

RECREATIONAL TRIPS TO WILDERNESS

Results from the USA National Survey on Recreation and the Environment

BY H. KEN CORDELL AND JEFF TEASLEY

Abstract: Although it is not the only use of the U.S. National Wilderness Preservation System (NWPS), recreation visits to wilderness are of high value to many people. As part of the 1994–1995 National Survey on Recreation and the Environment (NSRE), a general population sample of nearly 12,000 persons age 16 or older across the United States was asked about its outdoor recreation participation and about recreational trips it took away from home. In describing participation, members of the sample group were asked if they took any trips to wilderness areas. Based on these answers, this article presents national estimates of the number of trips taken to wilderness for recreation by people over 15 years of age in the United States.

THIS ARTICLE PRESENTS RESULTS FROM QUESTIONS about recreation participation that were included in the NSRE. Outdoor recreation participation rates in the United States are first estimated in order to establish context for the recreational role of wilderness. A look at the number of recreational trips taken away from home over the past year and the types of destinations chosen, including wilderness destinations, lends further perspective. Some characteristics of recreationists in general are compared with those who visit wilderness, and some characteristics of people indicating they know of the NWPS are compared with those not aware of the system. The NSRE is the latest in the continuing series of National Recreation Surveys, the first of which was conducted in 1960 (Cordell, et al. 1996).

Participation in Nature-Based Outdoor Recreation

During the 1994–1995 survey period, almost 95% of the U.S. population, approximately 189 million individuals 16 years of age or older, participated in some form of outdoor recreation at some time during the previous 12 months (Cordell, et al. in press). Substantial numbers reported participation in nature-based activities that typically occur away from roads and developed recreation sites (see Table 1).

The activities shown in Table 1 are among those permitted in most designated wilderness areas (though horses and hunting are not allowed in some). Although it was not possible to determine exactly how much of their participation in these activities occurred during visits to wilderness, we did ask about the last recreational trip each respondent took that was 15 or more minutes away from home. For this trip, visits to units within the NWPS were differentiated from other government managed sites.

Outdoor Recreational Trips Away from Home

Of the estimated 189 million outdoor recreation participants over age 15 in the United States, 77% reported that they took one or more recreation trips at least 15 minutes away from home during the 12 months just prior to their interview in 1994–1995 (some 145 million people). Across the four regions

of the country, the percentage of respondents taking trips away from home ranged from 73% in the South to 80% in the Rocky Mountains/Great Plains region (see Figure 1).

To characterize recreation trips people took, respondents were asked about their most recent trip taken within the last 12 months. Twenty-nine percent reported the destination of their last trip to be privately owned land, 56% reported their destination was a public (government managed) area, and the remainder did not know the ownership of their destination. Among the four regions, 54% and 56% in the North and South, respectively, indicated their last trip was to a public area. In the West, 58% in the Pacific Coast region and 65% in the Rocky Mountains/Great Plains region said their last trip was to a public site.

Among persons who said their last trip was to a government managed area, 7.5% reported that the destination area was best described as a national forest, 10.7% reported it was a national park, and 1.7% ($\pm 0.37\%$ at 95% confidence, approximately 1.4 million people) indicated it was best described as an area of the NWPS (see Table 2). Just over 60% indicated a local or state government destination and about 9% indicated a publicly-owned water body other than a national park, national forest, or wilderness as their last trip destination.

Trips to Wilderness

Descriptions of the most recent trips to wilderness areas provide a cross-sectional representation of the wilderness trips Americans take. This cross-section of wilderness trips was used to develop overall wilderness visitation estimates. In Table 2, percentage estimates of public site visitors reporting



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Table 1: Percentage and number of Americans age 16 years or older reporting participation in nature-based recreational activities that occur away from roads and developed sites, 1994–1995.

