

Daniel W. McCollum and Annette Puttkammer

1999

74. Bowker, J. M.; English, Donald B. K. and Cordell, H. Ken. (1999). Projections of outdoor recreation participation to 2050. In H. Ken Cordell (Ed.), *Outdoor Recreation in American Life: A National Assessment of Demand and Supply Trends* (pp. 323-350). Champaign, IL: Sagamore Publishing.

Keywords: recreation participation projections, regional cross-sectional models, recreation activities.

Type of citation: Book chapter

This chapter reports projections of future recreation participation (by millions of participants aged 16 and over) and consumption (by millions of days annually and by millions of primary purpose trips taken) across the U.S. in four regions (North, South, Rocky Mountain and Pacific). Models explaining current recreation behavior were used to develop projections of future recreation activity. Findings show that the days spent and numbers of participants in winter, water-based, and developed land activities will, in general, grow faster than the population. Some of the fastest growing outdoor recreation activities through the year 2050 are visiting historic places, downhill skiing, and sightseeing. Some of the slowest are off-road vehicle driving, hunting, and primitive camping.

261. Bowker, J.M.; Cordell, H.K. and Johnson, Cassandra Y. (1999). User fees for recreation services on public lands: A national assessment. *Journal of Park and Recreation Administration*, 17(3): in press.

Keywords: user fees, recreation services, public lands, logistic regression.

Type of citation: Journal article

This research contributes 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. Data for this study were obtained from the 1995 National Survey on Recreation and the Environment. Public opinion regarding the implementation of user fees in general to fully or partially fund ten broad categories of recreation services on public land are assessed. Additionally, regression models are used to test the effects of various sociodemographic factors in explaining support for user fees. 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. The results suggest a general receptiveness by the public for recreation fees as indicated by the fact that over 95 percent of the respondents supported either user fees or a combination of user fees and taxes to fund at least one recreation service on public land. Boat ramps, campgrounds, and special exhibits drew the most support for user fees. However, for six of the ten recreation services examined (visitor centers, trails, picnic areas, restrooms, parking areas, and

historic sites) there was more support for funding from taxes only than from fees or a combination of fees and taxes. In some of the models discussed, income and ethnicity surfaced as significant exploratory variables. A number of regional differences also emerged indicating differing levels of support for user fees around the country.

262. Absher, James D.; McCollum, Daniel W. and Bowker, J.M. (1999). The value of research in recreation fee project implementation. *Journal of Park and Recreation Administration*, 17(3): in press.

Keywords: business planning, recreation managers, evaluation.

Type of citation: Journal article

In a survey of all Forest Service fee project managers, key questions about business planning, communication efforts, agency support, and use of research data in the implementation of fee programs were investigated. A set of 24 questions was developed and administered in phone interviews to 63 managers in the fall of 1998. These managers rated research as the lowest item in the list of beneficial skills and knowledge areas, with nearly one-third rating it as having little or no benefit to the task of creating effective business or communication plans. On the other hand, managers who actually used primary or survey data (44 of 59) rated it as highly useful, even though some primary data may have been obtained in a casual fashion, with little evidence of systematic research at the planning stage. Scientific research apparently is not yet a formal part of the fee demonstration enterprise, thus the benefits available from scientifically valid research seem to be largely unachieved.

255. Krannich, Richard S.; Eisenhauer, Brian W.; Field, Donald R.; Pratt, Cristina and Luloff, A.E. (1999). Implications of the National Park Service Recreational Fee Demonstration Program for park operations and management: Perceptions of NPS managers. *Journal of Park and Recreation Administration*, 17(3): in press.

Keywords: National Park Service, recreation fees, park management, management impacts.

Type of citation: Journal article

This study provides an important additional perspective on Recreational Fee Demonstration Program effects by focusing attention on insights into the Fee Demonstration Program from the perspective of on-site management. The analysis presented in this paper reports results of a mail survey of administrative personnel responsible for Fee Demonstration Program management at 109 National Park Service units that were participating in the program in 1997. Results indicate that managers generally have positive perceptions of the program and its effects. Very few of these managers perceived negative effects on visitation, and most reported that the responses of local and nonlocal visitors have been either positive or neutral. About one-fourth of the

managers indicated problems with program administration that they perceived as originating at the local-unit level, and a similar number perceived problems as originating from regional-level administration. Nearly half perceived problems attributed to national-level National Park Service administration. Examination of variables reflecting varying park contexts indicates that perceptions of program effects are associated with differences in visitation levels and patterns, unit type, and regional location. These differences suggest that a "one size fits all" program, while easier to administer, may be less effective in meeting on-the-ground needs.

257. Kyle, Gerard T.; Kerstetter, Deborah L. and Guadagnolo, Frank B. (1999). The influence of outcome messages and involvement on participant reference price. *Journal of Park and Recreation Administration*, 17(3): in press.

Keywords: reference price, involvement, prospect theory.

Type of citation: Journal article

The primary purpose of this study was to examine methods of manipulating consumers' internal reference price (IRP) for a 10K road race offered by a public recreation agency. A secondary purpose was to examine the relationship between runners' level of involvement and their IRP. Four hundred sixty-eight subjects, drawn from a systematic sample of competitors who entered in the race, were systematically assigned to one of six treatment groups. Each subject received a message communicating potential outcomes associated with paying an entrance fee for a 10K road race. Subsequent changes in subjects' internal reference price were monitored. The results indicated that cost of service information was the most effective treatment message in encouraging significantly higher internal reference prices. In addition, as the subjects' level of social psychological involvement with running increased, so too did their internal reference price. However, as past participation in the event increased, their internal reference price decreased. These findings indicate that managers of public leisure services do have the ability to manipulate consumers' price expectations for the services they provide.

85. Lewis, Michael S. and Lime, David W. (1999). Boundary Waters Canoe Area Wilderness User Fee Evaluation: 1998 Study of Area Cooperators (Final report, submitted to USDA Forest Service, Superior National Forest). St. Paul, MN: University of Minnesota, Department of Forest Resources. 36 pp.

Keywords: camping fee, attitudes, collection methods, appropriateness, post-implementation, acceptance.

Type of citation: Report

This study is part of an effort by the Superior National Forest to monitor and evaluate public acceptance of a newly implemented camping fee program in the Boundary Waters

Canoe Area Wilderness (BWCAW). At the end of the 1998 summer use season, each area cooperator (77 outfitters, resorts, camps and other businesses) was mailed a questionnaire. Research topics included opinions about appropriateness of fee collection methods and amounts, ease of collection, and overall feelings about the new camping use fee. Overall, no less than 61 percent of respondents believe the fee amounts charged are "about right", and while most respondents understood the need for charging the camping fee (82 percent), many of them were uncertain about how the fee money will be used (53 percent). Over one-third indicated that collecting the fee at their place of business was complicated and inconvenient. At least 78 percent indicated they agreed with the statements, "Overall, I think the BWCAW camping fee is a good thing" and "I support the concept of paying a user fee for wilderness use". Respondents were split over whether or not to spend fee money to hire more full-time Forest Service wilderness staff, including wilderness rangers in the backcountry. Seventy-nine percent did not think the program should be expanded to include day use visitors.

254. Lindberg, Kreg and Aylward, Bruce. (1999). Price responsiveness in the developing country nature tourism context: Review and Costa Rican case study. *Journal of Leisure Research*, 31(3): in press.

Keywords: fees, price elasticity, developing countries.

Type of citation: Journal article

The U.S. is not alone in considering and implementing visitor fees. Evaluations of international experience are uncommon in the recreation literature, and much of the research has focused on valuation rather than price responsiveness. This article reviews estimates of willingness to pay, revenue maximizing fees, and price elasticities in developing countries. It then uses actual price and visitation data to estimate price elasticities for three national parks in Costa Rica. The results clearly indicate price inelasticity of demand at fee levels up to and beyond \$10, indicating that revenue at these three national parks may be increased significantly by raising fee levels with (relatively) little effect on visitation levels.

159. Loomis, John; Bonetti, Kenneth and Echohawk, Chris. (1999). Demand for and supply of wilderness. In H. Ken Cordell (Ed.), *Outdoor Recreation in American Life: A National Assessment of Demand and Supply Trends* (pp. 352-375). Champaign, IL: Sagamore Publishing.

Keywords: National Wilderness Preservation System, recreation, ecosystem protection, wilderness management, wilderness use.

Type of citation: Book chapter

To fulfill the part of the 1974 Renewable Resources Planning Act which requires a nationwide assessment of the supplies of and demand for natural resources every 10

years, this chapter compares the current supply of renewable natural resources (range, recreation, timber, water, wildlife, and wilderness) with current and likely future demands on these resources. The assessment looks at private and public lands, and state and federal agencies. This chapter also provides an overview of the National Wilderness Preservation System (NWPS) and describes the current status of the NWPS and how it contributes to recreation and ecosystem protection. The four main management implications which arise are: 1) the benefits of Wilderness to society go far beyond recreation; 2) the nonrecreation benefits of Wilderness are larger than the recreation use benefits; 3) there is a statistically significant positive influence of additional Wilderness acreage on recreation use; and 4) recreation use of both the Forest Service and National Park Service Wilderness areas is expected to increase.

259. Martin, Steven R. (1999). A policy implementation analysis of the Recreation Fee Demonstration Program: Convergence of public sentiment, agency programs, and policy principles? *Journal of Park and Recreation Administration*, 17(3): in press.

Keywords: recreation fees, fee demonstration program, fee principles.

Type of citation: Journal article

This paper examines the relationships among: 1) a set of principles to guide the design and implementation of recreation fee programs; 2) agency fee programs, objectives and actions; and 3) public sentiment toward recreation fees. The premise of this paper is that federal agency fee programs (under the Recreation Fee Demonstration Program) would benefit from a convergence of these three factors--that is, that fee programs will be more accepted by the public, and be programmatically stronger, if they operationalize a set of guiding principles as well as reflect public sentiment. Reports on implementation of the Recreation Fee Demonstration Program were collected from the participating agencies. Agency fee program objectives were identified in order to assess the extent to which they operationalized the guiding principles (adopted from Manning and others 1996), and to see if they addressed public concerns, which were obtained from numerous sources including publications, articles, and visitor survey data. Agencies appear to be adequately addressing only four of the relevant twelve concerns identified. With the exception of four principles, the agencies have done an adequate job of operationalizing the guiding principles. One recommendation would be for agencies to develop specific objectives for their fee programs that clearly reflect broader agency policy and philosophy. In addition, agencies need to more clearly articulate their criteria for determining when to charge fees.

37. McCollum, Daniel W.; Haefele, Michelle A. and Rosenberger, Randall S. (1999). A Survey of 1997 Colorado Anglers and Their Willingness To Pay Increased License Fees (Project Report for the Colorado Division of Wildlife, HDNRU Report No. 39). Fort Collins, CO: Colorado State University, Human Dimensions in Natural Resources Unit, and USDA Forest Service, Rocky Mountain Research Station. 105 pp.

Keywords: willingness to pay, fishing, license fee, stamp option, attitudes.

Type of citation: Report

Respondents for this research were surveyed by mail during the winter and spring of 1998. A total of 3,990 completed surveys were received from randomly sampled Colorado 1997 resident combination, annual fishing, and annual senior fishing license holders. The survey contained four parts, one of which asked questions about alternative fee increase proposals. Anglers were asked about their willingness to pay increased license fees using a "dichotomous choice" format, and an "open-ended" format. According to dichotomous choice results, annual license holders would be willing to pay an additional \$36.03, on average, in license fees, whereas the open-ended format showed a \$12.94 willing to pay increase. Other fee issues examined include support for an across-the-board fee increase as opposed to purchasing a stamp in addition to their license, and support for fee increases in relation to changes in fish stocking activities. The remaining three parts of the survey asked questions about fishing characteristics, style, and behaviors, angler attitudes toward selected issues, and demographic and socioeconomic characteristics of anglers.

260. More, Thomas A. (1999). A functionalist approach to user fees. *Journal of Leisure Research*, 31(3): in press.

Keywords: user fees, equity, economic efficiency, recreation policy.

