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User Fees for Recreation Services on Public Lands: A National Assessment

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ABSTRACT: A portion of the 1995 National Survey on Recreation and the Environment examined public opinion toward user fees as a means of funding recreation services on public lands, including campgrounds, boat ramps, trails, picnic areas, historic sites, restrooms, parking areas, special exhibits & presentations, visitor centers, and other facilities. Respondents were offered five choices to fund these services including fees only, fees and taxes, taxes only, don't provide the service, and don't know. Sample frequencies indicated that over 95 percent of the respondents felt that fees or a combination of fees and taxes should be used to fund at least one of the services. Boat ramps, campgrounds, and special exhibits drew the most support for users fees with over 80 percent of respondents indicating that user fees should be charged to cover at least part of the costs of providing these services. User fees were least favored for picnic areas, historic sites, and restrooms. Restrooms were the only case in which less than 50 percent of the public favored the use of fees to cover at least part of the provision costs. The only service for which at least 50 percent of the public did not feel taxes should be used at least in part to cover the costs of provision was for boat ramps.

Logistic regression models were used to examine the socioeconomic factors explaining support for fees. The model included variables on age, ethnicity, income, household size, education, gender, and region of the country. Findings were somewhat mixed. However, in a general fee model and in a number of specific service models, income and ethnicity surfaced as significant explanatory variables, indicating that concerns about fairness in the implementation of fees are not unfounded. Moreover, a number of regional differences emerged indicating differing levels of support for user fees around the country.

KEYWORDS: User fees, recreation services, public lands, logistic regression

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Introduction

User fees for recreation access to and use of public lands have been a topic of managerial and academic debate since the turn of the century

(White, 1992). In the late 1950s, legislation was enacted (Title V, Independent Office Appropriations Act) to collect fees, but this was not perceived by land management agencies as a significant revenue source compared to Congressional allocations. At that time, federal agencies did not rely on fees as a serious source of earnings because of the prevailing philosophy that outdoor recreation lands should be open and available to all socioeconomic classes at no cost (Warren & Rea, 1998). Those opposing fees also maintained that entrance fees and other such-out-of pocket expenditures amounted to double taxation; that is, the recreation consumer would be required to pay once through taxes and then again on-site (Harris & Driver, 1987). Others feared that user fees would exclude lower socioeconomic groups from recreating on public lands because these groups would be unable to afford the entry costs (Dustin, 1986; More, 1998a).

However, rising inflation and federal budget reductions in the 1970s and 1980s prompted land management agencies such as the National Park Service to increase user fees. Moreover, a philosophical shift seems to have occurred among a growing segment of public land managers, interest groups and politicians, who now believe that those who use and benefit most from recreation resources should bear more of the costs for provision of such services (White, 1992).

Fee proponents argue that, although typical non-users of National Forest recreation areas, National Parks, and other public recreation areas benefit from the mere existence of such places, recreation enthusiasts or users receive disproportional benefits from these areas. Therefore, these users should bear a greater share in the costs of providing recreation services at these public areas. This latter argument has appeal, especially if one considers that historically, National Park visitors and forest recreationists are not typically lower income. They tend to be non-minority, college-educated, middle-income wage earners (USDA Forest Service, 1992).

Current fee structures for recreation services on public lands are under legislative mandate. The 1965 Land and Water Conservation Fund authorizes the U.S. Forest Service to collect fees for specified camping and swimming activities, although many other services are free to consumers (Aukerman, 1987, p. 26). More recently, the Omnibus Consolidated Rescissions and Appropriations Act of 1996 authorized federal land management agencies to implement fee demonstration projects, the purpose of which is to help demonstration projects recover additional operational costs (USDA Forest Service, 1997). The Forest Service sees the Fee Demonstration Project as an improvement over previous authorizations because at least 80 percent of revenues from the fee demonstrations remain at the respective projects. This contrasts with prior legislation, which did not require that such monies stay at the site where collected.

A number of studies have addressed the topic of recreation fees on public lands from philosophical, pedagogical, and conceptual perspectives (More, 1998b). Cockrell & Wellman (1985) generally oppose fees, arguing

that access to unimpeded (free) recreation opportunities augments society on both the micro and macro levels. The individual receives personal benefits, while the larger American society is also made stronger because recreation helps to promote democratic ideals. Harris & Driver (1987) discuss arguments both for and against user fees. Among the reasons cited for free access is the philosophical position that the recreation experience is a mostly elusive "merit" good that should not be subjected to market prices. They acknowledge that fee supporters, however, counter that fees could help to improve the quality of recreation experiences by making revenues available to help maintain recreation areas. Finally, Rosenthal, Loomis, & Peterson (1984) argue that setting recreation prices at the marginal cost is an economically efficient way of limiting recreation use. Such price setting also maximizes, in theory, net economic benefits.

