

Expenditures by Residents



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This section explains how expenditures by residents on greenway, river, and trail-related activities can help support the economy. Expenditures by residents refers to spending by day users as compared to visitors from outside the local area (see *Tourism* Chapter 5). The section covers overall expenditures on outdoor recreation, and how these contribute to national and state economies. Also discussed, is how resident recreation expenditures can contribute to a local economy. The last subsection lists specific expenditure levels for various river, trail, or greenway-related recreation activities.

This is the first of several sections in the Resource Book which discuss actual expenditures related to greenways, rivers and trails. The other sections - Commercial Uses, Agency Expenditures, and Tourism - focus on the impacts of spending by visitors and the agency(ies) which manage(s) the greenway. The concepts and applications within these sections overlap.

Outdoor Recreation, a Spending Priority

Leisure is often considered to be discretionary, or free time, away from work and other responsibilities, where participants choose and control their activities. Leisure activities can vary from mountain climbing, walking for health, or watching a football game on television. Outdoor recreation is a major component of leisure, usually included in leisure spending figures unless reported otherwise. Outdoor recreation and leisure expenditures can account for a substantial part of people's discretionary spending. People spend more on leisure and recreation than the U.S. Government spends on national defense or housing construction.

- In 1990, 8.8 million people jogged at least twice a week throughout the year, an increase from 8.1 million in 1987. Nearly \$12 million was spent on athletic footwear in 1990. (U.S. News and World Report, April 1, 1991)

- In Pennsylvania, residents spent approximately \$11.8 billion or 12.6 percent of their total personal consumption dollars on leisure pursuits in 1981. Of this total, over 47 percent (an estimated \$5.6 billion) was spent for outdoor recreation activity alone. Leisure was the third largest item in personal budgets, exceeded only by housing and food costs (National Park Service, 1983).

■ In 1988, recreation and leisure was the third largest industry in California. More than \$30 billion per year is spent by Californians on recreation and leisure. This amounts to approximately 12 percent, or one of every eight dollars, of total personal consumption expenditures in the state (California Department of Parks and Recreation, 1988).

■ One study estimated that \$620 million is spent annually by California residents for urban recreation activities (playing sports, visiting parks, jogging, bicycle riding). This generates an estimated \$400 million in personal income and 22,800 jobs (Loomis, 1989).

How much outdoor recreation and leisure is attributable to the activities pursued along greenways, rivers and trails? Many outdoor recreation activities can be observed along a greenway. Patterns vary significantly due to factors such as proximity, accessibility, weather, recreation opportunities, income, and educational levels. Greenways are likely to provide increased opportunities for the more popular outdoor recreation activities. According to *Lifestyle Market Analysts*, a new report by National Demographics and Lifestyles Inc., a survey of households in 212 metropolitan areas revealed overall participation rates for several related activities:

- 40.4% Walk for health
- 32.8% Pursue physical fitness/exercise
- 14.9% Bicycle
- 13.75% Boat or sail
- 12.4% Run or jog

Spending by Local Residents

You can define your local economy as the area for which you want to quantify the recreation activity and expenditures related to your greenway project. A greenway project can attract residents not only to the greenway, but also to nearby businesses, and encourage residents to purchase recreation-related equipment and services. These greenway-related expenditures help support the local economy through generation of employment and income.

Specifically, local residents who use the greenway may spend money to get to and from the site, on supplies and equipment to pursue their recreation experience, at on-site concessions and events, and nearby attractions. The magnitude of the impact of these expenditures depends upon the boundary and character of your local economy and the level of spending by local residents.

If a new resource is created which attracts visitors, or non-residents, then outside dollars may be brought into your local economy. River, trail and greenway resources which attract visitors can stimulate economic activity and create new jobs and income. These non-resident expenditures are discussed in the Tourism section of the Resource Book.

Trends and Expenditures by Activity

The following discussion provides information on trends associated with uses of greenways and provides evidence where spending associated with greenway-related activities has been quantified. Activities include wildlife-related recreation, river boating, trail-related recreation, and traditional park pursuits.

