

June 1997

LAND OWNERSHIP

Similarities and Differences in the Management of Selected State and Federal Land Units



**Resources, Community, and
Economic Development Division**

B-276875

June 27, 1997

The Honorable James V. Hansen
Chairman, Subcommittee on National
Parks and Public Lands
Committee on Resources
House of Representatives

The Honorable Richard Pombo
House of Representatives

Both the federal government and the states own millions of acres of land that are managed for various purposes. In March 1996, we reported to the Chairman of the House Committee on Resources and Representative Pombo on a variety of topics dealing with land ownership, including the acreage owned by 13 western states.¹ Because you were interested in comparing state and federal land management, you asked us to (1) identify the purposes and uses for which state-owned lands are managed and (2) compare state and federal land management activities, operating costs, and revenues.

As agreed with your offices, we obtained data on the management of state-owned lands in New Mexico, North Carolina, and Utah. In addition, within these three states, we judgmentally selected 14 state and national parks, wildlife areas, and forests and compared the activities, operating costs, and revenues of the state units with those of the federal units. Because of differences in the emphasis given to particular activities, the size of the land units reviewed, the number of staff assigned to the units, and other factors—all of which affect the units' operating costs and revenues—caution must be used in interpreting the data gathered on these units and in making decisions on the basis of these data.

Results in Brief

The majority of the state-owned lands in New Mexico and Utah are trust lands, which are managed to generate revenue and are generally not open to the public. The remaining state-owned lands in New Mexico and Utah and all of the state-owned lands in North Carolina are public lands, which are managed by state departments and agencies for various purposes and uses. Specifically, the trust lands—95 percent (8.9 million acres) of the state-owned lands in New Mexico and 65 percent (3.7 million acres) of the

¹Land Ownership: Information on the Acreage, Management, and Use of Federal and Other Lands (GAO/RCED-96-40, Mar. 13, 1996).

state-owned lands in Utah—are managed to produce revenue for schools and other designated institutions from uses such as oil and gas production, grazing, and mining. The public lands are managed, among other things, to provide recreational opportunities for the public or to preserve the states' natural, historic, and scenic resources. From these lands, we selected the state units for comparison with federal units.

Our review of 14 state and federal land units identified similarities and differences in their activities, operating costs, and revenues.

- The three state parks and the three national parks we reviewed conducted similar activities, but the state parks placed more emphasis on visitor services while the national parks gave a higher priority to conserving natural resources (resource stewardship). The state parks also cost less to operate and less per visitor, but more per acre to manage. In addition, although the state parks usually generated less revenue, they recovered a higher percentage of their operating costs. For example, the state park in North Carolina generated about \$225,000 annually, or 64 percent of its operating costs, while the national park generated about \$780,000, or 6 percent of its operating costs. The activities emphasized by the state parks, as well as their smaller area and staffs, were among the factors contributing to the differences in costs and revenues.
- The three state wildlife/waterfowl management areas and three national wildlife refuges conducted similar activities; however, the state areas gave less attention to visitor services than did the three national refuges. The state areas generally had lower operating costs as well as lower costs per acre. For example, the state waterfowl management area in Utah cost an annual average of \$119,000 to operate and \$6 per acre to manage, while the national refuge cost an annual average of slightly over \$770,000 to operate and almost \$9 per acre to manage. The activities emphasized by the state areas and their smaller area and staffs were among the factors accounting for the differences in the operating costs. Because both the state and the national areas are managed to provide habitat for and to protect wildlife, the revenues generated from the public uses of these areas were minimal.
- Both the state forest and the national forests emphasized timber growth and production activities, but the state forest did not manage for recreation while the national forests did. The state forest's operating costs were significantly smaller than the national forests', while the costs per acre to manage were 35 percent higher. In addition, although the state forest generated less revenue, it recovered a much higher percentage of its operating costs. Again, the activities emphasized by the state forest, as

well as its much smaller size and staff, were among the factors contributing to the differences in costs and revenues.

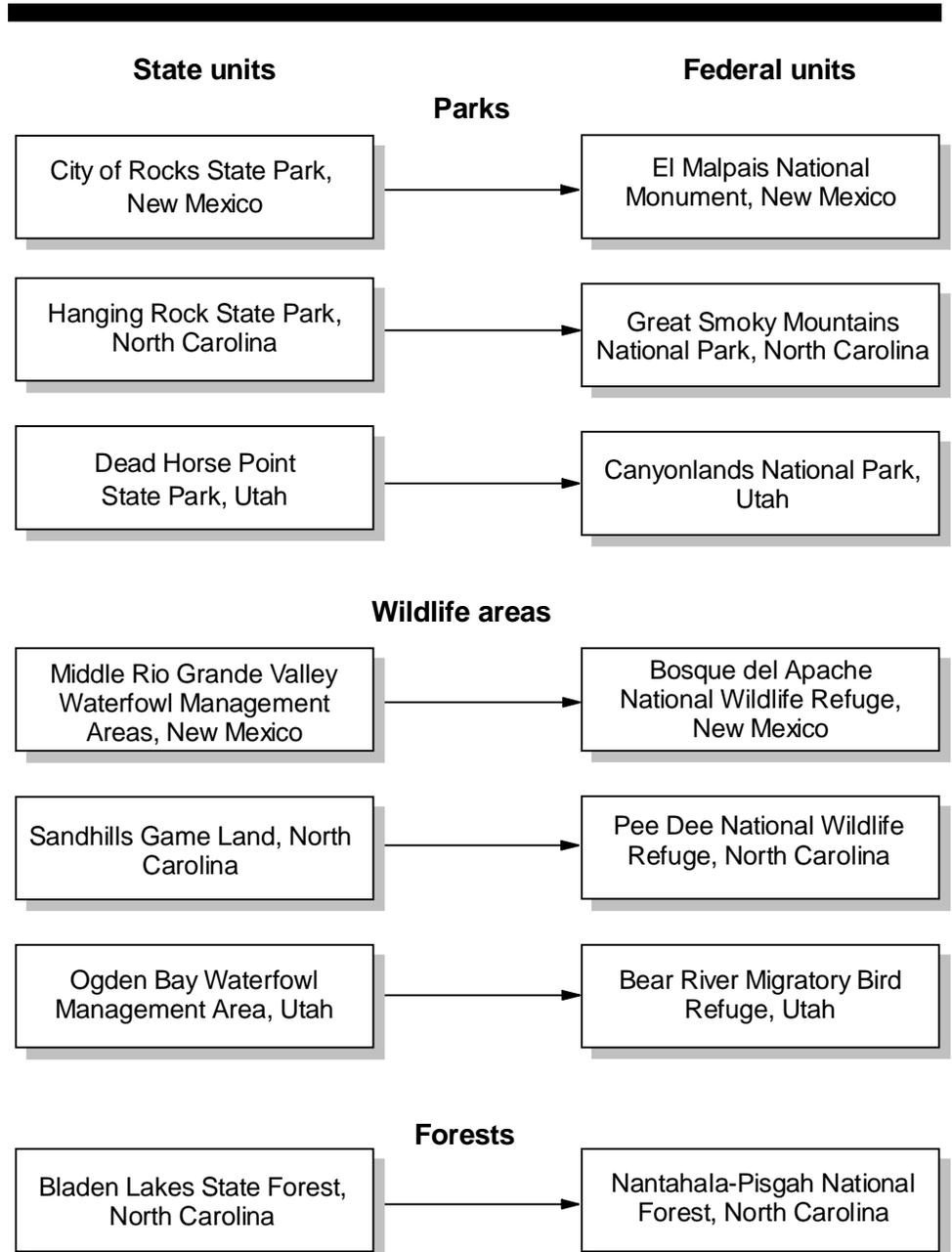
Background

The federal government owns about 30 percent (650 million acres) of the nation's total surface area. Four major federal land management agencies—the U.S. Department of Agriculture's Forest Service and the Department of the Interior's Bureau of Land Management, Fish and Wildlife Service, and National Park Service—manage about 95 percent of these lands. Each of these agencies bases the management of its lands and resources on its legislatively mandated mission and responsibilities. For example, the National Park Service manages its lands to conserve, preserve, protect, and interpret the nation's natural, cultural, and historic resources.

The 50 states also have substantial land holdings, including about 57 million acres of state forests, 20 million acres of state wildlife areas, and 12 million acres of state parks. Although the states rely on a variety of organizational structures, they have each created management agencies—such as state forestry, wildlife management, and park agencies—to manage their lands. Like the federal land management agencies, the state agencies base the management of their lands on their missions and responsibilities.

We judgmentally selected and reviewed 14 state and federal land management units located in New Mexico, North Carolina, and Utah. These units are shown in figure 1. A detailed description of each of these units—including its acreage, number of visitors, operating costs, and revenues generated—appears in appendix I.

Figure 1: Selected State and Federal Land Units in New Mexico, North Carolina, and Utah



We used several measures to provide additional perspective on the operating costs and revenues generated at these units. First, we used the cost per visitor in comparing the state and national parks because these units collected information on visitation. Then, for all of the units, we used the cost per acre to manage because it provides a uniform measure across units that vary in size. Finally, for the state and national parks and forests, we calculated revenues as a percentage of operating costs to measure these units' self-sufficiency.

Purposes and Uses for Which Three States Manage Their Lands

New Mexico, North Carolina, and Utah manage their lands for a variety of purposes and uses. Most of the state-owned lands in New Mexico and Utah—95 percent and 65 percent, respectively—are trust lands.² Unlike federal lands, these lands are generally not open to the public. Rather, they must be managed to generate revenues for designated beneficiaries through royalties or fees paid for oil and gas production, mining, grazing, or other uses. The remainder of the lands in these states are either sovereign or public lands. These lands are managed for purposes and uses such as wildlife areas, historic areas, and state parks to preserve natural, historic, and scenic resources while providing habitat for wildlife and recreational opportunities for citizens. In addition, some of these lands provide sites for state office buildings and medical facilities.

In New Mexico, of the 9.4 million acres owned by the state, 8.9 million acres, or 95 percent, are state trust lands. These lands, granted to New Mexico at statehood, must be managed to generate income for schools and other designated institutions. In fiscal year 1995, uses of these trust lands generated \$119.8 million in revenues. Although uses such as grazing, leases of rights-of-way, and commercial activities produced some income, over 87 percent of the revenues from New Mexico's trust lands came from royalties received from oil and gas leases. The remaining acres (about 500,000) are managed by various state agencies, including the Commission on Higher Education and the departments of Energy and Minerals and Game and Fish. The purposes and uses of these lands range from state parks and wildlife management areas to sites for state office buildings.

All of North Carolina's state-owned lands are public lands. Because none of the 13 original colonies received trust lands, North Carolina has none. The state's 480,000 acres are allocated to state departments and agencies to be managed for various purposes and uses, including sites for

²Except for Maine, Texas, and West Virginia, the states that joined the Union after 1803 received grants of land for the benefit of and use by schools in these states. These lands are generally known as state trust lands.

correctional facilities, educational facilities, office buildings, parks and recreational areas, and warehouse facilities. The largest portion of these lands—almost 380,000 acres, or 79 percent—has been allocated to the Department of Environment, Health, and Natural Resources. These lands are used to (1) provide habitat to wildlife and provide recreational opportunities to hunters and anglers, (2) promote a better understanding of forestry, or (3) conserve and preserve natural resources for the benefit of all of North Carolina's citizens.

In Utah, 3.7 million, or 65 percent, of the 5.7 million acres of state-owned land are held in trust for designated public institutions, primarily schools, which benefit from the income generated from the use of these lands. In 1995, Utah's trust lands generated \$15.6 million in income for their beneficiaries from uses such as mining, oil and gas production, grazing, and special uses requiring permits. Mineral leases, which generated \$11 million in royalties, constituted the most significant source of revenue.

About 1.5 million of Utah's remaining 2 million acres are managed for multiple uses and sustained yield. About 1.3 million acres are associated with the Great Salt Lake, including land and water that are used for recreation but also generate revenue for the state through mineral extractions. Various state agencies and departments manage the remainder of Utah's lands for a variety of purposes and uses, including road rights-of-way, correctional facilities, and state parks and wildlife areas.

Similarities and Differences in State and National Parks

During fiscal years 1994 and 1995,³ the state and national parks we selected conducted similar activities, but placed differing emphasis on activities such as visitor services and resource stewardship. This differing emphasis, along with differences in other factors such as the units' area and number of staff, enabled the state parks to operate at less cost—both overall and per visitor. However, the state parks cost more per acre to manage than the national parks. The state parks usually generated less revenue than the national parks, but they recovered a higher percentage of their operating costs.

During this 2-year period, the selected state and national parks both conducted activities connected with visitor services, resource stewardship, operations and maintenance, and administration. These

³For the state and national parks we reviewed, we obtained information on the cost of operations, number of visitors, and revenues generated for fiscal years 1994 and 1995. For the three states, the fiscal year runs from July 1 to June 30.

activities included providing campgrounds and visitor centers, monitoring and protecting park resources, and maintaining park facilities and structures. All of the state and national parks spent a substantial portion of their operating funds—generally from 30 to 40 percent— on operations and maintenance activities.