Fewer studies have examined user fees from an empirical standpoint. Those that have, have been primarily activity-specific or site-specific studies. Reiling, Criner, & Oltmanns (1988) examined the relationship between attitude toward camping fees and the provision of information about service costs. They found that providing information to campers about costs had a positive effect on their attitude and willingness to pay higher campground fees. Kerr & Manfredo (1991) developed an attitude-based model to try and explain backcountry hut users' reactions to fees. Their findings suggest that a history of fee paying positively affected user attitudes and paying intentions.

Related to equity and distributional issues, Cordell (1985) hypothesized that the implementation of fees would not necessarily exclude lower-income users from outdoor recreation opportunities because low-income earners were already grossly underrepresented in thirteen of fifteen outdoor activities. Alternatively, Reiling, Cheng, & Trott (1992) looked at the potentially discriminatory impact of higher entrance fees for campers at Maine state parks. Somewhat contrary to Cordell's hypothesis, their results showed that higher fees did, indeed, have the effect of excluding persons with lower incomes. More recently, in a study estimating demand for natural resource-based recreation in the Florida Keys, Bowker & Leeworthy (1998) found differing price elasticities between whites and Hispanics. This result suggested a disproportionate reduction in Hispanic visitors if a user fee were adopted for the region.

While past user fee research has indeed been informative, especially about users and specific sites, a gap in the literature persists at the macro or general public level. In this paper we hope to contribute to a previously unexplored niche in the user fee debate by reporting on the sentiment of the nation toward user fees for publicly provided outdoor recreation services. We assess public opinion regarding the implementation of user fees in general to fully or partially fund ten broad categories of recreation services on public land. Additionally, we use regression models to test the effects of various sociodemographic factors in explaining support for user fees. These models provide a means of testing a number of hypotheses which relate to social issues commonly raised in the user fee debate.

Methods

Survey and Sample Frame

Data for this study were obtained from the NSRE (National Survey on Recreation and the Environment, Cordell et al., 1996). NSRE sampling took place in 1995 and consisted of two separate telephone surveys. The primary survey consisted of a national sample of 12,000 people, aged 16 and over. In interviews averaging about 20 minutes, information was gathered on individual and household characteristics, day and trip participation in specified recreation activities, characteristics of recreation trips, and other general information about outdoor recreation.

For the secondary survey, a national sample of 5,000 people, aged 16 and over, was asked about a number of more specific issues including participation in outdoor recreation activities, benefits of participation, favorite activities, barriers and constraints to participation, wilderness issues, awareness of public land agencies, freshwater-based trips, and opinions about user fees and funding services commonly provided on public lands. Because of the number of issue questions, respondents were randomly assigned a set of modules with subsets of questions. For each of these randomly assigned modules, the sample size was approximately 2,500. The module including user fee questions contained 2,015 observations, of which 1,590 were complete across all variables.

For the primary survey, a sample stratified by region was employed. Within each region, sampling was distributed within states proportional to the distribution of population among area and local phone codes. Eight regions were identified. To ensure adequate numbers of observations in the Rocky Mountains, the Great Plains, and Alaska (minimum of 900 per region and 400 for Alaska), a disproportionate sampling rate with respect to population proportion was used. For the secondary survey, a simple random sample of the nation's population was employed. This sample was distributed among the states in proportion to population. In addition, the data were post-weighted for analysis to compensate for disproportionate sampling rates with respect to social strata and geographic regions.

The survey module containing user fee questions included the following lead-in:

> Public lands offer a variety of services. For each of the following services, please tell me whether the cost for the service should be paid for by user fees, by taxes, by a combination of both, or should the service not be provided.

The question was asked for each of the following ten services: visitor centers, special exhibits & presentations, trails, picnic areas, campgrounds, rest rooms, boat ramps, parking areas, historical sites, and other facilities. Respondents could select any one of the four funding options listed in the lead-in or they could choose "refuse" or "don't know" options. If a respondent chose either "user fees" (only) or "combination of both" (user

fees and taxes) to the fee question pertaining to a given service, it was inferred that they supported user fees. If the respondent chose otherwise, it was logically inferred that they did not support user fees. Contextual detail was kept to a minimum in keeping with the limited time frame, magnitude, and general nature of the survey. Respondents were made aware that the survey was national in scope and repeated every five to ten years.

