

TRENDS IN  
CONSUMER EXPENDITURES AND PUBLIC INVESTMENTS FOR  
OUTDOOR RECREATION

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Abstract.--In inflation-adjusted dollars, annual consumer spending for outdoor recreation was stable to slightly declining between 1974 and 1981. Recent data reveal that this trend is continuing but may reverse itself as consumers divert more of their post-recession dollars toward vacation travel and outdoor recreation. Expenditures on outdoor recreation-related travel showed a real growth increase of over 100%. Public expenditures, acres of recreation land, employment, and revenues showed substantial growth from 1960 to the mid-1970s. However, since the mid-1970s the rate of growth has been slowing and some actual decreases have been noted.

Additional keywords: leisure and travel industry receipts; public investments, personnel, and revenues; social and economic trends.

INTRODUCTION

The following statements from well-known and respected periodicals illustrate the significance of leisure spending in the U.S.

"As the summer of 1984 begins, an unusual battle is raging. Political sentiment runs high, and spending is at record levels. Every state, it seems, wants your vacation dollars" (Blyskal 1984, p. 46).

"In American today, sports is more than fun and games. It's big business...Not only are sales soaring for everything from exercise bikes to running shoes, but manufacturers are hard at work designing new products to excite the sports crowd" (Sanoff 1984, p. 26).

Transition into a post-industrial society has created unprecedented growth in the service industries of the U.S. One of these industries, the leisure industry in both private and public sectors, is the broad focus of

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this paper. The perception of this industry is changing from primarily that of a provider of public services to that of a key to the growth of many states' economies. Significantly, this transition is occurring even in states like Michigan, Ohio, and Pennsylvania, where heavy industry has traditionally dominated.

Our paper focuses on outdoor recreation as a subset of the leisure industry. We will emphasize trends in consumer expenditures and in various indicators of the economic importance of public sector outdoor recreation. Except for comparison purposes, we do not present trends in recreation in general as defined by the Bureau of Labor Statistics in their Survey of Current Business. Instead, we attempt to concentrate on just those sectors impacted by outdoor recreation.

## METHODS

We collected and analyzed secondary data from the following sources: U.S. Bureau of the Census; U.S. Bureau of Economic Analysis; U.S. Bureau of Labor Statistics; Department of Interior's National Recreation Surveys; the Outdoor Recreation Resources Review Commission Reports; U.S. Federal Highway Administration; the U.S. Forest Service's Resources Planning Act Assessments; federal agency records; Outdoor Recreation Statistics (Clawson and Van Doren 1984); American Statistics Index; Statistical Reference Index; U.S. Travel Data Center; Forbes Magazine; U.S. News and World Report; Sales and Marketing Management Magazine's annual reports and surveys of buying power; The Council of State Planning Agencies; and industry associations (e.g., Recreation Vehicle Industry Association, National Association of Boat Manufacturers, National Sporting Goods Association, National Snowmobile Institute).

The first criterion for selecting data bases for trend analysis was that the data be comparable across time. Our second criterion was that the data series covered a sufficient time period (i.e., data points) to permit the establishment of trends. Through these criteria, we were able to establish trends in consumer spending on outdoor recreation for the period 1974 to 1981 and trends in public sector involvement for the period 1960 to 1984. Due to missing or unavailable data, we were unable to continue the trend analysis from 1982 to 1984 for all consumer expenditures. However, where possible, we mention gross indicators of the most recent trends in consumer spending for outdoor recreation (e.g., actual and projected sales estimates of all sporting goods combined and travel industry receipts).

## RESULTS

### Equipment Expenditures

Though seldom systematically tallied, expenditures on outdoor recreation equipment are generally assumed to be: (1) in the billions of dollars annually and (2) increasing over time. There is ample basis for this

assumption, given a growing U.S. population which is increasingly involved in outdoor recreation. Changes have occurred in "required" equipment for most forms of outdoor recreation, and some modern recreation activities have been spawned by equipment development (e.g., the snowmobile). Our purpose is to estimate the dollars spent annually in the U.S. on outdoor recreation equipment, and to describe how this spending has changed in recent years. One specific goal is to estimate recent trends in expenditures for all types for outdoor recreation. Though equipment expenditures represent only a part of total expenditures for outdoor recreation, time series data are accessible for developing equipment expenditure trends. Expenditures for many other categories of expenditures, for example food, are far more difficult to derive for outdoor recreation because secondary data series do not include the information needed to assess the percentage of total sales attributable to outdoor recreation. Hence, to the extent that equipment and other outdoor recreation expenditures have a monotonic relationship, equipment expenditure trends may serve as a useful proxy for the overall trends in outdoor recreation spending.

Personal consumption expenditures by major product types are reported by the U.S. Bureau of Economic Analysis (1977, 1983) and "recreation" is one of the product types included. Unfortunately, the recreation product category is dominated by non-outdoor recreation products, such as radio and television sets, toys, books, and magazines, so that it is not possible to extract outdoor recreation-specific products. The recently published Statistics on Outdoor Recreation (Clawson and Van Doren 1984) contains a wealth of information and was used extensively in this section. These authors apparently had no more success than we in their search for outdoor recreation equipment expenditures. Missing information and inconsistencies in reported data complicate extracting meaningful trend data for outdoor recreation equipment expenditures.