Activities	Percentage and Confidence Interval ¹	Number in millions
Hiking	23.9 ± 0.62	47.8
Orienteering	2.4 ± 0.20	4.8
Backpacking	7.6 ± 0.39	15.2
Mountain Climbing	4.5 ± 0.34	9.0
Rock Climbing	3.7 ± 0.28	7.5
Horseback Riding	7.1 ± 0.39	14.3
Wildlife Viewing	31.2 ± 0.62	62.6
Studying Nature Near Water	27.6 ± 0.62	55.4
Big Game Hunting	7.1 ± 0.39	14.2
Cross-country Skiing	3.3 ± 0.28	6.5
Canoeing	7.0 ± 0.39	14.1
Floating or Rafting	7.6 ± 0.39	15.2

¹ Ninety-five percent confidence interval for a proportion (Agressi and Finlay 1986).

Source: USDA Forest Service and the University of Georgia, National Survey on Recreation and the Environment, 1994–1995.

their last trip was to an area of the NWPS is shown to vary from a low of 1.1% among residents of the South, to a high of 2.5% in the Pacific Coast region. Nationally, the proportion of all trips to either public or private sites that were taken to wilderness areas was 0.934%. An esti-

mate of the total trips to designated wilderness was estimated by multiplying the proportion of trips to wilderness areas by estimated total trips for all destinations separately for each recreational activity reported as the primary trip purpose by NSRE respondents. For example, nearly

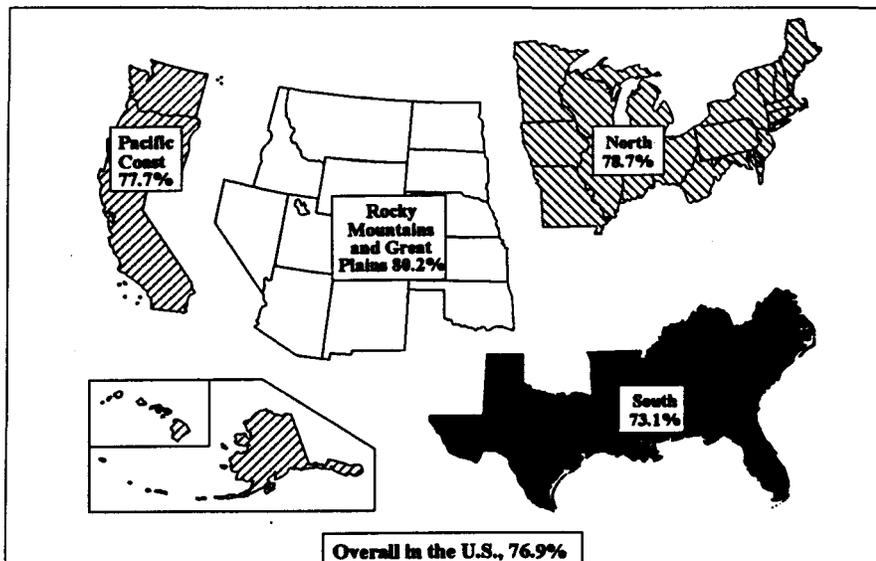


Figure 1.—Percentages of outdoor recreation participants 16 years or older who took one or more trips more than 15 minutes away from home for a recreational activity in 1994–95 by region of the country. Source: USDA Forest Service, National Survey on Recreation and the Environment, 1994–95.

1% of hiking trips was reported as NWPS area trips. Of the 43+ million hiking trips among persons age 16 years or older in 1994–1995, 0.934%, or an estimated +1 million, was to wilderness areas.

A key assumption of this study is that NSRE respondents correctly knew when their destination site was an area of the NWPS. Accepting this assumption, two estimates of total trips to wilderness were derived. The first is a summation of reported trips to wilderness across all recreational activities allowed by wilderness policy. This included activities whether or not respondents identified them as the primary trip purpose. The second was to sum wilderness trips across only those activities allowed in wilderness that respondents identified as their primary trip purpose. Adjustments were made for hunting and horseback riding as these activities are not permitted in some areas; for example, hunting in national park wilderness. The adjustment was to decrease the estimate for these two activities by the proportion of the NWPS total area that is in national parks in the lower 48 states.

