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BY THE COMPTROLLER GENERAL

Report To The Congress

OF THE UNITED STATES

Increasing Entrance Fees National Park Service

Entrance fees at most National Park Service units have not been raised or initiated for over 10 years. When the Park Service tried to raise fees in 1979, the Congress placed a temporary moratorium on raising or initiating fees until its concerns about the impact on visitors and the link between entrance fees and operations and maintenance costs were properly addressed. Had the Park Service used criteria for setting fees in the Land and Water Conservation Fund Act of 1965, the concerns of the Congress would have been addressed.

About \$21 million annually in additional net revenues could be collected if fees were raised or initiated and collection hours at various units were extended. GAO recommends that the Congress lift the moratorium and that the Park Service set entrance fees in accordance with the legislated criteria.



119113

GAO/CED-82-84
AUGUST 4, 1982

023005 / 119113

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

B-205211

To the President of the Senate and the
Speaker of the House of Representatives

This report discusses the potential additional park entrance fee revenue that the National Park Service could collect by raising or initiating fees to enter units in the National Park System, and suggests that the Congress enact legislation lifting the 1979 park entrance fee moratorium.

We made the review to estimate National Park System entrance fees using the criteria in the Land and Water Conservation Fund Act of 1965, as amended, and to determine whether it was appropriate for the Congress to reconsider its fee moratorium.

We are sending copies of the report to the appropriate House and Senate committees; the Director, Office of Management and Budget; the Secretary of the Interior; and the Director, National Park Service.

A handwritten signature in cursive script, reading "Charles A. Bowsher".

Comptroller General
of the United States



D I G E S T

A 1979 congressional moratorium has prevented the National Park Service from raising entrance fees at the 333 units in the National Park System in spite of rising operating costs and inflation. Entrance fees have not been raised for over 10 years at 53 of the 64 units charging fees.

In early 1979, the Park Service proposed to increase entrance fees by 74 percent to raise \$12 million to offset cuts in its operations budget. However, in October 1979, the Congress enacted Public Law 96-87, which froze entrance fees at their January 1, 1979, level and prohibited the Park Service from collecting fees at any other units.

As indicated in a Senate committee report, the freeze was intended to be a temporary measure to ensure that congressional concerns about the impact on visitors and the link between entrance fees and operation and maintenance costs were properly addressed. However, had the Park Service used the six criteria for setting park entrance fees set forth in the Land and Water Conservation Fund Act of 1965, as amended, the concerns of the Congress would have been addressed. Two of the six criteria specifically address those concerns--costs to operate and maintain the National Park System and visitor benefits. The other four criteria include the public policy or interest served, comparable fees charged by non-Federal public agencies, the economic and administrative feasibility of fee collection, and other pertinent factors.

In March 1981, the Park Service told GAO that it did not plan to determine whether entrance fees should be raised or collected at additional parks because of the congressional moratorium. GAO therefore made this review to determine whether park entrance fees were set at the right levels using the six legislative criteria as guidelines.

COSTS TO OPERATE AND MAINTAIN THE NATIONAL PARK SYSTEM

Between 1971 and 1981, Park Service operation and maintenance costs per visitor rose 149 percent (from \$0.61 to \$1.52) while entry fee revenues per visitor declined 30 percent (from \$0.046 to \$0.032). As a result, entry fee revenues declined from over 7 percent of Park Service operation and maintenance costs in 1971 to about 2 percent of those costs in 1981. During this same period, inflation rose by 129 percent. (See p. 8.)

VISITOR BENEFITS

Federal water resources agencies use three methods to determine recreation benefits in developing benefit-cost ratios for water projects. GAO selected the unit-day-value method to determine visitor benefits at national parks because it was the only one that could be applied with available data. Using this method at six major park system units, GAO estimated that the value for a family of four for a day ranged from \$7.64 to \$11.40. For example, a family of four would receive a value of \$10.52 for a day in the Everglades National Park and \$10.88 for a day in the Grand Canyon National Park. Entrance fees at these two parks are \$2 per vehicle. (See pp. 9 to 12.)

POTENTIAL ADDITIONAL REVENUE

Using the six legislative criteria as guidelines, GAO estimated that the Park Service could generate net additional revenues of \$18 million at 48 of the 71 units GAO reviewed. GAO also estimated that the Park Service could generate additional net income of \$2.7 million by extending fee collection hours at 14 parks. (See p. 16.)

GAO estimated that entrance fees at 25 parks would increase from 100 to 250 percent and fees at one park would not increase. (See p. 17.) Fees ranging from \$1 to \$3 per vehicle and from \$0.50 to \$2 per person at walk-in sites would be initiated at 23 parks and no fees would be collected at 22 parks. (See p. 19.) Also, the price of the Golden Eagle Passport (which allows

unlimited entry to all parks for the calendar year) would increase from \$10 to \$25 to make it comparable with increased entrance fees.) (See p. 21.)

GAO's figures for possible entrance fee levels and revenue increases are based on its analysis using the six legislative criteria and are not recommended entrance fee levels or additional revenue goals. The responsibility for setting park entrance fees rests with the Secretary of the Interior. However, the Director, National Park Service, and his Associate Director, Management and Operations, said that GAO's fee levels and revenue estimates appeared reasonable. The Park Service had not estimated appropriate entrance fee levels, or the resulting revenue increases, at the 262 parks GAO did not review.

Dr. Marion Clawson, a recognized authority on recreation demand, said that the entrance fee levels GAO developed would not have a measurable impact on visitation levels at units where there are few close substitutes and the entrance fee is a small portion of the recreation expense. Many parks, such as Grand Canyon, Yellowstone, and Yosemite, are in this category. At parks where transportation is a minor cost for most visitors and where nearby substitute recreation areas exist, new or higher fees may have a noticeable impact on visitation levels. GAO considered these aspects in developing fee levels and estimating fee revenue. (See pp. 9 to 12.)

PROPOSED LEGISLATION

In February 1982, after GAO had completed its fieldwork, the administration proposed broad recreation fee legislation but withdrew it for revision because of congressional objections to proposed hunting and fishing fees. GAO agrees with those portions of the proposed legislation which would have repealed the moratorium on initiating and increasing park entrance fees and removed the \$10 limit on the price of the Golden Eagle Passport. In commenting on GAO's draft report, the Department of the Interior stated that, recognizing that proposed legislation has been withdrawn, it will consider only the feasibility of establishing new entrance fee areas and raising entrance fees. (See p. 23.)

RECOMMENDATIONS

GAO recommends that the Congress (1) repeal the statute which froze all National Park Service entrance fees and (2) amend the Land and Water Conservation Fund Act to remove the \$10 limit on the price of a Golden Eagle Passport. (See p. 24.)

GAO recommends that the Secretary of the Interior direct the Director, National Park Service, to establish guidelines for applying the six legislative criteria for setting park entrance fees; use these guidelines to set entrance fee levels at park system units; and set the price of the Golden Eagle Passport based on the levels of fees set at individual parks. GAO also recommends that the Secretary of the Interior direct the Director, National Park Service, to extend entrance fee collection hours at parks where it is cost effective to do so. (See p. 24.)

AGENCY COMMENTS

Interior agreed with the recommendations to the Secretary and has begun to put them into effect. (See p. 51.)

C o n t e n t s

	<u>Page</u>
DIGEST	i
CHAPTER	
1 INTRODUCTION	1
History of park fees	2
Prior reports	3
Objectives, scope, and methodology	4
2 TIME TO CHARGE MORE TO VISIT NATIONAL PARKS	6
Public policy or interest served	6
Costs to operate and maintain the National Park System	8
Visitor benefits	9
Fees for comparable recreation experiences	12
Feasibility of collecting fees	12
Other pertinent factors	14
Entrance fee revenue potential	16
Reimbursement of fee collection costs	22
Proposed legislation	23
Conclusions	24
Recommendations to the Congress	24
Recommendations to the Secretary of the Interior	24
Agency comments	25
APPENDIX	
I National Park Service units included in this study	26
II Analyses of initiating entrance fees at six National Park Service units	28
Boston National Historical Park	28
Glen Canyon National Recreation Area	31
Jefferson National Expansion Memorial	33
Lake Mead National Recreation Area	35
Muir Woods National Monument	37
Olympic National Park	39
III Method used to estimate the potential revenue from increasing entrance fee levels and locations	41
IV Factors preventing the charging of entrance fees	47
V A Water Resources Council method for determining visitor benefits	48

APPENDIX

Page

VI

June 8, 1982, letter from Assistant Secretary
for Fish and Wildlife and Parks, Department
of the Interior, commenting on our draft
report

51

CHAPTER 1

INTRODUCTION

The National Park Service, Department of the Interior, protects natural, historic, and cultural values and provides diversified recreational opportunities at 333 units in the National Park System. The system is composed of national parks, seashores, battlefields, monuments, and other areas of national significance. ^{1/} These areas encompass 74 million acres, an area larger than the State of Arizona. In 1981 about 298 million visits were made to units in the National Park System located in 49 States, the District of Columbia, Puerto Rico, the Virgin Islands, Guam, and the Trust Territory of the Pacific Islands.

When the National Park Service was established in 1916, the then Director stated that park entrance fees and other revenues would eventually be sufficient to pay for all Park Service operation and maintenance costs and that the Congress would have to appropriate funds only for construction projects and acquisition of additional lands. In 1916 revenue exceeded operation and maintenance costs at 5 of the 16 national parks. Today, none of the 333 units in the National Park System collects revenue equal to or above its operation and maintenance appropriations. Also, entrance fees are collected at only 64 of the 333 units, and at 53 of these units they have not been raised for over 10 years. Fees to enter the 64 units range from \$1 to \$3 per vehicle, including all passengers, and from \$0.50 to \$1.50 per person at walk-in parks.

In early 1979 the Park Service proposed to increase entrance fees an average of 74 percent to offset budget cuts of \$12 million. However, the Congress was concerned about the basis for the proposed increase. Subsequently, the Congress froze entrance fees at their January 1, 1979, level and prohibited the Park Service from initiating entrance fees at additional parks.

In March 1981 we met with the Associate Administrative Director, National Park Service, who informed us that the Park Service was evaluating its camping fee schedules. That evaluation showed that camping fees were substantially below those charged for comparable campsites by State and local governments, other Federal agencies, and private campground operators. As a result, the Park Service raised its camping and other user fees an average of 73 percent for 1982. However, we were informed in 1981 that the Park Service had not planned to determine whether entrance fees should be raised or collected at additional parks because of the congressional moratorium on park entrance fees.

^{1/}Throughout this report, we often refer to the various units in the National Park System as parks.

HISTORY OF PARK FEES

The policy of collecting recreation fees at national parks predates the birth of the National Park Service. Fee collection began at Mount Rainier (Washington) in 1908, at Kings Canyon/Sequoia (California) in 1910, at Crater Lake (Oregon) in 1911, at Glacier (Montana) in 1912, at Yosemite (California) in 1913, at Mesa Verde (Colorado) in 1914, and at Yellowstone-Grand Teton (Wyoming, Montana, and Idaho) in 1915.

In 1916, Stephen T. Mather, the first Director of the National Park Service, wrote in his report to the Secretary of the Interior that:

"It has been your desire that ultimately the revenues of the several parks might be sufficient to cover the costs of their administration and protection and that Congress should only be requested to appropriate funds for their improvement. It appears that at least five parks now have a proven earning capacity sufficiently large to make their operation on this basis feasible and practicable. They are Yellowstone, Yosemite, Mount Rainier, Sequoia, and General Grant [now part of Kings Canyon/Sequoia National Park]. Accordingly estimates have only been submitted to Congress for appropriations for improvements of these parks."

Fee collection became general executive policy in President Franklin D. Roosevelt's budget message to the Congress for fiscal year 1941. During President Roosevelt's third administration, fee collection was accelerated. From 1939 through 1942, the Park Service designated 40 parks where fees could be collected.

