

ATTITUDES TOWARD FEES AND PERCEPTIONS OF COSTS OF PARTICIPATING IN DAY-USE OUTDOOR RECREATION

Allan Marsinko
Professor, Department of Forest Resources,
Clemson University,
Clemson, SC 29634-0331

John Dwyer
Research Forester/Project Leader,
USDA Forest Service, North Central Research
Station, 1033 University Place, Suite 360,
Evanston, IL 60201-3172

Herb Schroeder
Research Social Scientist,
USDA Forest Service, North Central Research
Station, 1033 University Place, Suite 360,
Evanston, IL 60201-3172

Abstract: Personal interviews were conducted at day use areas on six recreation sites in South Carolina. This was the second of two planned surveys on the sites, and its purpose was to provide insight into attitudes toward fees, and perceptions of costs of participating in day-use outdoor recreation activities. The first survey was conducted in 1998 and collected information about what participants liked and disliked about the sites. The first survey did not mention fees, but included open-ended questions in which participants could cite fees and other costs if they considered them important. Participants who appeared sensitive to costs tended to have lower incomes than those who were not sensitive to costs. In contrast to the first survey, the second asked specific questions about attitudes toward and consideration of fees and other costs. This paper compares the two surveys and presents results from the 2002 survey. Although the two surveys were conducted the same way and at the same time of the year, there were several important differences in responses to them. The response rate for the 2002 survey was about 65%, considerably less than the 89% rate for the 1998 survey. Total number of respondents was 604 in 1998 and 98 in 2002. The lower response rate and number of respondents was due, in part, to changes in the

sampling methodology, characteristics of sites, fee structures, and weather. However, much of the difference in response to the two surveys remains unexplained.

Introduction

Access fees on public lands can reduce use as well as generate revenue, and may be controversial for several reasons, including equity or fairness (Harris and Driver 1987, Warren and Rea 1998, Binkley and Mendelsohn 1987). Public reaction to fees on public lands is of great interest to public land managers as well as private firms that provide outdoor recreation opportunities in nearby areas (Chavez 1998, Lime et al, 1998).

This paper reports the second phase of a project designed to investigate the effect of fees on recreation site choice. Of particular concern was the extent of site switching in response to fees, and the role of substitute sites in site choice. This study was initiated because a recreation site in northwestern South Carolina was scheduled to begin charging fees in 1999, and we wanted to monitor responses to that change, including the possible shifting of some use to other sites. The study was designed as two personal interview surveys; the first occurring in 1998 (before fees were implemented), and the second occurring after fees were implemented. The first survey was conducted in 1998 as planned. Subsequently the District Ranger who made the decision to implement a site-use fee transferred to another state. The new District Ranger reversed the previous Ranger's decision regarding fees at that site. Because the decision had been reversed once, we delayed conducting the second survey as long as possible in case the decision was reversed again (i.e., to charge a fee). The decision was not reversed, and the second survey was conducted in 2002.

The objective of the 2002 survey was to identify attitudes toward and sensitivity to fees and other costs associated with day use areas on 6 recreation sites in South Carolina. This paper presents the results of the 2002 survey and compares selected aspects of both surveys (1998 and 2002). Results of the 1998 survey were reported in Marsinko (2000) and Marsinko et al. (2001).

Study Area

The primary study area is the Andrew Pickens District of the Sumter National Forest in the mountains of northwestern South Carolina. Recreation sites in this part of the state are operated by the U.S.D.A. Forest Service; the South Carolina Department of Parks, Recreation, and Tourism; the Pendleton District Historical, Recreational, and Tourism Commission; the county (primarily Oconee County); the U.S. Army Corps of Engineers; and local municipalities such as the city of Walhalla. The South Carolina Department of Natural Resources operates a fish hatchery in the study area adjacent to one of the study sites. Clemson University maintains a locally popular site on the University Forest and another at its Botanical Garden. Duke Energy Corporation operates a picnic area nearby at the site of a power plant and education center. The South Carolina Forestry Commission has a limited involvement in providing opportunities for outdoor recreation, but not primarily in the study area. A detailed description of the study area is given in Marsinko (2000).