Fish and wildlife-related recreation

- Fishing
- Hunting
- Birdwatching
- Wildlife photography

River boating

- Rafting
- Rowing
- Kayaking
- Canoeing
- Motorboating
- Sailing
- Sailboarding
- Houseboating
- Jet skiing

Trail-related recreation

- Walking
- Jogging
- Hiking
- Volksmarching
- Roller skating/in-line skating
- Bicycling/mountain bicycling
- Horseback riding
- Cross-country skiing

Traditional park pursuits

- Photography
- Camping
- Hosteling
- Attending special events
- Concerts
- Festivals
- Driving for pleasure

Fish and Wildlife-Related Recreation. Activities associated with fish and wildlife-related recreation include: fishing, hunting, birdwatching, and wildlife photography. According to the U.S. Fish and Wildlife Service, 108.7 million people in the United States took part in wildlife-related recreation in 1991. Expenditures by these participants were \$59 billion. Of these total expenditures, 70 percent was spent on fishing and hunting (U.S. Fish and Wildlife Service, 1993).

■ In 1991, hunting, fishing and wildlife viewing resulted in \$5.3 billion of annual spending in California. Of the 9.2 million people participating in wildlife-related recreation, 32 percent fished, 6 percent hunted and 71 percent pursued wildlife viewing (U.S. Fish and Wildlife Service, 1993).

Sport fishing is one of the most popular outdoor recreation activities in the U.S. A steady increase in fishing has occurred nationwide, from 17.6 percent of the U.S. population in 1955 to nearly 22 percent in 1991. In 1991, just over 35 million U.S. residents spent \$24 billion on salt and freshwater fishing. Average expenditures per person for fishing have been estimated at approximately \$700

per year (U.S. Fish and Wildlife Service, 1993). Start up expenditures for fly fishing equipment can range from \$500 to \$2000. Demand for fishing is expected to continue to increase.

■ In the Pacific Northwest (northern California, Oregon, Washington and Idaho), Pacific salmonids including trout, steelhead, salmon and char support commercial and recreational fishing industries that produce over \$1 billion in personal income per year and more than 60,000 jobs in the region. These figures include the economic impact of wild fish and hatchery fish, all of which ultimately depend on the integrity of the habitat that supports them (Oregon Rivers Council, 1992).

Viewing wildlife was another rapidly growing recreation activity in the 1980's and is the most common form of wildlife recreation in California, where nearly 75 percent of state residents participate.

■ As reported by the U.S. Fish and Wildlife Service, 30 percent of the total national wildlife-related recreation expenditures (\$18.1 billion in 1991) was related to wildlife viewing and photography (U.S. Fish and Wildlife Service, 1993).

■ The typical birdwatcher spends \$13 per day, with almost half spent on food and beverages, one-fourth on gas and oil, and most of the remainder on lodging. Spending by birdwatchers contributed a total of \$27 million in wages and business income to California's economy in 1987. A total of nearly 2,000 California jobs are supported by birdwatchers (Loomis and Unkel, 1989).

Interest in wildlife viewing should continue to increase over the next decade in areas where urbanization, education, and income levels continue to rise.

River Boating. Recreational river boating is one of the nation's most popular outdoor activities and includes rafting, rowing, kayaking, canoeing, motorboating, and more recently, jetskiing. In the last two decades a dramatic growth in whitewater boating has been evidenced (Shelby and Lime, 1986). Use of wild and scenic rivers in national forests more than doubled in the six years between 1976 and 1984 (Feuchter, 1984).



■ In Colorado, river running brings in more than \$50 million annually to the state's economy and fishing contributes over \$1 billion annually (Finken, 1988).

■ Americans purchased approximately 90,000 canoes in 1988, a fourteen percent increase over purchases in 1985 (Ingrassia, 1989). Canoeing by residents and visitors contributes \$20.1 million per year to the Arkansas economy. Overall economic impact of outdoor recreation in Arkansas is \$1.5 billion per year (Wilson, 1986).

It has been forecasted that there will be participation by a wider segment of society in river boat activities and that there will be increased representation by family groups. There is also likely to be longer participation throughout people's lifetimes, increased numbers of participants from older age groups, and increased sport expertise and equipment ownership. These trends are expected to increase the demand for quality river trips and for challenging whitewater experiences, technical innovation in creating new river equipment, better skill and safety instruction, and more sponsored events (Lime, 1984).