From the data provided by Clawson and Van Doren (1984), it was possible to select a satisfactory set of expenditure types for the period 1974-1981 (Table 1). Hunting and fishing license sales are included. Expenditures for equipment also used indoors (e.g., basketball) and for some other types (e.g., soccer) were not included because data were not available for the full 8-year period. Thus, the totals reported in Table 1 are less than the total expenditures for all types of outdoor recreation equipment.

Interpreting the trends in Table 1 is complicated by two factors. First, recreational vehicle expenditures are large relative to all other expenditure types and are reported as retail value of shipments rather than sales. The annual fluctuations in value of RV shipments masks the overall trend in outdoor recreation equipment sales. This is evident from the "totals-less-RV-shipment" figures in Table 1. The second difficulty lies in accounting for the influence of inflation.

Whether one focuses on the totals with or without RV shipments, it is evident that expenditures have increased significantly. The total, less RV shipments, increased in each of the 8 years, while the total including RV shipments peaked in 1978. The percentage change over the entire period was

Table 1.--Sales of selected outdoor recreation related equipment and licenses

Expenditures	1974	1975	1976	1977	1978	1979	1980	1981
(\$ Million)								
Firearms & Hunting Eq.	891	996	1030	1134	1242	1281	1391	1488
Bicycles & Supplies	1090	855	894	996	1006	1290	1233	1418
Fishing Tackle	440	469	476	492	472	516	539	571
Camping Eq.	352	447	529	492	472	434	503	548
Golf Eq.	535	554	601	566	508	488	483	498
Snowskiing Eq.	344	356	404	483	594	606	572	572
Snowmobiles	240	224	200	265	311	254	216	259
Baseball & Softball Eq.	145	137	149	168	169	142	158	177
Archery Eq.	99	122	132	132	127	130	149	163
	a							
Water Skis	80	80	87	110	123	123	123	123
Skin Diving	71	60	73	62	65	69	70	70
Football	69	70	72	77	72	50	50	50
Retail Boating Expenditures	4607	4800	5333	5920	6690	7500	7370	8250
RV Shipments (Retail Value)	1392	2320	4283	5327	5683	3582	1950	2775
	a							
Hunting Licenses	141	155	164	173	185	199	222	242
	a							
Fishing Licenses	130	142	155	156	159	174	196	213
<b>Total</b>	<b>10,626</b>	<b>11,787</b>	<b>14,582</b>	<b>16,553</b>	<b>17,878</b>	<b>16,838</b>	<b>15,225</b>	<b>17,417</b>
Growth Index	100	111	137	156	168	158	143	164
Adjusted CPI	100	111	118	124	133	146	160	173
<b>Total Less</b>								
RV Shipments	9,234	9,467	10,299	11,226	12,195	13,256	13,275	14,642
Growth Index	100	102	112	122	132	144	144	158

a) Not available in the source document. Estimated by authors.

Source: Statistics on Outdoor Recreation. Resources for the Future Inc., Washington, D.C., 1984, Clawson, Marion and C. S. Van Doren (eds.).

64 percent with RV shipments and 59 percent without. Over this period, the U.S. Bureau of Labor Statistic's monthly consumer price index (CPI) for durable commodities increased by about 74 percent. It appears then that inflation more than accounted for the observed increases in expenditures. Furthermore, U.S. Bureau of Economic Analysis data (1977, 1983) indicate that per capita disposable personal income (in inflation adjusted dollars) and per capita personal consumption expenditures (in inflation adjusted dollars) both increased by about 25 percent over this period. It would appear that constant dollar expenditures for outdoor recreation equipment were stable to slightly declining over the 1974-81 period and that their share of per capita personal consumption expenditures declined significantly.

Since 1981, there is good evidence of strong growth in inflation-unadjusted sales of outdoor recreation equipment. For example, sales of all types of sporting equipment (indoor and outdoor, excluding RV's, bicycles, and snowmobiles, but including athletic clothing) increased 13 percent between 1982 and 1983 (Sanoff 1984) and were projected to increase 10 percent in 1984 over 1983 (Hume 1984). Fleetwood Enterprises (60 percent of sales are from RV's) enjoyed a 31.9 percent return on equity in 1983, yielding an 8.1 percent sales growth from 1979-1983 (Ettorre 1984). We can state with confidence that equipment expenditures amounted to at least \$15 billion in 1981 (\$17 billion with RV shipments); however, it must be noted that our data do not account for expenditures on a host of other items including: clothing, cameras, binoculars, equipment maintenance and repairs, and insurance.

#### Transportation Expenses

The outdoor recreation experience can be divided into five phases: anticipation, travel to, on-site experience, travel back, and recollection (Clawson and Knetsch 1966). Given the outdoor recreation preferences of the U.S. population and its geographical distribution relative to outdoor recreation areas, considerable sums are spent during the travel phases. Motorized vehicles are the dominant mode of transport for outdoor recreation travellers. An entire sector of the motor vehicle industry, the recreation vehicle industry, has arisen to service the needs of recreation travellers. Yet, there is no question that multiple purpose vehicles (e.g., the family car) log far more outdoor recreation miles than do vehicles classified as RVs (U.S. Federal Highway Administration 1977). To what extent suitability for outdoor recreation enters into the purchase decisions of multiple purpose vehicles is largely unknown but is likely in part responsible for the growing popularity of pick-up trucks, van conversions, and mini-vans as the auto industry down-sizes the passenger car fleet.