Type of citation: Journal article

This paper reviews three major arguments in favor of fees within the context of historical, political, and socioeconomic trends, particularly the rise of libertarianism and the decline of the middle class. The three arguments discussed are that fees: 1) promote equity by charging users directly; 2) increase economic efficiency; and 3) generate needed revenue. However, the argument from equity ignores the existence of nonuse values and fails to consider the effect of fees on people at the margin, particularly the working class. The efficiency argument relies on questionable assumptions about value and willingness to pay and weights public policy toward the preferences of the affluent. The argument from revenue generation tends to advance agency interests that may not be perceived as being consistent with the interests of the general public. In the debates over the mechanics of setting fees, we have lost sight of public purpose. As an alternative, a functionalist perspective that focuses on the purposes associated with public-sector management of parks and recreation is proposed. Public parks, facilities, and programs must serve public objectives. It is these objectives that determine the appropriateness of user fees.

131. O'Toole, Randal. (1999). Run them like businesses: Natural resource agencies in an era of federal limits, [www.teleport.com/~rot/business.html]. The Thoreau Institute [1999, March 17].

Keywords: federal agencies, user fees, fair market value, trust funds, reform.

Type of citation: Electronic source

Congress can save taxpayers more than \$21 billion over five years and resolve numerous disputes over federal land management by running the Forest Service, Park Service and Bureau of Land Management like businesses. This means decentralized management based on a broad range of user fees, funding of forests, parks and Bureau of Land Management districts out of their net income, allowing federal land managers to sell conservation easements to people who want to protect special areas, and trust funds to safeguard nonmarketable resources. These proposed reforms will reduce both deficits and environmental controversies.

227. Olsen, Scott. (1999). Results of Paria Canyon/Coyote Buttes Recreation Test Fee Demonstration Pilot Project Visitor Survey . Flagstaff, AZ: Northern Arizona University, School of Forestry. 44 pp.

Keywords: survey results, graphs, Bureau of Land Management fees.

Type of citation: Report

This report presents item-by-item results of a visitor survey done in 1998 (see Olsen 1998 in this bibliography) in graph and table formats. Visitors to the Paria Canyon-Vermillion Cliff Wilderness Area were surveyed to determine how they were affected by new user fees. The report concludes with a summary and recommendations.

132. Powers, Jim. (1999). Is the Forest Service fee program appropriate for public lands?, [www.wildwilderness.org/docs/prescott.htm]. Prescott National Forest Friends [1999, March 17].

Keywords: Forest Service, fee program, problems.

Type of citation: Electronic source

The new fees allowed under the Recreation Fee Demonstration Program, coupled with the new rules allowing the sale of public facilities to private enterprise and expanded opportunities for private business ventures on federal lands has the author wondering whether the Forest Service will begin pushing profit over protection.

256. Richer, Jerrell Ross and Christensen, Neal A. (1999). Appropriate fees for wilderness day use: Pricing decisions for recreation on public land. *Journal of Leisure Research*, 31(3): in press.

Keywords: appropriate price, willingness to pay, wilderness user fees, fairness.

Type of citation: Journal article

An appropriate fee for the use of public lands is one that strikes a balance between the need for fee revenues, the desire to maintain access and four related concerns -- fairness, equity, other users' ability to pay, and congestion. Including these other concerns in pricing decisions improves the likelihood that fees will be acceptable to users. Data from a 1997-1998 survey of 407 day use visitors to the Desolation Wilderness are utilized. This paper examines whether the fee levels visitors claim they are willing to pay (at maximum) are consistent with the amounts they feel are appropriate. A demand curve from willingness to pay data is constructed, and then the tradeoff between revenue and access based on the appropriate price criterion is evaluated. Sixty-two percent of Desolation Wilderness day users stated a willingness to pay greater than the appropriate price. The cost of choosing a fee at the median appropriate price (\$2), rather than the revenue maximizing price (\$5), is a 30 percent reduction in revenue, while the gain is a smaller drop in participation (17 percent vs. 52 percent).

282. Schneider, Ingrid; LaPointe, Christopher and Stievater, Sharon. (1999). Perceptions of and Preferences for Fee Program Dollar Utilization Among Wilderness Visitors (Unpublished paper presented at the Wilderness Science Conference, Missoula, MT, May 24-27, 1999). 10 pp.

Keywords: fee program, visitor perceptions, activity style, wilderness.

Type of citation: Proceedings paper

The purpose of this study was to ascertain visitor perceptions of the Recreation Fee Demonstration Program and preferences for use of fee revenues. Differences in program perceptions were examined both by activity and activity style (the various personal meanings assigned to an activity). Visitors to the Superstition Wilderness were surveyed on-site during the 1997 and 1998 season (n=1,456). A \$4 dollar entrance fee is charged at two trailheads in the Superstition. Almost one-half of the visitors contacted (45.1 percent) indicated they were knowledgeable about the fee program and 56 percent agreed they understood the reasons behind the fee program. Respondents disagreed that the fee would effect their visitation but agreed that the program would limit access for others. Statistical differences in fee program perceptions were not found when the two main activity groups (hikers and backpackers) were compared. However, those with high activity style indicated greater overall knowledge of and support for the fee program. Visitors most frequently selected using the fees for site improvements such as signs (41.5 percent) and toilets (26.7 percent). Personnel rated the lowest in priority for use of fees (14 percent).

258. Schneider, Ingrid E. and Budruk, Megha. (1999). Displacement as a response to the federal recreation fee program. *Journal of Park and Recreation Administration*, 17(3): in press.

Keywords: federal fee program, displacement, substitution, coping.

Type of citation: Journal article

One potential criticism of fees and fee programs is their possibility of displacing current visitors. However, due to the challenging nature and additional resources required to study and understand displaced visitors, few studies utilize visitors who are actually displaced. The purpose of this study was: 1) to ascertain behavioral changes due to the fee program ranging from displacement to visit composition changes (frequency, length, etc.), and 2) to determine if displaced visitors hold more negative perceptions of the fee program. Visitors to a non-fee area within a national forest were surveyed to ascertain visitor responses and displacement from the fee areas in other parts of the forest. A total of 346 responses were attained. Results indicated one-half of respondents chose the site because it was free and that one-third of visitors had changed their visitation in response to the fee program. Of the visitors who changed their behavior, one-half indicated inter- or intra-site displacement, and 70 percent indicated they visit less frequently. Displacement appears to be a consequence of the fee program. It is possible that better and more persuasive information related to the fee program may diminish the number of people it displaces.

250. Schroeder, Herbert W. and Louviere, Jordan. (1999). Stated choice models for predicting the impact of user fees at public recreation sites. *Journal of Leisure Research*, 31(3): in press.

Keywords: recreation, fees, choice models, logit.

Type of citation: Journal article

A crucial question in the implementation of fee programs is how the users of recreation sites will respond to various levels and types of fees. Stated choice models can help managers anticipate the impact of user fees on people's choices among the alternative recreation sites available to them. Two models are presented in this paper to illustrate how stated choice models can help assess the impact of fee changes on the likelihood of choosing a site, and the importance of fees relative to other site attributes in people's choices. One model is based on a 1986 telephone and mail survey of Chicago-area residents, and the other is based on a two-phase mail survey concerning recreation site use and preference in the upper Great Lakes region in 1990. The results suggest that fee increases would have negative impacts on at least some of the respondents, and reduce choice probability of some sites. The models also suggest that some segments of the population may be more affected by a fee increase than others, but the differences were not easy to explain in terms of socio-demographic characteristics of the segments. Some groups also showed an increase in choice probability at the highest fee levels.

266. Sierra Club Yodeler. (1999, May). The corporate takeover of nature. *Sierra Club Yodeler*, pp. 1,4-5.

Keywords: recreation, Forest Service, Sierra Club, revenues, legislation.

Type of citation: Newspaper article

This article argues that the Recreation Fee Demonstration Program legislation represents an attempt to establish commercial recreation on federal lands. When managers must rely on fee revenues to support basic programs, they will be forced to encourage and solicit the most lucrative contracts, regardless of the impacts.

249. Trainor, Sarah Fleisher and Norgaard, Richard B. (1999). Recreation fees in the context of wilderness values. *Journal of Park and Recreation Administration*, 17(3): in press.

Keywords: wilderness, spiritual value, intrinsic value, use value, willingness to pay, wilderness use fees.

Type of citation: Journal article

This research investigates the relationship between statements of willingness to pay fees for wilderness use and descriptions of spiritual and intrinsic wilderness values. Specifically, it seeks to understand if, in the mind of the wilderness user, spiritual and intrinsic values are adequately reflected in statements of willingness to pay fees. Data were collected via standardized, semi-structured interviews with 100 day or overnight Desolation Wilderness users in July of 1997. The interviews were designed to learn how people think of three forms of wilderness value (economic, spiritual and intrinsic) and the relationships between them. Study participants largely supported wilderness use fees. Findings show the possibility of simultaneous pragmatic support for wilderness fees and conceptual disapproval of treating the wilderness as a commodity. When expressions of economic value were compared to those of spiritual and intrinsic values, the majority of respondents found monetary willingness to pay bids an inadequate expression of spiritual and intrinsic values. These results indicate a need for further research regarding the relationships between willingness to pay and multiple wilderness values so that the design and implementation of wilderness fee programs can achieve cost recovery without offending users who disapprove of commodifying the wilderness resource.

252. Vogt, Christine A. and Williams, Daniel R. (1999). Support for wilderness recreation fees: The influence of fee purpose and day versus overnight use. *Journal of Park and Recreation Administration*, 17(3): in press.

Keywords: recreation fees, pricing, wilderness, service levels, multiple user groups.

Type of citation: Journal article

To evaluate the role of new fees on public support for spending revenues at the Desolation Wilderness, this paper compares ratings of support for the use of fees for 19 different management activities assuming two different rationales across two user group

samples. One rationale asks about support for fees to improve upon the current level of service, while the other asks about support for fees to provide the current level of service. Data from a 1997-98 study which surveyed campers and day users at the Desolation Wilderness are used. The results suggest a spending program to restore and maintain wilderness conditions is favored over a development and new services spending program. Campers were particularly more supportive of maintaining current conditions. Day users were less definitive in their support for maintaining or improving conditions. There was general support for wilderness use fees with strongest support for restoration of human damaged sites, litter removal, and provision of information on ways to reduce impacts.

277. Watson, Alan E. and Herath, Gamini. (1999). Research implications of the theme issues "Recreation Fees and Pricing Issues in the Public Sector" (Journal of Park and Recreation Administration) and "Societal Response to Recreation Fees on Public Lands" (Journal of Leisure Research). Journal of Leisure Research, 31(3): in press.

Keywords: research implications, recreation fee and pricing policy, public sector.

Type of citation: Journal article

This is the overview paper for the 1999 Journal of Leisure Research theme issue on fees on public lands (articles from the Journal of Park and Recreation Administration 1999 theme issue on fees are also included in the discussion). The authors summarized their response to the papers in these two journals into a set of seven high priority research and application questions, meant to stimulate thought regarding the future of fees and pricing approaches in the public sector. Issues addressed include: 1) the controversial tradeoffs between considering fees from a public perspective versus a consumer point of view; 2) how fees change the relationship between public lands and the American people; 3) public support for fees and how revenues should be used; 4) who will be affected most by fees; and 5) the importance of research in assessing effects of fees and policy formation.

253. Williams, Daniel R.; Vogt, Christine A. and Vitterso, Joar. (1999). Structural equation modeling of users' response to wilderness recreation fees. Journal of Leisure Research, 31(3): in press.

Keywords: wilderness, recreation fees, pricing, wilderness experience, structural equation modeling.

Type of citation: Journal article

In the case of wilderness recreation fees, it is important to recognize the complex public purpose of wilderness and the long history of not having access fees in wilderness. To evaluate these various factors, this paper examines the impact of past wilderness experience and residential proximity on response to wilderness use fees using a structural equation approach. Data came from the 1997 survey of Desolation Wilderness overnight visitors who paid a fee. Findings suggest wilderness users generally support fees for public recreation, but fees are judged to be less appropriate for wilderness than for more

developed recreation facilities and services. Structural equation modeling shows that experienced wilderness users, experienced Desolation Wilderness users, and users residing in close proximity to the Desolation Wilderness are less supportive of fees and less likely to see positive benefits from fees. A history of paying fees for access to other recreation sites and perceptions of wilderness problems, though positively related to past wilderness experience, do not contribute to fee support.

251. Winter, Patricia L. and Palucki, Laura J. (1999). Anticipated responses to a fee program: The key is trust. *Journal of Leisure Research*, 31(3): in press.

Keywords: social trust, fees on public lands, communities of interest, communities of place.