Six primary sites and two roadside picnic areas were chosen for the study. The primary sites are: Yellow Branch (U.S.D.A. Forest Service), Stumphouse Tunnel Park (operated in 1998 by the Pendleton District Historical, Recreational, and Tourism Commission and operated by the city of Walhalla in 2002), Oconee State Park (South Carolina Department of Parks, Recreation, and Tourism), Chattooga Picnic area and Fishing Pier (known to most local recreationists as the Fish Hatchery - U.S.D.A. Forest Service), High Falls County Park (Oconee County), and South Cove County Park (Oconee County). All of these sites provide day use opportunities. Due to low use levels in 1998, the two roadside picnic areas surveyed in 1998 were not surveyed in 2002.

Methods

Personal interviews were conducted on weekends on the six primary sites (Yellow Branch, Stumphouse Tunnel Park, Oconee State Park, the Fish Hatchery, High Falls and South Cove County Parks) from July through November 2002. The focus was on participants in day use activities, primarily picnicking and walking/hiking, activities common to all sites. Four of the sites were thought to be substitutes for each other because they were along the same road, were in relatively close

proximity, and provided opportunities for similar activities. When the project was initiated, it was hypothesized that most users of these facilities would come from the nearby town of Walhalla or from areas east of Walhalla such as Seneca, Clemson, and Greenville, SC. During the first two weeks of the 1998 survey, it became apparent that users did come from these areas, and two additional sites east of Walhalla were selected as possible substitutes, bringing the total study area to six primary sites.

Two interviewers, who are permanent employees of Clemson University, including the senior author of this paper, worked on both the 1998 and 2002 surveys. Different student interviewers worked on each survey. The 1998 survey used mostly undergraduate students. However, a graduate student intensively sampled a key site that had low participation, and a graduate who was not a student worked early during the 1998 survey. The 2002 survey used undergraduate students. No site was intensively sampled in 2002. After allowing for methodological differences, the planned sampling effort in 2002 was about 10% greater than that in 1998, even though we contacted fewer individuals in 2002.

“Fee” was not mentioned in the 1998 survey because we wanted to see if individuals would bring it up. Many of the questions were open-ended, allowing respondents to include fees in their responses if they wished. The 2002 survey used a similar open-ended approach for some questions, but specifically addressed fees toward the end of the survey in order to collect sufficient information about attitudes toward fees and to test the different question formats (open-ended vs. specific fee questions). Information about responses to other costs was collected in like manner in the two surveys. In 1998, respondents were asked what costs they considered when they participated in this type of outing (they could list fees if they wished). In 2002, respondents were asked if they considered specific costs (e.g., food, gas, fees).

Results

Comparison of Responses to the 1998 and 2002 Surveys

In the 1998 survey, 701 on-site interviews were attempted and 604 were completed. Of those that were not completed, 18 had been surveyed

previously, 7 did not speak English, 14 were just leaving, and 58 refused to be interviewed for various other reasons. We did not want to resurvey previous respondents and were unable to survey the 7 who did not speak English. The response rate was 86% based on all observations and 89% calculated without those who were previously surveyed and those who did not speak English. Response rates varied by site from 84% to 95%.

In the 2002 survey, 158 on-site interviews were attempted and 98 were completed. Of those that were not completed, 5 had been surveyed previously, 2 did not speak English, 26 were just leaving, and 27 refused to be interviewed for various other reasons. The response rate was 62% based on all observations and 65% calculated without those who were previously surveyed and those who did not speak English. Response rates varied by site from 57% to 80%. The best site response rate in 2002 was lower than the worst site response rate in 1998.