Regional and activity-specific studies (e.g., Stynes et. al. 1982) reporting transportation costs are relatively common in the literature, but most often focus only on variable costs, such as gasoline purchases. We were unable to find any study or secondary data estimating full transportation costs for all forms of outdoor recreation. Yet, an expenditure item of such probable significance deserves some attention, even if only crude estimates can be derived. If nothing else, such estimates will illustrate the possible

extent of the void created when transportation expenditures (fixed and variable) are omitted from estimates of total national spending on outdoor recreation.

Hints of the potential importance of outdoor recreation expenditures were found in several secondary data series described in the previous section. However, one or more obstacles prevented extracting an outdoor recreation travel expenditure estimate from any one data series. Furthermore, merging of data series is impossible due to various inconsistencies in, for example, levels of aggregation. The obstacles to establishing an expenditure trend are even more severe. Various relevant data series differ in time periods covered, often are not continuous, or simply stop in 1977. During the previous National Outdoor Recreation Trends Symposium, Stynes and Brown (1980) showed how outdoor recreation data series often do not display trends but show methodological differences instead. It appears that little has changed since the first National Outdoor Recreation Trends Symposium.

After exploring several data series and approaches, the following appeared to offer the best estimate of a trend in outdoor recreation-related transportation expenditures. All data used were taken from Motor Vehicle Facts and Figures (Motor Vehicle Manufacturers Association of the U.S. 1984). We estimated the percentage of total motor vehicle travel attributable to outdoor recreation and then applied this estimate to total personal consumption expenditures for motor vehicle transportation.

The most recent information on purpose of travel is the U.S. Federal Highway Administration's 1977 National Personal Transportation Study. In 1977, privately owned motor vehicles (i.e., cars, station wagons, vans, pickups, other trucks, motorcycles, and self-contained recreational vehicles) were used on 83.7 percent of all trips. The first four vehicle types accounted for 82.4 percent of all trips. The Highway Administration study also reported how total trips and total miles travelled were distributed by primary purpose of trip. Since average trip length varies widely across different trip types (Cordell and English 1984), percent of total travel attributable to outdoor recreation is a more appropriate statistic for deriving the estimates we are seeking. Total motor vehicle miles travelled in 1977 was distributed among trip purposes as follows:

	<u>Percent</u>
Earning a living	37.7
Family and Personal Reasons	22.9
Civic, Educational, Religious	4.7
Social and Recreational	24.0
Other and Unknown	<u>10.7</u>
TOTAL	100.0

While outdoor recreation is likely present in several of these trip purposes, information to estimate the outdoor recreation share was not available except for the "Social and Recreational" purpose. This general category was broken down into the four subcategories presented below:

	<u>Percent</u>
Visiting Friends and Relatives	11.3
Pleasure Driving	0.8
Vacations	0.5
Other	<u>11.3</u>
SOCIAL AND RECREATIONAL SUBTOTAL	<u>24.0</u>

Clearly, not all of these trips involved outdoor recreation, but certainly they accounted for some portion of the travel credited to these categories. Subjective judgment, combined with some clues from related studies, was used to derive an estimate of the proportion of each which could be credited to outdoor recreation.

We decided not to assign a share of the "Visiting Friends and Relatives" trip type to outdoor recreation. Outdoor recreation is surely a part of many visits to friends and relatives and thus introduces a conservative bias in our estimates. "Pleasure Driving" has traditionally been considered as primarily an outdoor recreation activity (Clawson and Knetsch 1966, Clawson and Van Doren 1984), thus its full 0.8 percent of total travel was credited to outdoor recreation. Outdoor recreation plays a significant role in "vacation" travel, so half of its 0.6 percent share of total travel was credited to outdoor recreation. We decided to allocate 25 percent of the "Other" trip category's 11.3 percent share of total travel to outdoor recreation. Other studies (e.g., U.S. Bureau of the Census 1972, U.S. Travel Data Center 1978) indicated that on round trips of 200 or more miles outdoor recreation accounted for 25-30 percent of miles traveled, as did visiting friends and relatives. In summary, outdoor recreation's share of total motor vehicle travel in 1977 appears to have been about 4 percent (0.8 percent pleasure driving + 0.3 percent vacations + 2.8 percent other). We found no information indicating how this market share may have changed over time. Indeed there is some conflicting evidence as to what is occurring with outdoor recreation travel. Frechtling (1984) indicated that the number of long trips for outdoor recreation is fairly constant; Cordell and English (1985) show that the distribution of outdoor recreation trips is shifting dramatically toward shorter trips. There is also widespread agreement that participation in outdoor recreation is rising steadily, indicating that more people are travelling more outdoor recreation miles. Since the trend in percent of travel expenditures caused by outdoor recreation is unclear, we assume that these conflicting observations have balanced out, and that the 4 percent figure has remained unchanged.