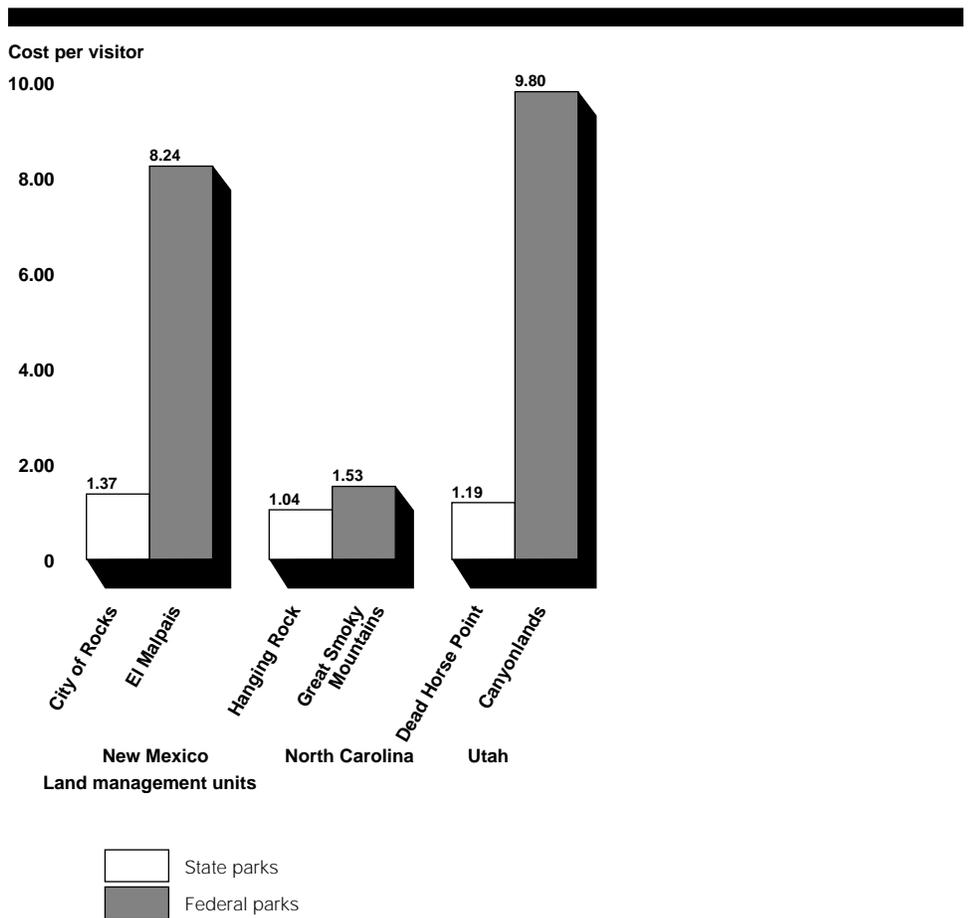
While the state and national parks conducted similar activities, they differed in the emphasis they placed on two activities—visitor services and resource stewardship. As indicated by the percentage of operating costs spent on these activities during the 2-year period, the state parks in New Mexico and Utah emphasized providing recreational opportunities for visitors, while the national parks emphasized preserving and protecting park resources. City of Rocks State Park in New Mexico and Dead Horse Point State Park in Utah each spent 50 percent of their average annual operating funds on visitor services. El Malpais National Monument in New Mexico and Canyonlands National Park spent 18 percent and 10 percent, respectively, of their operating costs on visitor services during this 2-year period. In contrast, the national parks in these two states spent from 21 to 28 percent of their operating costs on resource stewardship, while the state parks spent 5 and 4 percent, respectively. Because North Carolina’s management philosophy is similar to the National Park Service’s, Hanging Rock State Park and the national park in North Carolina spent similar percentages on both visitor services and resource stewardship.

Overall, the average annual operating costs for the 2-year period were substantially lower for the state parks than for the national parks. The lowest operating cost for a state park was \$73,000, compared with \$816,000 for a national park. The national parks cost more to operate for a number of reasons, including their larger area and more numerous staff. For example, the 6,192-acre Hanging Rock State Park in North Carolina, with seven full-time staff, cost \$353,000 to operate. In contrast, the 520,000-acre Great Smoky Mountains National Park, with 275 full-time staff, cost \$13.5 million. However, despite the difference in the size of their staffs, all of the state and national parks spent over half of their operating funds during this 2-year period on salaries and benefits.

The smaller state parks also had lower costs per visitor than the national parks for the 2-year period, partly because their operating costs were lower. For example, New Mexico’s City of Rocks State Park, which had average annual operating costs of \$73,000 and 53,000 visitors, incurred an average per-visitor cost of \$1.37. El Malpais National Monument, which had average annual operating costs of \$816,000 and 99,000 visitors,

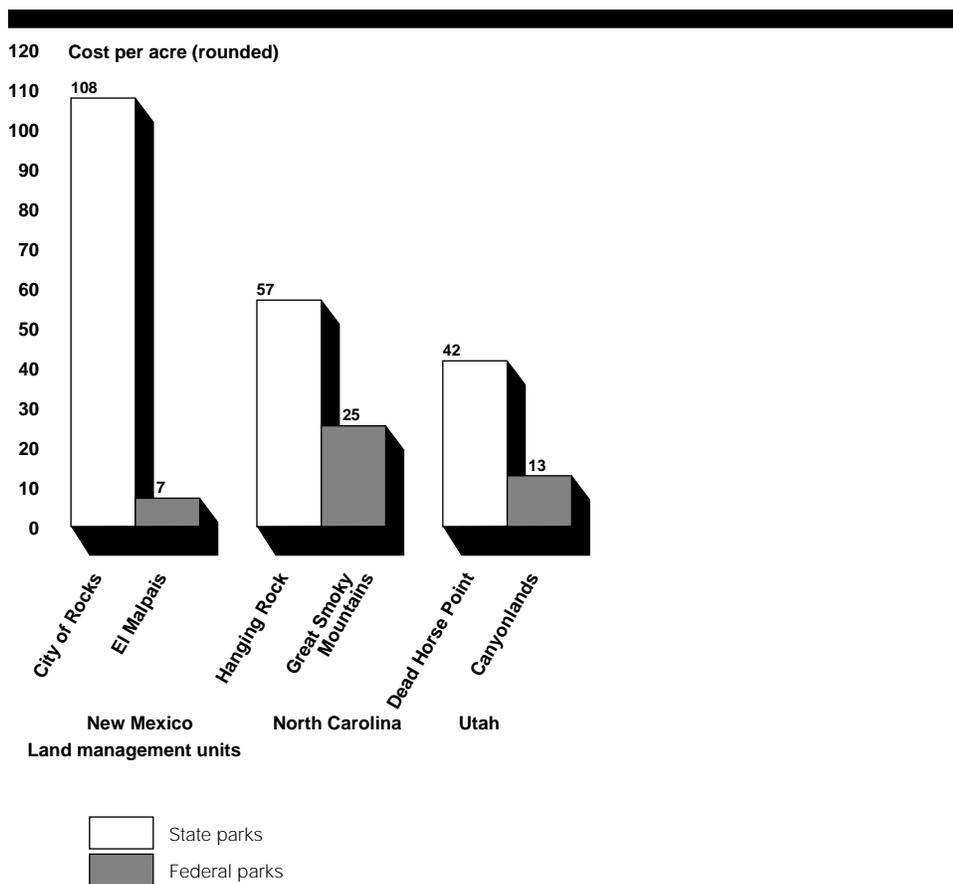
incurred an average per-visitor cost of \$8.24. Figure 2 shows the average cost per visitor at the selected state and national parks in New Mexico, North Carolina, and Utah.

Figure 2: Average Cost per Visitor at Selected State and National Parks in New Mexico, North Carolina, and Utah, Fiscal Years 1994 and 1995



Even though the state parks cost less to operate and less per visitor than the national parks, they cost more per acre to manage. The state parks conduct many of the same activities and incur the same types of costs as the national parks. However, because the state parks conduct these activities over a smaller area, they incur higher average costs per acre. Figure 3 shows the average cost per acre to manage the selected state and national parks.

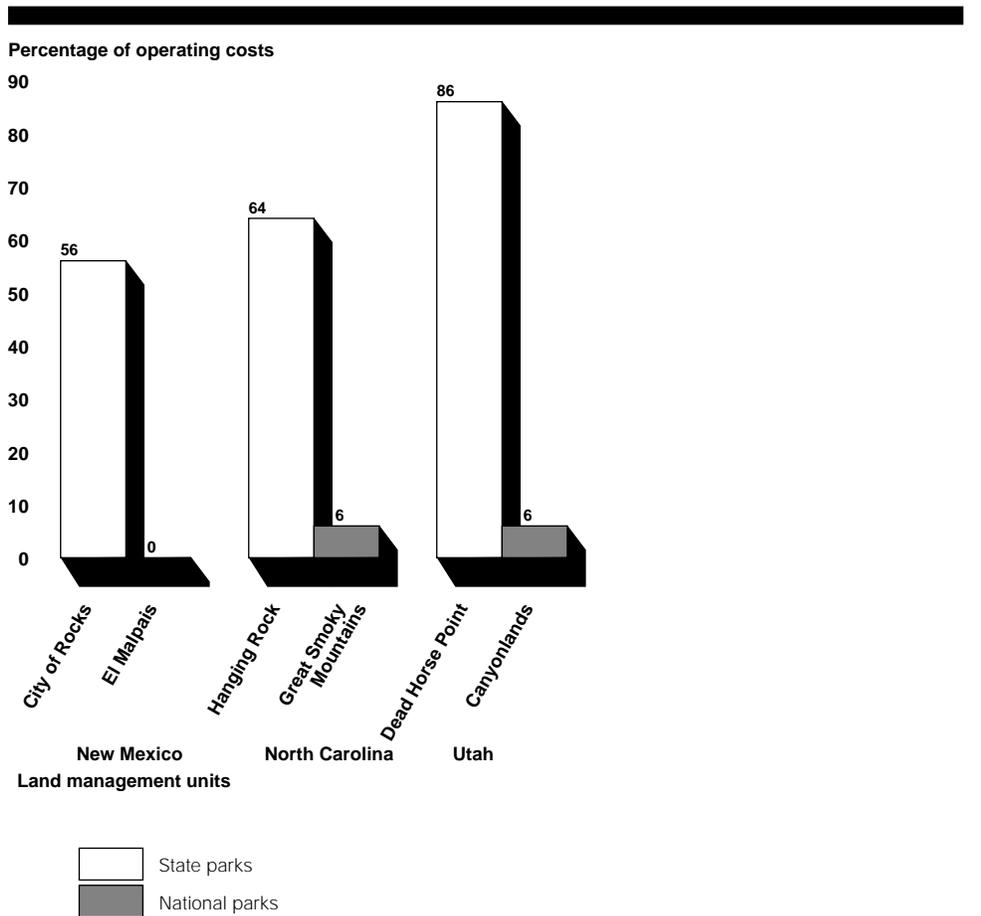
Figure 3: Average Cost per Acre to Manage Selected State and National Parks, Fiscal Years 1994 and 1995



Although the state parks usually generated less revenue than the national parks during the 2-year period, both collected user fees. Differences in the types of fees charged and in the number of visitors affected the collections. For example, the state parks typically charged entrance and camping fees. City of Rocks State Park in New Mexico and Dead Horse Point State Park in Utah, which emphasized visitor services, both charged entrance fees. Only one of the three national parks—Canyonlands National Park in Utah—charged an entrance fee. All three of the state parks charged camping fees, compared with two of the national parks. Nevertheless, the national parks, which reported more visitors, usually generated more revenue. For example, Canyonlands National Park in Utah reported an average of 440,000 visitors and received about \$263,000 annually from entrance and camping fees. Utah’s Dead Horse Point State

Park, in comparison, reported an average of 183,000 visitors and generated about \$188,000 annually from entrance and camping fees. The revenues generated by the state parks represented a higher percentage of their operating costs, in part because their operating costs were lower. For example, revenues represented about 86 percent of the operating costs at Dead Horse Point State Park, compared with about 6 percent at Canyonlands. Figure 4 shows the revenues generated by the selected state and national parks as a percentage of their operating costs.

Figure 4: Revenues Generated by Selected State and National Parks as a Percentage of Their Operating Costs, Fiscal Years 1994 and 1995



Appendix II, which contains a detailed comparison of one state and one national park, as well as additional information on the public uses allowed

and the facilities available, provides an example of the comparisons we made.

Similarities and Differences in State Wildlife/Waterfowl Areas and National Refuges

During fiscal years 1994 and 1995, the state wildlife/waterfowl management areas and the national refuges both conducted similar activities, primarily grouped under operations and maintenance. However, additional activities included in operating and maintaining the national refuges and other factors, such as differences in acreage and staffing, contributed to the state areas' generally having lower average annual operating costs. Because both the state areas and the national refuges are managed to provide habitat for and to protect wildlife, the revenues generated from the public uses of these areas were minimal.

