate known threats to its natural resources and its inadequate inventorying and monitoring of natural resources occurred because the Park Service emphasized visitor-related programs and placed less emphasis on natural resource needs. Historically, senior-level Park Service managers have not adequately addressed natural resource deficiencies. Although the Service's budgetary process allows the Service to allocate or reallocate adequate funds to needed program areas of specific parks, Service managers have chosen to allocate more of the available funding to non-natural resources programs. For example, from fiscal years 1983 through 1991, natural resource funding totaled \$515 million and annually averaged about 8 percent of the Service's operating budget while \$5.8 billion, or 92 percent, was devoted primarily to visitor-oriented programs.⁵ In fiscal year 1992, the Park Service allocated about \$93 million, or 10 percent, of its operating budget for natural resources management. Park Service officials stated that natural resources funding would need to be two to three times the current level to adequately meet annual natural resources management needs. As a result of the inadequate funding, serious degradation of some parks' natural resources has occurred, and the long-term effect is a reduction in the natural value and attraction of the parks to future generations.

Recommendations

We recommend that the Director, National Park Service:

1. Develop a Natural Resource Protection Plan to be implemented Servicewide that will result in the mitigation and correction, on a continuous basis, of known threats to the parks' natural resources and allocate sufficient funds to implement the plan.
2. Provide sufficient funds to complete the Servicewide Inventory and Monitoring Project within the existing 10-year schedule.

⁵These programs included concessions management, interpretive and visitor services, visitor protection and safety, maintenance, cultural resources, informational publications, and international park affairs.

3. Develop alternative actions, such as establishing a formalized Adopt-a-Park Program, to assist in addressing the ongoing trash cleanup problem and obtaining cooperative assistance from other Department of the Interior bureaus.

National Park Service Response

The August 31, 1992, response (Appendix 3) from the Associate Director, National Park Service, agreed in general with the draft audit report's finding and recommendations. However, the Service did not provide information on actions taken or planned, including target dates and titles of officials responsible for implementation of the three recommendations.

Regarding Recommendation 3, the response stated that some parks have had an Adopt-a-Park effort for various periods of time during the past 10 years to address trash (litter cleanup) and other problems but not the cleanup of hazardous materials. The response also indicated that expertise is available within Departmental bureaus to assist the Service in addressing natural resource issues but that those bureaus typically are willing to provide only limited assistance in the absence of Service-provided funding.

The response also stated that the draft report contained limited data and analyses to support the conclusions and included "comments that correct inaccuracies or identify areas where clarifications or documentation are needed." The response indicated that the Service has been unable to provide adequate oversight and funding to protect and conserve natural resources because it has received inadequate Servicewide funding and staffing resources.

Office of Inspector General Comments

Although the Service indicated agreement with the draft report's finding and recommendations, the response did not provide an action plan to implement the three recommendations. The status of the recommendations and the information needed for the recommendations are in Appendix 4.

We disagree that our conclusion is not supported. While we recognize that the Service has monitored, conserved, and protected natural resources in many of the parks, the report's examples and photographs show that many other parks are in need of increased efforts to maintain, rehabilitate, and perpetuate their natural resources. Based on the Service's own budget data, natural resources funding has remained about the same for the past 10 years. This is primarily the result of budget allocations made by Service management rather than any overall Servicewide budget constraints. As a result, we concluded that the Service's allocation of funds for natural resource management (about 10 percent of its fiscal year 1992 budget) was inadequate to provide sufficient protection to the parks' natural resources. Consequently, some of the parks' natural resources have been allowed to deteriorate or have been damaged or destroyed.

**OFFICES AND PARK UNITS
VISITED OR CONTACTED DURING AUDIT**

<u>Offices and Park Units Visited</u>	<u>Location</u>
Assistant Secretary for Fish and Wildlife and Parks	Washington, D.C.
National Park Service headquarters	Washington, D.C.
Office of Strategic Planning	Lakewood, Colorado
Associate Director, Natural Resources	Washington, D.C.
Air Quality Division	Lakewood, Colorado
Geographic Information Systems Division	Lakewood, Colorado
Water Resources Division	Fort Collins, Colorado
Wildlife and Vegetation Division	Washington, D.C.
Rocky Mountain Regional Office	Lakewood, Colorado
Arches National Park	Utah
Big Cypress National Preserve	Florida
Biscayne National Park	Florida
Canyonlands National Park	Utah
Capitol Reef National Park	Utah
Crater Lake National Park	Oregon
Gateway National Recreation Area	New York
Glen Canyon National Recreation Area	Arizona
Hagerman Fossil Beds National Monument	Idaho
Oregon Caves National Monument	Oregon
Padre Island National Seashore	Texas
Rainbow Bridge National Monument	Utah
Redwood National Park	California
Shenandoah National Park	Virginia
<u>Offices and Park Units Contacted</u>	<u>Location</u>
Alaska Oil Spill Coordination Office	Anchorage, Alaska
Midwest Regional Office	Omaha, Nebraska
Pacific Northwest Regional Office	Seattle, Washington
Southeast Regional Office	Atlanta, Georgia
Southwest Regional Office	Sante Fe, New Mexico
Acadia National Park	Maine
Big Bend National Park	Texas
Cape Cod National Seashore	Massachusetts
Cape Hatteras National Seashore	North Carolina
Death Valley National Monument	California
Fort Larned National Historical Site	Kansas
George Washington Carver National Monument	Missouri
Glacier National Park	Montana