In addition to responses for each of the ten recreation services, an aggregate variable was created to assess whether the respondent was opposed to user fees in general. If a respondent chose "user fees" or "both" in any of the ten recreation service categories it was inferred that the respondent could not be unilaterally opposed to user fees.

Logistic Analysis

To better understand factors influencing one's decision to be a proponent or opponent of user fees, multivariate logit methods are employed (Greene, 1995; Park & Kerr, 1990). The logit model can be used to estimate the cumulative probability that an individual will support user fees based on a given set of explanatory variables. The dependent variable in this kind of nonlinear model is dichotomous (yes or no) and is coded as a zero or one. In this case, the individual's response to the user fee question is transformed into a zero-one format. Hence, if an individual supports user fees, as indicated by a choice of either "user fees" or "both" to the given question, the dependent variable is a one. Otherwise, it is a zero. The logit model is generally specified as

$$\text{Probability (fee support)} = 1/(1 + e^{-(\alpha_0+\alpha_1 x_1+\alpha_2 x_2+.....)})$$

where e is the base of the natural logarithm, X_i's are independent variables, and the α's parameters of the distribution function. In this application, a logit model is estimated for each of the ten recreation services, as well as for the aggregate measure.

The set of independent variables for each of the models includes a number of demographic variables commonly used in recreation behavior models, including gender (SX), years of education (ED), age (RAGE), and household number (HHNUM).

A set of two binary variables is used to represent and assess an arbitrary division of the country into three regions. The South (SOUTH) includes states running from Virginia to Arkansas and Louisiana, West (WEST) includes all states west of the Mississippi River, while the northern states east of the Mississippi are the base case.

The potential relationship of ethnicity and user fees is addressed through the inclusion of a binary variable representing groups traditionally considered "underserved." In this case, blacks and Hispanics are grouped together and represented in a racial aggregate (BLKHSP). If the regression parameter estimate on this variable is significantly different from zero, then

inclusion in this group could be a factor in explaining an individual's probability of supporting user fees. A negative sign on this coefficient would imply that this group is less likely to support the use of fees to fund recreation services on public land.

The final variable represents income (INCRES). This income variable is actually the residual of reported household income regressed on gender, education, and race. This "filtering" procedure is suggested by Park & Kerr (1990) as a means to reduce problems of multicollinearity when demographic variables like income, gender, race, and education are included in a model specification. The actual parameter estimate for income in the logit model is unaffected. The inclusion of income in the models allows for identifying potential equity effects related to wealth. For example, if this variable is not significantly different from zero, one could conclude that the often-raised issues of fairness to poorer users and potential users of outdoor recreation sites and services (More, 1998a) is a moot point. Alternatively, if income is assumed to be a good proxy for wealth, and the coefficient on this variable is positive and significant, then the probability that one would support user fees would be lower for people of lower incomes, implying that wealth equity could be an important concern.

Results

Estimates of sample proportions supporting user fees for each of the ten recreation services are reported in descending order in Table 1. These estimates range from a high of 83.3 percent of the public supporting fees for campgrounds to a low of 45.4 percent supporting fees for rest room facilities. It appears that services for which fees are traditionally charged, such as campgrounds (.833), boat ramps (.821), and special exhibits and presentations (.818), obtain high proportions of support from the public. Alternatively, rest rooms (.454) decisively draw the least support, while historic sites (.552), picnic areas (.563), trails (.575), visitor centers (.601), other facilities (.626), and parking areas (.632) fall in between.

Table 1
Sample proportions supporting user fees or a combination of user fees and taxes to fund recreation services on public lands (n = 1590)

Service Provided	Proportion	Standard Deviation
Campgrounds	.833	.373
Boat Ramps	.821	.384
Special Exhibits	.818	.386
Parking Areas	.632	.482
Other Facilities	.626	.484
Visitor Centers	.601	.490
Trails	.575	.495
Picnic Areas	.563	.496
Historic Sites	.552	.497
Rest Rooms	.454	.498
FEE ANY	.967	.180

Of perhaps more significance is the value of the aggregate variable (FEE ANY). This variable represents whether an individual supports user fees or a combination of user fees and taxes to fund at least one of the services. The proportion of the sample supporting fees for at least one of the services is 96.7 percent. This result strongly suggests that the public has little problem in principle with the implementation of user fees to fund recreation services on public lands.