There were substantial differences between the two surveys in the number of individual on-site contacts and the response rate. The lower number of contacts (158 in 2002 compared to 701 in 1998) can be partly accounted for by changes in sampling methodology between the two surveys. Fees were supposed to be implemented on Yellow Branch, and this site had very few visitors in 1998 when there was no fee. Therefore, we intensively sampled this site in 1998 in order to get sufficient background information for evaluating the response to newly imposed fees. Because fees were not implemented on the site, we treated this site the same as the others in the 2002 survey. Less intensive sampling on that site accounted for about 37 fewer respondents in 2002. Two roadside picnic areas were sampled in 1998, but not in 2002 due to low participation in 1998. This accounted for about 22 fewer respondents in 2002. Other methodological differences accounted for approximately 50 fewer respondents in 2002. Thus, a reduction of 109 respondents can be accounted for by methodological differences between the surveys. Based on the 1998 response rate, this amounts to about 120 on-site contacts. However, there were 543 fewer contacts in 2002, leaving 423 unaccounted for. The 1998 survey ended at the end of October because Yellow branch was closed for the season at that time. This also

coincided with the fall foliage season in 1998. The 2002 survey was conducted for two more weekends. It ended in November because the foliage season occurred later and Yellow Branch was not closed for the season in 2002. This change should have increased the contacts in 2002.

The weather affected the number of contacts in 2002. The study area was in a drought in 1998, which began to end in 2002. Rain and the threat of rain appear to have reduced participation in 2002. In 2002, interviews could not be conducted on several days due to rain and interviews were curtailed on other days due to rain. The rains in 2002 tended to cover a much wider area and occur for longer time periods than the infrequent scattered showers that occurred in 1998. In 1998, no interviewing days were completely lost due to rain. Several other factors may have reduced the number of contacts in 2002. The tunnel at Stumphouse Tunnel Park was closed in 1998 and people tended to stand outside the barricaded entrance to the tunnel. In 2002, people tended to be in the tunnel or leaving the area and we were not able to contact as many at this site. One site changed its fee structure from a per car fee to a per person fee between 1998 and 2002, which could have affected visitation to the site. Also, it is possible that concerns following the terrorist attacks of September 11, 2001 may have had an effect on recreation in the area.

The lower response rate in 2002 may have been due to several factors, including reopening the tunnel between 1998 and 2002. People stood outside the barricaded tunnel in 1998 and participated in the survey, which gave them an opportunity to complain about the tunnel being closed. In 2002, we found fewer people at the site and those we found were usually in a hurry to leave after walking in the tunnel. In 1998, 14 (2% of contacts) refused to participate because they were just leaving, whereas in 2002, 26 (16% of contacts) gave this reason for not participating. The "just leaving" category accounted for almost half of the nonrespondents across all sites and for over 60% of the nonrespondents at Stumphouse Tunnel Park in 2002.

Other factors may account for the lower response rate across all the sites. More respondents in 2002 said that they considered time to be part of the cost

of their trip, which could have affected their willingness to spend time responding to the survey. The weather in 2002 was more likely to involve a threat of rain, which could also have affected recreationists' willingness to remain on site and respond to the survey. The lower response rate may also be linked to the fact that we had fewer contacts in 2002. In 1998, we were more likely to approach those who were enjoying their recreational activities than those who were packing up or otherwise preparing to leave. In 2002, we found fewer people at the sites, which probably increased our likelihood of approaching those who were preparing to leave. This may help explain the increase in the number of contacts citing "just leaving" as a reason for not participating.

There were also differences in the racial/ethnic makeup of the participants in the two surveys. The 1998 survey participants were 95% White, 2% African American, 2% Hispanic, and 1% Asian. The 2002 survey participants were 78% White, 10% African American, 9% Hispanic, and 2% Asian. About 500 fewer Whites were interviewed in the 2002 survey. An increase in ethnic diversity was especially apparent at the High Falls site in 2002. This was the most ethnically diverse site surveyed in 1998 and it was the site where we were most likely to encounter Hispanic recreationists. In 2002, the Hispanic population at High Falls was considerably larger than in 1998. This may have been partly due to an increasing Hispanic population in the general area, and a tendency for new arrivals to go to sites recommended by other Hispanic families. The Park Superintendent at High Falls felt it may also have been due to a change in the fee structure from a per car fee to a per person fee at Oconee State Park. This change may have caused more Hispanic families to switch to High Falls because Hispanic families in this area tend to travel in large groups in vans and thus benefit from a per car fee structure.