<u>Offices and Park Units Contacted (continued)</u>	<u>Location</u>
Guadalupe National Monument	Texas
Gulf Islands National Seashore	Florida
Kenai Fjords National Park	Alaska
Lassen Volcanic National Park	California
North Cascades National Park	Washington
Olympic National Park	Washington
Rocky Mountain National Park	Colorado
Sequoia National Park	California
White Sands National Monument	New Mexico
Wilson Creek National Battlefield	Missouri
Yellowstone National Park	Wyoming

**PRIMARY PROBLEMS/THREATS TO THE NATURAL
RESOURCES AT THE PARK UNITS VISITED**

<u>Park Units Visited</u>	<u>Problems/Threats</u>
Arches National Park, Utah	Cattle trespass/overgrazing, external development, and exotic species.
Big Cypress National Preserve, Florida	Water quality and flow, external development, and exotic species.
Biscayne National Park, Florida	Toxic contamination, external development, and marine debris.
Canyonlands National Park, Utah	Cattle trespass/overgrazing, soil erosion, and exotic species.
Capitol Reef National Park, Utah	Cattle trespass/overgrazing, exotic species, and external development.
Crater Lake National Park, Oregon	Water quality, endangered species, exotic species.
Gateway National Recreation Area, New York	Trash dumping, hazardous waste sites, water pollution.
Glen Canyon National Recreation Area, Arizona (including Rainbow Bridge National Monument, Utah)	Archaeological degradation, cattle trespass/overgrazing, and external development.
Hagerman Fossil Beds National Monument, Idaho	External agricultural irrigation, soil erosion, and site destruction.
Oregon Caves National Monument, Oregon	Water quality and flow, external development, and aesthetic/visual degradation.
Padre Island National Seashore, Texas	Hazardous waste and marine debris, oil and gas spills, and external development.
Redwood National Park, California	Soil erosion, water flow, external development.
Shenandoah National Park, Virginia	Air pollution, external development, and wildlife isolation.



IN REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE
P.O. Box 37127
Washington, D.C. 20013-7127

APPENDIX 3
Page 1 of 6



F4217(237)

AUG 31 1992

Memorandum

To: Assistant Inspector General for Audits
Office of Inspector General

From: Associate Director, Budget and Administration
National Park Service

Subject: Protection of Natural Resources
Assignment No, C-IN-NPS-001-92

We agree in general with the findings and recommendations in this draft report. Nonetheless, we believe that the report often contains limited data and analysis to support its conclusions and recommendations, particularly the conclusion that deficiencies have occurred because the National Park Service "emphasized visitor-oriented programs and therefore did not provide the management emphasis and support and the funding required to maintain a viable natural resources program." The report provides details only for 8 of the 33 parks visited. The report would be strengthened if data from the other parks were included.

Attached are specific comments that correct inaccuracies or identify areas where clarifications or additional documentation are needed.

If further information is needed, please contact Louis C. Penna, Audit Liaison Officer, on (202) 523-5382.

Attachment

Detailed Comments on Draft IG Report
Protection of Natural Resources
No. C-IN-NPS-001-92

Pages 1-4: The report carefully documents the nature of the policy and guideline controls that the NPS has established, but does not evaluate how well those controls operate to influence field level decisions. The focus is on the WASO organizational structure; regional or park structures and allocation of funds and FTE among the three organizational levels are not addressed. The report's conclusions would have been strengthened if these factors had been addressed.

Page 1, first paragraph, second sentence: The report says that the purpose of the National Park Service's Natural Resources Management Program is to protect and preserve these natural resources. NPS-77 defines a more specific purpose. It says "The fundamental objectives of NPS natural resource management, as prescribed in policy, are to manage the natural resources of the National Park System to maintain, restore, and perpetuate their inherent integrity and, when consistent with the foregoing, to provide opportunities for visitors to benefit from and enjoy natural environments which are evolving through natural processes minimally influenced by human action."

Page 1, first paragraph, third sentence: It should be clarified that not all of the project statements contained in a park's Resource Management Plan address the mitigation of threats. Some project statements, for example, address ecological research, or inventory and monitoring.

Page 1, first paragraph, fourth sentence: NPS recently revised the number of park units having significant natural resources from 240 to 250.