At both the state areas and the national refuges, expenditures for operations and maintenance activities accounted for over 60 percent of the costs in the 2 fiscal years. At both, such activities included providing habitat and protecting resources for wildlife/waterfowl and repairing and maintaining structures, equipment, and grounds. Other activities, such as construction, fire protection, and ecological services, were also conducted at some of the state and national areas.

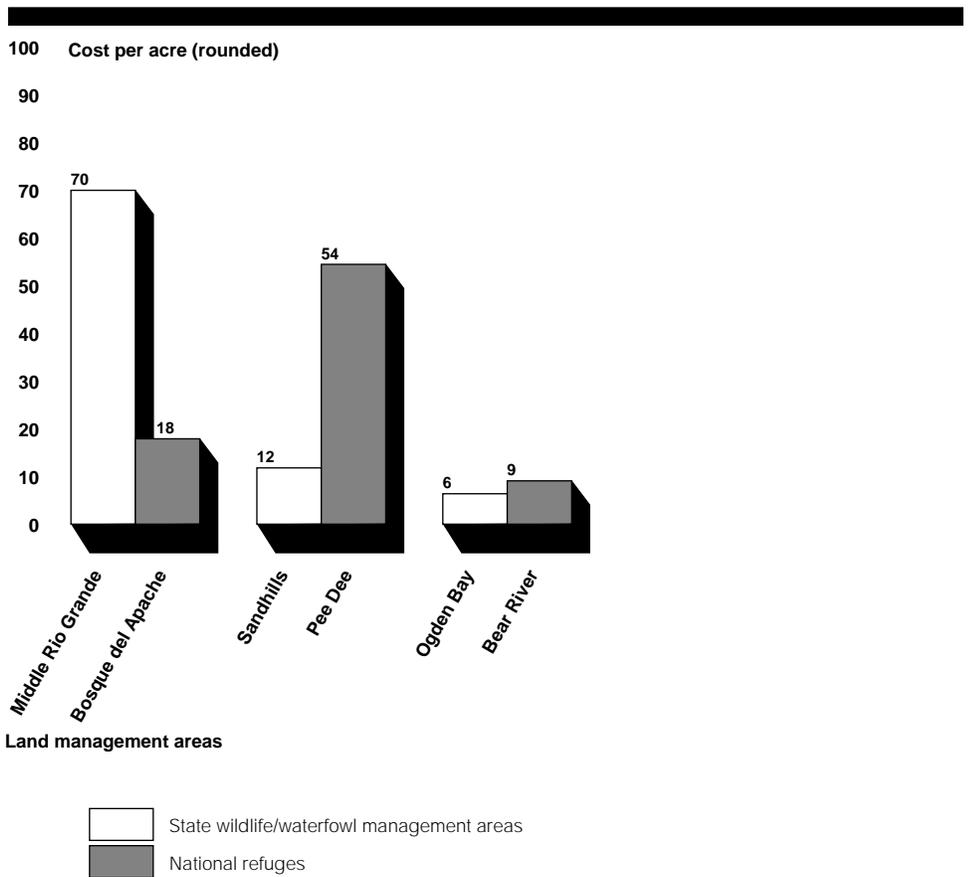
However, the costs of operations and maintenance activities at the national refuges included expenditures for providing visitor centers, wildlife observation decks, and interpretative programs. These activities were conducted to encourage compatible public uses, such as bird-watching and wildlife observation, that were not emphasized at the state areas. While the state areas allowed similar public uses, they did not provide the number of facilities or educational/interpretative programs found at the national refuges. For example, among the facilities provided to visitors at Bosque del Apache National Wildlife Refuge in New Mexico were a visitor center, a 15-mile vehicle tour route, walking trails, and six wildlife observation decks. In contrast, a vehicle tour route was the only recreational facility available at New Mexico's Middle Rio Grande Valley Waterfowl Management Areas.

The state areas generally cost less to operate than the national refuges. For all three national refuges, the average annual operating costs exceeded \$500,000, while only one of the state areas cost as much.⁴ A number of factors contributed to the higher costs of operating the national

⁴Sandhills Game Land in North Carolina had operating costs of \$672,000 in fiscal year 1995, the only year for which cost and revenue data were available.

refuges. Not only did the national refuges incur more costs for visitor services (i.e., for additional facilities and interpretative programs), but they also were larger in area and had more staff than the state areas. For example, the U.S. Fish and Wildlife Service’s 73,000-acre Bear River Migratory Bird Refuge in Utah, which had seven full-time staff, costs an average of about \$663,000 to operate annually. During the same period, the state of Utah spent an average of about \$119,000 annually and retained two full-time staff to operate Ogden Bay Waterfowl Management Area’s 19,000 acres. Unlike the national parks, the national refuges cost more per acre to manage than the state areas, with the exception of the Bosque del Apache National Wildlife Refuge in New Mexico.⁵ Figure 5 shows the average cost per acre to manage these areas.

Figure 5: Average Cost per Acre to Manage Selected State Wildlife/Waterfowl Management Areas and National Wildlife Refuges, Fiscal Years 1994 and 1995



⁵The water and construction costs incurred by the state area during this 2-year period contributed to its having a higher per-acre cost than Bosque del Apache National Wildlife Refuge.

Most of the state wildlife/waterfowl management areas and national refuges generated less than \$50,000 annually.⁶ At these areas, generating revenue is secondary to providing habitat for and protecting wildlife, and revenues are not generated to cover operating expenses. Very few fees were charged for the public uses allowed at these areas. For example, no state and only one national area, Bosque del Apache National Wildlife Refuge in New Mexico, charged an entrance fee. Instead, the state areas generally received state funds raised from the sale of hunting and fishing licenses. In addition, these areas received between 10 and 75 percent of their operating funds from federal aid grants.⁷ The state areas in New Mexico and Utah also received funds from the sale of habitat stamps. The national refuges, like the national parks and forests, generally received all of their funding through annual appropriations.

Appendix III, which contains a detailed comparison of one state waterfowl management area and a national refuge, as well as additional information on the public uses allowed and the facilities available, provides an example of the comparisons we made.

Similarities and Differences in State and National Forests

During fiscal years 1993, 1994, and 1995,⁸ both Bladen Lakes State Forest and the Nantahala-Pisgah National Forests⁹ in North Carolina conducted similar activities, such as forest management and utilization. However, differences in the emphasis that the forests gave to recreation, as well as differences in the size of the forests and of their staffs, contributed to differences in their average annual operating costs and/or revenues. For the much smaller state forest, the costs were significantly lower than for the national forests. Although the state forest also generated less revenue, its lower costs and its emphasis on timber growth and production contributed to a much greater recovery of its costs.

⁶Sandhills Game Land in North Carolina generated about \$260,000 in fiscal year 1995 from the sale of timber and pine straw.

⁷The Federal Aid in Wildlife Restoration Act (Pittman-Robertson Act) provides funding to state wildlife agencies for wildlife conservation and recreation projects. A total of \$165.2 million, derived from a federal excise tax on arms and ammunition, will be apportioned to state wildlife agencies in fiscal year 1997.

⁸Information presented for the state and national forests provides the average annual operating costs, number of visitors, and revenues for fiscal years 1993, 1994, and 1995.

⁹The Nantahala-Pisgah National Forests are actually two forests (the Nantahala and the Pisgah). They are two of the four national forests in North Carolina, all of which are managed by one forest supervisor.

Both the state and the national forests conducted similar activities. The state forest and the national forests spent 35 percent and 55 percent, respectively, of their operating funds on forest management and utilization. This activity included managing timber growth, production, and sales at both forests. The state forest and the national forests also spent 40 and 12 percent, respectively, of their resources to protect forest land and resources, which included maintaining forest grounds, roads, and facilities. Other activities conducted at both forests included administration and fire protection.

Differences occurred, however, in the activities conducted under forest management and utilization. The state forest focused on timber growth and production, while the national forests also emphasized recreation management, spending 28 percent of their forest management and utilization funds for this activity. The national forests provided facilities and services to visitors, which was not a priority at the state forest. For example, for about 15 million visitors per year, on average, the national forests provided a visitor center, information booths, and informative signs and exhibits throughout the forests. The state forest, however, did not have a separate visitor center or public rest rooms for its approximately 2,000 visitors.

The state forest cost substantially less to operate than did the national forests. The average annual cost during the 3-year period to operate the state forest was over \$385,000, while that of the national forests was \$9.2 million. This difference in costs was attributable to differences in the emphasis given to recreation management, as well as in the size of the forests and of their staffs. For example, the lower-cost state forest, which focused on timber growth and production, consisted of 32,000 acres and employed nine full-time employees. The national forests, which included recreation management among their major activities, together covered over 1 million acres and employed 157 full-time staff. Despite the difference in the size of their staffs, both forests spent about two-thirds of their operating costs on salaries and benefits.

Although the national forests cost more to operate, the average cost per acre to manage was 35 percent higher for the state forest than for the national forests. The average per-acre cost of management was \$12.05 for the state forest, compared with \$8.91 for the national forests. This difference occurs, in part, because the costs of managing the national forests are spread out over a larger area, reducing the costs per acre.

The one state forest we reviewed generated less revenue than the national forests, but it produced enough to make itself almost self-sufficient. Both the state forest and the national forests generated most of their revenues from the sale of forest products, such as timber and pine straw. For the 3-year period, the state forest generated average annual revenues totaling almost \$300,000, or about 77 percent of its operating costs. The national forests together generated average annual revenues of \$322,105, almost entirely from timber sales. But because the national forests incurred higher operating costs and emphasized providing visitor services, their revenues amounted to about 4 percent of their operating costs. Since neither forest charged entrance fees, the national forests did not derive additional revenue from their emphasis on visitor services.

Appendix IV contains a detailed comparison of the state and national forests, as well as additional information on the public uses allowed and the facilities available.

Agencies' Comments and Our Evaluation

We provided a draft of this report to the Department of Agriculture's Forest Service, the Department of the Interior, the New Mexico State Land Office, the Utah School and Institutional Trust Lands Administration, and the states of New Mexico, North Carolina, and Utah for review and comment.

We discussed the draft report with the Forest Service's Director for Policy Analysis and a Senior Policy Officer for North Carolina's Department of Environment, Health, and Natural Resources. Both agreed that the information contained in the report was accurate and that no changes were needed.

The Department of the Interior provided written comments on a draft of this report. While not disagreeing with the information contained in the report, Interior stated that although the report represents a good starting point for comparing federal and state land management, statements made and conclusions drawn in the report could be misleading because of the small number of land units sampled and differences in the activities and emphases of the units compared.

We agree that the number of units we examined was small. However, we judgmentally selected the 14 units as case studies to explore similarities and differences in the management of state and federal land units. We did not generalize, statistically project, or draw any conclusions from the data

we gathered on these units. Our report is meant to be a factual presentation of the similarities and differences in the activities, operating costs, and revenues of the selected state and federal land units within New Mexico, North Carolina, and Utah. In addition, we advised readers to use caution in interpreting the data gathered on these units and in making decisions on the basis of the data contained in this report because of the differences in emphasis given to particular activities, the size of the land units reviewed, the number of staff assigned to the units, and other factors. Interior's comments are presented in their entirety, together with our responses, in appendix VI.

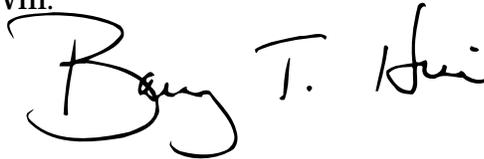
In written comments on a draft of this report, the New Mexico State Land Office agreed that the information presented on state trust lands was accurate. According to the Office, the report provided interesting comparisons of similarities in the management of state and federal land units and was of particular value in clearly pointing out differences in their management. The New Mexico State Land Office's comments are presented in their entirety in appendix VII.

The states of New Mexico and Utah and the Utah School and Institutional Trust Lands Administration provided no comments on the draft report.

We performed our work from July 1996 through May 1997 in accordance with generally accepted government auditing standards. A complete discussion of our objectives, scope, and methodology appears in appendix V.

As requested, unless you publicly announce its contents earlier, we plan no further distribution of this report until 15 days after the date of this letter. At that time, we will send copies to the Secretaries of Agriculture and the Interior; the Chief of the Forest Service; the Directors of the Fish and Wildlife Service and the National Park Service; the governors of New Mexico, North Carolina, and Utah; the land commissioners of New Mexico and Utah; and other interested parties. We will also make copies available to others upon request.

Please call me at (202) 512-9775 if you or your staff have any questions about this report. Major contributors to this report are listed in appendix VIII.

A handwritten signature in black ink that reads "Barry T. Hill". The signature is written in a cursive style with a large, looping initial "B".