Across all permitted activities, the estimate of total trips to wilderness areas was 34.7 million trips (± 7.8 million, the 95% confidence interval) during the 1994–1995 survey year. Focusing only on permitted activities specifically identified by respondents as primary purposes for wilderness trips, we derived a lower bound estimate of 15.7 million trips (with a 95% confidence interval of ± 3.5 million). Activities comprising this latter estimate included only horseback riding, hiking, backpacking, mountain and rock climbing, wildlife viewing, hunting, fishing, and a miscellaneous few other activities. The larger estimate, 34.7 million annual trips, added visiting prehistoric sites, bird-watching, studying nature near water, cross-country skiing, small game hunting, warm- and cold-water fishing, and white-water floating.

The two estimates of recreation trips away from home to visit wilderness areas provide a lower (15.7 ± 3.5 million) and an upper (34.7 ± 7.8 million) bound estimate of national-level wilderness visitation. Although neither of these point estimates is embraced by the 95% confidence interval of the other, it seems

Table 2: Percentage and number of Americans age 16 years and older who visited a government-managed recreation site during their last trip by region, 1994–1995.¹

National Estimates of Population Taking Trips to Public Sites			Regional Estimates of Population Taking Trips to Public Sites (Percentage and 95% CI)			
Type of Government Managed Destination	Percentage and 95% CI (n=4502)	Millions	North (n=2035)	Pacific Coast (n=755)	Rocky Mtn./ Great Plains (n=398)	South (n=1315)
Local or State Park, Resort or Other Site	60.3 ± 1.43	49.5	66.8 ± 2.05	50.0 ± 3.57	45.0 ± 4.89	61.1 ± 2.64
National Forest	7.5 ± 0.77	6.2	4.3 ± 0.88	11.7 ± 2.29	20.1 ± 3.94	6.2 ± 1.30
National Park	10.7 ± 0.90	8.8	8.0 ± 1.18	15.8 ± 2.60	13.9 ± 3.40	11.0 ± 1.69
Wilderness Area	1.7 ± 0.37	1.4	1.8 ± 0.06	2.5 ± 1.11	1.6 ± 1.23	1.1 ± 0.56
Other Federal Areas	2.4 ± 0.45	2.0	1.8 ± 0.06	2.0 ± 0.99	4.4 ± 2.01	3.0 ± 0.92
Other Public Water Body	9.4 ± 0.85	7.7	8.8 ± 1.23	11.7 ± 2.29	9.2 ± 2.84	9.1 ± 1.55
Didn't Know	7.9 ± 0.79	6.5	8.5 ± 1.21	6.3 ± 1.73	5.9 ± 2.31	8.4 ± 1.50

¹ Respondents were asked to recall the last recreational trip they took that was 15 or more minutes from home. The last trip taken prior to a respondent's interview was the trip sampling convention used in the NSRE. The above estimates of persons taking trips to government managed destinations are sample sums weighted to reflect population-level numbers.

Source: USDA Forest Service and the University of Georgia, National Survey on Recreation and the Environment, 1994–1995.

likely that the 1994–1995 level of NWPS visits lies somewhere between them as almost all activities that occur legally in wilderness are accounted for in their computations.

Characteristics of Persons Taking Trips to Wilderness

Persons who indicated they had visited a wilderness area in the last year were compared with visitors to other government managed recreation sites. This comparison was across a number of personal or recreational attributes using Duncan's Multiple Range Test at the 0.05 level of significance (see Table 3). The percentage of people under age 35 years is not significantly different between the four types of government managed sites. The percentage who are female is significantly higher at local and state areas at about 50%. The percentage of white participants is significantly higher at wilderness



Nonmotorized, nature-based activities, such as wilderness backpacking, are increasing in demand among recreationists. White Cloud Peaks, Idaho. Photo by John C. Hendee.

Table 3: Percentages and means for Americans age 16 years or older by personal or recreational characteristic and by type of government managed site they visited on their last trip, 1994–1995.