The Land and Water Conservation Fund Act of 1965, as amended, gave the Secretary of the Interior specific authority to designate outdoor recreation areas at which entrance and user fees could be charged and established six criteria to be used in setting fees. This act also established what became known as the Golden Eagle Passport. The passport allows the purchaser and all persons in the purchaser's vehicle to enter all 333 units in the National Park System without further charge during a calendar year. The Congress set the maximum fee for the passport at \$10 in 1970. In February 1982, entrance fees were collected at 64 of the 333 units.

In early 1979 the National Park Service proposed to increase entrance fees by 74 percent to raise \$12 million to offset cuts in its operations budget. In March 1979 the proposal was deliberated before the Subcommittee on Parks, Recreation, and Renewable Resources, Senate Committee on Energy and National Resources. The Director, National Park Service, testified that:

"It is a bottom line, this is how much revenue we feel that we can reasonably expect to raise this coming year, and we are required to raise at least \$12 million in order to overcome an offsetting reduction in our operations of the national park system budget. And we feel this is one way of doing it."

At the hearings, Chairman Dale Bumpers and Senator James McClure expressed concern about raising fees, especially

--whether the Park Service might be proposing fees based on "what the traffic will bear" and the ease of collection rather than the value of the experience and

--the need to more carefully examine the link between entrance fees and the cost to operate and maintain national parks.

In October 1979 the Congress enacted Public Law 96-87 which froze entrance fees at their January 1, 1979, level and prohibited the Park Service from collecting fees at any other units. The language in Senate Report Number 96-180 on S. 495 indicates that the freeze was to be a temporary measure to ensure that the Congress' concerns were properly addressed by the Park Service. It states, "The language adopted by the committee in section 5 will permit a more careful examination of this link between maintenance costs and park fees * * *." (Sen. Report No. 96-180 at 7(1979).)

PRIOR REPORTS

In our March 28, 1980, report entitled "The Congress Should Consider Exploring Opportunities To Expand and Improve the Application of User Charges by Federal Agencies" (PAD-80-25), we stated:

"Federal agencies provide goods, services, and privileges that benefit identifiable recipients. Charging for these benefits is equitable since it assures that costs are borne by beneficiaries, rather than taxpayers in general * * *."

In our October 10, 1980, report entitled "Facilities in Many National Parks and Forests Do Not Meet Health and Safety Standards" (CED-80-115), we recommended that the Congress permit the Park Service to increase entrance fees and use the proceeds for health and safety projects in the parks where they are collected.

OBJECTIVES, SCOPE, AND METHODOLOGY

The objectives of this review were to (1) estimate entrance fee levels at 71 parks using as guidelines the six criteria for setting fees in the Land and Water Conservation Fund Act of 1965, as amended, and (2) determine whether it was appropriate for the Congress to reconsider its park entrance fee moratorium.

The six legislative criteria are

- the public policy or interest served,
- direct and indirect cost to the Government,
- visitor benefits,
- comparable fees charged by non-Federal public agencies,
- the economic and administrative feasibility of fee collection, and
- other pertinent factors.

The Park Service had not defined or developed guidelines on how each of the six criteria were to be used in setting entrance fees. Also, there was little legislative history on why the criteria were included in the Land and Water Conservation Fund Act of 1965, as amended. As a result, we made our own analysis using each of the six criteria. Our figures for possible entrance fee levels and revenue increases are based on these analyses, discussions with Park Service officials at the 71 parks reviewed, and our judgment in applying the criteria. They are not recommended entrance fee levels or additional revenue goals. Setting park entrance fee levels is the responsibility of the Secretary of the Interior, who may choose to set levels different from those we developed.

The 71 National Park Service units we selected included 26 units where entrance fees were being charged and 45 units where entry was free. We selected fee units that collected considerable entrance fee revenue in 1981 and nonfee units that had high visitation levels in 1980. Of the 64 units charging entrance fees, the 26 we selected included the 14 that collected the most entrance fee revenue in fiscal year 1981. These 26 units accounted for \$7 million (85 percent) of the \$8.3 million in entrance fees collected by the 64 units in fiscal year 1981. The 45 nonfee units we selected included 16 of the 25 nonfee units with the highest visitation levels in 1980. The other units were selected for geographic coverage.

In our analysis using the six legislative criteria for setting fees, we used a variety of analytical techniques in estimating potential fee levels. This included making comparisons with non-Federal recreation experiences, applying the Water

Resources Council's unit-day-value method to determine visitor benefits, and determining the share visitors paid for Park Service operation and maintenance costs in 1971 and 1981. We interviewed Dr. Marion Clawson, a recognized expert on recreation demand, and Park Service officials to discuss our approach and to obtain their views on what impact the fee levels we developed would have on visitors to the parks.

We used a combination of onsite and telephone interviews with park superintendents or their assistants to obtain pertinent opinions and documents at the 71 parks. The Park Service units included in our review are listed in appendix I. We also obtained confirmation from the park superintendents or their assistants and the Director, National Park Service, on the reasonableness of our estimated entrance fee levels for each of the 48 units where we concluded that the fees were low. The respective park superintendents or their assistants reviewed and provided written comments on each of the six case studies included in appendix II. Their comments were considered and portions were incorporated in the case studies to clarify and increase the accuracy of our revenue estimates. Neither we nor the Park Service has estimated appropriate entrance fee levels, or the resulting revenue increases, at the 262 parks not included in our review.

We interviewed Office of Management and Budget and National Park Service officials in Washington, D.C.; Park Service officials in the Pacific Northwest regional office in Seattle; State recreation officials in Washington, Oregon, Idaho, and California; and representatives of the National Recreation and Park Association, the National Wildlife Federation, and Resources for the Future. We reviewed laws, policies, regulations, procedures, and legislative histories that apply to parks and entrance fees. We also reviewed available studies, reports, and pertinent documents on units and entrance fees.

We made our review in accordance with our current "Standards for Audit of Governmental Organizations, Programs, Activities, and Functions."

CHAPTER 2

TIME TO CHARGE MORE TO VISIT NATIONAL PARKS

We reviewed 71 parks to estimate what the entrance fee levels would be using the six legislative criteria as guidelines. We estimated that:

- Entrance fees at 25 parks would increase from 100 to 250 percent and fees at one park would not increase.
- Fees ranging from \$1 to \$3 per vehicle and from \$0.50 to \$2 per person at walk-in sites would be initiated at 23 parks and no fees would be collected at 22 parks.
- The price of the Golden Eagle Passport would increase from \$10 to \$25 to make its price comparable with the increased entrance fees.

The six legislative criteria, which are discussed in this chapter, are

- the public policy or interest served,
- direct and indirect cost to the Government,
- visitor benefits,
- the comparable recreation fees charged by non-Federal public agencies,
- the economic and administrative feasibility of fee collection, and
- other pertinent factors.

Two of these criteria--costs to operate and maintain the National Park System and visitor benefits--address the concern about higher entrance fees expressed by the Congress when it placed the moratorium on new and increased entrance fees in late 1979. The Park Service's proposal to raise entrance fees in early 1979 was to offset a budget cut in operating funds. Had the Park Service based its proposed fee increase on the six criteria for setting fees, the concerns of the Congress would have been addressed.

PUBLIC POLICY OR INTEREST SERVED

The Congress and the executive branch have established the policy that when the Government provides goods, services, or privileges that benefit identifiable recipients, these recipients should bear the associated cost.

Congressional intent

In 1971 the House Committee on Interior and Insular Affairs expressed its view about charging fees to use and enter Federal recreation areas (H.R. Report No. 92-742 at 7):

"Most Members of the Committee believe that those people who are fortunate enough to be able to take the time to use and enjoy these areas ought to be willing to help, to some reasonable degree, to defray the cost of providing them with these opportunities. No one wants to price anyone out of these outdoor areas, but neither do they want to unduly burden those who never visit such areas --either for economic or other reasons--with all of the costs of making these areas and their related facilities available."

Administration policy

Office of Management and Budget Circular A-25 (September 23, 1959) entitled "User Charges" states:

"* * * A reasonable charge * * * should be made to each identifiable recipient for a measurable unit or amount of Government service or property from which he derives a special benefit."

In his February 1982 budget submission to the Congress, the President proposed to increase existing entrance fees at Federal recreation areas and expand the number of areas where fees are charged. Estimated revenues to be generated by seven Federal agencies totaled \$344 million during fiscal years 1983 through 1987. The fees collected by each agency would be used to finance recreational projects of that agency.

The Secretary of the Interior in testimony on February 22, 1982, before the Subcommittee on Public Land and National Parks, House Committee on Interior and Insular Affairs, stated:

"* * * This Administration is seeking to increase fees, which have not increased for over a decade, with the additional funds going directly to the park system operation and maintenance budgets. In addition, we propose to return, administratively, part of the increased funds to the park units collecting them * * *."

COSTS TO OPERATE AND MAINTAIN
THE NATIONAL PARK SYSTEM

The direct and indirect cost to the Government is one of six legislative criteria that the Park Service is required to consider in setting entrance fees. The legislative history, however, does not fully explain what costs are to be used or how they are to relate to fees other than to suggest that the costs to the Government of establishing and maintaining the area would be relevant. Further, the Park Service had not defined the meaning and application of the cost criteria. Our approach was to compare operation and maintenance costs with entry revenues during an 11-year period.

Revenues from entrance fees and Golden Eagle Passport sales did not keep pace with the cost of operating and maintaining the National Park System between 1971 and 1981. Revenue rose 11 percent while operation and maintenance costs rose 296 percent. As a result, entry fee revenues declined from over 7 percent of Park Service operation and maintenance costs in 1971 to about 2 percent of those costs in 1981. Taxpayers in general have had to pay an increasingly greater share, while park visitors paid a smaller share of park costs.

From 1971 to 1981, the average Park Service entrance fees, adjusted for inflation, declined by more than 50 percent. Over a longer period, entrance fees have declined even more substantially. For example, in 1916 Yosemite National Park's entrance fee was \$8 per vehicle, Mount Rainier's was \$6, and Yellowstone's was \$10. In 1982 dollars, equivalent fees would be \$65, \$50, and \$83, respectively.

In fiscal year 1981 the Congress appropriated \$452.7 million for operating and maintaining the National Park System, which had 298 million visitors, or about \$1.52 per visitor. Entrance fees and Golden Eagle Passport revenue totaled \$9.4 million, or about 3 cents per visitor.

The increase in operation and maintenance costs can be attributed to an increase in the number of parks, an increase in the acreage managed, an increase in the number of visitors, and inflation. The following table compares these factors for fiscal years 1971 and 1981.

	<u>FY 1971</u>	<u>FY 1981</u>	<u>Percent increase/ decrease 1971 to 1981</u>
Entry revenues per visitor (note a)	\$ 0.046(est.)	\$ 0.032(est.)	-30
Park Service costs per visitor	\$ 0.61	\$ 1.52(est.)	149
Entry revenues (note a)	\$8,502,000(est.)	\$9,440,000	11
Park Service costs	\$114,364,000	\$452,752,000(est.)	296
Number of national parks	277	333	20
Number of acres managed	28,500,000	74,000,000	160
Annual visitation	186,188,000	297,986,000(est.)	60
Consumer price index (Oct.)	122.4	279.7	129

a/Includes Golden Eagle Passport revenues.

The increase in entrance fee and Golden Eagle Passport revenue from 1971 to 1981 was primarily due to the 60-percent increase in park visitations. Twelve national parks raised or initiated entrance fees during the period, and 13 parks lowered or stopped charging entrance fees for a variety of reasons, including prohibitive legislation, uneconomical fee collection, and the undesirability of collecting entrance fees because of increases in other recreation fees at the park. While the number of parks increased by 56 from 1971 to 1981, the number of national parks charging an entrance fee declined from 69 to 64.