Barry T. Hill
Associate Director, Energy,
Resources, and Science Issues

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Land Units Included in Our Review

We visited both state and federal land management units in each of the three states included in our review. Table I.1 shows the acreage, number of visitors, operating costs, and revenues generated at the selected state and national parks. The same data for the selected state wildlife/waterfowl management areas and national refuges are shown in table I.2 and for the selected state and national forests in table I.3. Brief descriptions of the state and federal units follow each table.

State and National Parks

Table I.1: Acreage, Number of Visitors, Operating Costs, and Revenues at Selected State and National Parks

Park name	Acreage	Number of visitors	Operating costs	Revenues
New Mexico				
City of Rocks State Park	680	53,478	\$73,265	\$41,269
El Malpais National Monument	114,277	99,069	816,368	0
North Carolina				
Hanging Rock State Park	6,192	338,287	352,600	224,899
Great Smoky Mountains National Park	520,000	8,813,854	13,507,940	780,102
Utah				
Dead Horse Point State Park	5,247	183,300	218,651	187,652
Canyonlands National Park	337,570	440,496	4,318,953	262,592

Note: Except for acreage, the data represent annual averages for fiscal years 1994 and 1995. For the three states, the fiscal year runs from July 1 to June 30.

Source: GAO's analysis of data provided by the National Park Service and the departments of Parks and Recreation of the respective states.

City of Rocks State Park, New Mexico

City of Rocks State Park is located near Faywood, New Mexico, about 28 miles northeast of Deming. This 680-acre park was established in 1956 to protect a unique geological formation of monolithic volcanic rocks arranged in the middle of a large expanse of land. The formation, which resembles a city, dates back over 30 million years. The park also features cactus gardens and hiking trails and averages over 50,000 visitors annually. The park is undergoing a major modernization—adding campsites with electrical hookups and water, and building a \$550,000 visitor center that

includes complete shower facilities and interpretive displays of the area's geology.

El Malpais National Monument, New Mexico

El Malpais was created by Public Law 100-225, on December 31, 1987. Located in the high desert lands of west-central New Mexico, El Malpais consists of 114,000 acres and is noted for its lava flows and related lava-tube cave systems. Most traditional recreational uses, such as hiking and camping, are allowed. Popular activities include exploring the lava tubes and cultural sites. Mining, timber harvesting, fishing, and hunting are not allowed; grazing, which is currently allowed, will be prohibited after December 31, 1997.

Hanging Rock State Park, North Carolina

Hanging Rock State Park is located in Danbury, North Carolina. Covering 6,192 acres, the park receives an average of 338,000 visitors each year. Hanging Rock was established in 1936 when the Winston-Salem Foundation, a local philanthropic organization, sold the property to the state of North Carolina for \$10. The deed specified that the property be conveyed with the condition that a state or national park be constructed. Hanging Rock State Park was created to protect the property's scenic, archaeological, geological, recreational, and biological values.

Great Smoky Mountains National Park, North Carolina

The National Park Service Act of May 22, 1926, established the Great Smoky Mountains National Park. The park, which straddles the border between Tennessee and North Carolina, is about equally divided between the two states. The park is world renowned for the diversity of its plant and animal resources, the beauty of its ancient mountains, the remnants of its American pioneer culture, and the wilderness sanctuary within its boundaries. Its purpose is to preserve its exceptionally diverse resources and to provide for the public's enjoyment of them in ways that will leave them essentially unaltered. Timber harvesting, mining, and hunting are prohibited. Grazing is generally not allowed, although the park has two grazing operations under permits to maintain the historical look the park is trying to preserve. Most other recreational uses are allowed.

Dead Horse Point State Park, Utah

Dead Horse Point State Park is located near Moab, Utah. Covering 5,247 acres, it was officially designated a state park in December 1959. Towering 2,000 feet directly above the Colorado River, the park provides a panoramic view of the river and its intricate canyon system. Several

viewpoints and paths offer easy access to the park's vistas. Eleven miles of primitive trails lead hikers to back country viewpoints and natural areas. The visitor center offers rest rooms, interpretive displays, snacks, books, and souvenirs. About 200,000 people visit the park each year. In addition, visitors can use the 21 campgrounds that have electricity, shelters, and tent pads.

**Canyonlands National
Park, Utah**

Canyonlands National Park was established in 1964 by Public Law 88-590. Located in the heart of the Colorado Plateau in southeastern Utah, it is noted for its canyons, arches, buttes, towers, and other land forms. Its purpose is to preserve its outstanding scenic, scientific, and archaeological resources for public enjoyment. Mining, grazing, timber harvesting, and hunting are prohibited. Most recreational uses are allowed. Featured recreational uses include viewing the park's spectacular landscapes, hiking, and camping.

State Wildlife/Waterfowl Management Areas and National Refuges

Table I.2: Acreage, Number of Visitors, Operating Costs, and Revenues at Selected State Wildlife/Waterfowl Management Areas and National Refuges

Unit name	Acreage	Number of visitors	Operating costs	Revenues
New Mexico				
Middle Rio Grande Valley Waterfowl Management Areas	5,877	a	\$411,420	\$8,799
Bosque del Apache National Wildlife Refuge	57,191	128,024	1,023,013	50,263
North Carolina				
Sandhills Game Land	57,000	a	672,225	259,428
Pee Dee National Wildlife Refuge	8,443	7,762	459,595	41,381
Utah				
Ogden Bay Waterfowl Management Area	18,860	60,000	119,000	1,000
Bear River Migratory Bird Refuge	72,972	20,400	662,842	5,607

Note: Except for Sandhills Game Land and for acreage, the data represent the annual averages for fiscal years 1994 and 1995. The data for Sandhills Game Land are for fiscal year 1995, the only year for which data were available.

^aNot available.

Source: GAO's analysis of data provided by the U.S. Fish and Wildlife Service and the wildlife management agencies of the respective states.

Middle Rio Grande Valley Waterfowl Management Areas, New Mexico

The Middle Rio Grande Valley Waterfowl Management complex consists of four separate sites—Belen, Bernardo, Casa Colorada, and La Joya—located along the Rio Grande River in central New Mexico. These four units, totaling 5,877 acres, work closely with Bosque del Apache and Sevilleta National Wildlife Refuges in providing habitat and feed for migrating waterfowl and cranes.

Belen is located about 1 mile south of the town of Belen, New Mexico, and has 247 acres. The first increment of land was acquired in 1959 with federal-aid funds. A portion of the land is used by a sharecropper to raise

corn for the waterfowl and alfalfa for a cash crop. Waterfowl hunting and bird-watching are permitted, but picnicking and camping are not allowed.

Casa Colorado is a 423-acre unit that borders the east bank of the Rio Grande approximately 5 miles south of Belen. The unit provides secure resting habitat and feed for the ducks, geese, and sandhill cranes that winter in the Middle Rio Grande Valley. The area was acquired in 1981 with federal-aid funds. A portion of the land is cultivated by a sharecropper. The unit is generally closed to the public, but access is allowed during hunting season.

Bernardo is a 1,676-acre unit located near the town of Bernardo, New Mexico, and is the center of activity for the Middle Rio Grande Valley complex. A headquarters building, shop, and two residences are located here, and four New Mexico Department of Game and Fish staff operate from this unit, carrying out crop management, farming, and irrigation operations. Bernardo provides winter habitat and produces corn, grain sorghum, and alfalfa for waterfowl and cranes. Hunting is permitted during the season, and bird-watching is best during the fall and winter months.

La Joya is a 3,531-acre unit located approximately 7 miles south of Bernardo, New Mexico. Land purchases began in 1928 and continued through 1948. No farming is carried out at La Joya. It was marshland when first purchased, and it consists of six man-made ponds. The upper three ponds are kept full in spring and summer for nesting waterfowl. Waterfowl hunting is permitted during the season, and fishing is available in the summer.

**Bosque del Apache
National Wildlife Refuge,
New Mexico**

The Bosque del Apache National Wildlife Refuge was established by Executive Order 8289 on November 22, 1939, as “a refuge and breeding ground for migratory birds and other wildlife.” The 57,191-acre refuge straddles the Rio Grande Valley in Socorro County, New Mexico. Within the refuge’s borders lie three wilderness areas totaling approximately 30,850 acres and five natural research areas totaling 18,500 acres. On the refuge, the foothills and mesas are typical high desert, but the lowlands contain marshes that were artificially created to replace the natural wetlands lost to development throughout the middle Rio Grande Valley. A new office/visitor center was added to the refuge’s headquarters in 1983. A 15-mile tour route provides wildlife observation opportunities for the more

than 125,000 visitors to the refuge each year. Recreational uses are encouraged, but timbering, mining, and grazing are prohibited.

**Sandhills Game Land,
North Carolina**

Sandhills Game Land is located in Hoffman, North Carolina. Covering 57,000 acres and managed to protect and improve wildlife habitat, the area opened in 1948 after state officials signed a 50-year lease with the federal government. Sandhills allows camping in designated areas, horseback riding, hunting, and off-road vehicle use during certain parts of the year. In the early 1970s, Sandhills changed its designation and operation from a wildlife management area to a game land. This change increased the area's emphasis on recreation as long as it did not affect wildlife.

**Pee Dee National Wildlife
Refuge, North Carolina**

Pee Dee National Wildlife Refuge consists of 8,443 acres located in the southern piedmont area of North Carolina. Seventy-two percent of the refuge is covered by forest, and approximately 1,200 acres are agricultural lands. Timber and timber-related products are sold on the refuge. Hunting and fishing represent the primary public uses of the refuge. Other public uses include bird-watching, wildlife observation, photography, and hiking. Trapping is not allowed by the public; however, it is carried out by employees of the refuge to control damage by beavers and muskrats.

**Ogden Bay Waterfowl
Management Area, Utah**

Ogden Bay Waterfowl Management Area is located in Hooper, Utah. Covering about 19,000 acres on the Weber River Delta of the Great Salt Lake, it is Utah's largest waterfowl management area. Started as a joint venture between state and federal agencies and a private wildlife group, Ogden Bay was the nation's first Federal Aid in Wildlife Restoration project. The area operates on revenues realized from the sale of state hunting and fishing licenses and federal aid. Its primary mission is to provide wetland wildlife habitat and public recreation. About 60,000 people visit the area each year and take part in photography, bird-watching, wildlife observation, hunting, and fishing.

**Bear River Migratory Bird
Refuge, Utah**

Bear River Migratory Bird Refuge was established in 1928 and is located in Box Elder County, Utah, just west of Brigham City. The refuge contains 73,000 acres and consists primarily of marsh, open water, and mudflats. Migratory waterfowl, shorebirds, and resident wildlife depend on the refuge as a production, feeding, resting, or staging area. Activities for visitors include bird-watching, photography, fishing, and hunting

waterfowl and pheasant in season. A 12-mile vehicle tour route is open daily during daylight hours from mid-March through December. The use of all-terrain vehicles and snowmobiles is not permitted.

State and National Forests

Table I.3: Acreage, Number of Visitors, Operating Costs, and Revenues at Selected State and National Forests in North Carolina

Forest name	Acreage	Number of visitors	Operating costs	Revenues
Bladen Lakes State Forest	32,000	2,000	\$385,752	\$297,757
Nantahala-Pisgah National Forests	1,031,000	14,809,004	9,185,177	322,105

Note: Except for acreage, the data represent annual averages for fiscal years 1993, 1994, and 1995.

Source: GAO's analysis of data provided by the U.S. Forest Service and the North Carolina Division of Forest Resources.

Bladen Lakes State Forest, North Carolina

Bladen Lakes State Forest is located in Elizabethtown, North Carolina. Covering 32,000 acres and managed for its aesthetic, wildlife, timber, and soil benefits, the forest opened in 1939. Between 1935 and 1939, the federal government used and managed the land through the Civilian Conservation Corps and constructed buildings and roads. In 1939, the State Forest Service leased the land from the federal government and assumed the area's management. Bladen Lakes generates enough revenues for self-sufficiency, primarily from the sale of timber, pine straw, and charcoal. Recreational opportunities at the forest include horseback riding; all-terrain vehicle use; primitive camping; hiking; and, on certain days of the week, hunting.

Nantahala-Pisgah National Forests, North Carolina

Nantahala and Pisgah are two of the four national forests in North Carolina that are administered as a single unit of the National Forest System. These forests are located in the western portion of the state. The forests were established in 1920 and 1916, respectively, and consist of over 1 million acres. There are no entrance fees into the forests. Activities for visitors include bird-watching, camping, fishing, hiking, horseback riding, hunting, riding off-road vehicles, and observing wildlife.