The U.S. Bureau of Economic Analysis, BEA, regularly reports consumer spending for transportation. Their "Expenditures for User-Operated Transportation" category includes the same vehicle types covered in the 1977 personal transportation study discussed above; thus the two data series mesh well. Expenditure categories include: new and used vehicles; tires, tubes, accessories and parts; repair, greasing, washing, parking, storage and rental; gasoline and oil; bridge, tunnel, ferry and road tolls; and insurance premiums less claims paid. Total expenditures for motor vehicle

transportation and the 4 percent share estimated for outdoor recreation are provided below:

Year	Transportation expenditures (\$ millions)	Outdoor recreation related expenditures for transportation (\$ millions)
1970	74,268	2,971
1972	92,792	3,912
1974	108,762	4,350
1976	144,103	5,764
1978	184,586	7,383
1980	218,504	8,740
1982	249,440	9,978
1983	275,088	11,004

These estimates indicate that outdoor recreation transportation expenditures have increased 270 percent over this 14-year period. Over this time period the CPI increased from 116.3 to 298.4 or 157 percent. Also, the per-mile cost of operating a car (full-sized sedan in 1970 vs. intermediate in 1983) increased from 15 cents per mile to 33.5 cents, or 123 percent. Thus, inflation would appear to have been responsible for 123 to 157 percent of the observed 270 percent growth in outdoor recreation expenditures on motor vehicle transportation, while the remaining 114-147 percent is growth in excess of inflation.

#### Equipment and Transportation Expenditures for Outdoor Recreation

It is fairly simple to sum equipment and transportation expenditure estimates to arrive at a composite estimate and trend. The only complication involves the presence of RV expenditures in both the equipment and transportation estimates. To avoid double counting, totals for equipment less RV shipments will be used (Table 2).

During the period 1974-81, transportation plus equipment expenditures for outdoor recreation increased from nearly \$13.6 billion to \$24.0 billion, a growth of about 77 percent. To put this increase in perspective, it is necessary to account for the influence of inflation on the observed change in expenditures. While probably not the best possible index, the CPI (all items) provides a reasonable basis for assessing inflation of the composite outdoor recreation expenditure trend. The CPI (all items) increased from 147.7 (1964=100) to 272.4 between 1974 and 1981, about 84 percent. Thus, the 77 percent observed increase in equipment and transportation expenditures for outdoor recreation lagged somewhat behind inflation, indicating that the composite expenditure trend over the 1974-81 period in constant dollars was slightly declining.

Table 2.--Outdoor recreation expenditures - summary statistics

Expenditure category	1974	1976	1978	1980	1981 <sup>a</sup>
(\$ million)					
Transportation	4,350	5,764	7,383	8,740	9,359
Equipment (- RV)	9,234	10,299	12,195	13,275	14,642
Total	13,584	16,063	19,578	22,015	24,001
Growth Index	100	118	144	162	177
Shipments Retail RV	1,392	4,283	5,683	3,582	2,775
Growth Index	100	308	408	257	199
CPI (All Items)	148	170	195	247	272
Adjusted CPI	100	115	132	167	184

<sup>a</sup>

Average of the 1980 and 1982 estimates.

#### Government Expenditures and Growth

In this section of the paper, trends in local, state and federal government recreation resources, expenditures and personnel, as indicators of the economic importance of government in recreation, are examined. Comparable data do not exist for all three levels of government; less information is available for local government than is available for state and federal governments.

Local Government.--Municipal and county park and recreation areas increased from 12,101 areas and 417,290 acres in 1930 to 31,235 areas and 644,067 acres by 1950. By 1960, total local government acreage was about 18 million acres, of which 3.5 million were designated for recreational and related purposes, including about 1 million acres of land specifically designated as park and recreation sites (ORRRC 1962). Between 1960 and 1982, local government added about 1.7 million acres of recreational land--an approximate 49 percent increase in 22 years (ORPRG 1983).

Lancaster (1976) reported average developed and total acreages for city parks and recreation land. His data indicate that a roughly proportionate relationship between population size and recreation acres existed in 1976. We infer from these data that there has been a trend in growth of municipal recreation land that has closely paralleled the population growth in cities. It seems that as cities have grown in size, they have continued to invest in recreation land in rough proportion to their population growth.

Table 3 indicates the growth of expenditures and employment by city and county parks and recreation departments. While the population of the United States grew 25 percent between 1962 and 1982, total parks and recreation expenditures by local government during this same period grew 644 percent--an average annual compounded growth rate of 10.5 percent. Number of people employed by parks and recreation departments increased at an average annual compounded rate of 4%, while payroll for these employees rose at an average annual compounded rate of 9.2%.

Since the mid-1970's there have been some important changes. The average annual compounded rate of growth of employees has dropped to just over 2 percent, and most of the growth has been in part-time employees. The average annual compounded rate of increase in payroll has dropped from almost 11% in the period 1972-1977, to under 7% for the period 1977-1982. Much of this drop is due to the dramatic slowing in the growth in number of full-time employees during the latter period. Also, the proportion of local park and recreation expenditures for capital outlay and construction has decreased by over 10%, even though actual construction dollars have doubled since 1972. Apparently more of the city and county park and recreation budgets are going to the operation and maintenance of existing programs, facilities, and parks, rather than to expanding capacity.