Type of citation: Journal article

The primary objective of this study was to describe anticipated reactions to a proposed fee program in southern California national forests prior to its implementation. Social trust's relationship to perceived fairness of the fee program (defined in terms of anticipated impacts to self and others), general attitudes towards the program (such as thinking the program was a good thing), and amounts people were willing to pay for the recreation pass were examined. Trust's relationship to these variables was expected to vary by communities of interest (based on ethnicity and recreation activity groups) and communities of place (based on residency within a national forest boundary and greater geographic proximity). Focus group participants (n=115) were selected based on membership in these two communities. In addition, 104 of the focus group participants completed a self-administered questionnaire. Conditional acceptance, and in some cases, outright disapproval, were expressed during the group discussions. Social trust was revealed as the only significant contributor to explaining the variance (more than 38 percent) in anticipated impacts and general opinions about fees.

1998

32. Bowker, J.M. and Leeworthy, V.R. (1998). Accounting for ethnicity in recreation demand: A flexible count data approach. *Journal of Leisure Research*, 30(1): 64-78.

Keywords: ethnicity, travel cost, price response, consumer surplus, count-data, equity, user fees.

Type of citation: Journal article

Little research exists that incorporates cultural differences into demand models explaining trip-taking behavior. This paper examines ethnicity and individual trip-taking behavior associated with natural resource based recreation in the Florida Keys. The travel cost method is used to estimate trip demand. Interviews with people at a variety of different sites, including hotels, campgrounds and museums, were conducted in July and August of 1995, resulting in 1,781 observations. Results show that Hispanics are more

sensitive to price changes and that increased travel costs, resulting from increases in entry or access fees, could result in the Hispanic population being priced-out of the market.

122. Bowker, J.M. and Leeworthy, V.R. (1998). Ethnicity, user fees and recreation demand: Some results from the Florida Keys, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: equity, recreation user fees, travel cost method, ethnicity, tourism.

Type of citation: Electronic source

Incorporating ethnic differences in recreation demand models could provide useful information for public policy. This study allows for ethnicity-based price response differences and the potential consequences associated with recreation user fees. For this analysis, a summer season subsample of 1,781 observations obtained in July and August in 1995 at the Florida Keys was used. The estimated models show that Hispanics in this sample are more sensitive to price changes. Increased travel costs resulting from increased entry or access fees could have uneven effects on the current ethnic distribution of recreation visitors to the Keys. If prices continue to rise, Hispanics will increasingly be priced-out of the market.

13. Brademas, D. James and Readnour, Julie K. (1989). Status of fees and charges in public leisure service agencies. *Journal of Park and Recreation Administration*, 7(4): 42-55.

Keywords: fees, fees and charges, budgets, cost factors.

Type of citation: Journal article

Over 300 chief executive officers from the eight-state National Recreation and Park Association (NRPA) Great Lakes Region were surveyed regarding fees and charges. The knowledge gained about current policies, procedures, attitudes and opinions provides background and guidance to other public leisure agencies in reviewing their own fee policies. Survey questions focused on written policies, current types of fees, how fees were established, demographics (type of agency, its visitors, etc.), why agencies charge fees, and how the income should be used. Results generally indicate that agencies had positive experiences with their fee programs, and these programs will likely continue and grow. The public reaction to fees was reported as favorable by 47.3 percent of the agencies, and neutral by 43.8 percent. Unfavorable public reaction was indicated by 7.5 percent of the agencies. These figures suggest that the public has grown to accept the "user must pay to play" philosophy as an alternative to high taxation.

116. Bohnsack, Brian L. and Sousa, Robert J. (1998). Lessons learned from sixty years of state fish and wildlife agencies funding,

[www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: state fish and wildlife agencies, funding programs.

Type of citation: Electronic source

This paper discusses the success of the Federal Aid in Sport Fish and Wildlife Restoration programs in providing over \$2.6 billion in funding to state fish and wildlife conservation efforts in the United States since 1950. The potential exists for public land management agencies to use a similar approach to provide a consistent, self-financed funding source to reduce or eliminate the need for appropriations.

10. Berrens, Robert P. and Adams, Richard M. (1998). Applying contingent valuation in the design of fee hunting programs: Pheasant hunting in Oregon revisited. *Human Dimensions of Wildlife*, 3(3): 11-25.

Keywords: contingent valuation, fee hunting.

Type of citation: Journal article

The feasibility of user fees to support a public stocking program for pheasant hunting at the E.E. Wilson Wildlife Area in Western Oregon was initially evaluated in 1989 using a survey-based contingent valuation (CV) method. Subsequent to this survey, an experimental "put and take" stocking program was conducted at the site. Several fee levels were charged for hunting pheasants, and visitation records were kept. Application of the CV method to investigate potential fee hunting at this Wildlife Area is used as an illustrative case study to evaluate the performance of the original study and ask how CV may be used in designing and evaluating pricing policies for revenue capture in fee hunting programs. For future fee hunting studies, the authors suggest that contingent behavior questions supplement standard contingent valuation questions. Survey design needs to be directed not only to acceptance rates of alternative fees, but also to expected behavioral responses to alternative pricing policies (such as changes in length of stay, or switching to alternative sites). To be a pragmatic tool in evaluating hunters' willingness to pay and the potential for user fees to generate revenues, survey designs must accommodate alternative pricing policies.

155. Bierhanzl, Edward J. and Downing, Paul B. (1998). User charges and bureaucratic inefficiency. *Atlantic Economic Journal*, 26(2): 175-189.

Keywords: user fees, government efficiency, bureaucratic response.

Type of citation: Journal article

This paper develops theoretical reasons why user fees lead to improved government efficiency and reduced expenditures. It is argued that user charges constrain bureaucratic behavior, thus forcing the bureau to operate closer to the true demand curve for the service, and that fees reduce consumer demand. The hypothesis that greater reliance on user charge finance would lead to lower government expenditures is tested using municipal expenditures on sewer services. The results support this hypothesis. These findings have implications for improving the performance and efficiency of government, particularly government provision of goods and services which resemble private goods.

103b. Becker, Ed. (1998). Fees provide funds, improve service. *Inner Voice*, 10(1): 14.

Keywords: user fees, proponent.

Type of citation: Journal article

The author presents reasons for his support of user fees for public lands.

176. Chase, Lisa C.; Lee, David R.; Schulze, William D. and Anderson, Deborah J. (1998). Ecotourism demand and differential pricing of national park access in Costa Rica. *Land Economics*, 74(4): 466-482.

Keywords: Costa Rica national parks, entrance fee, impacts, contingent behavior methodology, ecotourism demand.

Type of citation: Journal article

Little experience exists in developing countries to guide natural resource managers in designing effective pricing strategies for protected areas. After reviewing the current status of ecotourism in Costa Rica, this paper presents a theoretical framework which uses contingent behavior methodology to assess the effects of differential entrance fees on visitation demand in three Costa Rican national parks. Primary data were collected from 311 in-person interviews conducted from January to March of 1995, and included information on foreign tourists' hypothetical park visitation behaviors at alternative entrance fee levels. Results show that visitation demand elasticities at the three parks are quite different, and that substitutability in visitation demand can exist between parks with similar attractions. This suggests that differential fees can be an effective tool for distributing tourism use.

128. Chavez, Deborah J. (1998). Voices across the United States: Opinions from national forest customers about recreation fees, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: Forest Service, customer, evaluation, fee program.

Type of citation: Electronic source

Visitors to Forest Service fee sites had the opportunity to fill out a "Customer Comment Card." The results are summarized in this paper. Over half (57 percent) of respondents indicated that the value of the recreation opportunities and services they experienced was at least equal to the fee paid, and that recreationists should help pay for visitor services on public lands via fees. However, 26 percent also had negative views on these two items. Less than half of the comments received in the open-ended section (43 percent) were negative about the fee program. Comment cards are useful to assist in determining if additional research is needed and to provide "red flags" which might direct attention to particular customer service issues.

120. Chavez, Deborah J. and Gable, Robert. (1998). Will they pay to play on national forests? Perceptions of customers in the Enterprise Zone, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: national forests, fee program, attitudes, impacts.

Type of citation: Electronic source

The purpose of this research was to evaluate customer perceptions of the fee pilot program in the Enterprise Zone (southern California national forests). A two-phase panel study was developed. It consisted of a sample of 593 visitors who were contacted in person before fee implementation in phase one, and 389 participants who filled out mailed surveys after fee implementation in phase two. Data suggest that public support for the fee program can be generated through communications that focus on the reasons for the fee program and its potential benefits, and highlight immediate facility improvements, including ecological benefits.

110. Christensen, Neal and Richer, Jerrell Ross. (1998). Maximum and appropriate price for day use in the Desolation Wilderness, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: wilderness, willingness to pay, fee levels, day use, price sensitivity, appropriate price.

Type of citation: Electronic source

The mean willingness to pay value alone may not be the appropriate criteria to use to establish fee levels. Desolation Wilderness visitors were surveyed in 1997 to examine their maximum willingness to pay levels for a potential day use fee and perceived appropriate price for a potential day use fee. The data is used to predict the percentage of users who would pay the day use fee and continue to visit the area at varying price levels (price sensitivity). Price sensitivity is then incorporated into a framework to estimate the

amount of revenue a wilderness management agency might generate as a function of price. Results show that visitors believe the appropriate price for wilderness day use is significantly less than the maximum amount they would be willing to pay. Though higher fees generate more revenue per person, total revenue hinges on the number of people who decide to pay. Price sensitivity can be used to help reveal the effect of higher fee levels on purchase rates. For example, although average maximum willingness to pay for an annual pass is approximately \$30, revenue can be increased by about 40 percent by choosing the \$20 price instead.

109. Christensen, Neal A.; Borrie, Bill and Williams, Daniel R. (1998). Appropriateness to pay: Is wilderness a unique recreation experience?, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: wilderness, recreation fees, appropriateness.

Type of citation: Electronic source

The authors argue that wilderness may be a unique public recreation resource in terms of its function within public lands. For this reason, recreation fees should be applied cautiously in federally designated wilderness areas. Purchasing a wilderness experience may have the associated effect of turning a natural area into a consumer good for some people. Fees are likely to have a commodifying effect by narrowing the focus of the meaning of wilderness to functional, utilitarian values at the expense of the symbolic, emotional, and spiritual experience values. A wilderness fee program may run counter to the integrity of the relationship between people and wilderness.

127. Crompton, John. (1998). Visitor reactions to price increases at Texas State Parks, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: Texas Parks and Wildlife Department, admission fee, impacts, behaviors.

Type of citation: Electronic source

This paper discusses the effects of a new fee pricing structure on visitor behavior and attitude in all 70 of the Texas Parks and Wildlife Department's state parks. The increased fees went into effect in 1996. Data from four different studies, conducted between May of 1996 and April of 1998, were used. Data collection methods included on-site and mail surveys, and a statewide random telephone sample. Results indicate that: 1) decline in the number of Texas Conservation Passport sales since the price increase may be due more to the lack of incentives for managers to sell the Passes and the lack of follow-up efforts to renew Passes rather than the price increase; 2) there appear to be other factors that had a stronger constraining influence on park visitation than did price; 3) approximately 20 to 25 percent of day and overnight visitors indicated costs were sufficiently high to inhibit

visitation; 4) there were mixed results regarding whether the impact of a price increase decreases over time; and 5) responses to price increases are influenced by income level.

160. Crompton, John L. (1998). Visitor Reactions to Prices at TPWD Parks (A technical report completed as part of "Texas Outdoors: A Vision for the Future" study commissioned by the Texas Parks and Wildlife Department). Texas A&M University, Department of Recreation, Park and Tourism Sciences. 26 pp.

Keywords: Texas Parks and Wildlife Department, fee increases, visitor reactions.

Type of citation: Report

In 1996, the Texas Parks and Wildlife Department (TPWD) implemented a radically different pricing structure in the state parks which charged admission fees. Three studies were undertaken to monitor visitors' reactions to these price increases. They were conducted 3-4 weeks, 5 months, and 17 months after the fee increases were implemented. Another study solicited views regarding the price changes from a statewide sample of Texans. Major findings include: 1) although the Texas Conservation Pass is widely perceived to be a good value for the money, its sales declined substantially due to the absence of a promotional effort and follow-up program targeted at existing and lapsed Pass holders; 2) restoring Pass sales numbers to a higher level is important for revenue, but also because the Pass provides an accessible constituency for supporting park and natural resource enhancement in Texas; 3) there is widespread acceptance of per person prices; and 4) sales and revenues from overnight stays have substantially declined which suggests that the Department should focus on achieving higher occupancy of existing capacity rather than create new capacity.