Income also differed between the two surveys. Median household income was \$45,000 in 1998 and \$35,000 in 2002. The means were closer at \$45,500 in 1998 and \$44,400 in 2002. Figure 1 shows the distribution of income for each survey. The income differences are due to several factors. Hispanics who participated in the study had lower incomes than Whites, and there was a higher proportion of Hispanics in the 2002 survey.

Whites who participated in 2002 had slightly lower incomes than Whites who participated in 1998.

Comparison of question formats

We feel that the way questions about fees are asked can have a significant influence on the response received. Consequently we varied the way that questions about fees were asked.

The 1998 survey asked, "Is there any place that you used to enjoy visiting for this type of outing that you no longer visit? If yes, why don't you go there now?" The primary reason for asking this question was to find out who would cite "fees" as a reason for not using a site that they previously used. It was felt that only those who were actually affected by fees would mention them in response to such a question. Very few (only about 3%) of the respondents reported that they were affected by fees, and they tended to have lower incomes than other respondents. The 2002 survey asked the identical question along with a specific fee question that was asked later in the survey. The purpose was to compare the two question formats within the 2002 survey. This was based, in part, on park managers' comments concerning most fee complaints coming from those who appear most able to afford fees.

Our hypothesis was that fees would be mentioned in an open-ended question if they were important enough to be part of the thought process of the respondent. Thus, we expected lower income respondents to cite fees under these conditions.

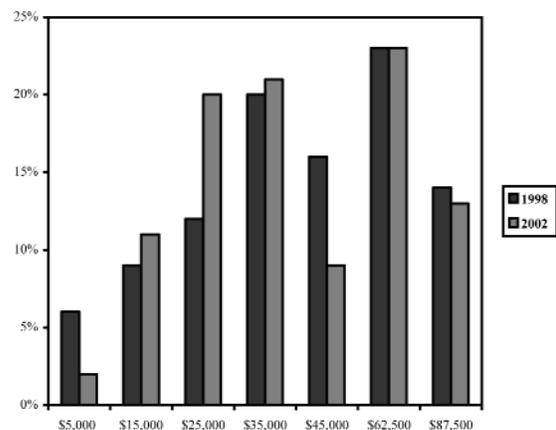


Figure 1. Household income of participants (1998 and 2002)

We felt that using the word “fees” in the question might generate protest responses. However, because of the small number of contacts and lower response rate in 2002, there were not enough responses to the open-ended question to analyze in 2002. Therefore, summary data are provided from similar questions on the 1998 and 2002 survey. We do not attempt to analyze these data, but present them to the reader because we feel the results are interesting. The questions being compared are “Is there any place that you used to enjoy visiting for this type of outing that you no longer visit? If yes, why don’t you go there now?” from the 1998 survey and “Have entrance/parking fees caused you to stop going to a site or to go less often?” from the 2002 survey.

In 1998, 71% of those citing “fees” had incomes of \$45,000 or less. In 2002, 75% of those who said fees caused them to stop going or to go less often had incomes of \$62,500 or more. Although the questions are not identical and the samples differed ethnically, the results are interesting and might suggest further study of which income groups are most likely to be affected by fees.

2002 survey

More than four-fifths of the respondents to the 2002 survey felt that fees were necessary and fair (Table 1), and only thirteen percent said they would go to a site less often or stop going due to fees. Thus, the majority of respondents who visit the study sites are in agreement with the concept of paying fees for the use of certain sites. Likewise, most reported that their participation behavior was affected little, if any, by fees.

Respondents were asked if they considered specified costs when on this type of day-use outdoor recreation trip. Those who did not consider a type of cost were asked why they did not. Fewer than half reported that they consider the cost of food, while slightly more than half reported that they consider the cost of gas (Table 2). The reason often given for not considering food was that respondents had to eat anyway (Table 3). Thus, they did not view food as an additional cost of the trip. Many did not consider the cost of gas because they felt it was low. Few considered the cost of lodging, primarily because they did not incur lodging costs on this type of trip.