Table 3.--Trends in parks and recreation expenditures, employment, and payrolls for local governments in the United States, 1960-1982<sup>a</sup>

Year	Expenditures			Employment			
	Capital and Construction	Portion of Total	Total	Full Time	Part Time	Total	Payroll
	(Millions)	(Percent)	(Millions)	(Thousands)			\$ (Millions)
1962	477	50.4	886	84	26	110	34.1
1967	705	54.6	1,291	96	44	140	48.2
1972	1,346	58.1	2,318	111	66	177	85.2
1977	1,879	48.0	3,914	141	76	217	143.1
1982	2,913	44.2	6,588	148	95	243	199.0

<sup>a</sup>

Includes parks and recreation expenditures and employment totals, not just outdoor recreation.

SOURCE: Census of Governments, Compendium of Government Finances, U.S. Dept. of Commerce; Census of Government, Compendium of Public Employment, U.S. Dept. of Commerce.

Finally, since about 1978, federal and state financial assistance to local government for parks and recreation has declined. Appropriations for the USDI Land and Water Conservation Fund have been cut by over 50%, from over \$800 million in 1978 to \$335 million in 1983. Declines in several other federal assistance programs have severely impacted local operations. These decreases in part also explain the slower growth in employment, capital outlays, and construction.

State Government.--By 1941, about 4 million acres of state system park land had been acquired. These acres were being managed by the states with a total budget of about \$10 million and were accommodating an estimated 100 million visits per year (USDC 1971). Between 1950 and 1970, state park systems expanded rapidly, rising from 4.7 million acres to 8.6 million acres and from 114 million to 483 million reported visits.

Table 4.--Trends in acreage, expenditures, employees, visitation, and revenues for state park systems in the United States, 1960-1984.

Year	Park, Recreation Historic Areas		Expenditures		Employees		Visitation	Revenues from Operations
	Areas	Acres	Capital	Total	Year	Seasonal Round		
	(Number)	(Thousands)	--(Millions \$)--		--(Thousands)--		(Millions)	\$
	a	a	a	a	a	a	a	a
1950	1725	4657	15.0	36.4	4.2	6.4	114.3	6.6
	a	a	a	a	a	a	a	a
1960	2664	5602	31.1	87.4	7.4	10.1	259.0	22.6
	a	a	a	a	a	a	a	a
1967	3202	7352	165.3	279.5	11.5	17.8	391.1	50.1
	a	a	a	a	a	a	a	a
1970	3425	8555	197.5	386.8	13.3	21.0	482.5	71.0
	b	b	b	b	b	b	b	b
1975	3804	9838	317.5	648.9	12.6	20.0	508.9	131.6
	b	b	b	b	b	b	b	b
1980	3774	9184	583.7	1099.7	11.9	19.0	535.3	192.1
	b	b	b	b	b	b	b	b
1982	3454	8919	288.2	887.7	10.6	21.7	605.0	230.3
		b	b	b	b	b	b	b
1983	ND	8989	221.2	837.4	11.6	23.7	631.0	226.3
		b	b	b	b	b	b	
1984	ND	9053	191.2	723.9	12.8	26.1	644.8	ND

a  
Source: Historical Statistics of the United States--Colonial Times to 1970, USDC, Bureau of the Census.

b  
Source: National Association of State Park Directors Annual Information Exchange. Numbers for 1984 are close approximations reflecting conflicting data.

Between 1970 and 1980, growth in areas, acreage, expenditures, employment and visitation in state park systems continued to expand. Acreage expanded at an average of about 0.7 percent per year while reported visitation expanded an average of 1.1 percent per year. Expenditures during this period almost tripled, in part due to inflation, while number of employees remained almost constant. Revenues from operations, which grew at an annual rate of \$3.2 million prior to 1970, grew \$12.1 million per year from 1970 to 1980. Capital expenditures (land acquisition plus construction) as a percentage of total expenditures rose from 41 percent in 1950 to 59 percent in 1967 and remained at about 53 percent during the 1970s. This percentage has since dropped to 26 percent in 1983 and 1984. Capital expenditures as a percentage of total expenditures represent the relative emphasis on state park system capacity expansion. Since 1980, the reported total acreage in state park systems has actually decreased in excess of 100,000 acres. As with local government, more dollars have been shifted to operations and personnel salaries since 1980.

Overall, the trends describing state park systems indicate decreasing acreage, budgets (especially capital outlays), and revenues. Only visitation and the park systems' response to increased visitation, more personnel, have been increasing during the 1980s. Visitation has been increasing by about 5 percent per year since 1980. Emphasis seems to be going to more intensive management of the existing acreage and facilities and away from expansion of the system. The number of employees having contact with the public increased 5 percent between 1982 and 1983 and increased 16 percent between 1983 and 1984. A very likely partial explanation for the decreased emphasis on land acquisition and development is the demise of the matching grants to states through the Land and Water Conservation Fund--\$113,000 in 1965; \$46.8 million in 1970; \$160.9 million in 1975; \$335.4 million in 1979; down to \$206.0 in 1981 and decreasing since then (ORPRG 1983). These monies had been major incentives to states and local governments to expand systems to help meet rising outdoor recreation participation levels.