121. Lewis, Michael S. and Lime, David W. (1998). Reactions of campers and interest groups to a proposed user fee in the Boundary Waters Canoe Area Wilderness, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: wilderness, campers, opinions, user fees.

Type of citation: Electronic source

To aid in the selection of a camping fee collection method and amount at the Boundary Waters Canoe Area Wilderness, interviews with 160 campers and focus group meetings with individuals representing outfitters and conservation organizations were conducted in 1997. Most respondents were supportive of a user fee, with campers consistently specifying the lowest fee amounts, and outfitter representatives consistently specifying the highest amounts. An equal number of campers and interest group representatives were supportive of either a flat rate fee per group per trip or some method which charges per person. Many respondents wanted to know how the fee money was being spent.

Several issues or principles which could help guide the selection and implementation of a camping fee program are given.

83. Lewis, Michael S. and Lime, David W. (1998). Reactions to a Proposed Camping Fee in Minnesota's Boundary Waters Canoe Area Wilderness: A 1997 Study of Campers and Interest Group Representatives (Research Summary No. 13). St. Paul, MN: University of Minnesota, College of Natural Resources, Cooperative Park Studies Unit. 4 pp.

Keywords: pre-implementation, wilderness, campers, attitudes, appropriateness, fee uses, implementation.

Type of citation: Report

This research summary briefly describes the methods and results of interviews with 160 campers visiting the Boundary Waters Canoe Area Wilderness (BWCAW) in 1997, and 10 focus group meetings with representatives of BWCAW interest groups regarding the proposed fee program. Most respondents felt it was appropriate to charge a camping use fee. An equal number of both campers and interest group representatives were supportive of either a flat rate fee per group per trip or some type of fee collection method that charges per person, either per trip or per night. The most popular dollar amounts given by respondents for each of the fee collection methods evaluated varied considerably. Suggested uses for the fee money and principles to guide selecting and implementing a camping use fee are then discussed.

84. Lewis, Michael S. and Lime, David W. (1998). Boundary Waters Canoe Area Wilderness User Fee Evaluation: 1998 Study of Campers Who Purchased the Seasonal Fee Card (Final Report, submitted to USDA Forest Service, Superior National Forest). St. Paul, MN: University of Minnesota, Department of Forest Resources. 53 pp.

Keywords: camping fee, attitudes, wilderness, appropriateness, post-implementation, acceptance.

Type of citation: Report

This study is part of an effort by the Superior National Forest to monitor and evaluate public acceptance of a newly implemented camping fee program in the Boundary Waters Canoe Area Wilderness (BWCAW). A randomly selected sample of 150 campers who purchased a seasonal fee card in 1998 were mailed a questionnaire. Research topics included visitor response to paying the new fees, potential impact of the new camping fee on future visits, and overall opinions about the new camping use fee. Overall, a majority of respondents believe the fee amounts charged are "about right", and while most respondents understood the need for charging the camping fee, many of them were uncertain about how the fee money will be used. Just under half of those studied indicated that fee payment was complicated. Nearly 60 percent agreed with the statement, "Overall, I think the BWCAW camping use fee is a good thing", while nearly one-third disagreed with that statement. Respondents also reinforced several concerns related to the

implementation of the camping fee - 73 percent disagreed with the statement, "I think the new fee will encourage campers to take better care of the BWCAW during their visits", and 45 percent thought the new fee will cause the U.S. Congress to reduce government funding of the BWCAW. Respondents were split over whether or not to spend fee money to hire more full-time Forest Service wilderness staff, including wilderness rangers in the backcountry. Nearly 70 percent did not think the fee program should be expanded to include day use visitors.

86. Lewis, Michael S. and Lime, David W. (1998). Boundary Waters Canoe Area Wilderness User Fee Evaluation: 1998 Study of Camper Party Leaders (Final report, submitted to USDA Forest Service, Superior National Forest). St. Paul, MN: University of Minnesota, Department of Forest Resources. 85 pp.

Keywords: post-implementation, camping fee, impacts, attitudes, collection methods, appropriateness, awareness, wilderness.

Type of citation: Report

This study is part of an effort by the Superior National Forest to monitor and evaluate public acceptance of a newly implemented camping fee program in the Boundary Waters Canoe Area Wilderness (BWCAW). A randomly selected sample of 400 camper party leaders who visited the BWCAW in 1998 were mailed a questionnaire. Research topics included visitor response to paying the new fees, potential impact of the new camping fee on future visits, and overall opinions about the new camping use fee. Seventy percent of respondents indicated the fee was "about right". Nearly 68 percent indicated they understood why the new camping fee was being charged, yet only 39 percent understood how the money would be used. Only 10 percent felt the fee-paying process was complicated, and only 8 percent indicated they would visit the BWCAW less often because of the fee. A majority of respondents (at least 78 percent) supported the new camping fee. They were split over whether or not the fee money should be used to increase ranger presence in the backcountry.

125. Lime, David W.; Lundgren, Allen L.; Warzecha, Cynthia A.; Thompson, Jerrilyn L. and Stone, Timothy G. (1998). Reactions of 1997 park visitors to the National Park Service Recreational Fee Demonstration Program, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: national parks, fee programs, monitoring, attitudes.

Type of citation: Electronic source

To help monitor and assess visitor reactions to the fee program, visitors at 11 units of the National Park System across the United States were interviewed during the summer of 1997, and focus group discussions were conducted at five of the park units. A total of

1,306 respondents were contacted overall. Eighty-three percent of them indicated the fees they paid were either "about right" or "too low". However, more respondents in lower income groups ranked fees as too high than those in the higher income groups. Many visitors were surprised and/or indignant to learn that in the past, money collected from recreational fees was deposited in the U.S. Treasury rather than returning to the site where they were collected.

123. Martin, Steven R. (1998). Recreation fees: Convergence of public sentiment, agency objectives and policy principles?,
[www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: fee policy, implementation, principles, public concerns.

Type of citation: Electronic source

As recreationists pay fees, the agencies implementing recreation fee programs should be guided by a set of principles and objectives. This paper examines the relationships among: 1) a set of principles that might guide the setting and implementation of fee policy; 2) objectives that agencies have set (and actions taken) for fee programs; and, 3) public sentiment toward recreation fees. A paper by Manning and others (1996) provides the set of principles for guiding the design of recreation fee programs. Public sentiment toward fees was summarized from numerous sources, and agency fee program objectives and actions were identified to determine if they operationalized the set of guiding principles, and if they reflected public concerns. Analysis shows that principles not being operationalized include differentiating among users based on resource impacts (on-site vs. off-site costs and benefits, merit goods and marginal costs), and using fees as a management tool. Public concerns not addressed include the disproportionate impact fees have on low-income visitors, the impact of fees on volunteerism and individual stewardship, and fees leading to increased development of sites.

126. McCarville, Ron. (1998). Overview and comments on fee-based presentations, 7th International Symposium on Society and Resource Management,
[www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: user fees, product, price.

Type of citation: Electronic source

This paper represents one panel member's presentation following the special session on recreation fees on public land at the Seventh International Symposium on Society and Resource Management in 1998. According to the author, the challenges arising from fee setting include: 1) users are unaccustomed to paying fees for many services; 2) fees applied by bureaucracy may erode or corrupt the wild and pristine visitor experience; 3)

fees are intrusive; and 4) fees contradict the public servant role of caregiver. Policy and research implications are then discussed.

285. More, Thomas A. (1998). User fees and public purpose, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: use fees, equity, economic efficiency, revenue generation.

Type of citation: Electronic source

In justification of fees for use of public lands, three arguments are typically advanced: 1) equity; 2) economic efficiency; and 3) revenue generation. The author argues that each of these perspectives is flawed, and advocates instead a functionalist approach that emphasizes weighing proposals for fee programs against the public purposes, or functions, of public land. It is concluded that fees frequently diminish these functions and that the implementation of fee programs need to be guided by a conception of public purpose rather than by a mechanistic financial analysis.

226. Olsen, Scott. (1998). Visitor Response to a Fee Demonstration Pilot Project in the Pariah Canyon-Vermilion Cliffs Wilderness Area. Unpublished Professional Paper, Northern Arizona University. 52 pp.

Keywords: Bureau of Land Management wilderness, fee program, visitor attitudes, satisfaction, impacts.

Type of citation: Thesis

The Bureau of Land Management instituted new fees at the Paria Canyon-Vermilion Cliff Wilderness Area in 1997. A questionnaire designed to determine how wilderness visitors were affected by the new fees was mailed to over 600 visitors in April of 1998. This professional paper reports the results of the data collected from 288 completed surveys. The majority of respondents (68.9 percent) felt the fee was about right, and 19.2 percent felt it was too high or far too high. Although almost 85 percent of visitors felt user fees are appropriate, almost 11 percent felt their taxes should pay for their use of the area. Almost one-fourth of those surveyed felt the fee had a negative effect on their wilderness experience. Over three-fourths of respondents felt the fees would not change their future plans for visitation.

213. Payne, Brian R. (1998). What did we learn? Where to from here?, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: recreation fees.

Type of citation: Electronic source

This paper represents one panel member's presentation following the special session on recreation fees on public land at the Seventh International Symposium on Society and Resource Management in 1998.

117. Puttkammer, Annette and Watson, Alan E. (1998). Acceptability of fees for various recreation activities as a function of activity orientation and past fee behavior, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: wilderness, cluster analysis, fee acceptability, involvement, fee payment history.

Type of citation: Electronic source

The purpose of this paper is to explore visitor evaluations of fee acceptability in relation to varying involvement levels in a range of 14 selected recreation activities and varying past experience paying fees. Overnight visitors to the Desolation Wilderness were asked to indicate: 1) the number of times they participated in 14 different recreation activities; 2) the number of times they paid a fee for each activity in the last three years; and, 3) how acceptable paying the fee was (if they had paid) or would be (if they had never paid). Using cluster analysis, two distinct clusters of visitors were identified. Cluster 1 participated more in generally all activities than Cluster 2, and had more fee paying experience. Cluster 2 people were less active, but showed higher wilderness use. Results show that acceptability of wilderness fees and fee levels is not strongly related to past fee paying behaviors. In fact, as payment history increases, support for wilderness fee levels decreases.

129. Richer, Jerrell Ross. (1998). Monitoring visitor response to the Adventure Pass Program, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: national forest, user fee, monitoring, visitor response.

Type of citation: Electronic source

This paper describes the monitoring program for visitor response to the Adventure Pass Fee Program in southern California national forests. Surveys are distributed and collected in-person at selected sites. The four objectives to the monitoring program are to: 1) examine cognitive and behavioral responses to the Adventure Pass Program; 2) examine attitudinal responses to the program; 3) examine visitor preferences for recreational improvements; and 4) assess impacts across groups.

115. Richer, Jerrell Ross. (1998). Setting new fees for recreation: Daily and annual pricing options in the southern California National Forests, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: national forests, pricing strategies, behavioral responses, recreation fees, revenues.

Type of citation: Electronic source

Pricing structure is of particular importance to public land managers who are designing new recreation fee projects since high per-visit costs may deter usage significantly and thereby generate low revenues. This paper presents a method to predict visitors' behavioral responses to new recreation fees when they are given a choice between daily and annual passes. Data from a 1996 survey of visitors to the national forests of southern California are used to estimate key behavioral parameters. Results demonstrate that a relatively low price can generate greater revenues than a high price in the case of a proposed per-vehicle user fee in the southern California national forests. Revenue estimates peak when the price of the annual pass is \$30 and daily passes are sold for \$5. It is estimated that revenues would be cut by 18 percent if the price were increased to \$40, and reduced by 32 percent if the price were raised to \$50.

64. Richer, Jerrell Ross. (1998). Southern California National Forest Adventure Pass Recreation Fee Demonstration Monitoring Program - Summary Of First-Year Findings: Descriptive Statistics, July 1997 - June 1998 . San Bernardino, CA: California State University-San Bernardino, Department of Economics, School of Social and Behavioral Sciences. 31 pp.

Keywords: monitoring, recreation fees, national forests, visitor response.