Table 1. — Attitudes Toward Fees - 2002

	Yes %	No %
Should NOT have to pay fees	17	80
Fees are unfair	15	85
Fees are needed	85	14
Go less often or stop because of fees	13	87

Row percents do not total 100 due to “don’t know” responses

Only 13% considered automobile operating expense (e.g., 30 cents per mile). We expected this pattern of results based on the results of the 1998 survey. Costs most often reported as considered tend to be those that require a dollar outlay just before, or during, the trip.

Entrance/parking fees were considered by 45% of the respondents. Activity and shelter rental fees were considered by 33% and 21% of the respondents respectively. Common reasons for not considering entrance/parking and activity fees were that the fees were reasonable. Few considered shelter rental fees because few rented the shelters (although many used the shelters). Although we did not pursue details about activity fees, comments from some respondents indicated that they had strong negative feelings about these fees, and may have avoided sites that charge such fees. One respondent said he would never pay to swim. One study site has an activity fee for swimming, while most recreation sites in the area do not charge a fee to swim. However, the site with the activity fee for swimming provides a lifeguard while the others do not. Thus, those who pay to swim receive an additional benefit for their money. This may explain why some respondents did not consider activity fees as part of the cost of the trip because they felt these fees were reasonable.

When we study travel behavior as part of the site choice process, we often assume the time spent traveling is part of the cost of the trip.

Table 2. — Types of Costs Considered by Respondents – 2002

Cost	% of Respondents
Food	44
Lodging	19
Gas	55
Car Expense	13
Entrance/Parking Fee	45
Activity Fee	33
Shelter Rental Fee	21

Table 3. — Why Costs Are Not Considered by Respondents – 2002

Cost	Common Response
Food	Have to eat anyway
Lodging	Not used
Gas	Cost is low
Entrance/Parking Fee	Reasonable
Activity Fee	Reasonable
Shelter Rental Fee	Do not rent

Respondents were asked if they considered the time spent traveling to be part of the cost of the trip. Forty percent said they did. This question was asked the same way in 1998, and 31% reported at that time that they considered travel time as a cost. When the 1998 survey was done, many respondents qualified their answer by saying “no, but I would if” and gave various circumstances under which they would consider travel time as a cost of the trip. Typical circumstances included some type of time or distance threshold, or a heavy traffic condition. The 2002 survey attempted to collect more details about these conditions and to quantify them by identifying the thresholds. However, the small sample size and the wide range of threshold numbers given by respondents did not permit analysis of this part of the study. Reasons given about accounting for time in 2002 were generally consistent with those given in 1998. One respondent to the 2002 survey stated that he would consider his time as a cost if there were children in the car.

After finding few participants the first weekend of the 2002 survey, a question was added concerning the effect of the events of September 11, 2001 on participation. Most respondents (89%) said September 11 did not affect their participation. Those who were affected said they had become more cautious or stay in rural areas or closer to home (which is rural for most respondents). We surveyed only those who were at the sites, and therefore could not determine how many had stopped going to the sites because of September 11.

Summary and Conclusions

This paper reported the results of the second phase of a study designed to investigate the effect of fees on recreation site choice, and compared the first (1998) and second (2002) phase surveys. Although the studies were conducted in much the

same way over similar time periods during the year, we found substantially fewer people and a lower response rate across all study sites in 2002. Some of the differences in the number of contacts could be accounted for by methodological differences, different weather patterns, and changes in sites and their management.