Page 1, second paragraph, first sentence: As this is a quote from the Organic Act, "wild life" should be two words rather than one.

Page 2, third paragraph, second sentence: It should be clarified that the FY 1992 budget of \$92.7 million is the Service's total natural resources budget. Because this sentence follows a description of the Natural Resources Directorate, it might be read that the budget of \$92.7 million is for the support of the Natural Resources Directorate, rather than for the regions and parks as well, as is the case.

Page 7, first full sentence on the page: NPS-75 should be out in final by the time this audit report comes out. It is currently at the printer.

Page 7: The Natural Resources Strategic Plan should be mentioned in addition to the Vail conference.

Page 8, fourth sentence: The sentence should read "The deficiencies occurred because the Park Service has had inadequate funding and staffing resources and gave greater priority and emphasis to visitor-related issues and consequently was not able to provide adequate oversight and funding to protect and conserve natural resources." (The words underlined should be inserted into the sentence).

Page 8, fifth sentence: The sentence says that the Park Service has a backlog of 4,700 projects, with an estimated cost of about \$477 million. These totals are reflective of a 4-year period and do not address just one year's work. This statement was also contained in the Memorandum from the Assistant Inspector General for Audits, dated July 17, 1992 which accompanied the draft audit report.

Page 8, seventh sentence: The report states that the "ability of park managers to protect natural resources from future threats has been adversely impacted" without providing supporting data. The report should recognize that, although the Service does not have the fiscal and staffing resources it needs, progress has been made. The Service's natural resources budget has increased substantially over the last 5 years, and the Service has trained over 120 Natural Resource Management Specialists through the Natural Resource Training Program since 1984. Most (over 50%) of the graduates of this program now occupy positions in parks where they assist the Park Manager and provide natural resource expertise.

Page 9, first sentence: This should be changed to read "The Park Service has not always prevented or corrected known natural resource degradation in the National parks." (The word underlined should be inserted into the sentence.) As currently written, this statement is an overgeneralization that is not supported by any data. There are examples of areas where the Service has prevented or corrected known natural resource degradation in the National Parks, such as the recent successes in protecting air quality at Grand Canyon.

Page 9, first paragraph, last sentence: The sentence says that \$477 million is required Servicewide to "complete" the more than 4,700 individual projects. It should be noted that the \$477 million will not necessarily complete the 4,700 projects. Also same comment as above, it should be noted that the \$477 million is reflective of a four year period.

Pages 9 and 10: While the description of the initial planning efforts at Hagerman Fossil Beds is accurate, and a more timely response would certainly hasten the implementation of a solution to the problem, it is a gross oversimplification to conclude that the NPS could have prevented the landslides had it taken immediate action in 1988 to address the irrigation threat adjacent to the park. In fact, it is likely that the landslides would have occurred even if the NPS had the funding and the flexibility to implement any solution it chose in 1988.

The landslides in the park have been precipitated by the discharge of water from a perched aquifer that has formed in the vast lakebed sediments as a result of percolation from the irrigated farmland on the Hagerman plateau. Irrigation was started on the plateau in the 1970's. In the 20 years that have elapsed, several dozens of feet of the lakebed sediments have become saturated and a rather large groundwater reservoir has been formed. Therefore, if a technical remedy could be implemented today, stored water in the sediments would continue to be discharged through the fossil-containing escarpment and an elevated risk of the occurrence of landslides in the park would persist for several years.

Page 10, first full paragraph, fourth sentence: The phrase "other than removing some hazardous materials containers" understates both the significance of this issue and the significant NPS efforts required in these removals.

Page 10: The example of natural resource degradation from Padre Island says that "minimal action has been taken to remove the debris": Prior to FY 1991, the Coast Guard intermittently had been cleaning hazardous waste drums from the beach. Starting in FY 91, with the assistance of Congressionally added funds, the park took on the hazardous waste cleanup task and increased the intensity of the effort, including adding staff and a contractor. In addition, the park staff has participated on several working groups dealing with the problem of marine waste. In response to the Secretary's desire that NPS be represented, park staff serve as the NPS representative on the MMS technical working group on hazardous materials. Also, park staff participate in the offshore operators committee that deals with debris items generated from the offshore platforms. Finally, the park has been participating in a cooperative NOAA/NMFS the Marine Debris Program monitoring program for marine debris since 1988, and now has substantial research underway, with partial support from EPA, to understand the dynamics of marine debris deposition on its beaches.

With respect to the use of volunteers for debris clean up, the park has received good cooperation from the Center for Marine Conservation, which coordinates volunteer clean-up activities twice per year over 8 miles of beach. The use of volunteers for clean-up activities is limited to litter cleanup. The cleanup of hazardous materials requires specially trained and equipped personnel.