Type of citation: Report

Two weeks after the June 1997 implementation of the Adventure Pass fee program in four southern California national forests, survey teams began collecting samples of visitor feedback by traveling to randomly selected recreation sites on the four national forests involved. By June of 1998, over 1,500 questionnaires at 87 recreation sites had been distributed. This report presents descriptive statistics (averages and percentages) that summarize data collected from the summer of 1997 through the spring of 1998. The findings presented focus on assessing the effects of the Adventure Pass fee program on forest visitors as a whole, and examining their preferences for improvements in the places where they recreate. A high percentage of visitors (59 percent) did not purchase a Pass for their visit, and 69 percent of those claim they did not purchase the Pass because they did not know about it. The top recreational improvements respondents wanted were "better protection of the natural environment" (14 percent), "nothing, I am satisfied with things as they are" (13 percent) and "more and cleaner restrooms" (13 percent). A general summary of the results is followed by a complete listing with corresponding percentages.

118. Schroeder, Herbert W. (1998). Predicting the impact of user fees on public choice of recreation sites, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: fees, impacts, site attributes, choice model.

Type of citation: Electronic source

An important question in the implementation of fee programs is how site users will respond to various levels and types of fees. This paper describes a method of choice modeling that can be used to predict the impact of fees on people's choices of sites for recreation. Results from actual choice modeling studies imply that small to moderate increases in fees may have a significant impact on at least some people's choices, and the impact varies across different subgroups of the public. Improvements in other site attributes may compensate for the impact of fee increases.

124. Terrell, Tina J. (1998). Recreation user fees on public lands: A manager's perspective on implementing the recreation fee demo program on public lands, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: manager perspective, fee program, national forest.

Type of citation: Electronic source

This paper represents one panel member's presentation following the special session on recreation fees on public land at the Seventh International Symposium on Society and Resource Management in 1998. The author is a manager in charge of a fee program on the Tonto National Forest.

108. Trainor, Sarah Fleisher. (1998). Money talks, but what does it say?: Value, use fees and the appropriateness of commodifying wilderness, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: willingness to pay, wilderness value, use fees.

Type of citation: Electronic source

This paper compares qualitative and quantitative expressions of wilderness value with respect to willingness to pay use fees. A total of 100 Desolation Wilderness users were interviewed in July 1997 on trails or at campsites. Results show that there is general support for wilderness use fees. However, the majority of users do not consider willingness to pay bids to be an adequate expression of all the ways they value the wilderness. Results also show there is a tension between support for fees as an expression

of support for wilderness, and resistance to fees as representing the commodification of wilderness.

114. Vogt, Christine A. and Watson, Alan E. (1998). Brand loyalty as indicator of fee support by Desolation Wilderness visitors, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: wilderness, brand loyalty, attitudes.

Type of citation: Electronic source

The purpose of this paper is to demonstrate that unique wilderness camping segments can be derived from measures of brand loyalty, and then to test for differences among the groups for support of fees. Traditional marketing measures of brand loyalty include number of past trips to Desolation and other wilderness areas, whether Desolation was the prime reason for a visit to the Tahoe area, willingness to substitute other places and experiences, and satisfaction. This type of analysis is important to understand the proportion of visitors who will remain customers, as well as understanding the effects of communication tools on the public's response to the programs. Three unique brand loyalty levels were found: loyal to wilderness, loyal to one specific national forest, and less loyal to one forest or wilderness. These three groups have different reactions to the fee program. For example, Desolation loyal visitors are the most likely to buy an annual camping pass for the Lake Tahoe/Eldorado National Forest and are less likely to agree that the fees are a good thing.

113. Watson, Alan E.; Puttkammer, Annette and Christensen, Neal. (1998). Support for recreation fees as a function of purpose of appeal (increasing services versus maintaining current level of services), [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999 August 31, .

Keywords: recreation fees, uses of fee revenues, wilderness.

Type of citation: Electronic source

The purpose of this paper is to explore responses from visitors when the purpose of fees is varied across two different potential uses - maintaining current services or improving services. At the Desolation Wilderness, visitors were asked to indicate support or opposition toward use of fees for maintaining or improving 18 potential management actions. In independent samples from the same population, when differences occur, support is higher for use of fees for maintaining the current level of services than for increasing the level of services. Results suggest that we should not always assume improvement is necessary for visitor support.

111. Watson, Alan E.; Williams, Daniel R.; Vogt, Christine; Richer, Jerrell; Puttkammer, Annette; Christensen, Neal; Parsons, David J. and Trainor, Sarah Fleisher. (1998). Providing science input to management issues: Defining and answering researchable questions - introduction to a case study of the Desolation Wilderness fee pilot program, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: wilderness, fee program, attitudes, behavioral intentions.

Type of citation: Electronic source

This paper provides a simple description of the fee program at the Desolation Wilderness, the attitudes and behavioral intentions visitors there have about fees, the potential factors that may influence these attitudes and behavioral intentions, and methods of data collection. Results show that while a majority of visitors who paid the fee to visit the Desolation accept the concept of wilderness use fees and consider the amount charged to be "about right", a sizable minority express negative attitudes toward fees generally, and toward the fee policy at Desolation specifically.

130. Watson, Alan E. and Vogt, Christine. (1998). Wilderness visitor perceptions of obtrusiveness and their attitudes toward the agency in predicting recreation fee level support, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: wilderness, user fees, attitudes, obtrusiveness.

Type of citation: Electronic source

This paper addresses the possibility that response to fees is at least somewhat based on the trust, confidence and perceptions the public has of the agency administering the fee program. Measures of obtrusiveness (the magnitude of negative emotional response by the visitor attributed to managers' decisions) and perceived similarity between the visitor's and the agency's interest and values were obtained from two separate 5-item summative scales. There are significant relationships between obtrusiveness and attitudes toward fees, and significant, but weaker relationships, between similarities in perceptions of interests and values and attitudes toward fees. The obtrusiveness scale would be an excellent indicator to use to establish baselines and monitor the response of visitors to fee programs.

112. Williams, Daniel R. and Watson, Alan E. (1998). The impact of place meaning and attachment on attitudes towards fees for wilderness use, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: wilderness, attitudes toward fees, place attachment.

Type of citation: Electronic source

Building from the tradition of the public purpose of wilderness, attitudes towards fees are likely to be complicated by social and historical factors related to the concept of wilderness as a public good. As a way to understand these differing views, this paper examines the relationship between place attachment and attitudes towards fees using data from a 1997 Desolation Wilderness study (see Watson, et al. 1998). Four measures of attachment (wilderness involvement, place dependence, place centrality, and place identity) were developed from a series of questions in the survey, and were then correlated with several fee attitude measures. Generally, correlations between attachment/involvement and fee attitudes were more strongly negative for overnight users than day users, and attached day users were more accepting of a potential day use fee. Findings suggest that wilderness users have varying relationships with the settings they use and these relationships contribute to different views of fees.

119. Winter, Patricia L.; Burkhardt, Rachel L. and Gable, Robert. (1998). Assessing community impressions of a fee pilot: Findings from southern California, [www.fs.fed.us/research/rvur/wilderness/recreation_fees.htm]. USDA Forest Service [1999, August 31].

Keywords: national forests, fee program, pre-implementation, attitudes, concerns, social trust.

Type of citation: Electronic source

Ten focus groups, with a total of 104 participants, were conducted prior to implementation of a new fee program on the southern California national forests. The purpose of the discussions was to gain in-depth information regarding participants' impressions and concerns about the fee program. After the group discussions, participants also completed surveys. Results show there is discontent over the necessity and use of fees, which requires that communications be focused on demonstrating their use and applications. Since program compliance is linked to convenience, the pass should be easy to purchase. The lack of trust in the agency points to the need to continually demonstrate the use of the fee dollars. Finally, results suggest the importance of examining the role of trust in agency-public relations on a broader scale.

209. Dimara, Efthalia and Skuras, Dimitris. (1998). Rationing preferences and spending behavior of visitors to a scarce recreational resource with limited carrying capacity. *Land Economics*, 74(3): 317-327.

Keywords: rationing preferences, spending behavior, Greece, visitor characteristics.

Type of citation: Journal article

This paper empirically investigates the factors influencing visitor preferences between three rationing systems and examines the spending behavior of households that have stated a preference between different rationing systems. A survey of visitors to the Lake Cave in Greece in 1995 resulted in 512 usable questionnaires. The first-come-first-served option is clearly preferred by young, short-distance visitors with lower education levels. A variable admission fee is preferred by a small-sized family, visitors who are older, have higher incomes, and who are planning to spend the night. An advanced reservation system is preferred by long-distance visitors, visitors with a high education level, and visitors who are planning to visit many places in the wider recreational area. The spending behavior of the three groups of visitors according to choice of rationing system differs also.

79. ENPLAN, Environmental Scientists and Planners. (1998). Enhancement Fund Monitoring Program, 1988 Survey Report. (Prepared for Shasta-Trinity National Forests). Redding, CA. 149 pp.

Keywords: Forest Service, post-implementation, camping, boat ramp, parking, climbing, willingness to pay, wilderness, impact, attitudes, appropriateness.

Type of citation: Report

This is the second report of results of a 3-year monitoring program for the Shasta-Trinity Enhancement Fund Program. From May to September of 1998, 325 visitors were surveyed at 10 fee locations on the Shasta-Trinity National Forests in northern California. Survey items included attitudes toward fees, how fee revenues should be used, future visitation of sites, and visitor demographics. To account for the variety of fees and activities offered in the area, five different survey instruments were administered: 1) campground, 2) boat ramp, 3) Mt. Shasta summit, 4) north side Mt. Shasta access - parking and summit, and 5) willing to pay for south side Mt. Shasta parking. Overall, there was satisfaction with the services provided. Generally there was somewhat lower support for the fees in 1998 than in 1997. However, there was a slight increase in agreement that "Overall, the fees are a good thing" (51 percent up to 55 percent) There was also a slight decline (33 percent down to 24 percent) in the percentage of respondents indicating they would visit the Forests less often because of the fees.

99. Herath, Gamini. (1998). Natural Areas, Sustainable Use and Entry Fees In Australia: An Evaluation of the Issues (Unpublished paper presented at the Sustainable Economic Growth for Regional Australia National Conference). Beaudesert, Queensland, Australia. 18 pp.

Keywords: Australia, national parks, entry fees, sustainable use.

Type of citation: Report

The objectives of this paper are to: 1) review the socioeconomic and institutional underpinnings of resource degradation in national parks in Australia; 2) examine the problems of market and government failure in the management of these areas; 3) critically analyze the user pay system and its problems and potential as a mechanism to improve the management system; and 4) evaluate the need for new solutions and directions through a targeted intervention. The review presented shows that due to intense pressure from interest groups, governments on many occasions sided with the exploitation of the resource rather than the cause of preservation. Continuous changes in management structure along with reduction of the budget have reduced protection activities and increased the workload of personnel. Fee levels are determined through consensus among a few individuals, rather than application of a market mechanism. The use of entry fees has also raised the questions of equity and whether it is appropriate to commodify the natural areas in the country.

162. Johnson, Paul R. (1998). Campers in Rustic Campgrounds: Characteristics of Non-Senior Supporters and Opponents of Differential and Higher Fees. Unpublished Master of Science, Michigan State University, Department of Park, Recreation and Tourism Sciences, East Lansing. 76 pp.

Keywords: Michigan state forest campground system, user fees, campers, attitudes.

Type of citation: Thesis

Since 1979, the Michigan state forest campground system has increasingly relied on user fees and less on Michigan's general fund for financial support. To make fee policy decisions regarding differing fee systems (a differential fee system or a \$1 increase in nightly camping fees), managers needed an understanding of the characteristics of campers who support or oppose the proposals. Self-administered questionnaires were distributed to a sample of summer 1995 state forest campground campers. Statistical tests examined whether characteristics of fee proposal supporters and opponents differed. Opponents to the differential fee camp more nights in Michigan campgrounds than supporters. Supporters of the \$1 fee increase camp fewer nights in Michigan campgrounds and spend a greater proportion of nights camping in developed campgrounds other than those in the Michigan state forest system.

203. Johnson, Cassandra Y.; Bowker, J.M.; English, Donald B.K. and Worthen, Dreamal. (1998). Wildland recreation in the rural south: An examination of marginality and ethnicity theory. *Journal of Leisure Research*, 30(1): 101-120.

Keywords: ethnicity, marginality, rural residence, wildland recreation.