The differences in results of the two surveys over a four-year period point out the significant changes that can take place in site choice and use over time in even a relatively small and homogeneous area. From the standpoint of site management, changes included who managed sites, the structure of fees and charges, and what facilities were open. Weather differed over the four-year period to include a drought and then wetter weather that helped compensate for the drought. The number of users was substantially lower than before, and there were changes in the characteristics of visitors, to include their incomes and their racial/ethnic backgrounds. These changes complicate efforts to compare the results of the 1998 and 2002 surveys; but also point out the dynamics of site choice and use, raising questions about the extent to which it is possible to generalize the results of one-time surveys of areas such as these. One would certainly get different perceptions of the study sites and their users from the surveys in 1998 and 2002.

Few respondents thought fees were unfair, and most thought fees were needed. Few reported that they allowed fees to affect their participation. With differences in results between the surveys, it was not clear which income groups were most affected by fees.

Many respondents did not consider the cost of food, gas, or fees when participating in this type of recreation. The primary reason is that they feel these costs are relatively low. Many respondents did not consider the cost of their time when participating in this type of recreation. Some stated they would consider time as a cost if they had to drive far enough, or for a long period of time, or if they had to drive in heavy traffic. This might be interpreted as considering this cost to be relatively low.

The perceptions of costs by respondents have potentially important implications for nonmarket valuation, particularly when the travel cost model

is used. This model estimates the value of the trip to the user based on actual travel expenses incurred. These expenses often include food and automobile expenses. Thus, the value of a trip based on actual expenditures may be inaccurate for participants who do not consider these costs when making decisions for certain types of trips.

References

Binkley, C. S. and R. O. Mendelsohn. 1987. Recreation user fees: An economic analysis. *Journal of Forestry*. 85(5):31-35.

Chavez, D. J. 1998. Voices across the United States: Opinions from National Forest customers about recreation fees. [Http://www.fs.fed.us/research/rvur/wilderness/voices_across_the_united_states.html](http://www.fs.fed.us/research/rvur/wilderness/voices_across_the_united_states.html). 3p.

Harris, C.C. and B. L. Driver. 1987. Recreation user fees: Pros and cons. *Journal of Forestry*. 85(5):25-29.

Lime, D. W., A. L. Lundgren, C. A. Warzecha, J. L. Thompson, and T. G. Stone. 1998. Reactions of 1997 park visitors to the National Park Service recreational fee demonstration program. [Http://www.fs.fed.us/research/rvur/wilderness/monitoring_the_reactions_of_park.html](http://www.fs.fed.us/research/rvur/wilderness/monitoring_the_reactions_of_park.html). 5p.

Marsinko, A. 2000. The effect of fees on recreation site choice: Management/Agency Implications. Northeastern Recreation Research Symposium. Lake George, NY. April 11-14, 1999. Gen. Tech. Rep. NE-269 U.S.D.A. Forest Service. pp. 164-171.

Marsinko, A., John Dwyer, and Herb Schroeder. 2001. Cost Consideration as a Factor Affecting Recreation Site Decisions. Northeastern Recreation Research Symposium. Lake George, NY. April 2-4, 2000. Gen. Tech. Rep. NE-276 U.S.D.A. Forest Service. pp. 68-73.

Warren, R. and P. Rea. 1998. Fee supported parks: Promoting success. *Parks and Recreation*. 33(1):80-88.

Pages 278-284 in:

Murdy, James, comp., ed. 2004. **Proceedings of the 2003 Northeastern Recreation Research Symposium**. Gen. Tech. Rep. NE-317. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Research Station. 459 p.

Contains articles presented at the 2003 Northeastern Recreation Research Symposium. Contents cover planning issues, communications and information, management presentations, service quality and outdoor recreation, recreation behavior, founders' forum, featured posters, tourism and the community, specialized recreation, recreation and the community, management issues in outdoor recreation, meanings and places, constraints, modeling, recreation users, water-based recreation, and recreation marketing.

Published by:
USDA FOREST SERVICE
11 CAMPUS BLVD SUITE 200
NEWTOWN SQUARE PA 19073-3294

For additional copies:
USDA Forest Service
Publications Distribution
359 Main Road
Delaware, OH 43015-8640
Fax: (740)368-0152

July 2004

Visit our homepage at: <http://www.fs.fed.us/ne>