It should also be clarified that debris comes ashore periodically, not seasonally (also picture caption p. 11). More than 90% of the debris is plastics, including styrofoam, bottles, sheeting, etc., not wooden materials. We cannot attribute debris to specific sources, and in general believe that, because of increased diligence by offshore oil platform operators, they may no longer be a significant source. The park generally tries to remove all hazardous debris and some large items, as well.

Page 13: While reporting the deficiencies in meeting fencing and restoration needs at Canyonlands, the report should recognize that NPS has made some progress in meeting similar needs elsewhere. For example, millions of dollars have been spent by NPS on effective fencing programs at Hawaii Volcanoes and Haleakala to reduce greatly the impact to native plants and animals, including threatened and endangered species, caused by exotic pigs and goats. The NPS priority setting process has identified the Hawaii park exotic species situation as of the very highest priority for resolution, and significant amounts of funding have been allocated for that resolution.

Page 15, first paragraph and Page 21, Recommendation 3: There have been Adopt-a-Park programs at various parks for various periods of time for at least the past ten years. It should be pointed out that the National Park Service has already utilized this method in some parks to address the trash and other problems. Lake Mead National Recreation Area, for example, currently has an "Adopt-a-Cove" program where groups maintain a particular cove on the shores of Lake Mead and Lake Mohave.

Additionally, the report cites refuse problems at Padre Island National Seashore and Gateway National Recreation Area as examples of trash cleanup problems that could be addressed by an Adopt-a-Park program. We suggest that the report clarify, and Recommendation #3 recognize, that such citizen programs are appropriate for litter cleanup activities and that the cleanup of hazardous materials which represent a significant portion of the refuse problem at these two parks must be dealt with using specially trained and equipped personnel.

This paragraph of the report (and Recommendation #3 on page 21) also recommends that the National Park Service obtain additional natural resources expertise and cooperative assistance from other Department of the Interior bureaus. The report then goes on to cite as examples the Bureau of Reclamation's expertise in water resources and the Office of Surface Mining's knowledge of mine reclamation. We agree that expertise is available within the Department to assist the National Park Service in addressing natural resources issues as cited in the report. However, based on the types of water resources issues facing the National Park Service, we believe that the expertise and assistance of the U.S. Geological Survey and the U.S. Fish & Wildlife Service are probably more appropriate in addressing these issues. Additionally, other bureaus typically are willing to provide only limited assistance without funding and FTEs.

Page 16, fourth sentence in first full paragraph: It is not accurate to state that FY 1993 funding for the Inventory and Monitoring Program was reduced--the program was funded at the same level as FY 1992. The program design--the framework used to plan and seek budget increases--was based on several years of increases. The lack of an increase to the design level in any given year simply results in stretching out the length of time needed to

complete the total planned work.

Page 17, first paragraph: The oilspill reached marine resources and coastlines of different parks at different times. Deleting "during the 8 days" would make the sentence accurate.

Page 17, first full paragraph, fourth sentence: This section incorrectly paraphrases a trip report by a Water Resource Division staff member. We recommend that this paragraph be revised as follows:

Biscayne Bay, in Biscayne National Park, Florida is being polluted by an active solid waste landfill and by a former waste dump adjacent to the Park (Figure 6). The South Dade Landfill was established in 1978 to dispose of garbage from nearby south Florida cities. In 1990, Dade County officials notified the Park Superintendent that leachate containing ammonia was coming from the landfill and had been contaminating Biscayne Bay since 1985. This condition had gone undetected by Park personnel because the Park's monitoring program had focused on sensitive offshore ecosystems and contamination in ground water. Preliminary results of National Park Service studies in January 1992 suggest that monitoring efforts be directed toward toxicological problems associated with the South Dade Landfill and the former waste dump.

Page 17, third sentence and footnote 3: The reference to the Environmental Protection Agency's "standard" for un-ionized ammonia is not correct. The EPA has published a criterion of 0.035 parts per million. We recommend that footnote 3 be rewritten as follows:

The Environmental Protection Agency's criterion for un-ionized ammonia is 0.035 parts per million, and the level found in Biscayne National Park waters was 32 parts per million un-ionized ammonia.

Page 19: As there are no supporting data on identified unmet visitor services needs, it is difficult to state conclusively that NPS has placed undue emphasis on visitor services compared to natural resources.

Page 20: The report's generalization that 8% of the NPS budget is for Natural Resources and that 92% is for visitor-related services is misleading. There are more areas of expenditures than the two listed, including cultural-historical resource preservation, international affairs, etc.

STATUS OF AUDIT REPORT RECOMMENDATIONS

Finding/ Recommendation Reference	Status	Action Required
1, 2, and 3	Management c o n c u r s ; a d d i t i o n a l i n f o r m a t i o n i s n e e d e d .	Provide a plan that identifies actions to be taken, target dates for implementation, and titles of officials responsible for implementation.

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