Type of citation: Journal article

This research reviews some of the theoretical explanations used to account for black/white differences in outdoor recreation, and empirically examines whether the theory that blacks participate less than whites in wildland recreation can be extended to a

rural, southern population in northwest Florida. The relative importance of marginality and ethnicity factors in explaining these differences is evaluated. Visitation for a rural, southern sample to unspecified wildland recreation areas, visitation to National Forest wildlands, and household visits to the Apalachicola National Forest wildlands were examined using survey data collected in 1994. The survey sample consisted of randomly sampled names from telephone books. Results showed significant racial differences in visitation, and that lower income African Americans were actually more likely than those with higher incomes to visit these areas. Marginality factors (such as lack of transportation and information) were a greater impediment to black visitation than white visitation.

103c. Lawler, Mark. (1998). Charging fees cheapens our heritage. *Inner Voice*, 10(1): 15.

Keywords: Forest Service, user fees, opponent.

Type of citation: Journal article

The author presents his arguments against user fees for public lands.

62. Leal, Donald R. and Fretwell, Holly Lippke. (1997). Back To the Future To Save Our Parks. In Jane S. Shaw (Ed.), *PERC Policy Series*. Bozeman, MT: Political Economy Research Center, Issue Number PS-10, 35 pp.

Keywords: national parks, self-sufficiency, fees, state park finances.

Type of citation: Report

The authors argue that requiring popular parks to be self-sustaining is the surest way of spurring responsible management and financial stability. The way to accomplish this is to return to the method by which park operations were largely financed in the early days of the National Park Service - earning revenues through user fees. To illustrate their argument, examples from successful state park fee programs are discussed and then compared with the revenues generated and services provided at some national parks. A series of recommendations are given, which include gradually reducing annual appropriations for park operations over a ten-year period until they reach zero, giving park managers the authority to raise fees or establish new fee-based services without having to obtain approval from Congress or state legislatures, and seeking private contractual arrangements such as corporate sponsorship of individual parks to raise money for special "park endowment funds".

156. Leal, Donald R.; Fretwell, Holly Lippke and Kiernan, Tom. (1998). Should national parks finance their operations through user fees? *Insight*, 14(45): 24-27.

Keywords: national parks, user fees, proponent, opponent.

Type of citation: Journal article

Supporting and opposing viewpoints regarding fees are presented in this article. The pro-fee argument for financing national parks through user fees is that fees will make park operators accountable to users, which will benefit both the visitor and the wildlife. The opposing argument is that a fee system could "Disneyfy" national parks.

50. Miller, Shane. (1998). A walk in the park: Fee or free? *The George Wright Forum*, 15(1): 55-62.

Keywords: recreation user fees, fee opponents, fee proponents, national parks.

Type of citation: Journal article

Supporting and opposing arguments of recreation fees are discussed in this paper. According to fee proponents, the primary advantage of recreation user fees is that they are the fairest source of revenue. They also improve the efficiency and responsiveness of the agency by introducing a context of market economy. They can also alleviate problems with overcrowding, and increase public appreciation of the parks. Fee opponents argue that fees are improper because preservation and conservation benefit all of society, and they are impractical to administer fairly. There is also the possibility that fees will become widespread and increase to levels which are unacceptable but difficult to reverse. Also, fees are inappropriate because they limit access on the basis of income.

27. Moskowitz, Karyn. (1998). Recreation Fee Demonstration Project: You play, you pay. *Different Drummer*, 13: 40-44.

Keywords: Bureau of Land Management, user fees, revenue, attitudes.

Type of citation: Journal article

This article discusses the history and current situation of user fees in the Bureau of Land Management (BLM). The Recreation Fee Demonstration Program is discussed in regard to innovation, collections, projected revenue versus real revenue, and user response. Most of the BLM's fee sites collected far below what they expected to collect, a few collected far more, and the rest were somewhere in between. According to managers, visitors generally responded positively to the implementation of the Program. Money collected has been spent on publicly visible projects. The author concludes that recreation user fees may, in the long run, shift incentives away from selling environmentally and fiscally damaging timber, mineral and grazing leases, and toward recreation.

103a. Novak, Theresa. (1998). Forest Service fee program draws fire. *Inner Voice*, 10(1): 11-13.

Keywords: Forest Service, user fees.

Type of citation: Journal article

The Recreation Fee Demonstration Program is discussed in this paper, and the viewpoints of a few fee opponents and proponents are presented.

145. Shultz, Steven; Pinazzo, Jorge and Cifuentes, Miguel. (1998). Opportunities and limitations of contingent valuation surveys to determine national park entrance fees: Evidence from Costa Rica. *Environment and Development Economics*, 3: 131-149.

Keywords: willingness to pay, Costa Rica national parks, entrance fees, contingent valuation method.

Type of citation: Journal article

The purpose of this paper is to evaluate the effectiveness and suitability of the contingent valuation method as a tool for establishing optimal entrance fees for different national parks in Costa Rica and possibly other developing countries. Willingness to pay values were estimated for future visits to two national parks, contingent upon improvements in their infrastructure and services. A total of 424 usable surveys were obtained from visitors between March and May of 1995. The results indicate that the most important advantages to the contingent valuation method presented in this paper are the ability to estimate statistically robust models representing willingness to pay for entrance fees and the possibility of estimating alternative willingness to pay values for different types of national parks.

90. U.S. Department of Agriculture (Forest Service). (1998). Recreation Research Update #26. Riverside, CA: Wildland Recreation and Urban Cultures, USDA Forest Service, Pacific Southwest Research Station.

Keywords: summary, focus groups, national forests, comment card evaluation, impacts, attitudes.

Type of citation: Report

This Forest Service research update gives a brief synopsis of results from two studies about recreation fees. The first study used focus groups to determine what anticipated impacts the fee program in the southern California forests would have on visitor recreation experiences. Perceptions of the fee program and visitor assessment of trust in the Forest Service are also discussed. The second study examines the results of the "customer comment card" evaluation of the fee program from the program's inception until November of 1997.

78. U.S. Department of the Interior (National Park Service, U.S. Fish and Wildlife Service, Bureau of Land Management), and U.S. Department of Agriculture (Forest Service). (1998). Recreation Fee Demonstration Program, Progress Report to Congress . 41 pp.

Keywords: Report to Congress, Forest Service, National Park Service, Fish and Wildlife Service, Bureau of Land Management, cost, revenue.

Type of citation: Report

This is a joint report prepared by the National Park Service, Bureau of Land Management, U.S. Fish and Wildlife Service, and U.S. Forest Service. It contains information on fee collections for fiscal year 1997 and estimates for fiscal year 1998, backlog projects, methods of fee collection, lessons learned, and suggestions for legislative and management improvements. As of September 30, 1997, there were 97 National Park Service fee sites, 10 Bureau of Land Management sites, 61 U.S. Fish and Wildlife Service sites, and 40 U.S. Forest Service sites. The amount collected from fee revenues during the first year of the program represented a 61 percent increase in revenues from the previous fiscal year. A National Park Service survey and analysis of the U.S. Forest Service customer comment card indicate that public acceptance of the program has been generally high. Visitation to fee sites does not appear to have been significantly affected either positively or negatively by the new fees.

75. U.S. General Accounting Office. (1998). Recreation Fees: Demonstration Fee Program Successful in Raising Revenues but Could Be Improved (Report to Congressional Requesters, GAO/RCED-99-7). Washington, D.C. 116 pp.

Keywords: report to Congress, recommendations, revenue, evaluation, impact.

Type of citation: Report

The General Accounting Office (GAO) reviewed the demonstration fee programs of the Park Service, the Fish and Wildlife Service, the Bureau of Land Management, and the Forest Service, focusing on program implementation and revenues, expenditures, innovative or coordinated approaches, and program effects on visitation. Recreational fee revenues increased substantially from 1996 to 1998, with the Park Service collecting the most revenues. About 76 percent of the revenues available for expenditure through March of 1998 had yet to be spent. Most of the revenues went toward repair and maintenance, the cost of fee collection, and annual operations of the sites. Although many sites' increased fee revenues equaled 20 percent or more of their annual budgets, this is not the case for all sites. The imbalance in revenues raises questions about the requirement that 80 percent of all fee revenues be spent at the sites where they are collected. There were some missed opportunities for innovative programs and pricing structures, but there were also some good examples of coordination between the agencies. Although visitation at fee sites in fiscal year 1997 increased overall by 5 percent, some sites did experience a decline in visitation. Generally, agency research showed that visitors supported the program and the fee amounts.

135. Van Sickle, Kerry and Eagles, Paul F.J. (1998). Budgets, pricing policies and user fees in Canadian parks' tourism. *Tourism Management*, 19(3): 225-235.

Keywords: national parks, Canadian park management, recreation management.

Type of citation: Journal article

While fiscal restraint in Canada's national and provincial parks has caused a budget reduction and loss of management effectiveness, an increase in public demand over the last two decades has resulted in increases in the number of parks and in tourism use. This paper summarizes the data from a national survey of all provincial, territorial and national park agencies' budget, fiscal and pricing policies in Canada. Following a discussion of results including park budgets, agency fee policies, and government funding revenue generation, two major observations are evident. One is the continuing loss of management capability due to reliance on insufficient government funding for capital and operational needs. The other is a shift from government budget funding to a higher utilization of tourism-based fees and charges. Overall, the trend is away from tax-based government allocations and towards income derived from fees for the services and facilities provided.

41. Warren, Roger and Rea, Phillip. (1998). Fee supported parks: Promoting success. *Parks and Recreation*, 33(1): 82-88.

Keywords: public park and recreation agencies, fees, revenues, costs.

Type of citation: Journal article

This paper introduces the concept of fees in public park and recreation agencies. Seven different kinds of fees are discussed, and several examples of fee programs at state parks and other agencies are given. Keys to successful fee-supported parks are outlined. These include proper planning, quality facilities, effective programming, and sound management. The authors conclude that fee-supported parks can provide special recreation experiences, help offset the cost of providing other recreation experiences, and, because these parks tend to be of high quality and aesthetically pleasing, they can become a source of community pride.

1997

77. Calkin, David E. and Henderson, Jim E. (1997). Evaluation of Effects of Implementing Day-Use Fees at Corps of Engineers Recreation Areas (Technical Report R-97-1). Vicksburg, MS: U.S. Army Corps of Engineers Waterways Experiment Station. 48 pp.

Keywords: Corps of Engineers, beaches, boat ramps, day use, attitudes, impacts, post-implementation.

Type of citation: Report

In 1994, the Corps of Engineers implemented a system of day use fees at beaches and boat ramps. To identify behavioral and attitudinal impacts of implementing day use fees,

three sources of data were used: 1) a 1993 pre-fee study to approximate revenues and visitor reactions, 2) a 1996 post-fee study assessing actual effects, and 3) records of visitation between 1993 and 1996 to detect trends before and after fee implementation. Comparisons of these data show that even though 50 percent of the pre-fee study respondents agreed with the statement "If the Corps charged a day use fee, I would no longer visit their day use areas", most sites experienced a visitation increase. Results also show that levels of support for paying fees increased with time.

147. Alexander, Glen D. (1997). Adding value to the outdoor recreation experience. In Walter F. Kuentzel (Ed.), *Proceedings of the 1996 Northeastern Recreation Research Symposium* (pp. 213-215). Radnor, PA: USDA Forest Service, Northeastern Forest Experiment Station, General Technical Report NE-232.

Keywords: Ohio State Parks, adding value, fees, revenues, cutting costs.

Type of citation: Proceedings paper

This paper explains how the concept of added value has helped to increase fee revenues, improve customer satisfaction, and build upon visitation. Added value is defined as the surplus or deficit of perceived value the customer receives from any service modification over the value that is tendered for it. The support or resistance of a customer to any given revenue generating or cost cutting initiative depends upon their perception of the added value attached to it. Examples of successful fee programs include the Rent-a-RV program at campgrounds, establishing a reservation system for picnic shelters, and initiating the sale of firewood, ice and camper food at most campground check-in stations. Ohio State Parks has achieved excellent results by paying attention to adding value to its revenue generation initiatives. Examples of how added value was applied in these parks are discussed.

228. Chase, Lisa C.; Lee, David R.; Schulze, William D. and Anderson, Deborah J. (1997). *Ecotourism Demand and Differential Pricing of National Park Entrance Fees in Costa Rica* (Working Paper, WP 97-10). Ithaca, NY: Department of Agricultural, Resource, and Managerial Economics, Cornell University. 38 pp.

Keywords: Costa Rica national parks, ecotourism, user fee impacts, fee policy, demand, differential pricing.