VISITOR BENEFITS

If each national park visitor were to pay an entrance fee based on the benefits received, the charges would vary widely depending on the park visited, the park activities engaged in, and for how long. Because it is not practical to determine what activities each visitor will pursue and for how long, the entrance fee could be based on the benefits available to each visitor, regardless of whether the visitor engages in the activities.

The U.S. Water Resources Council, which establishes principles, standards, and procedures for Federal water projects, has defined three methods for determining recreation benefits. These methods are used by the Corps of Engineers, Department of the Army; the Bureau of Reclamation, Department of the Interior; the Soil Conservation Service, Department of Agriculture; and the Tennessee Valley Authority to estimate recreation benefits at proposed water

projects. We selected the unit-day-value method because it was the only one that could be applied with the data available. (See app. V for a description of this method.) Applying the travel cost and contingent valuation (survey) methods requires the development and analysis of extensive and costly site-specific data. A National Park Service management consultant familiar with the development of the unit-day-value method stated that it is the most widely used method and can be used to determine the value of general recreation benefits. He also stated that this method applied by a recreation planner would result in reasonable values not much different from more vigorous valuation methods.

Although we neither endorse nor recommend this method, we asked recreation planners from the Park Service's Denver Service Center to apply the unit-day-value method to six frequently visited parks. Their values were multiplied by four to estimate the dollar value per recreation day received by a family of four (two adults and two children). We compared this value to the entrance fees actually charged at these six parks.

<u>Park</u>	<u>Current entrance fee per family of four in a single vehicle</u>	<u>Dollar value per recreation day for family of four</u>	<u>Percent increase in entrance fee needed to equal dollar value per recreation day</u>
Everglades	\$2.00	\$10.52	426.0
Grand Canyon	2.00	10.88	444.0
Lake Mead	0.00	7.64	N/A
Shenandoah	2.00	10.68	434.0
Yellowstone	2.00	11.40	470.0
Yosemite	3.00	10.88	262.7
Average	1.83	10.33	
Percent increase in average			464.5

As the table shows, the average entrance fee for the six parks would have to be raised from \$1.83 to \$10.33, or 464.5 percent, if actual entrance fees were to equal the dollar value per recreation day received by a family of four, using the Water Resources Council criterion. It was clearly evident that fees are low compared to visitor benefits at these six parks. However, we did not develop proposed fee levels on the basis of this criterion alone. We also used the other five criteria contained in the Land and Water Conservation Fund Act of 1965, as amended. Several of these criteria indicated that entrance fees should be increased substantially less than 464.5 percent.

Whether and to what extent park visitation levels would be affected by higher entrance fees is not known at this time. Methodologies have been developed to estimate the probable impact of higher entrance fees on visitation levels at recreation areas.

Dr. Marion Clawson, a recognized authority on recreation demand, informed us, and our review of the literature confirmed, that no studies have been made in recent years to determine the impact on visitation of higher entrance fees at national parks. He co-authored "The Economics of Outdoor Recreation" (1966), which included a section on the impact of entrance fees on recreation demand.

Dr. Clawson stated that the entrance fee levels we developed would not have a measurable impact on visitation levels at those Park Service units which have few close substitutes and for which the entrance fee is a small portion of the total recreation expense. Many parks, such as Grand Canyon, Yellowstone, and Yosemite, are in this category. Dr. Clawson said that at such parks, site studies of the change in visitation due to the higher fee levels we proposed would not be worthwhile because changes in variables, such as the weather and the price of gasoline, would obscure any change in visitation due to the change in entrance fees. Dr. Clawson also informed us that at parks where transportation is a minor cost for most visitors and where nearby substitute recreation areas exist, new or higher fees may have a noticeable impact on visitation levels.

For the 71 National Park System units we reviewed, we considered the probable impact on visitation levels in estimating whether the Park Service would charge entrance fees, what levels the fees would be set at, and the potential entrance fee revenue if the Park Service set entrance fees based on the six criteria in the 1965 act.

We spoke to the following officials of nonprofit groups involved in Federal recreation: the director of public affairs for the National Recreation and Park Association; the director of Federal affairs for the Sierra Club; the director of Federal activities for the National Parks and Conservation Association; a regional executive (region 13, covering Idaho, Montana, and Wyoming) of the National Wildlife Federation; and Dr. Clawson at Resources for the Future. These officials agreed that reasonable entrance fee increases (about 150 percent) probably would not affect visitation at Park Service units that now have entrance fees.

Public relations officials at 10 major attractions (see p. 13) informed us that despite entrance fee increases averaging 147 percent since 1971, annual visitation levels have not decreased.

Park superintendents and other Park Service officials at 21 fee parks we contacted told us that raising the entrance fee by about 150 percent would have little or no impact on park visitation. Officials at four other fee parks we contacted would not estimate the impact. The superintendent at Chickamauga and Chattanooga National Military Park said that a 150-percent increase in the fee would decrease visitation by 50 percent. We assumed the entrance fee at this park would not be raised.

Most park superintendents at 23 Park Service units where the initiation of entrance fees would be feasible and cost effective stated that initiating reasonable fees at these units would not have a major impact on visitation levels.

FEES FOR COMPARABLE RECREATION EXPERIENCES

The "crown jewels" in our National Park System, such as Grand Canyon, Yellowstone, and Yosemite, are unique in that no similar recreation areas exist that can be used as a comparison for setting entrance fees. However, appropriate entrance fee comparisons can be made by comparing the recreation experiences at these parks with those at other unique recreation attractions with high visitation levels. The table on the next page shows entrance fees at 12 unique recreation attractions.

The table shows that the average adult entrance fee at 10 popular recreation attractions rose 147 percent during the past 10 years. Converting the per-person fees in the table to per-vehicle fees charged at most national parks shows the wide difference between the two sets of fees. For example, a family of four (two adults and two children, 13 and 8 years of age) traveling in a single vehicle would pay \$2 to enter Yellowstone National Park for a visit of up to 2 weeks, \$29.80 to enter Marineland for a day, and \$36 to visit Universal Studios. Even the least expensive attraction in the table, an elevator ride to the Empire State Building view deck, would cost this family \$8.85.

Thirty-four States have parks which charge entrance fees, of which 27 charge private vehicles fees ranging from \$0.25 to \$4. These fees are comparable to possible fees we estimated for 23 units in the National Park System not charging entrance fees.

FEASIBILITY OF COLLECTING FEES

Determining the feasibility and cost effectiveness of initiating or raising entrance fees requires the consideration of several variables. Most can be quantified or determined to be clearly prohibitive of or favorable to collecting entrance fees. The key variables are the annual visitation level, the number of accesses to an area, the cost of capital improvements needed in order to collect entrance fees, the effect of entrance fees on visitation levels, property deed clauses prohibiting the collection of entrance fees, collection costs, and fee levels.

Recreation attraction	Number of visits in 1980	Entrance fee-- adult (A), child (C)		Percentage increase from 1971 to 1981 in adult fee
		December 1981	December 1971	
Hearst Castle	960,262	(A) <u>a</u> /\$7.80 (C) <u>a</u> / 3.80	<u>a</u> /\$4.00 <u>a</u> / 2.00	95
Biltmore House	460,000	(A) <u>a</u> /12.00 (C) <u>a</u> / 9.00	(b)	(b)
Williamsburg	1,100,000	(A) <u>c</u> / 9.00 (C) <u>c</u> / 4.50	(b)	(b)
San Diego Zoo	3,700,262	(A) 4.25 (C) 1.00	1.50 Free	183
San Diego Wild Animal Park	1,086,890	(A) 4.50 (C) 2.75	1.25 Free	260
Marineland	1,000,000	(A) 7.95 (C) 5.95 (C) -	3.50 <u>d</u> /2.75 <u>d</u> /1.25	127
Mount Vernon	968,646	(A) 3.00 (C) 1.50	1.00 0.50	200
Disneyland	11,300,000	(A) 8.00 (C) <u>d</u> /6.00 (C) <u>d</u> /4.00	3.50 <u>d</u> /2.50 <u>d</u> /0.75	129
Empire State Building	1,823,541	(A) 2.50 (C) 1.35	1.60 0.80	56
Universal Studios	3,767,558	(A) 9.50 (C) 7.50 (C)	4.00 <u>d</u> /3.00 <u>d</u> /2.00	138
The <u>Queen Mary</u>	950,000	(A) 6.75 (C) 4.00	2.50 1.25	170
Cypress Gardens	1,366,000	(A) 7.95 (C) 4.50	3.75 2.10	112
Average adult fee and fee increase for attractions except Biltmore House and Williamsburg		6.22	2.66	147

a/Entrance fee includes a guided tour. Entrance fee without tour is not available.

b/The 1971 and 1981 fee structures were not comparable at this attraction.

c/This fee, which allows entry to 10 of the exhibits (or a higher fee for entry to 18 exhibits), is paid by most visitors. Entrance is free for visitors who do not wish to visit any of the exhibits.

d/This recreation attraction had two levels of fees for persons under 18, depending on age.

The feasibility of collecting fees has already been demonstrated at those units where fees are being collected. At all 26 fee units we reviewed, entrance fee revenue exceeded collection costs. Therefore, higher fees would increase the favorable revenue/collection-cost ratio.

At 23 of the 45 nonfee areas we reviewed, we determined that it would be feasible and cost effective to initiate entrance fees. We judged collecting entrance fees at the remaining 22 units to be infeasible and/or uneconomical. At 17 units, collecting entrance fees appeared to be uneconomical because

- five units had low visitation,
- three units required costly capital improvements in order to collect fees, and
- nine units had too many public accesses to control.

At five units, collecting entrance fees appeared to be infeasible because

- three units have property deed covenants requiring access and
- two units already charged visitors a tour or transportation fee to see the main attraction.

Appendix IV gives a more detailed and graphic presentation of the factors preventing entrance fees charges at these 22 units. We did not attempt to determine the feasibility or cost effectiveness of initiating fees at 224 other free Park Service units. However, discussions with several park superintendents about the potential for initiating fees at other units where they had previously worked indicated that collecting entrance fees would be feasible and cost effective at many other units.

OTHER PERTINENT FACTORS

Besides the net revenue generated, many benefits can be gained from collecting entrance fees at units in the National Park System. Collecting entrance fees has contributed to reducing crime and vandalism in parks because visitors are aware of the presence of park officials when they enter the park and visits for unlawful or undesirable purposes decline. In addition, fee collectors provide information which increases visitor enjoyment of the park and inform visitors of hazards, such as icy roads or grizzly bears. Providing such information at the entrance reduces the workload of personnel who do this inside the park.

At 24 parks, Park Service officials informed us that collecting entrance fees reduced crime, vandalism, or other undesirable activities in the park. For example, the superintendent at Kings Canyon/Sequoia National Park, California, said that the presence of a fee collector at the park entrance reduced illegal woodcutting, a frequent occurrence on unmonitored Federal lands in the area. The superintendent at Shenandoah National Park, Virginia, said he would staff the entrance booth during the hunting season, even if fees were not collected, to stop poaching in the park at night. Several park superintendents said that a fee collector sees everyone entering the park, which makes potential criminals realize they may be observed and possibly stopped on the way out. This contributes to reducing crime in parks.

Initiating entrance fees at many State and local parks has caused undesirable activities at those parks to decline. For example, in 1981 Oregon State began charging a \$1 per car entry fee on weekends and holidays during the summer months at nine parks. One State park manager reported that staff in the fee collection booth stopped 105 vehicles containing alcoholic beverages and 224 vehicles carrying dogs, both of which the park prohibits. Another park manager reported the day-use fee eliminated "cruising" (traveling for the sake of traveling without destination or other definite purpose).

At Oakledge Park, a unit of the Burlington, Vermont, park system, an entry fee of \$1 per vehicle (\$10 for an annual pass) was initiated in 1980. According to an article in the November 1981 issue of "Parks and Recreation" magazine, undesirable activities, such as loitering around parking lots, declined substantially; concurrently, activities for which the park was designed, such as picnicking and field sports, increased. Further, the number of automobiles entering the park daily dropped by more than 50 percent, while use of recreational facilities remained constant.