Sample frequencies detailing responses to each funding alternative for the ten recreation services are reported in Table 2. The first and second data columns provide a disaggregation of column one in Table 1. Column one of Table 2 illustrates that boat ramps (.579), campgrounds (.456), and special exhibits (.450) have the highest proportion of the public supporting user fees as the principal source of funding such services on public lands. In contrast, restrooms (.154) and historic sites (.163) obtain the least support from the public for funding based solely on user fees.

Column three in Table 2 indicates the proportion of the sample supporting "taxes only" as the means of funding the various recreation services. It is interesting to note that rest rooms (.520) was the only category for which a majority of respondents chose "taxes only" as the principal source of funding. The public seems to support using taxes to fund recreation services on public land for six of the ten services investigated.

Table 2
Response frequencies for funding alternatives across ten recreation services on public land (observations = 1590)

	Frequency				
Service	User fees only	User fees & taxes	Taxes only	Don't provide	Refuse/ don't know
Visitor Centers	391 (.245)	565 (.355)	584 (.367)	10 (.006)	40 (.025)
Special Exhibits	716 (.450)	584 (.367)	211 (.132)	21 (.013)	58 (.036)
Trails	390 (.245)	524 (.329)	615 (.386)	13 (.008)	48 (.030)
Picnic Areas	364 (.228)	531 (.334)	657 (.413)	8 (.005)	30 (.018)
Campgrounds	725 (.456)	600 (.377)	229 (.144)	4 (.002)	32 (.020)
Rest Rooms	245 (.154)	477 (.300)	828 (.520)	4 (.002)	36 (.022)
Boat Ramps	921 (.579)	384 (.241)	220 (.138)	9 (.005)	56 (.035)
Parking Areas	492 (.309)	513 (.322)	547 (.344)	1 (.000)	37 (.023)
Historic Sites	260 (.163)	618 (.388)	666 (.418)	8 (.005)	38 (.023)
Other Facilities	293 (.184)	702 (.441)	244 (.153)	27 (.017)	324 (.203)

The "don't provide" responses (column four) average less than 1 percent across the various services. This result provides a fairly strong

indication that the public considers the provision of recreation services on public land as very important. This fact is further corroborated by the 2 to 3 percent average of refusals and "don't knows" over all but the "other facilities" category. The large proportion of refusals and "don't knows" here (20.4 percent) are likely due to the ambiguous nature of "other facilities."

Logistic Models

Logistic regression results for the aggregate user fee variable, FEE ANY, are reported in Table 3. All regression models were estimated with LIMDEP 7.0 (Greene, 1995). The estimated model is highly significant and, with the exception of household number (HHNUM), being from the West (WEST), and gender (SX), all explanatory variables are significant at the =.05 level.

Based on the insignificance of HHNUM, it appears that household size has little or no influence over whether an individual would, in general, support user fees for recreation services on public lands. This would suggest that, in principle, implementation of user fees could not be considered anti-family. A different conclusion might be drawn, depending on specific pricing policies; however, reference to issues at specific sites involving specific prices is beyond the scope of this study.

The insignificance of the western regional variable (WEST) implies that Westerners respond to fees in general no differently than Northerners (base case). Alternatively, Southerners are less likely to support fees, as evidenced by the statistically significant negative sign on the SOUTH variable.

Table 3
MLE Logistic regression estimates for the aggregate fee variable (FEE ANY) representing whether an individual would support user fees for at least one recreation service on public land (n = 1586)

Variable	Coefficient	b/St. Er.*	Mean of X
	Characteristics in numerator of Prob[FEE ANY = YES]		
Constant	3.223	3.145	
SX	.505	1.725	.475
INCRES	.018	2.609	1.872
ED	.149	2.409	14.028
RAGE	-.026	-2.886	40.201
HHNUM	-.108	-1.182	2.845
BLKHSP	-1.311	-4.050	.105
SOUTH	-1.081	-3.421	.247
WEST	-.019	-.047	.287

* asymptotic t-value

Age and education appear to have significant but opposite effects on the likelihood an individual will support fees. The sign on the years of education variable (ED) is positive and significant, suggesting that more highly educated individuals are more likely to support fees. This result is generally consistent with existing literature. The negative and significant sign on the age variable (RAGE) indicates that holding other factors constant, older Americans are less likely to support user fees than younger ones.

The income variable (INCRES) is positive and highly significant. This result implies that support of user fees is positively correlated with income. Such a result would appear consistent with More's (1998a) argument that user fees have a discriminatory impact on the poorer segments of society. However, given the high proportion of the sample (96.6 percent) supporting fees or a combination of fees and taxes for at least one recreation service, perhaps the real issue may not so much be one of whether to employ user fees but rather how to discriminatingly price services so as not to place an undue burden on lower-income people.