Trail-related Recreation. Much of the population enjoys trail-related recreation such as: walking for pleasure and health, jogging, hiking, volksmarching, bicycling, rollerskating, in-line skating, horseback riding, and cross-country skiing. Research has shown walking and hiking have played a significant role in the nationwide growth in outdoor recreation. There are over 26 million day hikers in the U.S., and over half the American public says they walk for pleasure (Spitzer, 1988). Also, running has increased significantly since the early 1960's. According to a national recreation survey conducted for 1982-1983, over 25 percent of the U.S. population ran for conditioning during that time period (Van Horne, et al., 1985).

■ Trail users of three rail-trails generated a total economic impact of over \$1.2 million for each trail, according to the recent study *The Impacts of Rail-Trails*. These trails were used mostly by people living nearby who visited frequently. "Users spent an average of \$9.21, \$11.02, and \$3.97 per person per day as a result of their trail visits to the Heritage, St. Marks, and Lafayette/Moraga Trails respectively." (Moore, et al 1992).

■ Maryland's North Central Rail Trail, a 20-mile corridor through Baltimore County has become quite popular in the last few years. Use of the trail increased from 10,000 visitors in 1984 to 450,000 in 1993. The trail supports approximately 264 jobs statewide. Goods purchased in 1993 for uses related to the North Central Rail Trail were valued at over \$3.38 million (Maryland Greenways Commission, 1994).

Bicycling attracts people of all ages and interest in this activity is retained from childhood into later years. With the aging of the U.S. population, bicycling will likely retain its popularity as a "lifetime" activity. In the United States, the rate of participation in bicycling tripled since the early 1960s. By the end of 1993, there were more than 100 million bicyclists in the United States. This represents an increase of over 33 percent in the last ten years (Bicycle Federation of America, 1994). Bicycles are used for commuting to work as well as pleasure and fitness. There were 2.7 million bicycle commuters in the U.S. in 1987, more than double the number in 1982.

All-terrain bicycle use, or mountain bicycling has recently emerged as a very popular form of bicycling. In the United States, mountain bicycle ownership increased dramatically from 200,000 in 1983 (Hecker, 1989) to more than 25 million in 1992, up 20 percent from 1991 (Bicycle Institute of America). The communities of Marin County, California, Moab, Utah, and Durango, Colorado all vie for the title of "mountain bicycling capital of the U.S.", according to a recent article in the *Independent Journal* (Western Trail and Bikeway News, 1994).

■ The Hart-Montague Bicycle Trail in Michigan follows along 20 miles of the eastern coast of Lake Michigan. In 1992, six months of bicycle use along the trail increased business for several owners by 25 to 30 percent. Trail passes brought in revenues of approximately \$40,000, up 33 percent from revenues in 1991 (Aardema, 1992).

■ A 1991 survey of trail users in Oil Creek State Park in Venango County, Pennsylvania revealed that each cyclist spent an average of \$25.86 per visit/day. (Pennsylvania Economy League, 1993)

In-line skating has also become extremely popular in the U.S. in just the past few years. The original intent of these skates in the U.S. was for summer hockey training. They were quickly adapted as a sport unto themselves and from 1991 to 1993 participation in the sport increased from approximately 6 million to 12.5 million in the U.S. (NSGA, 1994).

- In 1993, 4.6 million pair of skates were sold, generating \$310 million (Sports Style Magazine, 1993). The industry estimates a 30 percent increase in skates sold and dollars generated in 1994.

Another rapidly growing trail-related activity is cross-country skiing which experienced an 80 percent increase during the period between the 1982 to 1983 and 1987 to 1988 ski seasons. Over 50 percent of participants interviewed were between the ages of 25 and 44 and over 50 percent had skied less than five years (Ski Industries America, Inc., 1988).

Since the 1960's, participation in horseback riding has been fairly constant, with a greater number of participants being female. Horseback riding is a very high expenditure activity.

- The Heritage Trails Fund estimated the total amount contributed by equestrians to the economy of California and local communities to be \$1.8 billion dollars. This is based upon a horse population of over one million, and includes annual costs for feeding, license fees, trucks and trailers, horse shelters, and other horse equipment.