At 22 national parks, Park Service officials informed us that collecting fees increased visitor contact and the dissemination of safety information. Many brochures distributed by fee collectors have a section that warns the visitor of hazardous situations in the park. This information is intended to reduce accident levels. This initial visitor contact allows park staff to inform visitors of areas where bears may be a problem at such parks as Yellowstone and Glacier. According to the superintendent of Grand Canyon National Park, the maps and directions furnished by fee collectors helped visitors find their hotel or campsites inside the park, thereby reducing traffic congestion and the need for personnel inside the park to provide directions. In addition, fee collectors provide information on road conditions, travel time to popular attractions in the park, and the availability and locations of the park's camping and lodging facilities.

Fee collectors may be the only contact within miles to assist visitors who are sick, involved in traffic accidents, or whose vehicles have broken down.

ENTRANCE FEE REVENUE POTENTIAL

At the 71 parks we reviewed, we estimated that if the Congress lifted the moratorium on increasing and initiating entrance fees and removed the \$10 limit on the price of the Golden Eagle Passport, the Park Service could increase annual net revenues by \$20.7 million by

- increasing entrance fees at 25 units,
- extending collection hours at 14 of the 25 units,
- initiating entrance fees at 23 units, and
- raising the price of the Golden Eagle Passport from \$10 to \$25.

During late February 1982, the Director, National Park Service, and his Associate Director, Management and Operations, reviewed the fee levels and revenue estimates we developed and said that they appeared reasonable. On May 3, 1982, the Chief, Ranger Activities and Protection Division, said the Park Service had just begun a comprehensive review of recreation fees and that it would be difficult to confirm the appropriateness of our estimated fee levels until the review was completed.

The following table shows the individual sources of potential increases in entrance fee revenue.

	<u>Increase in revenue</u>	<u>Increase in collection costs</u>	<u>Net increase in revenue</u>
	------(millions)-----		
Increasing entrance fees at 25 units	\$10.9	-	\$10.9
Extending collection hours at 14 units	3.9	\$1.2	2.7
Initiating entrance fees at 23 units	6.6	1.3	5.3
Increasing price of Golden Eagle Passport to \$25	<u>1.8</u>	<u>-</u>	<u>1.8</u>
Total	<u>\$23.2</u>	<u>\$2.5</u>	<u>\$20.7</u>

Increasing entrance fees

As discussed earlier, using the Water Resources Council visitor benefit criteria, the average entrance fee for a family of four for six major national parks would be raised from \$1.83 to \$10.33, or 464.5 percent. However, other criteria indicate that entrance fees should be raised by a lesser amount. For example, from 1971 to 1981 Park Service operation and maintenance costs rose 285 percent more than entry revenues, and the average entrance fee for 10 popular recreation attractions rose 147 percent. Analysis of three of the fee-setting criteria (the public policy or interest served, the feasibility of collecting fees, and other pertinent criteria) does not indicate a specific amount by which fees should be raised. However, since the Congress indicated that people should not be priced out of national parks, we estimated fee increases averaging about 150 percent. (See table, p. 18.) This increase is at the low end of the range of increases [147-464 percent (see tables, pp. 10 and 13)] resulting from our analysis of the six criteria for setting entrance fees. However, our estimates of fee increases at individual parks ranged from 100 to 250 percent. At Chickamauga and Chattanooga National Military Park, we agreed with the park superintendent that a fee higher than the 50 cents charged to enter the small house would substantially reduce visitation levels.

Entrance fee increases averaging about 140 percent would increase net entrance fee revenue by an estimated \$10.9 million and would not increase collection costs. Our estimate is based on the assumption that visitation levels would not decrease as a result of the increase in entrance fee levels. If, however, there were a decrease in visitation levels, the increase in revenue would be less. For example, a 5-percent decrease would reduce our estimated revenue gain by \$900,000. The table on the next page shows the potential annual increase in entrance fee revenue for the 25 parks reviewed where we concluded that entrance fees using the six legislative criteria as guidelines would be higher than the present fees.

Extending collection hours

Park officials said that extended collection hours at 14 parks would be cost effective. For example, at Yosemite National Park, where entrance fees were collected from 9 to 12 hours a day in the summer of 1981, the park superintendent said that 25 to 30 percent of the visitors who entered the park in July and August may have entered when entrance fee stations were closed.

At Grand Canyon National Park, we observed vehicles entering the park through the east entrance at 8 a.m. on October 21, 1981, when no fee collectors were present. The park superintendent said he could collect an additional \$279,000 a year in entrance fees if he had sufficient staff to collect fees at all hours it was cost effective to do so. At Rocky Mountain National Park,

Potential Annual Increase in Entrance
Fee Revenue for the 25 Parks We Reviewed

Park Service unit (note a)	Present entrance fee	Estimated future entrance fee	Percent increase in entrance fee	Fiscal year 1981 entrance fee revenue collected	Estimated annual increase in entrance fee revenue
Arches NP	\$1.00/veh (note b)	\$2.50	150	\$ 33,503	\$ 50,255
Badlands NP	1.00/veh	2.00	100	73,514	73,514
Cape Cod NS	1.00/veh	2.50	150	141,896	212,844
Carlsbad Caverns NP	3.00/veh	6.00	100	382,452	382,452
Castillo de San Marcos NM	0.50/per (note c)	1.50	200	229,447	458,894
Chickamauga and Chattanooga NMP	0.50/per	0.50	-	9,005	-
Colonial NHP	2.00/veh	5.00	150	147,566	221,349
Crater Lake NP	2.00/veh	5.00	150	131,271	196,907
Everglades NP	2.00/veh	5.00	150	191,321	286,982
Glacier NP	2.00/veh	5.00	150	210,358	315,537
Grand Canyon NP	2.00/veh	5.00	150	1,032,613	1,548,920
Grand Teton NP	2.00/veh	7.00	250	306,677	766,693
Kings Canyon/ Sequoia NP	2.00/veh	5.00	150	392,303	588,455
Lassen Volcanic NP	1.00/veh	2.50	150	46,865	70,298
Montezuma Castle NM	1.00/veh	2.00	100	84,948	84,948
Mount Rainier NP	2.00/veh	5.00	150	299,407	449,111
Natural Bridges NM	1.00/veh	2.00	100	4,115	4,115
Rocky Mountain NP	2.00/veh	5.00	150	430,371	645,557
Shenandoah NP	2.00/veh	5.00	150	713,658	1,070,487
Theodore Roosevelt Birthplace NHS	0.50/per	1.25	150	2,947	4,421
Tuzigoot NM	1.00/veh	2.00	100	11,608	11,608
Walnut Canyon NM	1.00/veh	2.00	100	18,644	18,644
Yellowstone NP	2.00/veh	7.00	250	471,965	1,179,913
Yosemite NP	3.00/veh	7.00	133	1,408,703	1,873,575
Zion NP	2.00/veh	5.00	150	265,435	398,153
Total				<u>\$7,040,592</u>	<u>\$10,913,632</u>

a/Abbreviations: NHP--National Historic Park; NHS--National Historic Site; N MEM--National Memorial; NMP--National Military Park; NM--National Monument; NP--National Park; NRA--National Recreation Area; NS--National Seashore.

b//veh--per vehicle.

c//per--per person.

1981 entrance fee revenues declined by \$166,000 because of reduced collection hours even though visitation levels increased by 12 percent.

We estimated that extended collection hours at 14 parks would generate additional gross revenue of \$3.9 million. Collection costs would increase by \$1.2 million and net revenue would increase by \$2.7 million.

At the 12 other fee units included in our review, such as Montezuma Castle National Monument in Arizona where entrance fees are already being collected during all hours the monument is open, park officials said that no opportunity existed to increase the entrance fee revenue by extending collection hours.

Initiating entrance fees at 23 additional units

Based on our analyses using the six fee-setting criteria and discussions with Park Service officials at each of the 45 Park Service units which are now free, we estimated that entrance fees are feasible and could be collected cost effectively at 23 units. We estimated that initiating entrance fees at these 23 units would increase gross fee revenue by \$6.6 million. After paying collection costs of \$1.3 million, \$5.3 million in net entrance fee revenue would be generated. (App. II contains case studies that detail cost and revenue estimates for six units capable of producing substantial revenue. App. III describes the methodology used to estimate revenue potential at all 23 free units with fee potential. App. IV describes the factors that made it uneconomical or infeasible to initiate entrance fees at 22 units.) The table on the next page shows the possible fee level and estimated gross revenue, collection costs, and net revenue for each of the 23 parks with entrance fee potential.

At one of the parks in the table, Muir Woods National Monument, California, a change in the authorizing legislation would be necessary before fees could be initiated. This is true of many national parks not included in our review.

Prohibitions on charging entrance fees are contained in laws specifically applicable to the following areas of the National Park System:

1. American Memorial Park, Saipan (92 Stat. 492).
2. Alaska units of the National Park System (94 Stat. 2384).
3. Biscayne National Park, Florida (94 Stat. 600).

Possible Fee Level and Estimated Net Revenue
for 23 Parks With Entrance Fee Potential

Park Service unit (note a)	Possible fee level	Collection		
		Gross revenue	costs	Net revenue
----- (in thousands) -----				
Assateague Island NS	\$1.00/veh (note b)	\$ 282.4	\$ 37.3	\$ 245.1
Boston NHP	0.50 & 1.00/per (note c)	425.0	20.4	404.6
Castle Clinton NM	0.50/per	11.3	9.4	1.9
Cedar Breaks NM	1.00/veh	84.0	79.6	4.4
Chaco Canyon NM	3.00/veh	38.8	17.1	21.8
Chickasaw NRA	2.00/veh	449.7	88.7	361.0
Custer Battlefield NM	1.00/veh	41.1	8.6	32.5
Federal Hall N MEM	1.50/per	71.3	23.7	47.6
Fort Vancouver NHS	1.00/per	56.6	11.0	45.6
Glen Canyon NRA	2.00/veh	786.3	211.2	575.1
Haleakala NP	1.00/per	77.0	59.2	17.8
Hawaii Volcanoes NP	1.00/veh	400.0	166.0	234.0
Independence NHP	2.00/per	494.8	50.5	444.3
Jefferson National Expansion Mem. NHS	0.50/per	437.2	74.2	363.0
Joshua Tree NM	2.00/veh	209.4	96.7	112.7
Klondike Gold Rush NHP (Seattle)	0.50/per	5.5	2.8	2.8
Lake Mead NRA	2.00/veh	1,553.9	152.5	1,401.4
Lincoln Boyhood N MEM	0.75/per	33.1	13.5	19.6
Muir Woods NM	1.00/per	732.5	42.9	689.6
Olympic NP	3.00/veh	101.1	9.0	92.1
San Juan NHS	0.50/per	249.3	48.6	200.7
Sunset Crater NM	2.00/veh	45.7	29.2	16.5
Wupatki NM	2.00/veh	44.4	32.7	11.7
Total		<u>\$6,630.7</u>	<u>\$1,284.9</u>	<u>\$5,345.8</u>

a/Abbreviations: NHP--National Historic Park; NHS--National Historic Site; N MEM--National Memorial; NMP--National Military Park; NM--National Monument; NP--National Park; NRA--National Recreation Area; NS--National Seashore.

b//veh--per vehicle.

c//per--per person.

4. Boston African American National Historic Site, Massachusetts (94 Stat. 1846).
5. Channel Islands National Park, California (94 Stat. 77).
6. Fort Jefferson National Monument, Florida (94 Stat. 601).
7. Golden Gate National Recreation Area, California (86 Stat. 1299).
8. Martin Luther King, Jr., National Historic Site, Georgia (94 Stat. 1842).
9. Mount Rushmore National Memorial, South Dakota (52 Stat. 694).
10. Point Reyes National Seashore, California (76 Stat. 538).
11. Virgin Islands National Park, Virgin Islands (76 Stat. 747).
12. War in the Pacific National Historic Park, Guam (92 Stat. 493).