Comparison of Utah's Dead Horse Point State Park and Canyonlands National Park

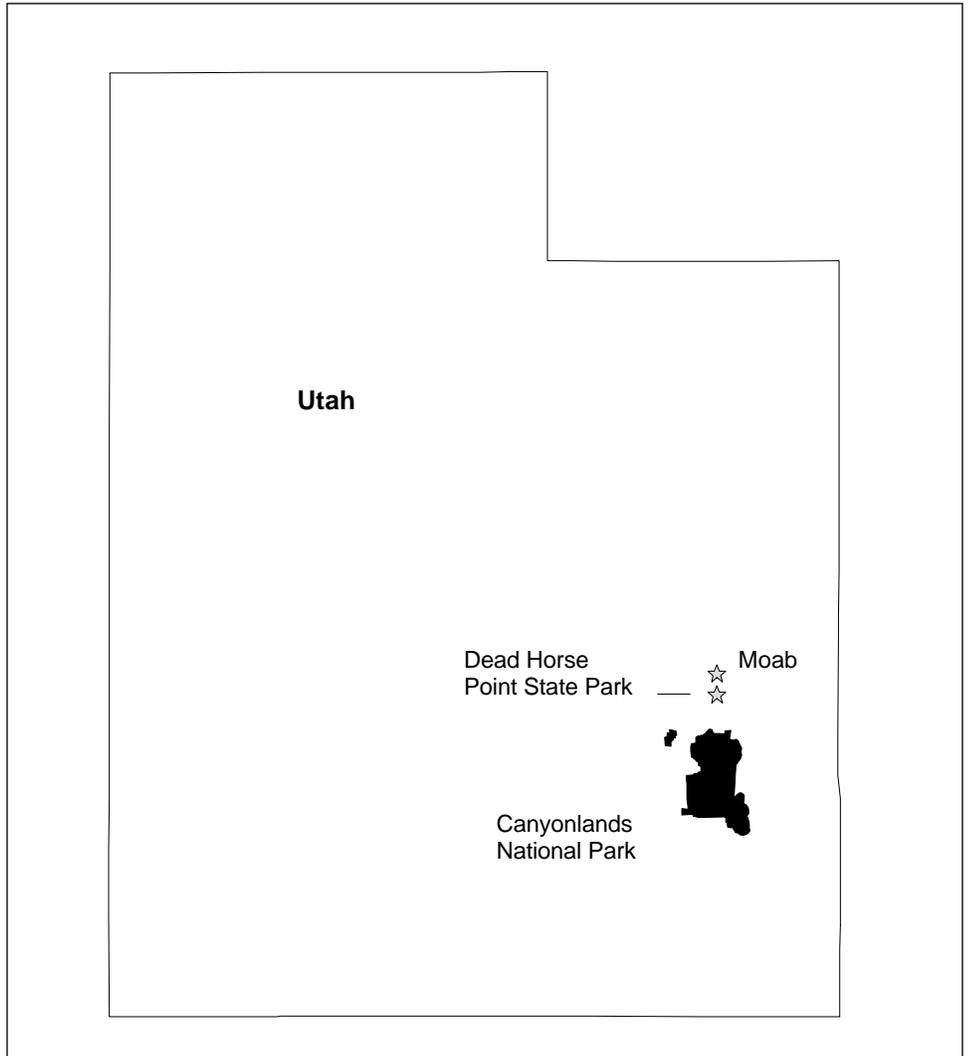
This appendix identifies similarities and differences between Dead Horse Point State Park and Canyonlands National Park. In addition to showing the public uses allowed and the facilities available, it discusses the types of activities conducted and the costs associated with these activities. It also provides information on the cost per visitor and the cost per acre to manage these parks. Finally, it provides information on the types and amounts of the fees charged at the state and national park, the total revenues generated through the collection of fees, and the percentage of the parks' operating costs that these fees represent.

Public Uses Allowed and Facilities Available

Dead Horse Point State Park and Canyonlands National Park are classified as scenic parks and, as figure II. 1 shows, both are located outside Moab, in southeastern Utah. Table II.1 shows the public uses allowed at both parks.

Appendix II
Comparison of Utah's Dead Horse Point
State Park and Canyonlands National Park

Figure II.1: Location of Dead Horse Point State Park and Canyonlands National Park



**Appendix II
Comparison of Utah's Dead Horse Point
State Park and Canyonlands National Park**

Table II.1: Public Uses Allowed at Dead Horse Point State Park and Canyonlands National Park

Park name	Uses								
	Camping	Hiking	Fishing	Boating	Wildlife observation	Picnicking	Photography	Sight-seeing	Rock climbing
Dead Horse Point State Park	•	•			•	•	•	•	• ^a
Canyonlands National Park	•	•	•	•	•	•	•	•	•

^aRequires a special-use permit.

Source: Officials from Dead Horse Point State Park and Canyonlands National Park.

As table II.1 shows, both Dead Horse Point State Park and Canyonlands National Park are used for many of the same purposes. However, boating and fishing, which are allowed at Canyonlands, are not found at Dead Horse Point. In addition, two oil and gas leases are active at Dead Horse Point, but oil and gas production; mining; and other consumptive uses, such as grazing and timber harvesting, are not allowed at Canyonlands. Neither park allows hunting, and both parks restrict automobiles and mountain bikes to established roads.

Both parks also have facilities, such as visitor centers, and interpretative programs to facilitate and encourage public use. Table II.2 shows the facilities available and some of the special services provided at each park.

Table II.2: Facilities Available and Special Services Provided at Dead Horse Point State Park and Canyonlands National Park

Park name	Facilities available						Special services provided
	Visitor center	Campsites	Utility hookups	Hiking trails	Drinking water	Rest rooms	Interpretative programs
Dead Horse Point State Park	•	•	•	•	•	•	•
Canyonlands National Park	•	•		•	•	•	•

Source: Officials from Dead Horse Point State Park and Canyonlands National Park.

Although many of the same types of facilities and special services can be found at both parks, the number of facilities and the amenities available differ. For example, Canyonlands has almost four times the number of

**Appendix II
Comparison of Utah's Dead Horse Point
State Park and Canyonlands National Park**

campsites as Dead Horse Point, but the campsites at Dead Horse Point have utility hookups, which are not provided at Canyonlands. In addition, Canyonlands has 125 miles of trail, about 11 times the 11 miles of trail found at Dead Horse Point.

**Activities Conducted
and Costs of
Operations**

Staff at Dead Horse Point and Canyonlands perform various activities to meet the parks' purposes and objectives. These activities include collecting entrance fees, maintaining trails, performing routine vehicle maintenance, and preparing management reports. Table II.3 shows the average costs of operations, by activity, at these units in fiscal years 1994 and 1995 and the percentage of the unit's total operating costs that each activity represents.

Table II.3: Average Costs of Operations, by Activity, at Dead Horse Point State Park and Canyonlands National Park, Fiscal Years 1994 and 1995

Activity	Dead Horse Point		Canyonlands	
	Cost of activity	Percentage of total operating costs	Cost of activity	Percentage of total operating costs
Resource stewardship ^a	\$8,746	4	\$1,230,636	28
Visitor services ^b	109,326	50	449,255	10
Operations and maintenance ^c	78,714	36	1,272,443	29
Administrative/park support ^d	21,865	10	714,826	17
Construction	0	0	469,941	11
Other ^e	0	0	181,852	4
Total	\$218,651	100	\$4,318,953	100

Notes: Utah's fiscal year runs from July 1 through June 30.

Percentages may not add because of rounding.

The costs of the activities at Dead Horse Point State Park are based on estimates of the percentage of total operating costs spent on these activities provided by the park manager.

^aResource stewardship consists of activities such as monitoring and protecting park resources and preserving archaeological and historic sites.

^bVisitor services include interpretation and education, law enforcement and protection, visitor use management, health and safety, and concession management.

^cMaintenance includes the upkeep and protection of park facilities and structures.

^dAdministrative/park support includes the costs associated with administrative and management activities such as financial management, data processing, and communication services.

^eOther includes expenditures of donations and fees collected.

Source: Officials from Dead Horse Point State Park and Canyonlands National Park.

Appendix II
Comparison of Utah's Dead Horse Point
State Park and Canyonlands National Park

As table II.3 shows, the combined costs associated with maintenance and administration account for a similar percentage of each park's total costs. However, for the remaining two activities—resource stewardship and visitor services—the percentage spent differs significantly. At Dead Horse Point, only 4 percent of the operating costs were associated with resource stewardship, while at Canyonlands, 28 percent went for this activity. According to the park manager, Dead Horse Point has a smaller area to manage and does not have the wildlife or cultural and archaeological resources found at Canyonlands. National Park Service officials also point out that Canyonlands' spending in this area is consistent with the Service's mission to conserve, preserve, protect, and interpret the nation's natural, cultural, and historic resources. In contrast, only 10 percent of Canyonlands' operating costs in this period went for visitor services, compared with 50 percent of Dead Horse Point's operating costs. According to the manager of Dead Horse Point, the number of visitors to the park has increased in the past several years, as have the staff time and resources devoted to collecting entrance fees and protecting the park's visitors.

The average cost per visitor was less at Dead Horse Point (\$1.19) than at Canyonlands (\$9.80). However, many of the visitors to Dead Horse Point stop to enjoy the park's view for only a short period of time. In contrast, according to National Park Service officials, Canyonlands is a destination point and many of its visitors spend several days hiking and camping in its remote backcountry areas.

Although the average cost per visitor was less at Dead Horse Point, the average cost per acre to manage was higher. Dead Horse Point cost an average of \$41.67 per acre to manage, whereas Canyonlands cost \$12.79 per acre. Although many of the same activities are conducted at the two parks, Canyonlands is about 60 times the size of Dead Horse Point. As a result, the operating costs of the national park are spread over a larger area, and the per-acre costs are smaller than at the state park.

At Dead Horse Point, staff salaries and benefits amounted to over \$166,000, or about 76 percent of the park's operating costs. While Canyonlands' expenditure reports did not identify these costs, according to the Park Superintendent, about 85 percent of the park's operating costs, or over \$3 million, went for personnel.

**Appendix II
Comparison of Utah's Dead Horse Point
State Park and Canyonlands National Park**

Revenues Generated

Dead Horse Point State Park and Canyonlands National Park generate revenues by charging entrance fees and a variety of fees for recreational uses of the park. Dead Horse Point generated an average of \$187,652 during fiscal years 1994 and 1995. Canyonlands generated an average of \$262,592. Table II.4 shows the types and amounts of the fees charged by the two parks.

Table II.4: Fees Charged in 1995 at Dead Horse Point State Park and Canyonlands National Park for Entrance and Recreational Uses

Park name	Entrance fees	Campsite rental fees	Rock climbing/hang gliding	Commercial film making	Backcountry permit fees				
					Day use	Back-packing	Flatwater	Four-wheel drive campsites	Whitewater rafting
Dead Horse Point State Park	\$4 per car	\$9 per day ^a	\$5 per person	\$50 ^b	^c	^c	^c	^c	^c
Canyonlands National Park	\$4 per car	\$6 per night	^d	\$0 ^e	\$5	\$10	\$10	\$25	\$25

^aThis fee includes a \$4-per-car entrance fee.

^bThis is the minimum charge for one vehicle and up to five people. Additional fees are charged for larger film crews.

^cNot applicable.

^dCanyonlands allows rock climbing but does not charge a fee. Canyonlands prohibits hang gliding.

^eCanyonlands does not charge a fee unless a ranger is needed. If one is needed, then Canyonlands charges for the amount of time the ranger's services are required.

Source: Officials from Dead Horse Point State Park and Canyonlands National Park.

In Utah, the revenues generated by a park are directed to the state's general fund but are eventually returned to the park system through appropriations. Until recently, moneys generated through the collection of such fees at national parks were directed to the General Fund of the U.S. Treasury. The revenues generated annually by Dead Horse Point through collections of entrance, camping, and user fees—about \$188,000—are not returned directly to the park; however, they represent 86 percent of the park's operating costs. Although Canyonlands generated more revenues than Dead Horse Point (about \$263,000), this sum represented only 6 percent of its operating costs.

Comparison of New Mexico's Middle Rio Grande Valley Waterfowl Management Areas and Bosque del Apache National Wildlife Refuge

This appendix identifies similarities and differences between the Middle Rio Grande Valley Waterfowl Management Areas¹⁰ and Bosque del Apache National Wildlife Refuge. In addition to showing the public uses allowed and the facilities, such as visitor centers and tour routes, available at each unit, it discusses the types of activities conducted at the units, the costs associated with these activities, and the cost per acre to manage these units. The appendix also provides information on the types and amounts of revenues generated.

Public Uses Allowed and Facilities Available

The Middle Rio Grande Valley Waterfowl Management Areas and Bosque del Apache National Wildlife Refuge are located in south central New Mexico along the Rio Grande River. Bosque del Apache National Wildlife Refuge was established in 1939 and today encompasses 57,191 acres. The Middle Rio Grande Valley Waterfowl Management Areas, which total 5,877 acres, were purchased beginning in 1928 with federal funding. Both units provide habitat and feed for migrating and wintering waterfowl and cranes. Figure III.1 shows the location of each of these units, and table III.1 provides information on the public uses allowed.

¹⁰The Middle Rio Grande Valley Waterfowl Management Areas consist of four waterfowl areas that are managed as one complex—Belen, Casa Colorada, Bernardo, and La Joya.