How to Use These Rationales in Your Community

Demonstrate how leisure and recreation expenditures are important in your state, region, or community. Cite some of the examples given to show how people value recreation and open space opportunities. Gather similar information for your state, region, or community and present them at meetings and in publications.

Quote the above examples to show how greenway-related expenditures are important to other economies. The examples provided focus upon a variety of aspects of how recreation/open space expenditures support local, regional, state, and national economies. If appropriate, local examples can be

found and listed. Choose the activities relevant to your planning area; the size of the economy, and the type of impact.

Recognize the multiplier effect of greenway expenditures. The effect of greenway spending is multiplied as local businesses patronized by greenway users purchase supplies and services from manufacturers and other businesses. This concept is further discussed in Section 6 Estimating the Effects of Spending, under the subsections “Direct, Indirect and Induced Effects” and “Multipliers.”

Compare the economic effects of the greenway to those of another facility or program. Compare the number of jobs supported or created by your greenway to those supported by a well-known local employer.

Discuss effects of decisions that could alter visitation. Many activities such as natural area restoration, fish habitat improvement, increased publicity, better access, etc, can increase recreational use. If such activities are proposed, calculate the effects of such a change. Use this information as base data for illustrating how changes in management (supply) or visitor needs (demand) affect the greenway’s impact on the local economy.

Table 2-1

Estimated Start-up Costs by Activity (Per New Entrant)			
Activity	Purchase	Low-end Cost	Mid-Range Cost
Bicycling	Bicycle	\$ 300	\$ 800
	Helmet	50	50
	Lock	30	30
	Bicycle Rack		25
	Bicycle Pack		50
	Water Bottle		10
	Shoes		45
	Clothing		50
	Car Rack		150
	Total	380	1,210
Hiking	Shoes/Boots	45	120
	Socks	10	15
	Daypack	20	40
	Water Bottle	5	5
	Total	80	180
Birdwatching	Binoculars	50	150
	Spotting Scope		200
	Field Guide	10	50
	Camera, lenses, etc		1000
	Total	60	1,780
Cross-country Skiing	Skis	85	250
	Boots	40	90
	Bindings	10	30
	Poles	15	30
	Wax	15	60
	Clothing		100
	Gaiters		25
	Total	165	505
Horseback Riding	Lessons	250	250
	Hard Hat	40	40
	Boots	100	100
	Crop	15	15
	Horse		1,000
	Tack		500
	Boarding (annual)		2,400
	Total	405	4,305
Skating	Inline Skates	100	210
	Wrist Guards	20	20
	Knee and Elbow Pads	40	60
	Helmet	50	50
	Total	210	340

Estimated Start-up Costs by Activity			
(Per New Entrant)			
Activity	Purchase	Low-end Cost	Mid-Range Cost
Canoeing	Canoe	250	500
	Life Jacket	40	50
	Paddles	100	100
	Car Rack		150
	Foul Weather Gear		1,000
	Drybags		
	Safety Equipment		
	Total	390	1800
Kayaking	Kayak	700	700
	Paddle	90	90
	Drysuit	200	200
	Sprayskirt	50	50
	Helmet	40	40
	Safety Equipment		75
	Car Rack		150
	Total	1,080	1,305
Rafting	Raft	1,500	3,000
	Frame	250	250
	Oars	200	200
	Safety Equipment	150	150
	Life Jackets (for 4)	200	200
	Car Rack		100
	Clothing (for 4)		200
	Lessons/Training	475	475
	Total	2,775	4,575
Fishing Cold Water	Rods, reels, line	90	200
	Flies, lures, tackle	60	150
	Accessories	70	200
	Waders	70	150
	Total	290	700
Fishing Warm Water	Rods, reels, line	65	150
	tackle	45	150
	Accessories	70	200
	Total	180	500

Sources of Information

Recreation and Sports Associations. The National Sporting Goods Association (NSGA) publishes survey results of participation in 53 sports throughout the nation. The most recent publication, "Sports Participation in 1993," contains two series. Series I gives statistics on 26 competitive sports such as baseball, while Series II shows information on sports like roller skating. Another publication, "Sporting Goods Market in 1994," includes average prices paid for equipment, shoes, and clothing for 26 sports. Contact the NSGA, at (708) 439-4000 for this information.