Federal Government.--Since 1960, the number of acres of federal land open for outdoor recreation use has increased from 32 percent in 1960 to 50 percent of the total acreage in 1983. Although the total federal land base has declined by about 100 million acres since 1960, this increase in percentage of acreage open has resulted in a net increase of approximately 82 million recreation acres (Table 5). Most of the increase in available recreation land has been due to interagency transfers of land, rather than from the investment of Federal monies in land. However, in the years from 1964 to 1983, Federal agencies collectively purchased almost 20 million acres of prime recreation land. Table 5 also indicates that the relative proportion of cumulative land acquisition costs going to the purchase of park and historic sites has increased over time. In 1960, less than 5 percent of the cumulative land acquisition costs was for recreation; in 1980, 17.1 percent of the cumulative costs were for recreation. Virtually all of this increase was due to LWCF monies spent to acquire recreation land.

In 1960, the Federal government spent about \$10 million on the construction of new recreation facilities (access roads, trails, campgrounds,

picnic areas, buildings, etc). By 1965 the spending level for construction had increased elevenfold to \$110 million, and by 1970 construction spending was \$154 million (Table 5). These figures indicate that the Federal government has invested approximately \$2.5 billion toward recreation facility construction since 1960. This is a significant amount in view of the fact that these investments are only for construction of new facilities and that none of this includes operation and maintenance costs. Nevertheless, the rate of growth of number of facilities has slowed since 1970 because rapid inflation has devalued the budgeted dollars for construction.

Level of employment by federal agencies is also shown in Table 5. The job titles of interest include Outdoor Recreation Planner, Park Manager, Park Technician, and Recreation Specialist. These titles do not cover all federal workers involved with outdoor recreation. The listing in Table 5, however, provides an insight into the relative change in the level of recreation-related employment in federal government.

In 1970, there were 3800 federal employees in jobs with titles related directly to outdoor recreation. By 1975, the number was 5564. The majority of this increase was in the job categories of Outdoor Recreation Planner and Park Technician. By 1981, the number of employees in these jobs was 7047.

In the 11-year period from 1970 to 1981, the average salary for all of the above job titles had nearly doubled but barely kept pace with the growth in costs, as evidenced by the CPI. We calculated that the annual expenditure for salaries for employees in these jobs had risen from \$42.6 million in 1970 to \$141.6 million in 1981. The rapid increase in the monthly payroll of federal employees involved with recreation has further impacted already shrinking federal budgets. Even though there were about the same number of employees in 1982 as in 1976, the October payroll for 1982 was over \$50 million more than in 1976, largely due to cost of living increases.

Federal budgets for recreation management, acquisition, development, and assistance was \$75 million in 1960 and grew to \$1400 million by 1978. Inflation has caused a dramatic decrease in the real value of these budgets (in parentheses, last column of Table 5). In inflation-adjusted dollars (base year 1967), the total amount appropriated by Congress for recreation rose from \$85 million in 1960 to a high of \$718 million in 1978 (Cordell and Hendee 1982). Since 1978, the real value of the budget has fallen almost back to its 1975 level.

Table 5.--Acres of land, percent open, cost, construction, employment, and budget for outdoor recreation by the Federal government, 1960-1983

Year	Land	Cost of Park Investment & Historic Sites Rel. c to Total	Outdoor Recreation Employees	Total Federal Budget for Recreation Unadjusted and (adjusted)
	Total Acres Purchased a	Open for Recreation L&WCF b	Construction of Facilities d	
	(Million)(Thousand)	(Percent)	(Million)	(Number)
1960	730.0(Est) 0.0	31.8	10.1	ND
1965	697.8(Est) 0.0	33.7	110.0(Est)	ND
1970	685.1	34.7	153.5	3800
1975	681.3	35.2	164.3	5564
1978	ND	ND	185.0	7375(Est)
1980	660.7	45.5	154.3	7120(Est)
1983	627.1	50.0(Est)	ND	ND
				1581(538)

<sup>a</sup> Agencies include National Park Service, Forest Service, Corps of Engineers, Tennessee Valley Authority, Bureau of Land Management, Bureau of Reclamation and Fish and Wildlife Service.

<sup>b</sup> Acres purchased in concurrent year using federal portion of the Land and Water Conservation fund. SOURCE: National Park Service, L&WCF files.

<sup>c</sup> Assumes all National Forest, National Park, Refuge, TVA, COE, and BUREC lands are open without restrictions. SOURCE: Principal sources include 1984 Statistical Abstracts of the U.S. Bureau of the Census; Public Land Statistics, 1960-1984, Bureau of Land Management; and the Federal Budget of the United States for the respective years reported.

<sup>d</sup> Numbers in parentheses represent dollars adjusted for inflation to base year 1967.

Visitation to federal areas has continued to rise to a level 258 percent higher in 1983 than it was in 1960 (Table 6). A significant sidenote is that the average annual rate of visitation growth has decreased--from a high of 14.6 percent in 1970 to 4.0 percent in 1983.