Personal or Recreational Characteristics	Local or State Area	Federal Lands Not in NWPS	Federal Wilderness Areas	Other Reservoir, River or Ocean Not in NWPS	Refuse/Don't Know
Percent under 35 Years	43.0 (A) ¹	42.3 (A)	39.0 (A)	38.3 (A)	45.1 (A)
Percent Female	50.0 (A, B)	43.0 (B, C)	40.2 (C)	44.5 (B, C)	55.4 (A)
Percent White	83.2 (B)	88.7 (B)	94.5 (A)	86.9 (B)	82.9 (B)
Percent with 16 or More Years of Education	33.9 (A, B)	40.4 (A)	40.8 (A)	28.9 (B)	31.5 (B)
Mean Number of People in the Household	3.03 (A)	2.93 (A)	2.76 (A)	2.81 (A)	2.83 (A)
Mean Number of Activities Participated in During Last 12 Months	16.74 (B)	18.53 (A)	18.39 (A)	16.87 (B)	15.69 (B)
Mean Number of Days per Activity	18.17 (B, C)	17.25 (C)	25.64 (A)	20.96 (B)	20.15 (B, C)

¹ Different letters indicate means that are significantly different.

Source: USDA Forest Service and the University of Georgia, National Survey on Recreation and the Environment, 1994–1995.

areas. The average numbers of persons in the household were not significantly different. Visitors to wilderness and other federal lands are among those who participated in the highest number of recreational activities across the year. Wilderness visitors participated in their chosen activities on average more days per activity per year than did visitors to other types of sites.

Survey respondents were also asked whether or not they were aware of the NWPS. A smaller percentage of those aware

of the NWPS were under age 35 (33% vs. 53%). Only a slightly larger percentage of those aware of the system were white (88% vs. 85%), but a larger percentage had 16 or more years of formal education (40% vs. 25%). People aware of the NWPS also participated in more recreational activities, 19 vs. 17, over the course of a year.

Discussion

The NWPS of the United States is the largest protected wilderness land base in the world at nearly 105 million acres. Among

other purposes, it provides diverse and often very challenging settings for outdoor recreation. From the estimates reported in this article, at least 1.4 million persons 16 years of age or older take advantage of this opportunity each year by taking recreational trips to visit a wilderness area. Across this nation's population 16 or older, an estimated 15.7 to 34.7 million trips are made to designated wilderness annually for a variety of recreational purposes. Compared with people who reported visiting other types of government managed sites on their last trip away from home, visitors to wilderness areas are about the same age, though much higher proportions are white, and they have spent more time involved in recreational activities than other outdoor recreationists.

Recreation participation in the United States continues to grow both in terms of the numbers of people who participate and in terms of the number of days and trips participants devote to their chosen activities (Cordell et al. in press). While unreliable visitation statistics leave it unclear whether recreational use is increasing per unit of area in designated wilderness (Loomis et al. in press), growth trends in activities consistent with wilderness use restrictions indicate a growing demand for settings for nonmotorized, nature-based activities. It seems likely that the estimated 15.7 to 34.7 million trips people take annually to recreate in wilderness will also rise.

Wilderness visitors are not a representative cross section of the U.S. public and often have been cited by wilderness opponents as "elitists." The point is—whether people are wilderness visitors or RV campers—there is a need to consider the recreational lifestyles and preferences of all recreating "publics." Through management activities that provide access within designated wilderness, a significant segment of the U.S. public is being served.

As the political and social climates in the United States change, there will be an increasing need to have good information and defensible data describing outdoor recreation, including visits to wilderness, one of the NWPS's more visible values. Currently, the managing agencies and interested organizations seem to

have too little in the way of staffing or funding to monitor use levels accurately. However, recent interest in better and more credible information about outdoor recreation use should give rise to greater emphasis on improving wilderness recreation use data in the near future. The estimates of the number of recreational trips people take to wilderness provided in this article represent one effort to im-

prove our knowledge and understanding of the recreational role of wilderness in the United States. **LW**

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