Information can also be obtained from individual recreation organizations. A partial listing of national organizations, their location, and phone number, is below. Contact state and local recreation associations in your area for additional information.

American Hiking Society
Washington, D.C. (703) 255-9304
American Nature Study Society
Homer, NY (607) 749-3655
American Recreation Coalition
Washington, D.C. (202) 662-7420
American Rivers
Washington, D.C. (202) 547-6900
Heritage Trails Fund (Equestrian and Hiking)
Walnut Creek, CA (415) 672-5072
League of American Bicyclists
Baltimore, MD (301) 539-3399
National Organization for River Sports
Colorado Springs, CO (719) 579-8759

The National Recreation Survey. This is a summary of the results of a national household interview survey conducted in 1982 and 1983. The survey covered the current participation status of 36 recreation activities. Expected trends in participation were also covered. Information concerning the survey can be obtained from the Recreation Resources Assistance Division, National Park Service. Contact Merle Van Horne at (202) 343-3780. It is important to note, however, recreation activities have changed during the last decade (i.e. mountain bicycling has experienced dramatic growth) and that recreation activities may be different in your area.

Media. Recreation is covered by the news almost daily. Look for feature articles and relevant information. Review newspapers, periodicals, and newsletters for information relevant to trends, activities, and expenditures that could be useful in building your case. Keep a file of related clippings.

Considerations When Using These Rationales

Realize the policy implications of your data. This information can be helpful in setting economic development policy. Knowledge of who spends the most, where these people are from, and what services they desire, can assist in providing direction for development or changes aimed at increasing the economic benefits to an area. Bear in mind that more is not necessarily better, especially in sensitive resource areas, which might be adversely impacted by overuse. Make protection of the greenway resources your bottom line and manage use accordingly.

References

- Aardema, Barbara. October 23, 1992. "Hart-Montague trail more than pays its way." *Grand Rapids Press*.
- Arizona State Parks. 1989. "Creative Funding for Trails." *Arizona Trail News* Phoenix, AZ: Arizona Hiking and Equestrian Trails Committee, Arizona State Parks Board. Sue Thomas, Editor.
- Bicycle Federation of America. 1994. "Facts About Bicycling."
- Bicycle Institute of America. 1992. "Bicycle Facts and Figures."
- California Department of Parks and Recreation. June 1988. *California Recreation Plan*. Sacramento, CA: State of California.
- Davis, John S. 1986. "The National Trail System Act and the Use of Federal Protective Zoning." *Harvard Environmental Law Review* 10(1):189-255.
- Doyle, Thomas B. Letter of April 24, 1989. Director of Information and Research, National Sporting Goods Association, Mt. Prospectus, IL.
- Feuchter, Ray. 1984. "Perspectives on River Recreation in the National Forests." In Popadic, et al., eds. *Proceedings of the 1984 National River Recreation Symposium*. Baton Rouge, LA: Louisiana State University, School of Landscape Architecture.
- Finken, Mary. April 1988. "What It's Worth." *River Runner Magazine*.
- Hecker, Rob. September, 1989. "Land Claims! Are Mountain Bicyclists Getting Their Share?" *California Bicyclist*.
- Ingrassia, Paul. July 24, 1989. "Today it is Possible to Sail a Freighter and Call it a Canoe." *Wall Street Journal*.
- Kelly, Timothy J. and Ronald M. Sushak. 1987. "Significance of Water-Related Outdoor Recreation to the State and Regional Economies in Minnesota." MN: Minnesota Department of Natural Resources, Division of Waters, Office of Planning for the Water Allocation Project.

Klar, Lawrence R. and Jean S. Kavanagh. 1986. "Hiking Trail Systems in the United States." *A Literature Review - President's Commission on Americans Outdoors*. Washington, D.C.

Langenau, Ed. 1986. Literature Review. *President's Commission on Americans Outdoors*. Washington, D.C.

Lawton, Kate. May 1, 1986. *The Economic Impact of Bike Trails: A Case Study of the Sugar River Bike Trail*.