Type of citation: Report

Little experience exists in developing countries to guide resource managers in designing effective pricing strategies for protected areas. This paper uses a contingent behavior methodology to generate experimental data to assess the effects of differential pricing of entrance fees to the three most frequently visited national parks in Costa Rica. A random sample of 311 foreign tourists were interviewed in-person during January to March of 1995. The park visitation demand elasticities estimated at the parks are quite different.

The estimated cross-price elasticities show that substitutability in visitation demand can exist between parks with similar attractions. Differential fees may in this case be used successfully to relieve overcrowding at one park or encourage local economic development at another. The results also show that revenue-maximizing entrance fee prices may differ significantly from the fees that are actually charged. In only one of the parks studied were actual fees close to estimated revenue-maximizing levels. Differential pricing can be a promising tool for distributing tourism and increasing park revenues.

284. Field, Donald R.; Krannich, Richard S.; Luloff, A.E. and Pratt, Cristina. (1997). National Park Service Managers' Views Toward the Recreational Fee Demonstration Program - 1997, Executive Summary, [www.nps.gov/feedemo/managers.htm]. Pennsylvania State University, University of Wisconsin-Madison, and Utah State University [1999, September 9].

Keywords: park visitation, park managers, perceptions, Recreational Fee Demonstration Program.

Type of citation: Report

This executive summary highlights the opinions and perceptions of park managers regarding the effects of the Recreational Fee Demonstration Program on park visitation. Also summarized are their views about implementation, efficiency, and management of the program within park operations for the calendar year of 1997. The results are based on a survey of 109 managers at parks which were participating in the Recreational Fee Demonstration Program.

81. Lime, David W. and Lewis, Michael S. (1997). Reactions of Campers and Interest Group Representatives to a Proposed Camping Use Fee in the Boundary Waters Canoe Area Wilderness: Results of a 1997 study. (Final Report submitted to USDA Forest Service Superior National Forest). St. Paul, MN: University of Minnesota, College of Natural Resources, Department of Forest Resources. 81 pp.

Keywords: pre-implementation, wilderness, camping fee, attitudes.

Type of citation: Report

The purpose of this study was to seek the opinions of several key Boundary Waters Canoe Area Wilderness (BWCAW) stakeholder groups concerning a proposed camping use fee. In an effort to identify a range of issues, concerns, and questions the Superior National Forest should consider when designing and implementing a fee program for the Boundary Waters, personal interviews in a group setting with campers visiting the BWCAW in 1997 and several focus group meetings with selected interest groups were conducted. Overall, 83 percent of participants supported a camping use fee. However, two-thirds of the individuals representing various conservation organizations were not

supportive. Study results also revealed that an equal number of both campers and interest group representatives were supportive of either a flat rate fee per group per trip or a method that charges per person. Campers consistently specified the lowest dollar amounts for a reasonable fee amount, and outfitter representatives consistently specified the highest amounts.

272. Hoffman, Rich. (1997). To fee or not to fee. *American Whitewater*, 37(5): 19-23.

Keywords: Grand Canyon National Park, non-commercial river running, fee program.

Type of citation: Journal article

Although American Whitewater, a non-profit organization, supports fees, their constituency has several concerns about the new fee program for non-commercial boaters at Grand Canyon National Park. This article describes those concerns and suggests some possible solutions.

80. ENPLAN, Environmental Scientists and Planners. (1997). Enhancement Fund Monitoring Program, 1997 Survey Report. (Prepared for Shasta-Trinity National Forests). Redding, CA. 108 pp.

Keywords: Forest Service, post-implementation, camping, boat ramp, parking, climbing, willingness to pay, wilderness, impact, attitudes, appropriateness.

Type of citation: Report

This is the first report of results of a 3-year monitoring program for the Shasta-Trinity Enhancement Fund Program. From July to September of 1997, 370 visitors were surveyed at 12 fee locations on the Shasta-Trinity National Forests in northern California. Survey items included attitudes toward fees, how fee revenues should be used, future visitation of sites, and visitor demographics. To account for the variety of fees and activities offered in the area, five different survey instruments were administered: 1) campground, 2) boat ramp, 3) Mt. Shasta summit, 4) north side Mt. Shasta access - parking and summit, and 5) willing to pay for south side Mt. Shasta parking. Overall, there was satisfaction with the services provided. The most serious problem was the condition of the restrooms at most locations. Generally, there was somewhat mixed support for the fees, and approximately one-third of respondents indicated they would visit the Forests less often because of the fees.

88. Gable, Robert; Burkhardt, Rachel L. and Winter, Patricia L. (1997). Assessing Community Impressions of a Fee Pilot Program: Final Report . Claremont, CA: Claremont Graduate University, Center for Organizational and Behavioral Sciences. 61 pp.

Keywords: public perceptions, potential impacts, Forest Service, pre-implementation.

Type of citation: Report

This study used focus group interviews and questionnaires to determine community perceptions of the proposed fee program for the national forests in southern California, and what impacts the fees might have on recreation patterns of current and potential visitors. The 140 participants were not assembled randomly, rather they were assembled based on membership in either a community of interest (ethnic orientation or recreationally based) or a community of place (geographically oriented). Focus group topics included reasonable daily and annual fees, how to use the fee money, and fee compliance issues. Questionnaire items included attitudes toward the fee program, anticipated effect on recreation behavior, and trust toward the Forest Service. About 30 percent of participants felt there should be no daily or annual fee at all, while about 50 percent felt a \$1-\$5 daily fee was reasonable, and almost 25 percent felt a \$20-\$25 annual fee was reasonable. Concerns included exclusion of lower income families from recreation, decreased spontaneity of forest visits, and rights to public land. Opposition to the fee program was primarily based on the belief that a government agency cannot be trusted to implement a fee program successfully or fairly.

89. Gable, Robert; Chavez, Deborah and Short, Robert. (1997). Pilot Fee Demonstration Project Evaluation: Visitor Surveys on the Enterprise Zone, Phase I -- Before Fee Implementation . Claremont, CA: Claremont Graduate University, Center for Organization and Behavioral Sciences. 47 pp.

Keywords: potential impacts, Forest Service, user perceptions, pre-implementation.

Type of citation: Report

The research described in this report is based on a panel study which explores the perceptions of visitors to the national forests in southern California (the Enterprise Zone) before the implementation of fees. The sample included 593 people located at various recreation sites on 18 districts within the Enterprise Zone from January through April of 1997. Many respondents had not heard about the fee program (75 percent), and about one-third (35 percent) did not understand the need for a fee program. Over one-third (39 percent) indicated the fees would not impact future visitation to the forests. Preferences for daily fee amounts ranged most commonly from \$3-\$5 (42 percent), and from \$15-\$25 (53 percent) for an annual fee. Additional statistical analyses indicate that variables impacting respondents' perceptions about the fee program include whether the respondent has paid an outdoor recreation fee before, whether they are low use or frequent visitors to the forests, and whether or not they have had contact with a forest employee in the last two years.

235. Lundgren, Allen L. and Lime, David W. (1997). Overview of a 1997 National Park Service Monitoring Study to Obtain Visitor Reactions to the Recreational Fee Demonstration Program (Final Report, Submitted to the National Park Service, Midwest Region, National Fee Program, and Social Science Program). St. Paul, MN: University of Minnesota, Department of Forest Resources, Cooperative Park Studies Unit. 38 pp.

Keywords: national parks, post-implementation, visitor reactions, fees.

Type of citation: Report

During the summer of 1997, as part of a national study to monitor visitor reactions to the new Recreational Fee Demonstration Program authorized by Congress in 1996, a sample of approximately 1,600 visitors at 11 park units were contacted. Information obtained from visitors includes: 1) the type of entrance or other recreation fee paid; 2) their reactions to the appropriateness of increased or new fees; 3) reactive changes, if any, in their current or future plans and activities as a result of the new fees; 4) their opinions to the disposition of fee revenues collected by the parks; and 5) information on their socioeconomic characteristics. This overview report presents the findings from 1,306 on-site surveys and focus group discussions, and 300 informal discussions with visitors, park staff and concessionaire personnel. Overall, 60 percent of participants were not aware of the fee program before coming to the park in which they were contacted. A wide majority of visitors to all 11 park units (71 percent) rated the fees about right. There were no statistically significant differences in fee ratings based on gender, age, education, race or ethnicity. There was, however a significant difference for lower income groups, which consistently ranked fees as too high.

236. Lundgren, Allen L.; Lime, David W.; Warzecha, Cynthia A.; Lewis, Michael S. and Thompson, Jerrilyn L. (1997). Visitor Reactions to the Recreational Fee Demonstration Program: Yellowstone and Grand Teton National Parks (Final Report, Submitted to the National Park Service, Midwest Region, National Fee Program, and Social Science Program). St. Paul, MN: University of Minnesota, College of Natural Resources, Department of Forest Resources, Cooperative Park Studies Unit. 67 pp.

Keywords: national parks, post-implementation, visitor reactions, fees.

Type of citation: Report

This report is part of a national study to monitor visitor reactions to the new Recreational Fee Demonstration Program authorized by Congress in 1996. From August 5 - 9 in 1997, 280 visitors to Yellowstone National Park and Grand Teton National Park took part in questionnaires and focus group meetings. Information obtained from visitors includes: 1) the type of entrance or other recreation fee paid; 2) their reactions to the appropriateness of increased or new fees; 3) reactive changes, if any, in their current or future plans and activities as a result of the new fees; 4) their opinions to the disposition of fee revenues collected by the parks; and 5) information on their socioeconomic characteristics. More than half of the respondents were not aware of the new fees before coming to the park. When asked to rate the appropriateness of the entrance fees in terms of the amount they paid, 71 percent of respondents said they were about right, 12 percent said they were too low, and 17 percent said they were too high.

237. Lundgren, Allen L.; Lime, David W.; Warzecha, Cynthia, A. and Thompson, Jerrilyn L. (1997). Visitor Reactions to the Recreational Fee Demonstration Program: Yosemite National Park (Final Report, Submitted to the National Park Service, Midwest Region, National Fee Program, and Social Science Program). St. Paul, MN: University of Minnesota, College of Natural Resources, Department of Forest Resources, Cooperative Park Studies Unit. 39 pp.

Keywords: national parks, post-implementation, visitor reactions, fees.

Type of citation: Report

This report is part of a national study to monitor visitor reactions to the new Recreational Fee Demonstration Program authorized by Congress in 1996. From July 17-20 of 1997, 144 visitors at Yosemite National Park filled out a questionnaire or took part in informal discussions. Information obtained from visitors includes: 1) the type of entrance or other recreation fee paid; 2) their reactions to the appropriateness of increased or new fees; 3) reactive changes, if any, in their current or future plans and activities as a result of the new fees; 4) their opinions to the disposition of fee revenues collected by the parks; and 5) information on their socioeconomic characteristics. Overall, slightly more than half of the respondents were aware of the new fee program, but this varied between visitors staying only one day in the park (one-third of whom were aware of the new program), and those staying for more than one day (57 percent of whom knew about the program). When asked how appropriate the fee amount they paid was, 64 percent ranked it as about right, while 22 percent ranked it as too high.

238. Lundgren, Allen L.; Lime, David W.; Warzecha, Cynthia A. and Thompson, Jerrilyn L. (1997). Visitor Reactions to the Recreational Fee Demonstration Program: Sleeping Bear Dunes National Lakeshore (Final Report, Submitted to the National Park Service, Midwest Region, National Fee Program, and Social Science Program). St. Paul, MN: University of Minnesota, College of Natural Resources, Department of Forest Resources, Cooperative Park Studies Unit. 52 pp.

Keywords: national lakeshore, post-implementation, visitor reactions, fees.

Type of citation: Report

This report is part of a national study to monitor visitor reactions to the new Recreational Fee Demonstration Program authorized by Congress in 1996. From August 15-18 of 1997, a total of 170 visitors at Sleeping Bear Dunes National Lakeshore took part in an on-site survey or focus group sessions. Information obtained from visitors includes: 1) the type of entrance or other recreation fee paid; 2) their reactions to the appropriateness of increased or new fees; 3) reactive changes, if any, in their current or future plans and activities as a result of the new fees; 4) their opinions to the disposition of fee revenues collected by the parks; and 5) information on their socioeconomic characteristics. Thirty-eight percent of the questionnaire respondents were aware of the new park fee program before they arrived. When asked to rate the appropriateness of the amount they were

charged, 30 percent of questionnaire respondents and 20 percent of focus group participants indicated the fees were too high or far too high. When asked how the fees should be used, 47 percent of questionnaire respondents indicated all fees should be kept in the park. Another 48 percent indicated most of the fees should be kept in the park, and the rest should be distributed among other national park units as needed.