**Appendix III
Comparison of New Mexico's Middle Rio Grande Valley Waterfowl Management Areas and Bosque del Apache National Wildlife Refuge**

Figure III.1: Location of the Middle Rio Grande Valley Waterfowl Management Areas and Bosque del Apache National Wildlife Refuge

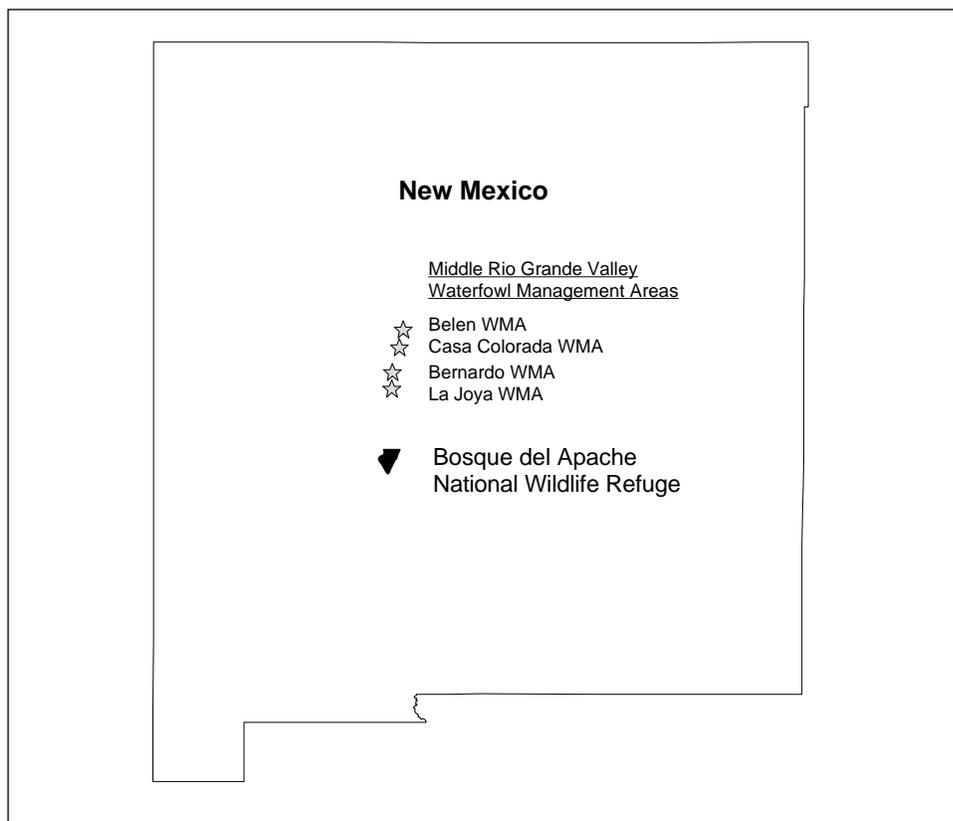


Table III.1: Public Uses Allowed at the Middle Rio Grande Valley Waterfowl Management Areas and Bosque Del Apache National Wildlife Refuge

Unit name	Nonconsumptive uses					Consumptive uses	
	Bird-watching	Wildlife observation	Photography	Hiking	Camping	Hunting	Fishing
Middle Rio Grande Valley Waterfowl Management Areas	•	•	•			•	•
Bosque del Apache National Wildlife Refuge	•	•	•	•	• ^a	• ^b	•

^aPrimitive camping is available on a reservation basis to educational and volunteer groups.

^bSmall game hunting is allowed at Bosque in designated areas. Waterfowl hunting is not allowed.

Source: Officials from the Middle Rio Grande Valley Waterfowl Management Areas and Bosque del Apache National Wildlife Refuge.

**Appendix III
Comparison of New Mexico's Middle Rio Grande Valley Waterfowl Management Areas and Bosque del Apache National Wildlife Refuge**

Although some of the same uses are allowed at both locations, public uses are emphasized at Bosque much more than at Middle Rio Grande. One of Bosque's goals is to provide the general public with an opportunity to see and understand wildlife. To facilitate this goal, the U.S. Fish and Wildlife Service built a visitor center at the refuge in 1983. The Service has also constructed six observation decks and installed interpretative signs and exhibits to encourage public use of the refuge. In contrast, except for a vehicle tour route, no recreational facilities are available at Middle Rio Grande. In addition, although portions of Middle Rio Grande are open to the public year-round for bird-watching and other activities, access to one area is not permitted except during hunting season. Table III.2 shows the facilities available at each of the units.

Table III.2: Facilities Available at the Middle Rio Grande Valley Waterfowl Management Areas and Bosque del Apache National Wildlife Refuge

Unit name	Headquarters office	Visitor center	Rest rooms	Tour route	Storage and maintenance facilities	Employee housing	Duck blinds
Middle Rio Grande Valley Waterfowl Management Areas	•			•	•	•	•
Bosque del Apache National Wildlife Refuge	•	•	•	•	•	•	

Source: Officials from the Middle Rio Grande Valley Waterfowl Management Areas and Bosque del Apache National Wildlife Refuge.

Activities Conducted and Costs of Operations

Because the areas have existed for a number of years, many of their activities consist of maintenance, including the maintenance of dikes. Other activities include the production and manipulation of food to manage waterfowl population levels. Table III.3 shows the average costs of operations, by activity, at these areas in fiscal years 1994 and 1995.

**Appendix III
Comparison of New Mexico's Middle Rio
Grande Valley Waterfowl Management
Areas and Bosque del Apache National
Wildlife Refuge**

Table III.3: Average Costs of Operations, by Activity, at the Middle Rio Grande Valley Waterfowl Management Areas and Bosque del Apache National Wildlife Refuge, Fiscal Years 1994 and 1995

Activity	Middle Rio Grande Valley Waterfowl Management Areas		Bosque del Apache National Wildlife Refuge	
	Cost of activity	Percentage of total operating costs	Cost of activity	Percentage of total operating costs
Ecological services ^a	\$0	0	\$104,048	10
Operation and maintenance of refuge ^b	394,707	85	863,497	84
Construction	61,713 ^c	15	775	^d
Fire protection	0	0	42,018	4
Other	0	0	12,675	1
Total	\$411,420	100	\$1,023,013	100

Notes: The costs of the activities at the Middle Rio Grande Valley Waterfowl Management Areas are based on estimates of the percentage of total operating costs spent on these activities provided by an official of the New Mexico Department of Game and Fish.

Percentages may not add because of rounding.

^aEcological services include providing technical assistance and consultation on activities that affect wildlife resources—primarily on other federal or private lands.

^bOperation and maintenance include habitat management; grounds upkeep; and the repair and maintenance of buildings, pumping facilities, and water control structures. Salaries for the staff needed to maintain equipment and facilities are also included.

^cConstruction represents the costs of constructing dikes for a major wetlands renovation.

^dThe amount was less than 1 percent.

Source: Officials from the Middle Rio Grande Valley Waterfowl Management Areas and Bosque del Apache National Wildlife Refuge.

As table III.3 shows, the costs of operating and maintaining Middle Rio Grande and Bosque account for 85 and 84 percent, respectively, of these areas' average annual operating costs for fiscal years 1994 and 1995. However, included in the costs of operations at Bosque are the costs of providing visitor services and collecting entrance fees, which are not incurred at Middle Rio Grande. The percentage of operating costs expended for other activities varied. For example, 15 percent of Middle Rio Grande's operating costs went for construction, compared with less than 1 percent of Bosque's costs. In addition, fire protection accounted for 4 percent of Bosque's total costs, while Middle Rio Grande, which relied on New Mexico's Division of Forestry for fire protection, had no costs in this area.

**Appendix III
Comparison of New Mexico's Middle Rio
Grande Valley Waterfowl Management
Areas and Bosque del Apache National
Wildlife Refuge**

The managers of both units told us that employees' salaries and benefits were their biggest cost. For example, \$610,865, or 60 percent, of Bosque's average costs for fiscal years 1994 and 1995 went for the salaries and benefits of the refuge's 15 full-time employees. The salaries and benefits of Middle Rio Grande's four full-time employees accounted for \$218,817, or 53 percent, of the areas' average costs for the same period.

In addition to its staff, Bosque has the largest volunteer program in the national refuge system. Bosque's volunteers donated 31,166 hours in calendar year 1995 and rendered such services as providing information for visitors, performing construction, and conducting a population census. Bosque estimated that the work performed by these volunteers was equivalent to the work of about 15 full-time employees. Middle Rio Grande currently does not have such a program, although officials from New Mexico's Department of Game and Fish have indicated that they plan to develop one.

One other major difference in the costs associated with managing these two units is the management cost per acre. Despite Middle Rio Grande's smaller size and lower operating costs, the total management cost per acre is almost 4 times greater for the state areas (about \$70) than for the national refuge (about \$18). One factor in the difference is the cost of water. According to the manager of the Middle Rio Grande complex, water to irrigate its fields costs over \$70,000 a year. Bosque, by contrast, does not incur any costs for water because it owns a 1906 water rights privilege.

Not only the costs but also the sources of operating funds for these two units differ. For example, about 75 percent of Middle Rio Grande's operating funds come from the Federal Aid in Wildlife Restoration Program. The remaining 25 percent come from state funds generated by the sale of state hunting and fishing licenses. Bosque relies on federal appropriations for its funding.

Revenues Generated

Neither Bosque nor Middle Rio Grande generated significant amounts of revenue in relation to its total operating costs. Bosque generated an average of over \$50,000 in fiscal years 1994 and 1995, primarily from entrance fees. Middle Rio Grande generated an average of about \$19,000 in hay sales in fiscal years 1994 and 1995.

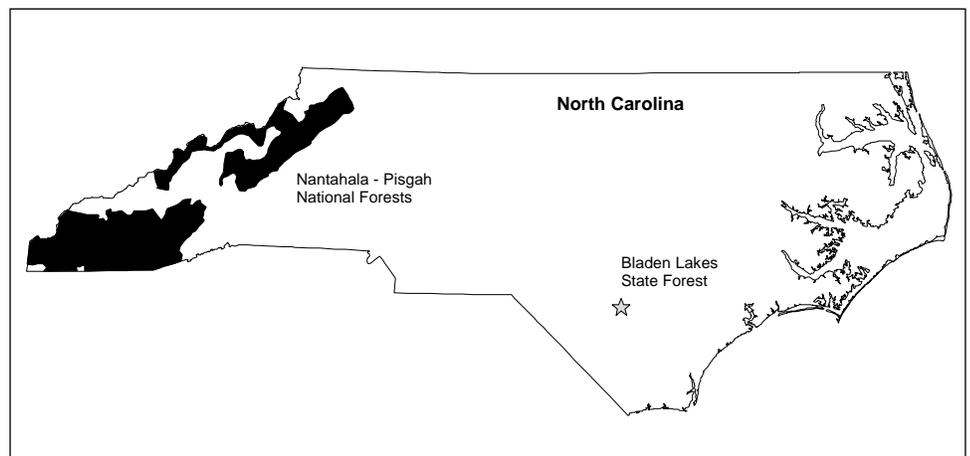
Comparison of North Carolina's Bladen Lakes State Forest and the Nantahala-Pisgah National Forests

This appendix identifies similarities and differences between Bladen Lakes State Forest and the Nantahala-Pisgah National Forests in North Carolina.¹¹ In addition to showing the public uses allowed and the facilities available, it discusses the types of activities conducted at the units, the costs associated with these activities, and the costs per acre to manage these forests. The appendix also provides information on the types and amounts of revenue generated and the percentage of the forests' operating costs that the revenues represent.

Public Uses Allowed and Facilities Available

Bladen Lakes and Nantahala-Pisgah are multiuse forests that are managed with timber production as one of their primary purposes. Originally federal property, the 32,000-acre tract that is now Bladen Lakes State Forest was turned over to North Carolina's Forest Service to manage in 1939. Nantahala-Pisgah, established over 75 years ago, contains 1,031,000 acres. Both the state and the national forests provide public uses such as camping, hiking, and hunting. Figure IV.1 shows the location of each of these units. Table IV.1 identifies the public uses allowed at both forests.

Figure IV.1: Location of Bladen Lakes State Forest and Nantahala-Pisgah National Forests



¹¹The Nantahala-Pisgah National Forests are actually two forests (Nantahala and Pisgah). They are two of the four national forests located in North Carolina. One forest supervisor manages all four national forests.

**Appendix IV
Comparison of North Carolina's Bladen
Lakes State Forest and the Nantahala-Pisgah
National Forests**

Table IV.1: Public Uses Allowed at Bladen Lakes State Forest and the Nantahala-Pisgah National Forests

Forest name	Public uses								
	Horseback riding	Off-road vehicles	Camping	Hiking	Hunting	Wildlife observation	Bird-watching	Timber harvesting	Pine straw harvesting
Bladen Lakes State Forest	•	•	•	•	•	•	•	•	•
Nantahala-Pisgah National Forests	•	•	•	•	•	•	•	•	•

Source: Officials from Bladen Lakes State Forest and the Nantahala-Pisgah National Forests.