Concurrent with visitation increases, fee revenues have risen almost eightfold since 1960, although these revenues represent less than 3 percent of the total federal recreation budget.

Table 6.--Visitation and fee revenues on federal areas in the United States, 1960-1983.

Year	a		b	
	Visitation		Fee Revenues	
	Index to Base Year	Avg. Annual Rate of Change	Entrance	On-Site Use
	(Base Yr.=1960)	(Percent)	(Millions of Dollars)	
1960	100	----	ND	4.9
1965	148	9.6	2.0	ND
1970	221	14.6	9.3	ND
1975	288	13.4	7.9	12.4
1978	331	14.3	10.3	17.9
1980	346	4.0	7.2	19.6
1983	358	4.0	8.6	32.3

a

Includes Tennessee Valley Authority, Bureau of Reclamation, National Park Service, Forest Service, Corps of Engineers. SOURCE: Marion Clawson and Carlton Van Doren, 1984, Statistics on Outdoor Recreation, Washington, D.C., Resources for the Future.

b

Includes all federal agencies. SOURCE: Includes USDI Federal Recreation Fee Reports and Outdoor Recreation Resources Review Commission, Report No. 1, 1962.

### Overview of Government

The trend in acres of recreation land; dollar budgets for planning, management, acquisition, development and assistance; and for personnel are shown in Table 7. Since 1960, government-managed recreation acres increased 46 percent to an aggregate of 368 million acres in 1982. Real dollar budgets

rose 202 percent since 1960 to a level of 1.87 billion in 1982. Number of employees rose 140 percent to a total of 282,000 in 1982. Overall, significant increases in these major indicators of the economic importance of government's role in providing outdoor recreation have been realized since 1960. In the case of land area, 81 percent of the 22-year increase has been realized since 1970. Only 22 percent of the real-dollar budget increase and 50 percent of the personnel increase were realized since 1970.

Table 7.--Trends in total land area, budgets, and personnel for recreation opportunity production among all levels of government in the United States, 1960-1982

Year	Type of Resources		
	Acres of Land	Budgeted Dollars <sup>a</sup>	Personnel
	(Millions)	(Millions)	(Thousand)
1960	252.3	620.4	117.4
1970	274.4	1592.7	199.1
1982	367.6	1874.1	282.3

<sup>a</sup>

Inflation adjusted real dollars--base year 1964. SOURCE: Listed in Table 3 - 6 of this paper.

Land area open for recreation use is additive, and it is unlikely that large areas of this land will be closed. Budgets and personnel, however, are not viewed as fixed and are more sensitive to the severe budgetary pressures which have characterized the late 1970s and early 1980s. The real dollar level of federal budgets are less now than in 1975 and the number of state park system employees are less now than in 1970.

In terms of relative shares, as of 1982 the federal government managed almost 97 percent of the recreation land. Local government spent 53 percent of total government dollars budgeted for recreation and employed 86 percent of the recreation personnel. This points to much higher importance of local government in spending and employment in the economy, a higher use density per acre, and higher maintenance costs per acre. Federal government recreation land is much more important as an attraction for travellers and for its impacts on the land tax base.

## DISCUSSION

### Equipment Spending

While expenditures on outdoor recreation equipment were increasing, it appears that inflation more than accounted for the observed growth in gross

sales. Outdoor recreation equipment appeared to be claiming a smaller share of personal consumption expenditures. Frechtling (1984) provided some confirmation of this smaller share during the 1982-1984 period by noting that the pent-up demand unleashed by the recovery from the 1981-82 recession has not yet been felt in the travel industry (airline, hotel/motel, and foodservice sectors). Frechtling concluded that the travel industry has grown in the past three years at a lackluster rate mainly because consumers are still venting their pent-up demand on purchases of automobiles, homes, and home furnishings. Once the propensity for consumers to buy such large and expensive durable goods subsides, the travel industry could rebound. Since much of outdoor recreation involves travel, outdoor recreation may also show real growth in the near future.

However, there are two long-term sets of data that imply a possible dampening effect on large real gains in outdoor recreation. According to U.S. News and World Report (1981), the leisure industry (sports, recreation, and entertainment) grew from \$58 billion in 1965 to \$244 billion in 1981, a 321 percent increase in actual dollars. After inflation, real growth during this 16 year period was 47 percent. This same leisure industry was projected to grow to \$310 billion in 1984, a 27 percent increase over 1981 figures (Sanoff, 1984). According to the U.S. Travel Data Center (1974-1982), spending by Americans on travel in the U.S. rose from \$67.7 billion in 1974 to over \$185 billion in 1982. In constant (deflated) dollars, real travel growth fell only once during this period, in 1980. Furthermore, adjusted travel receipts for the first 3 quarters of 1984 showed a 4.2 percent growth over the comparable 1983 period (Frechtling 1984).