The National Park Service could determine for each of the 224 nonfee parks we did not review whether collecting entrance fees would be feasible and cost effective, and what the net revenue would be.

Increasing the price of the Golden Eagle Passport

The Congress authorized what ultimately became known as the Golden Eagle Passport in the Land and Water Conservation Fund Act of 1965; it set the maximum fee for the passport at \$10 in 1970. The passport allows the purchaser and persons in the purchaser's vehicle to enter all national parks without further charge during a calendar year. Over 118,000 Golden Eagle Passports were sold in fiscal year 1981. In 1981, almost \$1.2 million was collected.

If entrance fees at Park Service units were raised an average of about 150 percent, the price of the Golden Eagle Passport should also be raised by this factor--to \$25. As long as the passport cost rises by about the same percent as the average entrance fee, purchase of the passport would remain cost beneficial for persons making multiple visits to parks charging entrance fees in a single calendar year. If entrance fees were also initiated at some free parks, the Golden Eagle Passport would provide even

greater savings for the multiple park visitor. Increasing the cost of the Golden Eagle Passport from \$10 to \$25 would increase net fee revenue by \$1.8 million a year, assuming that the number of purchasers does not decrease; the cost of issuing the passports would remain constant. If, however, the number of passports sold declines as much as 5 percent, the increase in revenue would be about \$1.65 million.

REIMBURSEMENT OF FEE COLLECTION COSTS

Parks are no longer reimbursed for collection costs from entrance fee revenue. As a result, when a park's budget is cut, fee collection hours and personnel are reduced just like any other operation. Fees collected were greater than collection costs at all of the Park Service units we reviewed. Therefore, even though reducing fee collection hours to save money may be a rational decision by park superintendents, it results in a "penny-wise and pound-foolish" policy for the Federal Government as a whole.

In fiscal year 1980 and several previous years, recreation fees were deposited in a special U.S. Treasury account. Each year the National Park Service requested, and the Congress appropriated, money from this account to cover the recreation fee collection costs in the next fiscal year. The Department of the Interior Appropriations Act for Fiscal Year 1981 (Public Law 96-514) directed that recreation fees be credited to the Land and Water Conservation Fund, to be used for both Federal and State government land acquisition. As a result, in fiscal year 1981 recreation fee revenue was no longer appropriated to the Park Service to cover fee collection costs.

At eight parks we visited, park officials told us that although extending collection hours would be cost beneficial, the hours had been reduced due to budget cuts and further reductions were possible. Park officials at 48 units where we estimated fees could be raised or initiated stated that fee collection costs should be paid from recreation fee revenues. In January 1982 the Secretary of the Interior encouraged the Park Service Director to increase the emphasis on collecting fees and consider the results of entrance fee collection efforts when evaluating the performance of Park Service regional directors and superintendents for pay and promotion purposes.

To provide park superintendents with an added incentive and the necessary funds and personnel to collect entrance fees at all times when it is cost effective to do so, the Congress could

- (1) repeal the fiscal year 1981 Department of the Interior Appropriations Act requirement that Park Service entrance fees be paid into the Land and Water Conservation Fund and reestablish the special U.S. Treasury account provided for in section 4(f) of the Land and Water Conservation Fund Act of 1965, as amended, and
- (2) annually appropriate sufficient funds from this account to pay for Park Service entrance fee collection costs.

The Assistant Secretary for Fish and Wildlife and Parks, in his June 8, 1982, letter commenting on our draft report, stated that:

"We strongly emphasize the importance of reimbursement for fee collection costs. The report makes reference to park superintendents that reduce fee collection hours to save money. In reality, such decisions weigh the competing management needs for the available personnel and dollars. Providing the incentives that will enable collection of fees to cover the full costs of collection is not only sound economically but good management practice."

PROPOSED LEGISLATION

On February 22, 1982, the administration proposed broad recreation fee legislation entitled the Recreation Fees and Improvements Act of 1982. The proposed legislation would have allowed the Departments of the Interior, Agriculture, and Defense and the Tennessee Valley Authority to charge visitors a reasonable fee for using the recreation areas and facilities they manage. Estimated revenue to be generated would have totaled \$344 million for fiscal years 1983 through 1987. The proposed legislation would also have repealed the moratorium on initiating and increasing park entrance fees and would have removed the \$10 limit on the price of the Golden Eagle Passport. The Park Service would have been required to establish entrance fees based on the six criteria for setting fees in the Land and Water Conservation Fund Act of 1965, as amended.

The proposed legislation would have repealed section 402 of Public Law 96-87, which froze all National Park Service entrance fees at their January 1, 1979, level and prohibited the collection of entrance fees at any additional units. Language in the fiscal year 1981 Interior appropriations act would also have been repealed so that fees collected would be available for appropriation back to the collecting agencies for operation, maintenance, rehabilitation, and construction needs. The proposed legislation would also have repealed prohibitions on charging entrance fees contained in 12 laws (see p. 19) applicable to specific Park Service units.

On February 26, 1982, the administration withdrew the proposed legislation to make revisions because of congressional objections to certain hunting and fishing fees. Interior, in commenting on our draft report, stated that:

"Recognizing that proposed legislation has been withdrawn by the department, we will only consider the feasibility of establishing new entrance fee areas and raising entrance fees. User fees that are not affected by proposed legislation will also be analyzed and implemented by October of 1982. Other changes will occur if authority is granted through legislation."

We agree with those portions of the proposed legislation which would have repealed the moratorium on initiating and increasing park entrance fees and removed the \$10 limit on the price of the Golden Eagle Passport.

CONCLUSIONS

Using as a guideline the six legislative criteria for setting fees, we estimated that entrance fees could be raised at 25 parks and initiated at 23 of 45 nonfee parks reviewed. We also determined that it would be cost effective to extend collection hours at 14 parks and that the price of the Golden Eagle Passport could be raised from \$10 to \$25 to reflect increases in entrance fees at individual parks. These changes would result in net additional Park Service revenues of \$20.7 million. The Park Service said that our estimates of increased entrance fee levels and revenue appeared reasonable and that new or increased fees may be warranted at many of the 262 parks not included in our review.

The Congress should repeal the moratorium on increasing and initiating park entrance fees. The Park Service should determine what the fee levels should be for units in the National Park System, using the six legislative criteria. Had the Park Service used the criteria, the concerns of the Congress would have been addressed when it froze entrance fees in 1979. Higher and more widespread entrance fees would shift a more reasonable portion of park costs from taxpayers in general to park visitors.

RECOMMENDATIONS TO THE CONGRESS

We recommend that the Congress:

- Repeal section 402 of Public Law 96-87, which froze all National Park Service entrance fees at their January 1, 1979, level and prohibited collecting entrance fees at any additional units.
- Amend section 4 of the Land and Water Conservation Fund Act of 1965, as amended, to remove the \$10 limit on the price of a Golden Eagle Passport.

RECOMMENDATIONS TO THE SECRETARY OF THE INTERIOR

We recommend that the Secretary of the Interior direct the Director, National Park Service, to:

- Establish guidelines for applying the six legislative criteria for setting park entrance fees.
- Use these guidelines to set entrance fee levels at park system units.

--Set the price of the Golden Eagle Passport based on the levels of fees set at individual parks.

We also recommend that the Secretary direct the Director, National Park Service, to extend entrance fee collection hours at parks where it is cost effective to do so.

AGENCY COMMENTS

The Assistant Secretary for Fish and Wildlife and Parks, in his June 8, 1982, letter commenting on our draft report, stated:

"We agree with the proposed recommendations to the Secretary and work has begun to put all the recommendations into effect. In early April, a National Park Service work force met to discuss the entire issue of entrance fees, user fees, and special permits. As a result of that session, guidelines are now being written to assist each NPS unit in analyzing fee programs."

* * * * *

"The GAO reports that the National Park Service proposed an entrance fee and Golden Eagle increase in 1979. We have continued to promote that position. The proposed legislation would have removed all legislative prohibitions, which prevented establishment of entrance fees at many units of the National Park Service. We believe criteria used to establish entrance fees should be applied to all units of the National Park System." (See app. VI.)

NATIONAL PARK SERVICE UNITS INCLUDEDIN THIS STUDYUnits charging entrance fee

Arches NP <u>1/</u>	Lassen Volcanic NP
Badlands NP	Montezuma Castle NM
Cape Cod NS	Mount Rainier NP
Carlsbad Cavern NP	Natural Bridges NM
Castillo de San Marcos NM	Rocky Mountain NP
Chickamauga and Chattanooga NMP	Shenandoah NP
Colonial NHP	Theodore Roosevelt Birthplace NHS
Crater Lake NP	Tuzigoot NM
Everglades NP	Walnut Canyon NM
Glacier NP	Yellowstone NP
Grand Canyon NP	Yosemite NP
Grand Teton NP	Zion NP
Kings Canyon/Sequoia NP <u>2/</u>	

Free units

Abraham Lincoln Birthplace NHS	Hawaii Volcanoes NP
Acadia NP	Independence NHP
Assateague Island NS	Jefferson National Expansion Memorial NHS
Biscayne NM	Joshua Tree NM

1/Abbreviations: NHP--National Historic Park; NHS--National Historic Site; N MEM--National Memorial; NMP--National Military Park; NM--National Monument; NP--National Park; NRA--National Recreation Area; NS--National Seashore.

2/The Park Service administers Kings Canyon and Sequoia National Parks as a single unit.

Free units (cont.)

Boston NHP	Klondike Gold Rush NHP (Seattle)
Chesapeake and Ohio Canal NHP	Lake Mead NRA
Cape Hatteras NS	Lake Meredith NRA
Castle Clinton NM	Lincoln Boyhood N MEM
Cedar Breaks NM	Lincoln Home NHS
Chaco Canyon NM	Mammoth Cave NP
Chickasaw NRA	Muir Woods NM
Custer Battlefield NM	Nez Perce NHP
Delaware Watergap NRA	North Cascades NP
Devils Postpile NM	Olympic NP
Federal Hall N MEM	San Juan NHS
Fort Caroline N MEM	Saratoga NHP
Fort Clatsop N MEM	Shiloh NMP
Fort Matanzas NM	Statue of Liberty NM
Fort Vancouver NHS	Sunset Crater NM
George Rogers Clark NHP	Valley Forge NHP
Glen Canyon NRA	Whitman Mission NHS
Great Smoky Mountains NP	Wupatki NM
Haleakala NP	

ANALYSES OF INITIATING ENTRANCE FEESAT SIX NATIONAL PARK SERVICE UNITSBOSTON NATIONAL HISTORICAL PARK

Boston National Historical Park, located in the Boston, Massachusetts, area, is composed of eight historical sites all relating to the American ideals of freedom of speech, religion, government, and self-determination. The eight sites are the Paul Revere House, the Old South Meeting House, the Old State House, the Old North Church, Faneuil Hall, Dorchester Heights National Historic Site, Charlestown Navy Yard, and the Bunker Hill Monument. In fiscal year 1981 these eight sites and the visitor center received more than 1,687,000 visitations. All but two of the sites are privately or municipally owned and managed, and three of these have entrance fees ranging from \$0.50 to \$1.

The Chief of Interpretation and Visitor Services, National Park Service, said that the Park Service could feasibly and economically collect entrance fees at the Charlestown Navy Yard and the Bunker Hill Monument. The two sites received almost half of the park's total visitation in fiscal year 1981. The Chief said collection costs would be low because (1) no additional personnel would be needed to collect entrance fees and (2) capital investment would be minimal at both sites. All Charlestown Navy Yard visitors could be channeled through an entrance that has a collection booth already in place. The Bunker Hill Monument has a single entrance with a desk already set up near the door.