As table IV.1 indicates, the forests allow both recreational and consumptive uses. However, although both the state and the national forests allow similar uses, the public makes more extensive use of the national forests. For example, Nantahala-Pisgah reported an average of about 15 million visitors annually. Bladen Lakes does not actively track the number of visitors to it. However, the forest supervisor estimated that about 2,000 people—including hunters, military personnel performing maneuvers, boy scouts, and university students performing forest-related research—visit the forest each year. Table IV.2 identifies the facilities available at each of the units.

Table IV.2: Facilities Available at Bladen Lakes State Forest and the Nantahala-Pisgah National Forests

Forest name	Facilities available						
	Headquarters/district office	Visitor center	Public rest rooms	Campsites	Showers	Equipment storage and maintenance facilities	Employee housing
Bladen Lakes State Forest	•			•		•	•
Nantahala-Pisgah National Forests	•	•	•	•	•	•	•

Source: Officials from Bladen Lakes State Forest and the Nantahala-Pisgah National Forests.

As table IV.2 shows, the national forests have more public-use facilities available than the state forest. Not only do they have more and better developed campsites than Bladen Lakes, but they also have visitor and information centers located throughout their areas. While visitor information and rest rooms are available at Bladen Lakes' administrative office, no separate visitor center or public rest rooms are available.

**Appendix IV
Comparison of North Carolina's Bladen
Lakes State Forest and the Nantahala-Pisgah
National Forests**

**Activities Conducted
and Costs of
Operations**

Many of the activities conducted at both the state and the national forests pertain to the management and utilization of the forests or to the protection of the forests' lands and resources. Such activities include the production and sale of timber and timber-related products, the protection of trees and other forest resources, and the maintenance of roads and trails. Table IV.3 shows the average costs of operations, by activity, at these forests in fiscal years 1993, 1994, and 1995.

Table IV.3: Average Costs of Operations, by Activity, at Bladen Lakes State Forest and the Nantahala-Pisgah National Forests, Fiscal Years 1993, 1994, and 1995

Activity	Bladen Lakes State Forest		Nantahala-Pisgah National Forests	
	Cost of activity	Percentage of total operating costs	Cost of activity	Percentage of total operating costs
Forest management and utilization ^a	\$135,013	35	\$5,085,888	55
Forest land and resource protection ^b	154,301	40	1,104,303	12
General administration	38,575	10	1,970,459	21
Fire protection ^c	38,575	10	637,268	7
Construction	0	0	178,847	2
Other	19,288	5	208,411	2
Total	\$385,752	100	\$9,185,177	100

Notes: North Carolina's fiscal year runs from July 1 to June 30.

Totals may not add because of rounding.

The costs of the activities at Bladen Lakes State Forest are based on estimates of the percentage of total operating costs spent on these activities provided by the forest supervisor.

^aIncludes recreation management, wildlife habitat management, rangeland management, forest land management, and ecosystem management.

^bIncludes soil, water, and air management; mineral and geology management; land ownership management; infrastructure management; and law enforcement operations.

^cIncludes fire protection and emergency fire fighting.

Source: Officials from Bladen Lakes State Forest and the Nantahala-Pisgah National Forests.

Table IV.3 indicates that the only two activities that accounted for similar percentages of the operating costs during the 3-year period at both the state and the national forests were fire protection and other. For the remaining activities, the percentages differed. Moreover, for forest management and utilization, the types of activities as well as the percentages differed. Specifically, about 28 percent of the about

\$5.1 million in forest management and utilization costs at Nantahala-Pisgah, or 15 percent of the forests' total operating costs, were attributable to recreation management—an activity not conducted at Bladen Lakes. The percentages attributable to forest land and resource protection also differed. Forty percent of Bladen Lakes' total operating costs were attributable to protecting forest lands and resources, while such activities accounted for only 12 percent of Nantahala-Pisgah's total operating costs. Administrative activities also accounted for a higher percentage of the national forests' total operating costs. About 21 percent of Nantahala-Pisgah's total operating costs were attributable to administration, compared with only 10 percent of Bladen Lakes' costs.

At both the state and the national forests, employees' salaries and benefits were the biggest operating costs. According to the forest supervisor at Bladen Lakes, the salaries and benefits for nine full-time staff accounted for \$276,019, or 71 percent of the forest's total operating costs. In addition, Bladen Lakes receives supplemental labor through the North Carolina prison system, which provides up to five inmates to perform unskilled labor at a \$1 per day per inmate for up to 3 or 4 days per week. The salaries and benefits of Nantahala-Pisgah's 157 full-time permanent employees accounted for a little over \$6 million, or 66 percent of the forests' operating costs.

Despite its substantially lower average annual operating costs, Bladen Lakes incurred higher per-acre management costs than did the national forests. The average cost per acre to manage Bladen Lakes during the 3 fiscal years was \$12.05, or 35 percent more than the \$8.91 per-acre cost to manage the national forests.

Like the costs of activities, the sources of operating funds differ for these units. For example, Bladen Lakes is virtually self-sustaining, generating revenues through the sale of timber, pine straw, and charcoal. In addition, it receives \$20,000 to \$25,000 annually from wildlife receipts. In contrast, the national forests rely primarily on federal appropriations for their funding.

Revenues Generated

Most of the revenues generated by Bladen Lakes State Forest and the Nantahala-Pisgah National Forests come from the sale of forest products, such as timber and pine straw. Neither the state nor the national forests charge entrance fees. During the 3 fiscal years, Bladen Lakes generated an average of \$297,757 annually, of which \$264,526, or 89 percent, came from

**Appendix IV
Comparison of North Carolina's Bladen
Lakes State Forest and the Nantahala-Pisgah
National Forests**

the sale of forest products. The remainder was generated from the sale of surplus property, rental fees for employees' homes, and payments received from the North Carolina Wildlife Resources Commission for hunting access. At Nantahala-Pisgah, a higher proportion of the total revenues generated in fiscal year 1995 came from the sale of forest products. Specifically, of the average annual revenues of \$322,105, 99 percent (\$319,300) came from the sale of forest products.

Although the Nantahala-Pisgah National Forests generated higher average annual revenues than Bladen Lakes State Forest, the revenues generated by Bladen Lakes represented a higher percentage of its operating costs. The revenues generated by Bladen Lakes during this 3-year period represented 77 percent of its operating costs. In comparison, the revenues generated by the national forests represented only 4 percent of their operating costs.

Objectives, Scope and Methodology

Because you were interested in comparing federal and state land management, you requested that we (1) identify the purposes and uses for which state-owned lands are managed and (2) compare state and federal land management activities, operating costs, and revenues. As agreed with your offices, we limited our review to three states—New Mexico, North Carolina, and Utah. Within the 48 contiguous states, both New Mexico and Utah were among the top four in the number of state-owned acres (New Mexico ranked first) and Utah was among the top third in the number of federally managed acres. Although North Carolina has less state-owned and federally managed acreage than other states, it has a diverse range of both state and federal land management units, including a state forest that is managed for timber production.

To identify the purposes and uses for which the three states manage their lands, we interviewed state officials in New Mexico, North Carolina, and Utah. We also obtained and reviewed relevant documents and data on the purposes and uses of the state-owned lands.

To compare the activities, operating costs, and revenues of state and federal land management units, we judgmentally selected 14 state and federal units in New Mexico, North Carolina, and Utah. We selected the state units that appeared to most closely approximate the activities performed and the uses allowed at the federal units. We chose a state park and a waterfowl/wildlife management area in each state and, in North Carolina, a state forest. These seven state units were the same type of unit as the federal unit to which they were compared, were generally in the same geographic location, and allowed similar public uses. At each of the selected state units, we interviewed unit managers and obtained documentation on the activities conducted, the operating costs, the public uses allowed, and the revenues generated.

The federal units, selected on the basis of their (1) size, (2) number of visitors, and (3) types of uses allowed, included a national park and a national wildlife or migratory bird refuge in each state and, in North Carolina, a national forest. We interviewed senior-level land management officials of the Department of the Agriculture's Forest Service and the Department of the Interior's Fish and Wildlife Service and National Park Service at headquarters in Washington, D.C., as well as at the selected field locations. We also obtained and reviewed documentation on the activities conducted, the operating costs, and the revenues generated at the federal units. We did not verify the completeness, accuracy, or reliability of the data provided by the federal and state agencies.

To identify the similarities and differences between the activities, operating costs, and revenues of the selected state units and those of the federal units, we compared the seven state units we visited to seven federal land management units located in these three states. The states and the federal agencies used different categories when recording and reporting their costs. To ensure that the costs were comparable, we asked the state managers to estimate their costs using the federal categories. We also averaged units' statistics for the number of visitors, operating costs, and revenues when data for more than 1 year were available. We also used several other measures—average cost per visitor, average cost per acre to manage, and revenues generated as a percentage of operating costs—to provide additional perspective on the operating costs and revenues generated at the state and federal units.

Comments From the Department of the Interior

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, D.C. 20240

June 4, 1997

Mr. Victor S. Rezendes
Director, Energy, Resources, and
Science Issues
U.S. General Accounting Office
441 G Street, N.W. Room 1842
Washington, D.C. 20548

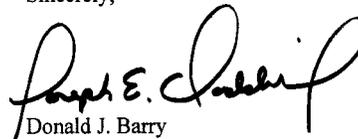
Dear Mr. Rezendes:

We appreciate the opportunity to review the draft General Accounting Office (GAO) report entitled, "LAND OWNERSHIP: Similarities and Differences in the Management of Selected State and Federal Land Units." Our review concentrated on the portions of the report relating to park and wildlife area comparisons.

Overall we believe the report represents a good starting point for comparing federal and State management of land. However, the statements made and the conclusions drawn could be misleading due to the small sampling size of the land units and differences in the activities and emphases of the units compared. More specific comments are provided as an enclosure to this letter.

We hope that you will find the enclosed comments to be of assistance.

Sincerely,

For 
Donald J. Barry
Deputy Assistant Secretary for
Fish and Wildlife and Parks

Enclosure

**Appendix VI
Comments From the Department of the
Interior**

Enclosure

**COMMENTS ON DRAFT GAO REPORT RE: LAND OWNERSHIP
(GAO/RCED-97-158)**

GENERAL COMMENTS

See comment 1.

The report represents a good first start at comparing federal and State management of land. However, many of the statements made and conclusions drawn could be misleading. This is mainly due to the report's tendency to provide gross comparisons rather than ones based on common denominators. Greater use and analysis of percentage comparisons and cost per visitor and acre would improve the presentation though not totally solve the problem of comparable comparisons. Percentage costs may be higher because more services are being provided. It appears that GAO already has some data for strengthening the report. Also, GAO needs to review some of the conclusionary statements it makes between federal and State land management to make sure that they are supported by the data.

Now on p. 2.
See comment 2.

For example, on page two of the letter, GAO concludes that "state parks place more emphasis on visitor services while the national parks gave a higher priority to conserving natural resources..." The State parks also cost less to operate and less per visitor, but more per acre to manage." The relative comparison in the first sentence appears to have been based on a percentage allocation of total budgets across the examined state and national parks. However, this opening summary statement does not so qualify itself. This is misleading. Instead, the report gives the reader the impression that state parks give greater emphasis to visitors than does the National Park Service. However, the second sentence appears to contradict this first sentence by noting that the State spends less per visitor than the federal government. The implication is that either the federal government caters to visitors more than State parks (despite the assertion in the first sentence) or the federal government is inefficient. If the greater expenditure of money does not translate into better services or more diverse services, why the difference? In the case of parks, the report doesn't provide an answer.

Sometimes conclusions are made but the reader is not told whether any measurement was done or how. For example, the national parks gave higher priority to conserving natural resources (than state parks)...," and so forth, etc. Was this an author impression or was there more to it than that? In other statements, the meaning is unclear. For example, "state parks also cost less to operate and less per visitor, but more to manage." One might have to read far into the report to distinguish between "operate" and "manage."

See comment 3.

The term "judgementally" is used often. Has there been any analysis of the validity of the sample for drawing conclusions about differences among state and federal lands?

Now on p. 1.
See comment 4.

Finally, the cautionary note at the end of paragraph 2 on page 1 of the letter underscores the limitations of the current analysis. The repeated lack of control for limitations across the compared areas and to explore factors behind differences hampers the utility of this report.

**Appendix VI
Comments From the Department of the
Interior**

SPECIFIC COMMENTS

Introduction and Results in Brief -- The report states (last sentence of second paragraph) that "caution must be used in interpreting data..." This is an understatement. There should be a conclusion about whether the report authors think any valid conclusions can be made from the information presented. The results in brief section should be significantly revised. Readers who do not proceed beyond this point may go away with a false sense of the significance of the gross differences noted, given the lack of analysis of the factors underlying those differences.