The binary race variable (BLKHSP) is negative and significant, suggesting that blacks and Hispanics are less likely to support user fees in general than whites or Asians, other factors held constant. This result could reflect cultural differences in views toward the role of the government in the provision of recreation services on public lands. An interesting question is raised when one considers the existence of a large body of empirical work in the recreation literature suggesting that blacks and Hispanics have historically been less likely to partake in many types of traditional outdoor recreation. Under such conditions, one might expect blacks and Hispanics to favor the use of fees, thereby shifting the financing of such entities away from the general tax base to the users who stand to benefit the most from these services and/or to favor not providing the service at all. However, our results tend to suggest otherwise.

Individual logistic regression models for selected recreation services are reported in Table 4. While these results generally follow the aggregate variable model results above, a number of exceptions emerge. For example, while gender (SX=1 for females, SX=0 for males) is statistically insignificant in the general model and most of the specific service models, it is significant and positive for boat ramps and trails, suggesting females are more likely to favor fees for such services. These two services are often considered to be among the more male dominated, and hence, it is not surprising that women are more likely than men to support fees here.

Income is significant and positive for the aggregate model above but is only significant and positive in one of the individual models (boat ramps). This result would seem to contradict the often-espoused contention that poorer groups have problems with fees.

While Westerners are not significantly different from Northerners in their likelihood of supporting fees in general, the binary variable for Westerners has a significant and positive coefficient in four of the specific

Table 4
MLE Logistic regression estimates for funding selected recreation services on public lands (dependent variable is yes = 1 to either user fees or user fees & taxes, N = 1586)

	Constant	SX	INCRES	ED	RAGE	HHNUM	BLKHSP	SOUTH	WEST
CAMPGROUNDS									
Coefficient	-.590	.242	.209E-03	.134	-.178E-02	.118	-.918	.029	.190
b/St. Er.*	-1.196	1.760	.092	4.496	-.390	2.312	-4.934	.174	1.146
BOAT RAMPS									
Coefficient	-.126	.262	.992E-02	.113	.728E-03	.014	-.713	-.345	.081
b/St. Er.*	-.266	1.981	3.851	3.939	.164	.287	-3.861	-2.215	.496
PARKING AREAS									
Coefficient	.197	.134	.815E-03	.011	.344E-03	.038	-.350	-.183	.238
b/St. Er.*	.514	1.275	.486	.474	.096	.977	-2.085	-1.436	1.880
HISTORIC SITES									
Coefficient	-.342	.110	-.125E-02	.011	.513E-02	.026	-.248	.112	.149
b/St. Er.*	-.918	1.087	-.775	.520	1.466	.711	-1.494	.887	1.227
TRAILS									
Coefficient	.035	.199	.159E-02	.103E-02	.540E-03	.503E-02	-.334	.096	.373
b/St. Er.*	.092	1.946	.973	.046	.153	.135	-2.004	.764	3.034
PICNIC AREAS									
Coefficient	-.248	.078	-.159E-02	.015	.539E-02	-.025	-.184	.046	.320
b/St. Er.*	-.663	.766	-.982	.670	1.531	-.677	-1.104	.369	2.621
VISITOR CENTERS									
Coefficient	.616	.033	-.274E-03	-.031	.374E-02	-.010	.179	-.259	.511
b/St. Er.*	1.618	.314	-.166	-1.388	1.043	-.273	1.035	-2.054	4.010
RESTROOMS									
Coefficient	.324	.043	-.130E-03	.365E-03	.223E-02	-.236E-02	-.022	-.745E-02	.066
b/St. Er.*	3.538	1.710	-.327	.067	2.597	-.259	-.539	-.240	2.223
Independent Variable Sample Means		.475	1.87	14.028	40.021	2.845	.105	.247	.287

*asymptotic T-value

service models, including trails, picnic areas, visitor centers, and rest rooms. Southerners on the other hand, are significantly less likely to support fees for boat ramps and visitors centers but are not different with respect to most other services.

Among the individual service models, the coefficient on age is only significant for rest rooms. The positive sign suggests that older Americans are more likely to support paying for these services. This result is contrary to the general finding above that age is inversely related to the probability of supporting fees in general. Education is significant and positive only for boat ramps and campgrounds.