The Chief of Interpretation and Visitor Services said entrance fees could be collected at both sites from 9 a.m. to 5 p.m. daily, with an entrance fee of \$1 a person at Charlestown Navy Yard and \$0.50 a person at the Bunker Hill Monument. He said these rates would be reasonable and would reduce visitation by only 10 percent. As the table on page 30 shows, the Park Service could collect an estimated gross annual revenue of \$425,045 at a cost of \$20,400 for a benefit-to-cost ratio of 20.8 to 1. Net entrance fee revenue would be \$404,645.

After receiving our case study, the superintendent wrote that (1) it would not be proper for the Park Service to charge an entrance fee because the U.S.S. Constitution, located in the Charlestown Navy Yard, is managed by the U.S. Navy, (2) the non-profit foundation which operates the U.S.S. Constitution Museum depends heavily on museum admission fees and sales at its gift shop, and (3) the foundation's revenues would be severely affected if the Park Service charged an entrance fee.

The potential net fee revenue that could be collected at the entrance to the Charlestown Navy Yard (\$404,645) is large compared to the \$102,000 that the U.S.S. Constitution Museum collected in fiscal year 1981. According to the director of the museum, if the foundation were to receive a portion of the entrance fees collected by the Park Service equal to what the foundation would have collected on its own, it would discontinue the separate museum fee. He said that charging one entrance fee to see all the attractions in the navy yard, including the museum, should not affect the museum's visitation or gift shop sales. In fact, a single fee would be beneficial by encouraging more of a joint interpretive program between the Park Service and the foundation.

Estimated Annual Net Entrance Fee Revenue
at Charlestown Navy Yard and Bunker Hill Monument
in Boston National Historical Park

Revenue at Charlestown Navy Yard

Number of Charlestown Navy Yard visitors in fiscal year 1981	716,844
Percent of visitors entering during collection hours	x 95%
Visitors entering during collection hours	<u>681,002</u>
Percent of visitors arriving after entrance fees are imposed	x 90%
Visitors visiting after an entrance fee is imposed	<u>612,902</u>
Percent of visitors subject to paying an entrance fee	x 64%
Potential fee-paying visitors	<u>392,257</u>
Reasonable entrance fee	\$ 1
Gross annual revenue	<u>\$392,257</u>

Revenue at Bunker Hill Monument

Number of Bunker Hill Monument visitors in fiscal year 1981	113,848
Percent of visitors entering during collection hours	x 100%
Visitors entering during collection hours	<u>113,848</u>
Percent of visitors arriving after an entrance fee is imposed	x 90%
Visitors willing to pay an entrance fee	<u>102,463</u>
Percent of visitors subject to paying an entrance fee	x 64%
Potential fee-paying visitors	<u>65,576</u>
Reasonable entrance fee	x \$.50
Gross annual revenue	<u>\$ 32,788</u>
Total gross entrance fee revenue for both sites	<u>\$425,045</u>

Collection costs

Capital investment:

2 cash registers (\$1,000 each)	\$ <u>2,000</u>	
Capital investment amortized at 20% per year		-400

Annual operating costs:

Personnel already on site—no additional cost	-
Administrative overhead for both sites (supervision, completion of paperwork)	<u>20,000</u>

Total annual operating costs	<u>-20,000</u>
Total annual collection costs	<u>-20,400</u>
Estimated annual net entrance fee revenue	<u>\$404,645</u>

Benefit/cost ratio is 20.8:1

GLEN CANYON NATIONAL RECREATION AREA (NRA)

Glen Canyon National Recreation Area in southern Utah and northern Arizona encompasses spectacular mountains and vertical cliffs of brick-red Navajo sandstone. Totalling over 1.2 million acres and including the 186-mile-long Lake Powell, the NRA plays host to highly water-oriented recreationists. Opportunities for boating, fishing, swimming, and waterskiing, as well as hiking and camping, all have their place within the NRA.

Although remote from major population centers--about 120 miles north of Flagstaff, Arizona, and 400 miles northeast of Las Vegas, Nevada--the NRA attracts over 1.7 million visitors a year, 68 percent of whom arrive from May to September. Over 90 percent of the 1.7 million recreationists visit three of the five developed areas, and these three areas have a potential for charging entrance fees. According to the assistant park superintendent, charging a fair entrance fee of \$2 a vehicle during daylight hours (12 hours a day), 7 days a week during the peak season, would have an insignificant impact on the NRA's annual visitation level. We believe the visitor levels are high enough at these areas to make it cost effective to collect fees all year long. We estimate that 90 percent of the vehicles entering the area enter during daylight hours.

Based on fiscal year 1981 visitor levels and a \$2 vehicle entrance fee collected all year long, we estimate the Park Service could collect annual revenues of about \$786,000 at a collection cost of about \$211,000. Net revenue would exceed \$575,000 annually for a benefit-to-cost ratio of 3.7 to 1. These cost and revenue calculations consider the suggestions the superintendent made after reviewing our case study draft.

Our revenue and cost estimates are as follows.

Estimated Annual Net Entrance Fee Revenue
at Glen Canyon National Recreation Area

Revenue

Number of visitors in fiscal year 1981 (at three of five developed areas)		1,625,523
Average number of visitors per vehicle	÷	<u>3.2</u>
Number of vehicles entering potential fee area		507,976
Percent of vehicles arriving during collection hours	x	<u>90%</u>
Number of vehicles arriving during collection hours		457,178
Percent of vehicles subject to paying entrance fee	x	<u>86%</u>
Number of vehicles subject to paying an entrance fee		393,173
Entrance fee to be charged	x	\$ <u>2</u>
Gross annual revenue		<u>\$786,346</u>

Collection costsCapital construction costs:

Collection kiosk (including con- struction, utilities, and equip- ment--\$21,600 x 4 facilities)	\$ 86,400
Road widening	100,000
Housing (4 trailers at remote sites, \$30,000 each)	<u>120,000</u>
	<u>306,400</u>

Capital investment amortized at 20% per year	-61,280
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Annual operating costs:

Salaries (12 hours/day, all year long requires 12 GS-3 permanent employees for three stations at \$11,361 per person)	136,332
Overhead (est. to be 10% of salary costs for adminis- tration and supervision)	<u>13,633</u>

Total annual operating costs	-149,965
Total annual collection costs	-211,245
Estimated annual net entrance fee revenue	<u>\$575,101</u>

Benefit/cost ratio is 3.7:1

JEFFERSON NATIONAL EXPANSION MEMORIAL

Established to memorialize the role of Thomas Jefferson and others responsible for this Nation's territorial expansion to the Pacific Ocean, this park dramatizes the great social, political, and economic changes that followed in the wake of the Louisiana Purchase. The central feature of the memorial is the soaring 630-foot, stainless-steel arch which symbolizes St. Louis' historic gateway role.

Located in downtown St. Louis on the west bank of the Mississippi River, the memorial has the highest visitation level of all tourist attractions in the St. Louis metropolitan area--over 2.5 million visitors during fiscal year 1981. The memorial consists of three areas--the old courthouse, the arch, and the grounds. The old courthouse receives about 5 percent of the total visitation, the arch receives about 60 percent, and the grounds receive about 35 percent. The visitor center is located at the arch--underground between the legs--and has two entrances, one by each leg.

Collecting an entrance fee at this park unit is not the only possible revenue-producing alternative. The superintendent, after reviewing this case study, suggested several alternatives other than entrance fees that may be equally or more cost effective. We are presenting only the entrance fee alternative because the other alternatives are difficult to compare with our other case studies. The figures used are mostly those supplied by the park and have been changed only to maintain comparability among parks.

Collecting entrance fees is feasible at two places: the visitor center and the museum within the visitor center. The park superintendent prefers that if an entrance fee is established, it be collected at the visitor center.

According to the park superintendent, a 50 cents per person (ages 16 to 61) entrance fee to the visitor center collected during park hours, all year round, would decrease visits by 15 percent at the most. The visitor center has two entrances and hosts more than 1.5 million visitors per year. We estimate that entrance fee revenue of about \$437,000 could be collected at a cost of about \$74,000, a benefit-to-cost ratio of 5.89 to 1.

Our specific cost and revenue estimates are as follows.

Estimated Annual Net Entrance Fee Revenue
at Jefferson National Expansion Memorial

Revenue

Visitors to the arch in fiscal year 1981	1,540,000
Percent of visitors arriving after fee imposed	x <u>85%</u>
Number of visitors entering potential fee area	1,309,000
Percent of visitors subject to fees (75% > 16 yrs. x 90% < 62 yrs x 99% without Golden Access Passports (note a))	x <u>66.8%</u>
Number of potential fee-paying visitors	874,412
Entrance fee to be charged	x \$ <u>.50</u>
Gross annual revenue	<u>\$437,206</u>

Collection costs

Capital construction costs:

Equipment--4 cash registers at \$1,000 each	\$ 4,000	
--4 desks at \$2,000 each	8,000	
Total capital investment	<u>12,000</u>	
Capital investment amortized at 20% per year		-2,400

Annual operating costs:

Salaries (three GS-3 permanent employees at \$11,361 per year each, including fringe benefits)	34,083	
(2.3 GS-3 temporary employees at \$10,849 per year)	24,953	
(One GS-4 permanent supervisor--overhead)	<u>12,754</u>	
Total annual operating costs		<u>-71,790</u>
Total annual collection costs		<u>-74,190</u>
Estimated annual net entrance fee revenue		<u>\$363,016</u>

Benefit/cost ratio is 5.89:1

a/Passes for the physically handicapped.

LAKE MEAD NATIONAL RECREATION AREA

Vast expanses of clear water, stark and colorful desert landscapes, and clear air provide opportunities for swimming, boating, fishing, beach camping, hiking, and water skiing. The recreation area, totaling about 1.5 million acres, includes 105-mile-long Lake Mead and the 67-mile-long Lake Mohave. Located 25 miles east of Las Vegas, Nevada, and 295 miles from Los Angeles, California, Lake Mead NRA received 5.2 million visitors in about 1.6 million vehicles during fiscal year 1981, 80 percent of whom arrived from April to October.

According to the assistant park superintendent, collecting an entrance fee may be economically and physically feasible at three areas in the NRA. He suggested that fees could be collected using four collection stations operating during daylight hours (averaging 12 hours a day), 7 days a week, from April to October. Visitation at these three developed areas accounted for about 64 percent of the total NRA visitor level reported in fiscal year 1981. We believe it would be cost effective to collect during daylight hours all year long, and this collection schedule would cover 90 percent of the vehicles entering the three areas annually.

The assistant superintendent estimated a fair entrance fee to be between \$1 and \$3 per vehicle and believed that this would reduce visitation by about 5 percent. We estimate gross revenue from such fees would be more than \$1.55 million a year if \$2 per vehicle were charged. Annual collection costs would be about \$152,000 and annual net revenue would be about \$1.4 million. The benefit-to-cost ratio would be 10.2 to 1.

After reviewing our case study, the assistant superintendent suggested some changes in the narrative, all of which were incorporated where appropriate.

Our specific cost and revenue estimates are as follows.

Estimated Annual Net Entrance Fee Revenue
at Lake Mead National Recreation Area

Revenue

Number of visitors, fiscal year 1981, at the three potential fee areas	3,486,872
Average number of visitors per vehicle	÷ 3.3
Number of vehicles entering potential fee areas	1,056,628
Percent of vehicles arriving during collection hours	x 90%
Number of vehicles arriving during collection hours	950,965
Percent of vehicles arriving after entrance fees are imposed	x 95%
Number of vehicles entering potential fee area	903,417
Percent of vehicles not using Golden Age Passport	x 86%
Number of potential fee-paying vehicles	776,939
Entrance fee to be charged per vehicle	x \$ 2
Gross annual revenue	<u>\$1,553,878</u>

Collection costs

Capital investment:

Collection kiosk (including construction, utilities, and equipment at \$21,600 x 4 facilities)	\$ 86,400	
Road widening (park estimate)	100,000	
Total capital investment	<u>186,400</u>	
Capital investment amortized at 20% a year		- 37,280

Annual operating costs:

Salaries--operating hours (Avg. 12 hours/day all year long, requires 8.74 GS-3 permanent employees at \$11,361 per year)	99,295	
Overhead--10 percent of salary level	9,930	
Transportation (GSA est.--2 vehicles x \$250/mo. x 12 mo.)	<u>6,000</u>	
Total annual operating costs		<u>-115,225</u>
Total annual collection costs		<u>-152,505</u>
Estimated annual net entrance fee revenue		<u>\$1,401,373</u>

Benefit/cost ratio is 10.2:1

MUIR WOODS NATIONAL MONUMENT

Muir Woods National Monument is 550 acres of rich plant and animal life dominated by the soaring redwoods. Located 17 miles north of San Francisco, this park hosts more than 1 million visitors annually.