Lime, David W. 1984. "Who Uses Rivers for Recreation and What of the Future?" In Popadic, et al., eds. *Proceedings of the 1984 National River Recreation Symposium*. Baton Rouge, LA: Louisiana State University, School of Landscape Architecture.

Loomis, John. Summer 1989. "Estimating the Economic Activity and Value from Public Parks and Outdoor Recreation Areas in California." *Journal of Park and Recreation Administration*.

Loomis, John. 1989. *Economic Activity and Value Associated with Public Parks and Outdoor Recreation Areas in California*. Cosponsored by California Association of Recreation and Park Districts and California Park and Recreation Society. Davis, CA: University of California, Division of Environmental Studies.

Loomis, John and Chris Unkel. 1989. "The Economic Contribution of Wildlife Viewers." *Outdoor California*.

Loomis John, Michael Creel, and Joseph Cooper. October 1989. *Economic Benefits of Deer in California: Hunting and Viewing Values*. Davis, CA: University of California, Institute of Ecology. Report #32.

Maryland Greenways Commission. 1994. *Analysis of Economic Impacts of the Northern Central Rail Trail*. Prepared by: PFK Consulting for the Maryland Greenways Commission.

Moore, Roger L., Alan R. Greene, Richard J. Gitelson, Elizabeth Porter. 1992. *The Impacts of Rail-Trails*. Washington D.C.: U.S. Department of the Interior, National Park Service in cooperation with The Pennsylvania State University.

National Park Service and Pennsylvania State University. *The Impacts of Rail-Trails*, 1992 Washington, D. C.: Rivers and Conservation Assistance Program.

National Park Service. 1983. *Winning Support for Parks and Recreation*. State College, PA: Venture Publishing.

National Wildlife Federation. 1988. *1988 Conservation Directory*. Washington, D.C.

Oregon Rivers Council. 1992. "The Economic Imperative of Protecting Riverine Habitat in the Pacific Northwest."

Pennsylvania Economy League. 1993. *The Economic Impact of the President Oil Land Acquisition on Venango County*.

President's Commission on Americans Outdoors (PCAO). 1986. Hearing testimony.

Schmidt, Adolph. November 1982. "Equestrians in California and Their Contribution to the Economy." Concord, CA: Heritage Trails Fund.

Schwecke, Tim, Dave Sprehn, Sue Hamilton, and Jack Gray. January 1989. *A Look at Visitors on Wisconsin's Elroy-Sparta Bike Trail*. Madison, WI: University of Wisconsin - Extension, Recreation Research Center.

Shelby, Bo and David W. Lime. 1986. "Whitewater River Recreation." In *A Literature Review - President's Commission on Americans Outdoors*. Washington, D.C.

Ski Industries America. 1988.

Southwick, Robert I., and David B. Rockland. October 1989. *How to Conduct an Economic Impact Analysis*. Washington, D.C.: The Sport Fishing Institute.

Spitzer, W.T. September 13, 1988. Speech to Ninth National Trail Symposium. Helena, GA.

Sport Fishing Institute. 1988. *The Economic Impact of Sport Fishing in the U.S.* Washington, D.C.: Sport Fishing Institute.

The Trail and Bikeway Center. Spring 1994. "Tops in the World of Mountain Bikes." *Western Trail and Bikeway News*. Fairfax, CA.

U.S. Fish and Wildlife Service. 1993. *1991 National Survey of Fishing, Hunting and Wildlife Associated Recreation*. Washington D.C.: U.S. Department of Interior, Fish and Wildlife Service.

U.S. News and World Report. October 9, 1989. "The Price of Fun."

Van Home, Merle. 1987. "Economic Impact of Parks Methods Assessment." Draft memo. Washington, D.C.: National Park Service, Recreation Resources Assistance Division.

Van Home, Merle J., Laura B. Szwak, and Sharon A. Randall. 1985. "Outdoor Recreation Activity Trends - Insights from the 1982-1983 Recreation Survey." *Proceedings: 1985 National Outdoor Recreation Trends Symposium II*. SC: Clemson University, Department of Recreation and Tourism Management.

Wilson, J. L. 1986. Testimony at President's Commission on Americans Outdoors.