The ethnicity variable is significant and negative for four of the individual models: trails, campgrounds, boat ramps, and parking areas. These results, along with the similar finding for user fees in general, are difficult to understand. Previous research has shown fishing and outdoor group activities to be important among blacks and Hispanics (Johnson & Bowker, 1999). This might account for why those in the ethnic composite of blacks and Hispanics would be less likely to support fees for campgrounds, parking areas, and boat ramps. However, the reason for the negative sign on the ethnicity variable in the trails model is not apparent.

Conclusions

Our results suggest a general receptiveness by the public for recreation fees, as indicated by the fact that over 95 percent of the respondents in our sample supported either user fees or a combination of user fees and taxes to fund at least one recreation service on public land. However, for six of the ten recreation services examined, there was more support for funding from taxes only than from fees or a combination of fees and taxes. The sample differs from previous work in that we do not limit our questions about fees to users at a specific site. The most support for fees is generally centered in venues where they are often charged in public and private sectors, e.g., campgrounds and boat ramps. Interestingly, nearly 60 percent of the sample favored only user fees as a means of funding boat ramps on public lands.

There are at least two different explanations for this phenomenon. The first is that the public views provision of specialized recreation activities on public land as less of a "public good" than such services as picnic areas, rest rooms, and historic sites. It is also possible that Kerr & Manfredo's finding that experience with fees influences reaction to fees could be at work. Hence, if the public is not used to paying fees for rest rooms, they would not have a positive attitude toward the same. This could also help to explain the negative relationship between age and support of fees in the aggregate fee model, as the idea of paying for outdoor recreation is more pervasive today than in the past.

While our results indicate broad support for fees in general and over a number of specific services, they do not imply that the public wants recreationists to bear the full cost of their pursuits on public land. More than

one-third of the sample chose "taxes only" as the best way to fund visitor centers, trails, picnic areas, rest rooms, parking areas, and historic sites on public lands.

Among the sociodemographic factors explaining the support of fees, our findings are mixed. For the aggregate fee equation, the positive relationship between income and support of fees appears to support, in general, assertions by those who argue against fees for reasons of fairness. However, when individual services models are considered, only boat ramps show a positive and significant relationship between income and support of fees. The lack of significance in the individual models could derive from the fact that in many forms of outdoor recreation, individuals in similar income brackets choose similar activities and sites, thus masking the effects of income differences.

Belonging to an ethnic grouping composed of blacks and Hispanics has a negative influence on support for user fees on public lands in general and for services such as campgrounds, boat ramps, parking areas, and trails. We can propose no simple explanation for this result, which would appear to indicate important cultural differences and would suggest that researchers spend more time looking into this potentially difficult management issue.

Although coarse, our regional variables indicate that Southerners are less likely to support fees in general than are Northerners or Westerners. Regarding specific services, Southerners are noticeably different from the other two regions in their lack of support in charging fees for boat ramps and visitor centers on public lands. This could possibly arise from regional preferences related to government intrusion. Westerners, on the other hand, demonstrated more support for user fees alone or with taxes than either of the other two regions for the provision of parking areas, trails, picnic areas, visitor centers, and even rest rooms. Such results could be driven by a Western sentiment of "pay as you go."

Overall, we think the results of this study provide reasonably strong evidence to suggest that researchers and agencies move beyond the question of whether to implement user fees and focus on the specifics of where, when, and how. In many cases, particularly those involving dispersed recreation activities, actual fees are likely to be relatively minor in comparison to the costs of transportation, equipment, food, and incidentals associated with an outdoor experience. In cases where equity is an issue, or where users from nontraditional backgrounds are to be encouraged, revenues from fees could be creatively redistributed to provide incentives for participation. An example of such a program might be using fee revenues to subsidize transportation and entry costs for inner-city youth groups in urban proximal national forests.

The approach in this study has been to look at user fees in general across a national sample of households. As such, the results and conclusions should be viewed in a broad sense and should not be used to make inferences about fees at specific sites. For example, while we find that in

general the public strongly supports user fees for boat ramps, this may not be the case when referring to a specific lake with most of the shoreline controlled by private interests. Moreover, our results provide little guidance for suggesting specific pricing policies. For this, more research at representative sites will be necessary. Our research could also be extended by exploring deeper household recreation choices and preferences. Nevertheless, it seems apparent that the vast majority of the public favors user fees, alone or in combination with taxes, for the provision of some recreation services on public land. Therefore, it would seem reasonable for site managers and policy makers to at least consider fees as one part of a portfolio of management alternatives, especially in the provision of more specialized recreation services and opportunities.

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