One might speculate that these results indicate the beginnings of a shift in interest away from outdoor recreation, possibly linked to other emerging social trends such as heightened interest in economic development and fading of the "environmental movement." Yet, there are equally plausible explanations which derive from the nature of the data we used. For example, consumers may be purchasing greater quantities of outdoor recreation equipment which are not accounted for in our data or may have delayed purchasing outdoor recreation equipment because of the generally poor economic conditions which prevailed between 1974 and 1981. There appears to be a growing trend to more "stay-at-home" leisure, indicated by increasing sales of spas, whirlpools, and swimming pools (U.S. News and World Report, 1981), home entertainment centers (Doan and Cole 1982, Frechtling 1983), and home exercise equipment (Sanoff 1984). All of these may be cutting into the amount that Americans normally spend for outdoor recreation equipment as we have defined it in this paper. Also, Cordell and English (1984) noted that there has been a strong shift toward a reduction in miles travelled for outdoor recreation.

### Transportation Spending

As noted earlier, secondary data available to develop reliable estimates of outdoor recreation related expenditures on transportation were not available, but those used are, in our opinion, conservative. For example, they do not account for expenditures for non-user operated transportation

(e.g., commercial airlines). In addition, the method employed is particularly sensitive to the assumptions underlying the derivation of outdoor recreation's share of total transportation expenditures. In 1983, 1 percent of total motor vehicle expenditures for all purposes amounted to nearly \$3 billion or about what was spent on the combination of all hunting, fishing, camping, and snow skiing equipment purchased in 1981 (see Table 1 and accompanying discussion). The estimated impact of outdoor recreation travel is very important, and better methods for teaching this trend need to be developed.

### Government Expenditures

Government spending, land ownership, taxation, market control, and employment have always been important components of the United States economy. Provision and support of outdoor recreation is a relatively small part of governmental activity, and seems miniscule when compared with defense spending, highway construction, or public works projects. Our examination of the acres, dollars, personnel and revenues associated with government involvement with outdoor recreation show that substantial growth has occurred since 1960. In almost all categories, this growth is continuing into the 1980s, although the rate of growth is now barely keeping pace with inflation, and the rate of growth may slow even more in the next few years (Cordell and Hendee 1982).

The economic importance of government's involvement in recreation cannot be judged solely on the basis of the acres, dollars and personnel devoted to providing public consumption opportunities. There is evidence to suggest that the economic importance of government lies more in the fact that the consumer spending discussed in the early parts of this paper is in large part generated because government provides a very large share of the opportunities for recreation participation. For example, we estimate that in 1983 federal and state recreation lands accommodated approximately 2.3 billion separate recreation visits. With the assumption that an average of \$10 was spent per recreation visit for equipment, supplies, food, travel, and lodging, the total resulting direct spending into the economy would be \$23 billion.

Detailed data on changes in levels of budgets, services, sites and other elements describing government's outdoor recreation role during the 1980s are scarce. Our examination of the available data, however, indicate that the levels of growth experienced in the 1960s and 1970s will not continue in the 1980s. There may even be some reductions in the opportunities provided (Cordell and Hendee 1982, 26 and 74). To the extent that reduced budgets lead to reduced opportunities, recreation visits and therefore the economic importance of government's role in outdoor recreation could decrease. Because of the relationship between recreation participation and consumer spending, the consequences of reduced opportunities extend beyond the direct effects on recreationists. There can be substantial redistributions of income and employment among sectors of the economy which in turn means that some segments of society may lose economically, while others gain.

## General Comments

Our categories of consumer expenditures included only selected equipment, RV's and estimated transportation expenditures. The amount spent on food and lodging as a result of outdoor recreation was omitted due to an absence of appropriate information. Yet, from 1974-1977, the U.S. Travel Data Center's National Travel Expenditure Surveys included outdoor recreation as a separate purpose of trip. Food and lodging consistently accounted for 42 to 45 percent of total travel spending during this period. Thus, the data in Table 2 do not fully account for consumer spending on outdoor recreation. Had we been able to include spending on food and lodging, a different trend in outdoor recreation expenditures may have emerged, especially since spending on these items likely equaled or exceeded spending on equipment and transportation. In any case, the significant limitations noted in the data available suggest that the trends they depict should be judiciously employed, augmented by 1982-84 data, and interpreted in light of societal trends.

Since knowledge of expenditures on outdoor recreation in the U.S. is necessary to assess the consequences of government involvement, action is needed to develop quality data bases for accurate trend assessment. A recent technical meeting on assessing the secondary economic impacts of recreation and tourism held at Michigan State University revealed important conceptual and methodological guidelines for establishing such data bases (Propst and Gavrilis 1985). Based on some of the recommendations from this meeting, the principal federal land management agencies, in cooperation with the National Association of State Park Directors, are developing a methodology to estimate income and employment effects of changes in recreation consumption patterns. As part of this methodology, the Public Area Recreation Visitor Survey (PARVS), to be conducted during 1985 and 1986, will provide the necessary data base. This data base will contain the results of thousands of interviews with outdoor recreationists concerning their trip expenditures. It is expected that a much greater understanding and consideration of the economic importance of outdoor recreation will emerge from this work. This effort alone, however, is not enough. The PARVS will provide a snapshot of consumer expenditures at one point in time. New policy is needed at the federal level to assure continuity in the PARVS data base. Such policy could alleviate the data deficiencies noted in this paper. The future seems to promise significant changes in the role of both the public and private sectors in outdoor recreation. Providing quality data that will permit accurate assessment of trends in the economic importance of these changes is an important research role for the future.

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