Entrance fees of 50 cents per person (ages 16 to 61) were collected during park hours until November 1978, when Public Law 95-625, section 317(e), prohibited entrance fees from being charged at Golden Gate National Recreation Area, of which Muir Woods is a part. In fiscal year 1978 entrance fee revenue totaled \$335,900 and collection costs were about \$43,600. The resulting revenue-to-cost ratio was 7.7 to 1. In fiscal year 1981 entrance fee revenue of \$335,900 would have made Muir Woods the ninth largest entrance fee revenue producer of the Park Service's 64 entrance fee-collecting parks.

The Park Service manager of Muir Woods said that if entrance fees were to be reinstated, a fair fee would be \$1 a person (ages 16 to 61). He thought the fee would reduce annual visitation by only 2 or 3 percent. We estimate that a \$1 entrance fee would result in annual revenue of about \$732,000 and would cost about \$43,000 to collect. The collection booth is already in place and staffed by a park employee handing out brochures. Net revenue would be about \$690,000. The benefit-to-cost ratio for collecting entrance fees would be about 17.1 to 1.

The unit manager reviewed our case study and suggested decreasing the percentage of visitors arriving during collection hours from 100 percent to 97 percent. We incorporated this change into the revenue and cost estimates.

Our specific revenue and cost estimates are as follows.

Estimated Annual Net Entrance Fee Revenue
at Muir Woods National Monument

Revenue

Number of visitors, fiscal year 1981		1,297,485
Percent of visitors arriving after entrance fees imposed	x	<u>97%</u>
Number of visitors entering potential fee area		1,258,560
Percent of visitors arriving during collection hours	x	<u>97%</u>
Number of visitors arriving during collection hours		1,220,803
Percent of visitors subject to paying entrance fee	x	<u>60%</u>
Number of potential fee-paying visitors		732,482
Entrance fee to be charged	x	<u>\$ 1</u>
Gross annual revenue		<u>\$732,482</u>

Collection costsCapital investment:

Turnstile, fence, and signs	\$1,000	
Equipment (two cash registers and typewriter)	<u>2,000</u>	
Total capital investment	<u><u>3,000</u></u>	
Capital investment amortized at 20% per year		- 600

Annual operating costs:

Salaries (2.7 years' effort x \$11,361 per year for a GS-3 permanent employee, including fringe benefits)	30,675	
Overhead (0.4 years' effort x \$21,619 per year for a GS-9 permanent employee, including fringe benefits)	8,648	
Transportation (GSA estimate of average vehicle cost is \$250/mo. x 6 mo./yr. of use)	1,500	
Cash register service contract	250	
Ticket printing	750	
General and administrative expenses	<u>500</u>	
Total annual operating costs		- <u>42,323</u>
Total annual collection costs		- <u>42,923</u>
Estimated annual net entrance fee revenue		<u><u>\$689,559</u></u>

Benefit/cost ratio is 17.1:1

OLYMPIC NATIONAL PARK

Olympic National Park is located about 60 miles northwest of Seattle on the Olympic Peninsula in Washington State. The park has varied geography, ranging from the snow-covered Olympic Mountains to Pacific Ocean beaches. Visitor activities include hiking, camping, picnicking, skiing, and swimming. The park received more than 2 million visitations in fiscal year 1981.

To collect entrance fees from all park visitors would not be cost effective because (1) the park has 14 entrances and collection costs would exceed revenues and (2) visitation levels are low from October through April each year. However, entrance fees could be collected at Hurricane Ridge, a major attraction in the park during the summer months. The area has a single access road with an entrance fee collection booth already in place. It received about 160,000 visitors between June 15 and September 7, 1981.

The park superintendent, assistant chief ranger, and director of maintenance provided information which indicates that it would be feasible and cost effective to collect entrance fees at Hurricane Ridge from 7 a.m. to 9 p.m. daily from June 15 to Labor Day. The assistant chief ranger said an entrance fee of \$3 a vehicle would be reasonable and estimated that the fee would result in only a 10-percent decrease in visitation.

The table on page 40 shows that the Park Service could collect estimated gross annual fee revenue of \$101,091 at a cost of \$9,012. This would result in net entrance fee revenue of \$92,079. The benefit-to-cost ratio would be 11.2 to 1.

The superintendent responded to our case study stating that entrance fees would decrease visitation for about 2 years. When visitors become accustomed to paying a reasonable entrance fee, visitation would be expected to increase over pre-entrance-fee levels.

Estimated Annual Net Entrance Fee Revenue
at Hurricane Ridge in Olympic National Park

Revenue

Number of visitors June 15 to September 7, 1981, at Hurricane Ridge		119,150
Average number of visitors per vehicle	÷	<u>2.6</u>
Vehicles arriving at Hurricane Ridge		45,827
Percent of vehicles arriving during collection hours	x	95%
Vehicles entering during fee collection hours		<u>43,536</u>
Percent of vehicles arriving after entrance fees imposed	x	90%
Vehicles arriving after entrance fee imposed		<u>39,182</u>
Percent of vehicles subject to paying an entrance fee	x	86%
Potential fee-paying vehicles		<u>33,697</u>
Reasonable entrance fee	x \$	<u>3</u>
Gross annual revenue		<u>\$101,091</u>

Collection costs

Capital investment:

Equipment (cash register estimated to cost \$1,000)	\$1,000	
Capital investment amortized at 20% a year		- 200

Annual operating costs:

Salaries (2 GS-3 temporary employees for 6 2-week pay periods at \$417 per pay period and 1 GS-4 temporary employee for 6 pay periods at \$468 per pay period for both fee collection and supervision- overhead)	5,004
Supplies (cash register tape, adminis- trative forms, printing)	<u>1,000</u>

Total annual operating costs	- 8,812
Total annual collection costs	<u>- 9,012</u>
Estimated annual net entrance fee revenue	<u>\$ 92,079</u>

Benefit/cost ratio is 11.2:1

METHOD USED TO ESTIMATE THE POTENTIAL REVENUE
FROM INCREASING ENTRANCE FEE LEVELS AND LOCATIONS

The availability of information necessary to estimate potential entrance fee revenues varied depending on whether the park unit was an entrance fee or a nonfee unit. We have greater confidence in our increased revenue estimates at units currently charging entrance fees because more precise information on collection costs, collection schedules, and numbers of fee-paying visitors was available. However, we believe our revenue estimates at both fee and nonfee sites are conservative. Although our analysis in chapter 2 indicates that fees should be raised as much as 465 percent at those units now charging entrance fees, we assumed entrance fee increases averaging about 150 percent, the lowest percent of increase that seemed appropriate based on our analysis using all six criteria for setting entrance fee levels. At units not currently charging entrance fees, we assumed maximum entry fees of \$2 a person or \$3 a vehicle. These low rates should ensure that people are not priced out of visiting our national parks.

For both fee and nonfee units, we based our data and revenue projections on fiscal year 1981 visitor levels and current National Park Service rules and regulations governing fee collection procedures. For example, we assumed that fees would be collected by Park Service personnel, rather than by mechanical devices, and that persons 15 and younger and 62 and older would continue to be admitted free.

ESTIMATING REVENUE AT FEE UNITS

At each of the 26 fee parks contacted, we spoke with the park superintendent, assistant superintendent, chief ranger, and/or park manager. We asked them to estimate, based on their knowledge of park visitor patterns and profiles, the impact on fiscal year 1981 visitation of raising entry fees to a reasonable level, usually an increase of 150 percent. Realizing that these estimates may have a wide margin of confidence, we attempted to assure their reasonableness by researching independent studies that have been conducted on the public's willingness to pay higher fees. (See ch. 2.) Table I shows what information was usually available and what information was usually estimated at the fee parks we contacted. We assumed that any decline in visitation due to higher entrance fees would be exactly offset by the usual increase in annual visitation of about 5 percent.

Table I

Availability of Information Requested

<u>Information requested</u>	<u>Available</u>	<u>Not available (estimated)</u>
Park visitation level by month	x	
Visitor-to-vehicle conversion factor	x	
Fair entrance fee to be charged		x
Impact on visitor level of increased fee		x
Fee collection schedule (daily and yearly)	x	
Annual collection costs	x	

ESTIMATING REVENUE TO NONFEE UNITS

Our revenue estimates at nonfee units are more tentative because we had to rely more upon the park personnel's estimates of direct and indirect collection costs, desirable collection times, and reasonable fees. Transportation or housing costs were included in our cost computations for some units, even though Park Service regulations do not require them to be furnished, because the park's remoteness or the potential location of the entrance stations justified including these costs. For example, at Lake Mead NRA, two vehicles were justified as an entrance station collection cost in order to collect receipts because two of four proposed entrance stations are about 50 and 80 miles from the NRA's headquarters in Boulder City. Cost for Park Service-provided housing was not included due to the availability of commercial housing in nearby communities. The following table shows the greater number of estimates used in projecting revenue at the nonfee units.

Table II

Availability of Information Requested

<u>Information requested</u>	<u>Available</u>	<u>Not available (estimated)</u>
Park visitation levels by month	x	
Visitor-to-vehicle conversion factor	x	
Fair entrance fee to be charged		x
Impact on visitor levels of entrance fee		x
Fee collection schedule (daily and yearly)		x
Annual collection costs:		
Salary--grade level and number of employees		x
Overhead		x
Transportation		x
Other		x
Capital costs:		
Construction required		x
Roads		x
Equipment		x

Whenever possible, we tried to increase the confidence in our park cost estimates by using independent sources or studies to verify or adjust our computations. For example, superintendents' estimates of the cost of constructing entrance stations ranged from \$5,000 to \$50,000. As a result, we contacted the Park Service's Denver Service Center, which estimated an average construction cost of \$21,600, including utilities and some equipment. We used this figure in most cost estimates. To estimate an average annual vehicle cost, we contacted the General Services Administration's Motor Pool and obtained a vehicle rental cost of \$250 per month, including mileage; we used this figure in our calculations rather than individual park estimates.

Although our net revenue amounts (see p. 20) are tentative due to the many cost and revenue assumptions used to derive these figures, large adverse changes in gross revenue or cost would be necessary to eliminate the cost effectiveness of collecting fees at most sites we reviewed. Table III shows the format we used to estimate the annual net entrance fee revenue potential of initiating entrance fees at the 45 nonfee National Park System units we reviewed.