The example in the summary statement regarding the analysis of parks should explain why the revenue generated from the national park is such a low percentage of operating costs. Is it because there are limits on the ability of the National Park Service (NPS) to charge fees, or the NPS has not been as aggressive as the State parks in charging fees, or another reason?

Background -- In the section on State holdings, make clear that reference is being made to all States, not just the three States examined in the study. In the last paragraph there should be an explanation of the limitation of using a cost per acre figure. It still may not be a true relative comparison because there may not be an identity across the activities being carried out by the agencies. The text indicates that this indeed is the case.

This section paraphrases the NPS Organic Act in describing parks' mission. It should be noted that, additionally, parks are managed consistent with their own enabling legislation or proclamations.

Purposes and Uses For Which Three States Manage Their Lands -- The discussion presents the revenue from the trust lands but not the revenue generated from the State public lands. Also, to truly compare the economic productivity of the two classes of land one would need to account for the multiplier effect (e.g., secondary economic benefits).

Similarities and Differences in State and National Parks -- The first sentence discusses visitor services and resource stewardship. It would improve the usefulness of the report if the body of the report included working definitions of the terms "visitor services" and "resource stewardship" (rather than as a footnote to Table II.3 of Appendix II).

In addition, it should be noted that the definition in the appendix indicates that law enforcement is a visitor services activity. In the NPS budget, "resource stewardship" includes law enforcement related to resource protection, including, for example, backcountry patrols. In a park such as Canyonlands, which reported a fairly high percentage of resource stewardship funding, a significant portion of the resource stewardship funding is likely from ranger patrol activities. If all law enforcement activities for State parks are categorized as visitor services, although they include resource protection functions, direct comparisons with State budget categories may not be valid.

Now on p. 1.
See comment 4.

Now on p. 3.
See comment 5.

Now on p. 5.
See comment 6.

Now on p. 6.
See comment 7.

**Appendix VI
Comments From the Department of the
Interior**

Now on p. 6.
See comment 8.

In the first paragraph, the report states "...the state parks cost more per acre to manage than the national parks." Are the comparisons for the same type of management (e.g., interpretation, fire control, fishing, etc.) or just all lumped together? If it is the latter, the reader should know about it and something should be said about the usefulness (or non-usefulness) of such broad-brush comparisons. (Also see the comment above about accuracy of resource stewardship and visitor services definitions.) While the report notes the high proportion of salaries included in park budgets, it does not evaluate the extent to which this may be due to difference among federal and State salaries, as well as the type of employees required for different functions.

Now on p. 7.
See comment 8.

A similar example is, "the national parks in these two states spent from 21 to 28 percent of their operating costs on resource stewardship, while the state parks spent 4 and 5 percent." Is this the same type of stewardship or different? The report should point out that while the studied national parks emphasized preserving and protecting park resources, compared with the State parks studied, NPS unfunded needs in this area (i.e., resource stewardship) are great.

The report would be more useful if it were to discuss how the user fees are used (i.e., what percentage the State parks versus the national parks retain and apply toward operating expenses).

Now on p. 11.
See comment 9.

Similarities and Differences of State Wildlife/Waterfowl Areas and National Refuges. The report properly identifies refuges as having a greater emphasis on and a wider variety of wildlife-dependent public uses than do comparable State wildlife management areas. A more subtle difference between refuges and State wildlife management areas that was not discussed is the scope of wildlife management activities undertaken. While there is variation from State to State, as a general rule, State wildlife management areas manage for a narrow range of fish and wildlife species to enhance hunting and fishing opportunities. The National Wildlife Refuge System undertakes management for a much broader range of both "game" and "nongame" species. This results in the need to manage a wider variety of habitats, to be concerned for meeting wildlife needs on a year round as opposed to a seasonal basis, and to devote greater attention to monitoring the status and health of wildlife populations.

Now on p. 22.
See comment 10.

Appendix I -- The background explanations for the national parks are less complete than the State park explanations. No visitor data are provided in the written description of El Malpais, although El Malpais is presented in the table. Also, budgetary information is missing. The description of Great Smokies is lacking statistical information as is the description for Canyonlands.

The following are GAO's comments on the Department of the Interior's letter dated June 4, 1997.

GAO's Comments

1. The report contains no conclusions and is meant to be a factual presentation of the similarities and differences in the activities, operating costs, and revenues of 14 selected state and federal land management units within the states of New Mexico, North Carolina, and Utah. Furthermore, while the report presents data on the units' overall operating costs and revenues, it also provides information on the percentage of the units' total operating costs expended on particular activities. In addition, the report presents the cost per acre to manage each unit and, where appropriate, the cost per visitor, the revenues generated as a percentage of the operating costs, and explanations for differences in the units' costs and revenues. This factual presentation is based on data provided by each of the state and federal units and on mathematical computations made using these data. The managers of the 14 selected state and federal units were sent the relevant portions of the report for review and verification. None provided any substantive corrections or clarifications.

2. The paragraph in question is a summary of the similarities and differences in the state and national parks and, as such, does not include the supporting evidence. The supporting evidence for the information in this paragraph appears later in the report in the section entitled "Similarities and Differences in State and National Parks." In this section, we provide the basis for our statements about the emphasis placed on particular activities by the state and national parks. We also discuss the differences in overall costs, costs per visitor, costs per acre, and revenues generated and the factors, such as the units' acreage and staffing, that contribute to these differences. In addition, appendix II, which contains a detailed comparison of a state and national park, provides an example of the types of comparisons we made.

3. The term "judgmentally" appears in the report in three places to inform and remind the reader that the 14 state and federal units were not randomly selected. The data are not statistically projectable, and we did not draw any conclusions from the data we collected. We selected the units as case studies to explore similarities and differences in the management of state and federal units.

4. This report is meant to be a factual presentation of the similarities and differences in selected state and federal land management units. We did

not revise the report in response to this comment because the “Results in Brief” section summarizes our findings for each of the review’s objectives. As we explained earlier, sections appearing later in the report contain the details supporting our findings. In addition, we included the statement advising the reader to use caution before we summarized the similarities and differences.

We recognize that the data presented in the report raise additional questions; however, further analysis is required to answer questions such as those posed by Interior.

5. We revised our final report to clearly indicate that this information applies to all 50 states. However, we did not revise the final report to say that each park’s management is consistent with the park’s enabling legislation or proclamation. We introduced the purposes for which the Park Service manages its lands as an example of how each of the four major federal land management agencies manages its lands according to its legislatively mandated mission. In addition, because we included a cautionary statement at the beginning of our report, we do not believe that an explanation of the limitation of using a cost-per-acre figure is necessary.

6. As this section points out and emphasizes by including revenue figures, the state trust lands, unlike public lands, are managed to generate revenue. Since, neither a comparison of the revenues generated by the different types of state-owned lands nor a comparison of the economic productivity of the different types of state-owned lands was an objective of our review, we did not revise our report in response to this comment.

7. Page 9 of our draft report provided working definitions of these activities. For example, we cited campgrounds and visitor centers as examples of visitor services and identified monitoring and protecting park resources as examples of resource stewardship.

Although we recognize that law enforcement is a component of resource stewardship, the definitions that appear in appendix II of our report were taken from the Park Service’s 1997 budget justification. In addition, as we explain on page 42 of appendix II of our draft report, Dead Horse Point State Park, which expended only 4 percent of its operating costs on resource stewardship, has a smaller area to manage and does not have the wildlife or cultural and archaeological resources (backcountry) that Canyonlands National Park has to protect. We further point out that the

28 percent of its operating costs that Canyonlands spent on this activity is consistent with the National Park Service's mission.

8. The cost per acre is a mathematical computation of a unit's total operating costs divided by the unit's acreage. On page 11 of our draft report, we explain that the state parks conduct many of the same activities and incur the same types of costs as the national parks, but because of their smaller area, they incur a higher cost per acre. An evaluation of the parks' salary structure and staff allocation was beyond the scope of our review; such an evaluation would require further analysis.

As Interior noted in its second general comment, the report observes that the selected national parks gave a higher priority to conserving natural resources than the state parks. However, comparing the unfunded needs of the state and federal units was not an objective of our review.

Interior also suggests that the report would be more useful if it were to compare the percentages of user fee collections returned to the state and national parks. We provided this type of information on Dead Horse Point State Park and Canyonlands National Park in appendix II and therefore made no changes to the report.

9. Interior appears to generally agree with the information presented in the report.

10. Because the tables in appendix I present the data sought by Interior, we made no changes to the report. These tables, which precede the brief descriptions of the state and federal land units, provide information on their acreage, numbers of visitors, operating costs, and revenues generated.

Comments From New Mexico State Land Office



State of New Mexico
Commissioner of Public Lands

RAY POWELL, M.S., D.V.M.
COMMISSIONER

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May 30, 1997

Mr. Barry T. Hill, Associate Director
Energy Resources, and Science Issues
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Hill:

Thank you for affording the New Mexico State Land Office the opportunity to review and comment on the draft report entitled Land Ownership: Similarities and Differences in the Management of Selected State and Federal Land Units (GAP/RCED-97-158). Further, we appreciate the efforts of your staff to communicate with this office and ensure the data contained in the report are factually correct.

The authors were faced with the daunting task of comparing similarities and differences between state and federal land management units and developing economic analyses. Specifically, the objectives of the report included (1) identifying the purposes and uses for which state-owned lands are managed, and (2) comparing state and federal land management activities, operating costs, and revenues. New Mexico was one of the states used for comparison in the study. The focus of the study was apparently on those lands that could be compared with National Park Service, U.S. Fish and Wildlife Service and U.S. Forest Service administered lands. Recognizing that state trust land comprises the majority of state owned and managed land in New Mexico, but the management of state trust land does not lend itself to comparison with federally managed lands, limited data regarding state trust land is presented in the report. Nonetheless, we found the information presented in the draft report in reference to state trust land to be accurate.

The informative report provides interesting comparisons of the similarities between state and federally managed land units. We found the report to be of particular value in terms of elucidating the differences between the management of state and federal land units. Importantly, the authors stressed that due to the emphasis given to particular activities, the size of the land units reviewed, the number of staff assigned to the units and other factors, "caution must be used in interpreting the data gathered on these units and in making decisions on the basis of these data." This is a logical observation given the very different missions and legal foundations between the state and federally managed land units.

**Appendix VII
Comments From New Mexico State Land
Office**

Mr. Barry T. Hill

-2-

May 30, 1997

The roles, responsibilities, obligations and missions of each agency is predicated upon the enabling legislation by either the U.S. Congress or state legislature, and is typically driven by an observed and confirmed public interest. The operations of those agencies are often guided by mission statements that fall within the legislative framework. To illustrate this point, the National Park Service's mission is "To conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." In comparison the New Mexico State Parks and Recreation Division's mission is "To provide leadership in the protection, conservation, management and responsible development of New Mexico's natural resources." These differing missions, predicated upon the enabling legislation of the respective federal and state agencies, reflect very different legislative intents. Likewise, the same considerations apply when making comparisons between federal and state wildlife and timber management units. It is for these very reasons that true operation, expense, and public value comparisons are exceptionally difficult, if not impossible.

One of the reasons proffered for reserving various types of lands in federal ownership is the preservation and protection of unique scenic and historical resources that would otherwise be lost or unavailable to the public if developed by the private sector. Further the concept extends to consideration of the interest of the entire citizenry by providing services that would not or could not be adequately supplied by private development. One inference that may be read in the draft report is that the states and their limited fiscal resources likewise would not be able to provide a comparable level of protection and service as that currently afforded under federal management.

The report clearly shows the importance and value of a system which includes both state and federal management of land units particularly in recognition of the fact that the American public has a diversity of expectations in the availability for use of public recreation land. In some facets of public recreation and land use the federal government is much better able to provide logistical, facility, technical and interpretive support. In other cases the states are better able to provide for the expectations and needs of a different constituency through their organizational and development abilities. Some of the different uses or non-uses managed for by the various federal and state agencies are not compatible, thus further emphasizing the need for a diversity of missions and capabilities to meet the broad interests represented by the American public.

An opportunity that may be appropriate to explore is that of integrating natural resource planning and management to include those land units managed by both the state and federal agencies. This idea should not be construed as promoting the consolidation of agencies into one department or into one level of government. The limited benefits and significant liabilities to the public of past consolidation proposals have been extensively reviewed. However, the benefits of true intergovernmental coordination and planning on a large scale have not been sufficiently studied. One may surmise that by having various authorities with a diversity of responsibilities to meet a diversity of public expectations, while at the same time ensuring management conflicts are prevented or minimized, is obviously the best possible outcome.

**Appendix VII
Comments From New Mexico State Land
Office**

Mr. Barry T. Hill

-2-

May 30, 1997

The New Mexico State Land Office appreciates the efforts of the General Accounting Office to explore the extremely complicated and important issue of public land management. If we can provide any additional information, please do not hesitate to contact Robert Jenks of my staff at 505/827-5793.

Sincerely,



**RAY POWELL, M.S., D.V.M.
COMMISSIONER OF PUBLIC LANDS**

RP/RSJ/ljs

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