Table III

Format Used To Estimate Annual
Net Entrance Fee Revenue

<u>Revenue</u>	
Number of visitors in fiscal year 1981, fee collection season and/or location (note a)	XXXX
Average number of visitors per vehicle (note b)	÷ XXXX
Vehicles arriving in fiscal year 1981, fee collection season and/or location	XXXX
Percent of vehicles arriving during collection hours (note c)	X <u>XX%</u>
Vehicles arriving during collection hours	XXXX
Percent of vehicles arriving after entrance fees imposed (note d)	X <u>XX%</u>
Vehicles arriving after entrance fees are imposed	XXXX
Percent of vehicles subject to paying entrance fee (note e)	X <u>XX%</u>
Potential fee-paying vehicles	XXXX
Entrance fee to be charged (note f)	X \$X.XX
Gross annual revenue	<u>\$XXXX</u>

Collection costs

<u>Capital investment:</u>	
Collection booth (note g) \$21,600 each	\$ XXXX
Cash register	XXXX
Road improvements (note h)	XXXX
Total capital investment	<u>XXXXXXXX</u>
Capital investment amortized at 20 percent per year (note i)	- XXXX
 <u>Annual operating costs: (note j)</u>	
Salary (no. of employees GS-3 temp. at \$417 per pay period x no. of pay periods of work) (note k)	XXXX
Overhead (supervision and general administrative costs) (note l)	XXXX
Transportation \$3,000/vehicle/yr. (GSA avg. rental charge at min. monthly charge) (note m)	XXXX
Supplies (note n)	XXXX
Other (note n)	<u>XXXX</u>
Total annual operating costs	- <u>XXXX</u>
Total annual collection costs	- <u>XXXX</u>
Estimated annual net entrance fee revenue	<u>\$XXXX</u>

Benefit/cost ratio is xx.x:1

NOTE: Footnotes are on pages 45 and 46.

Footnotes to Table III

- a/Monthly visitor count reported by each park which we cumulated for fiscal year 1981.
- b/Average number of passengers per vehicle formulated for each park and used in the monthly visitor report.
- c/Park estimate based on daily average traffic flow.
- d/Park official's estimate of the percent of vehicle operators that would be willing to pay the proposed fee.
- e/This was usually an estimate by park personnel, verified by available park surveys. In those cases where an estimate was not made or was not reasonable, we assumed 100 percent of the vehicles were subject to paying the entrance fee less those vehicles with an occupant 62 years or older, which were assumed to use a Golden Age Passport allowing them free entry. To estimate the number of vehicles with an occupant 62 years or older, we assumed that the age distribution of park visitors reflects the age distribution of the U.S. population as a whole. About 14 percent of the adult population is 62 years of age or older. Therefore, 86 percent (100 percent - 14 percent) of the vehicles are subject to paying entrance fees. We did not consider the number of Golden Eagle Passport holders in our revenue calculations at nonfee parks because we assumed that the revenue from the sale of additional Golden Eagle Passports would offset free entry by passport holders. We did not consider the number of Golden Access Passport (passes for the physically handicapped) holders because of the small number of the passes issued. In addition, we did not consider reentries because (1) the valid reentry period differs at each park and (2) no data was available on the percent of visitors reentering.
- f/This was the fee that we and officials at each park thought would be reasonable.
- g/The Denver Service Center of the National Park Service estimated the construction cost of a collection facility to be \$21,600, including utilities and equipment.
- h/Park personnel estimated highway construction or reconstruction costs. The Denver Service Center could not estimate highway costs due to the many site-specific variables that affect cost, such as terrain, soil composition, remoteness, desired width and thickness, etc.
- i/Total capital investment costs amortized at 20 percent a year.

j/Annual operating costs are those direct costs resulting solely from the recreation fee collection efforts and may include the following:

- Salaries and benefits.
- Transportation.
- Printing.
- Equipment.
- Utilities (for entrance stations).
- Maintenance.
- Supplies.

k/A GS-3 is the grade of many entrance station collectors at the parks we visited. We used this grade's salary level--adjusted for fringe benefits which differ for permanent and temporary employees. Permanent employees receive \$512 a year more in fringe benefits than temporary employees.

l/We estimated the cost of overhead (general administration and supervision expenses) as being 10 percent of direct salary costs unless park personnel provided a more specific estimate, such as one full-time GS-5 supervisor.

m/General Services Administration's Motor Pool estimated that an average vehicle assigned to an agency on a long-term basis would cost \$250 a month, including about 1,000 miles driven each month.

n/Estimate of park officials.

FACTORS PREVENTING THE CHARGING OF ENTRANCE FEES

Park Service unit	Entrance fee uneconomical			Entrance fee not feasible	
	Low visita- tion	Cost of improve- ment	Too many accesses	Property deed restric- tions	Other reasons
Abraham Lincoln Birthplace NHS (note a)				x	
Acadia NP			x		
Biscayne NM			x		
C&O Canal NHP			x		
Cape Hatteras NS			x		
Delaware Water Gap NRA			x		
Devils Postpile NM	x				
Fort Caroline N MEM	x				
Fort Clatsop N MEM		x			
Fort Matanzas NM	(b)				
George Rogers Clark NHP	(b)				
Great Smoky Mountains NP				x	
Lake Meredith NRA			x		
Lincoln Home NHS				x	
Mammoth Cave NP					(c)
Nez Perce NHP		x			
North Cascades NP			x		
Saratoga NMP	x				
Shiloh NMP			x		
Statue of Liberty NM					(c)
Valley Forge NHP			x		
Whitman Mission NHS		x			

a/Abbreviations: NHP--National Historic Park; NHS--National Historic Site; N MEM--National Memorial; NMP--National Military Park; NM--National Monument; NP--National Park; NRA--National Recreation Area; NS--National Seashore.

b/The superintendent at this unit estimated that if an entrance fee were imposed, the visitor level would decrease to such an extent as to make entrance fee collection uneconomical. At the other three units with low visitations, current visitor levels are not sufficient to make collection of an entrance fee economical.

c/At this unit, an entrance fee may not be feasible because visitors already pay a user fee. At Mammoth Cave National Park, the Park Service charges \$1.50 to \$3 for the guided cave tours. The price varies depending on the length of the tour. At the Statue of Liberty National Monument, the concessionaire charges visitors a \$1.50 transportation fee for the boat trip to Liberty Island; in addition, visitors pay the Park Service a 10-cent fee for the elevator ride to the top of the statue.

A WATER RESOURCES COUNCILMETHOD FOR DETERMINING VISITOR BENEFITS

The Water Resources Planning Act of 1965 established the Water Resources Council which consists of the following members: the Secretaries of the Interior, Agriculture, Army, Commerce, Energy, Housing and Urban Development, and Transportation and the Administrator of the Environmental Protection Agency. Part of the Council's function is to formulate standardized methods to evaluate Federal water and related land resource projects.

The "unit-day-value" (UDV) method used in chapter 3 to estimate the value of a recreation day at five major national parks is one of the three methods that the Water Resources Council developed to estimate the value of recreation benefits at proposed water projects. We selected the UDV method because it is more widely used than the other two methods. A thorough explanation of all three methods can be found in the Code of Federal Regulations, title XVIII, section 713.901.

The UDV method is a two-step process. First, a judgment is made and points are assigned to five criteria of a recreation experience. These criteria reflect the number and quality of recreation activities available, the travel time required to reach other recreation opportunities, the degree to which facilities have been developed at the site, the site's accessibility, and the site's esthetic qualities. The following table shows these criteria and the points that can be assigned to each.

Guidelines for Assigning Points for General Recreation

<u>Criteria</u>	<u>Judgment factors</u>				
Recreation	Two general activities (note a)	Several general activities	Several general activities; one high-quality value activity (note b)	Several general activities; more than one high-quality value activity	Numerous high-quality value activities; some general activities
Total points - 30 Point value:	0-4	5-10	11-16	17-23	24-30
Availability of opportunity (note c)	Several within 1 hr. travel time; a few within 30 minutes travel time	Several within 1 hr. travel time; none within 30 minutes travel time	One or two within 1 hr travel time; none within 45 minutes travel time	None within 1 hr. travel time	None within 2 hr. travel time
Total points - 18 Point value:	0-3	4-6	7-10	11-14	15-18
Carrying capacity (note d)	Minimum facility development for public health and safety	Basic facilities to conduct activity(ies)	Adequate facilities to conduct activity(ies) without deterioration of the resource or activity experience	Optimum facilities to conduct activity(ies) at site	Ultimate facilities to achieve intent of selected alternative
Total points - 14 Point value:	0-2	3-5	6-8	9-11	12-14
Accessibility	Limited access by any means to site or within site	Fair access, poor roads to site; limited access within site	Fair access, fair roads to site; fair access, good roads within site	Good access, good roads to site; fair access, good roads within site	Good access, high-quality road to site; good access within site
Total points - 18 Point value:	0-3	4-6	7-10	11-14	15-18
Environmental quality	Low esthetic factors (note e) exist that significantly lower quality (note f)	Average esthetic quality; factors exist that lower quality to minor degree	Above average esthetic quality; any limiting factors can be reasonably rectified	High esthetic quality; no factors exist that lower quality	Outstanding esthetic quality; no factors exist that lower quality
Total points - 20 Point value:	0-2	3-6	7-10	11-15	16-20

NOTE: Footnotes are on page 50.

After values are assigned to each criterion, they are totaled up to get a single point value for the site. The following table is then used to convert the point totals to dollar values.

<u>Number of Points</u>	<u>Dollar value of a recreation day</u>
0	\$1.07
10	\$1.25
20	\$1.44
30	\$1.68
40	\$1.93
50	\$2.30
60	\$2.48
70	\$2.67
80	\$2.85
90	\$3.04
100	\$3.22

To obtain a dollar value for recreation days at sites whose point total was not evenly divisible by 10, we used a standard interpolation process. We multiplied this dollar value by four to obtain the dollar value of a recreation day for a family of four, as shown in the table on page 10. For example, Yellowstone National Park received 80 points to which the table assigns a value of \$2.85 per recreation day, or \$11.40 for a family of four.

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Footnotes for table on page 49

- a/General activities include those that are common to the region and that are usually of normal quality. This includes picnicking, camping, hiking, riding, cycling, and fishing and hunting of normal quality.
- b/High-quality value activities include those that are not common to the region and/or Nation and that are usually of high quality.
- c/Likelihood of success at fishing and hunting.
- d/Value should be adjusted for overuse.
- e/Major esthetic qualities to be considered include geology and topography, water, and vegetation.
- f/Factors to be considered in lowering quality include air and water pollution, pests, poor climate, and unsightly adjacent areas.



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

JUN - 8 1982

Mr. Henry Eschwege
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Eschwege:

Thank you for the opportunity to review the draft of the proposed report, "Increasing Park Entrance Fee—NPS and Congressional Action Required". The draft has been reviewed for accuracy and context, and we have concluded that a great deal of effort was put into this project. The end result is excellent.

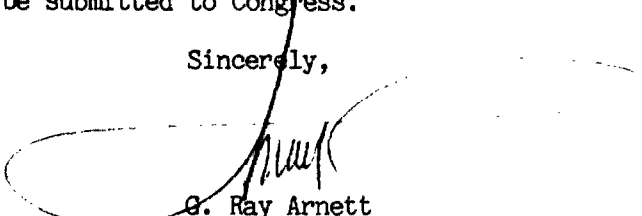
We agree with the proposed recommendations to the Secretary and work has begun to put all the recommendations into effect. In early April, a National Park Service work force met to discuss the entire issue of entrance fees, user fees, and special permits. As a result of that session, guidelines are now being written to assist each NPS unit in analyzing fee programs. Recognizing that proposed legislation has been withdrawn by the department, we will only consider the feasibility of establishing new entrance fee areas and raising entrance fees. User fees that are not effected by proposed legislation will also be analyzed and implemented by October of 1982. Other changes will occur if authority is granted through legislation.

The GAO reports that the National Park Service proposed an entrance fee and Golden Eagle increase in 1979. We have continued to promote that position. The proposed legislation would have removed all legislative prohibitions, which prevented establishment of entrance fees at many units of the National Park Service. We believe criteria used to establish entrance fees should be applied to all units of the National Park System.

We strongly emphasize the importance of reimbursement for fee collection costs. The report makes reference to park superintendents that reduce fee collection hours to save money. In reality, such decisions weigh the competing management needs for the available personnel and dollars. Providing the incentives that will enable collection of fees to cover the full cost of collection is not only sound economically but good management practice.

We look forward to the final report. We believe it will have positive influence on fee legislation that may be submitted to Congress.

Sincerely,



G. Ray Arnett
Assistant Secretary for Fish
and Wildlife and Parks

(148100)

22681

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