239. Lundgren, Allen L.; Lime, David W.; Warzecha, Cynthia A. and Thompson, Jerrilyn L. (1997). Visitor Reactions to the Recreational Fee Demonstration Program: Grand Canyon National Park (Final Report, Submitted to the National Park Service, Midwest Region, National Fee Program, and Social Science Program). St. Paul, MN: University of Minnesota, College of Natural Resources, Department of Forest Resources, Cooperative Park Studies Unit. 38 pp.

Keywords: national park, post-implementation, visitor reactions, fees.

Type of citation: Report

This report is part of a national study to monitor visitor reactions to the new Recreational Fee Demonstration Program authorized by Congress in 1996. From July 2-6, of 1997, 158 respondents at Grand Canyon National Park completed a questionnaire. Information obtained from visitors includes: 1) the type of entrance or other recreation fee paid; 2) their reactions to the appropriateness of increased or new fees; 3) reactive changes, if any, in their current or future plans and activities as a result of the new fees; 4) their opinions to the disposition of fee revenues collected by the parks; and 5) information on their socioeconomic characteristics. Almost 40 percent of survey participants knew about the fee program before coming to the park. In general, backcountry campers appeared to be better informed about the new fees than did the other visitors. Most visitors thought the fee they paid was about right (73 percent). Twenty percent thought they were too high.

241. Lundgren, Allen L.; Lime, David W.; Warzecha, Cynthia A. and Thompson, Jerrilyn L. (1997). Visitor Reactions to the Recreational Fee Demonstration Program: Muir Woods National Monument (Final Report, Submitted to the National Park Service, Midwest Region, National Fee Program, and Social Science Program). St. Paul, MN: University of Minnesota, College of Natural Resources, Department of Forest Resources, Cooperative Park Studies Unit. 25 pp.

Keywords: national monument, post-implementation, visitor reactions, fees.

Type of citation: Report

This report is part of a national study to monitor visitor reactions to the new Recreational Fee Demonstration Program authorized by Congress in 1996. During July 10-11 of 1997, a total of 81 visitors to Muir Woods National Monument completed a survey. Information obtained from visitors includes: 1) the type of entrance or other recreation fee paid; 2) their reactions to the appropriateness of increased or new fees; 3) reactive changes, if any, in their current or future plans and activities as a result of the new fees; 4) their opinions

to the disposition of fee revenues collected by the parks; and 5) information on their socioeconomic characteristics. Most of the visitors contacted were unaware of the new entrance fee before coming to the park. Overall, 76 percent of the visitors interviewed judged the fees they paid as about right. Only 4 percent thought they were too high. When asked how the fees should be used, 60 percent chose to keep all revenues in the park, and 38 percent chose to keep most revenues in the park and distribute the rest among other National Park Service units as needed.

242. Lundgren, Allen L.; Lime, David W.; Warzecha, Cynthia A. and Thompson, Jerrilyn L. (1997). Visitor Reactions to the Recreational Fee Demonstration Program: Glen Canyon National Recreation Area (Final Report, Submitted to the National Park Service, Midwest Region, National Fee Program, and Social Science Program). St. Paul, MN: University of Minnesota, College of Natural Resources, Department of Forest Resources, Cooperative Park Studies Unit. 37 pp.

Keywords: national recreation area, post-implementation, visitor reactions, fees.

Type of citation: Report

This report is part of a national study to monitor visitor reactions to the new Recreational Fee Demonstration Program authorized by Congress in 1996. From June 27 to July 1 of 1997, 122 visitors to the Glen Canyon National Recreation Area completed a survey. Information obtained from visitors includes: 1) the type of entrance or other recreation fee paid; 2) their reactions to the appropriateness of increased or new fees; 3) reactive changes, if any, in their current or future plans and activities as a result of the new fees; 4) their opinions to the disposition of fee revenues collected by the parks; and 5) information on their socioeconomic characteristics. Almost half the respondents knew about the fee program before coming to the park. Only 16 percent of visitors surveyed indicated the entrance fees they paid were too high. More than three-quarters felt they were about right.

244. Lundgren, Allen L.; Lime, David W.; Warzecha, Cynthia A. and Thompson, Jerrilyn L. (1997). Visitor Reactions to the Recreational Fee Demonstration Program: Alcatraz Golden Gate National Recreation Area (Final Report, Submitted to the National Park Service, Midwest Region, National Fee Program, and Social Science Program). St. Paul, MN: University of Minnesota, College of Natural Resources, Department of Forest Resources, Cooperative Park Studies Unit. 25 pp.

Keywords: national recreation area, post-implementation, visitor reactions, fees.

Type of citation: Report

This report is part of a national study to monitor visitor reactions to the new Recreational Fee Demonstration Program authorized by Congress in 1996. On July 12, 1997, a sample of 75 visitors to Alcatraz Golden Gate National Recreation Area filled out a survey. Information obtained from visitors includes: 1) the type of entrance or other recreation

fee paid; 2) their reactions to the appropriateness of increased or new fees; 3) reactive changes, if any, in their current or future plans and activities as a result of the new fees; 4) their opinions to the disposition of fee revenues collected by the parks; and 5) information on their socioeconomic characteristics. Although almost none of the respondents knew about the new fee before arrival at the park, only 4 percent of the visitors thought the fee was too high.

245. Lundgren, Allen L.; Lime, David W.; Warzecha, Cynthia A. and Thompson, Jerrilyn L. (1997). Visitor Reactions to the Recreational Fee Demonstration Program: Frederick Douglass National Historic Site (Final Report, Submitted to the National Park Service, Midwest Region, National Fee Program, and Social Science Program). St. Paul, MN: University of Minnesota, College of Natural Resources, Department of Forest Resources, Cooperative Park Studies Unit. 28 pp.

Keywords: national historic site, post-implementation, visitor reactions, fees.

Type of citation: Report

This report is part of a national study to monitor visitor reactions to the new Recreational Fee Demonstration Program authorized by Congress in 1996. From August 2-3 of 1997, a total of 153 visitors to Frederick Douglass National Historic Site completed a questionnaire. Information obtained from visitors includes: 1) the type of entrance or other recreation fee paid; 2) their reactions to the appropriateness of increased or new fees; 3) reactive changes, if any, in their current or future plans and activities as a result of the new fees; 4) their opinions to the disposition of fee revenues collected by the parks; and 5) information on their socioeconomic characteristics. Most of the visitors were unaware of the new interpretive fee before coming to the park. Overall, 78 percent of the visitors surveyed felt the fees were about right, and 12 percent felt the fees were too high.

240. Lundgren, Allen L.; Lime, David W.; Warzecha, Cynthia A. and Thompson, Jerrilyn L. (1997). Content Analysis of Correspondence Received by the National Park Service Regarding the Recreational Fee Demonstration Program (Final Report, Submitted to the National Park Service, Midwest Region, National Fee Program, and Social Science Program). St. Paul, MN: University of Minnesota, College of Natural Resources, Department of Forest Resources, Cooperative Park Studies Unit. 20 pp.

Keywords: national parks, content analysis, public reaction, fees, correspondence.

Type of citation: Report

Public reaction to the Recreational Fee Demonstration Program, authorized by Congress in 1996, has been expressed in many ways, including letters and other communications to the National Park Service and members of Congress. This report is part of a national study to monitor public reactions to this Fee Program, and reports the results of a content analysis of letters and other written communication received by the National Park Service. A total of 484 pieces of correspondence received between early May and mid-

September of 1997 were specifically related to the Fee Program. Thirty-one percent expressed some measure of support for the new fees, while 67 percent expressed opposition. A wide variety of concerns, including equity issues, the general acceptability of fees, and implementation, were expressed.

82. Lundgren, Allen L.; Lime, David W.; Warzecha, Cynthia A. and Thompson, Jerrilyn L. (1997). Monitoring 1997 Park Visitor Reactions to the National Park Service Recreational Fee Demonstration Program (Research Summary No. 10). St. Paul, MN: University of Minnesota, College of Natural Resources, Cooperative Park Studies Unit. 4 pp.

Keywords: monitoring, national parks, post-implementation, attitudes, impacts.

Type of citation: Report

To help monitor and assess visitor reactions to the Recreational Fee Demonstration Program, visitors at 11 units of the National Parks System were interviewed during the summer of 1997. Over 1,600 visitors were contacted, and a total of 1,306 respondents completed a questionnaire or took part in focus group discussions. A brief summary of key results includes: 1) most visitors (60 percent) were not aware of the new fees before coming to the park; 2) 71 percent of visitors thought the fee levels they paid were "about right"; 3) 57 percent wanted the new fee money to be kept in the park where it was collected, and 39 percent wanted to keep most of it in the park and distribute the rest among other parks as needed; and 4) almost all (96 percent) visitors indicated the new fees had not made them change plans for their stay in the park.

243. Lundgren, Allen L. and Lime, David W. (1997). Visitor Reactions to the Recreational Fee Demonstration Program: Colonial National Historical Park, Yorktown Unit (Final Report, Submitted to the National Park Service, Midwest Region, National Fee Program, and Social Science Program). St. Paul, MN: University of Minnesota, Department of Forest Resources, Cooperative Park Studies Unit. 24 pp.

Keywords: national historic site, post-implementation, visitor reactions, fees.

Type of citation: Report

This report is part of a national study to monitor visitor reactions to the new Recreational Fee Demonstration Program authorized by Congress in 1996. From May 30-31 of 1997, 56 visitors to the Yorktown Unit of the Colonial National Historical Park participated in focus group sessions. About two-thirds of the participants had not heard of the new fees before arrival at the park. When asked how appropriate the entrance fee was, 10 percent said it was too low, 69 percent said it was about right, and 21 percent said it was too high.

5. McCarville, Ronald E. (1997). The anchoring effect of price-last-paid information on willingness-to-pay levels. *Journal of Applied Recreation Research*, 22(3): 191-209.

Keywords: pricing, experiment, price last paid, willingness to pay.

Type of citation: Journal article

This study monitored whether willingness-to-pay levels could be influenced by psychological reference points. An experimental format placed participants in a hypothetical recreation day use area and used a series of photographic slides to simulate this setting. Respondents were offered hypothetical messages offering various "price-last-paid" levels, and were asked to report their willingness-to-pay levels for entry into this hypothetical site. The control group received no price last paid information, the second group was asked to assume they had paid a \$2 admission fee on the last visit, and the third group was told they had previously paid \$4. Willingness-to-pay levels for admission to the site were increased by as much as 41 percent by these messages. It seems that the values participants report for public leisure services may be influenced by memories of prices paid during previous visits to similar sites.

207. McLean, Donald J. and Johnson, Ronald C.A. (1997). Techniques for rationing public recreation services. *Journal of Park and Recreation Administration*, 15(3): 76-92.

Keywords: rationing, resource allocation, recreation delivery system, benefits, public good, downsizing.

Type of citation: Journal article

Rationing use of public services is proposed as an approach which is based on the pursuit of public good, and should be used in response to reductions in public funding support for recreation services. Depending on the general service mission of the organization (resource protection, social values, or personal enrichment), there are a variety of rationing techniques which could be used. Eight rationing techniques are outlined: 1) price; 2) reservations; 3) lotteries; 4) priority based on need; 5) access to use rules, such as skill level; 6) time allotment; 7) demarketing through decreasing public awareness of the service, introducing ancillary services, and not providing a service; and 8) vouchers.

225. Michael, Jeffrey A. and Reiling, Stephen D. (1997). The role of expectations and heterogeneous preferences for congestion in the valuation of recreation benefits. *Agricultural and Resource Economics Review*, 26(2): 166-173.

Keywords: congestion, visitor expectations, willingness to pay, wilderness visitors.

Type of citation: Journal article

Studies of recreation congestion generally utilize nonmarket valuation techniques to determine the use level and entrance price that maximize recreation benefits for a specific recreation area. This paper improves upon these previous studies by relaxing the assumption of homogeneous preferences among visitors of the same recreation area and

accounting for visitor expectations of congestion. Specifically, the empirical analysis of this paper has two objectives: 1) to examine the impacts of the actual experience versus pre-trip expectations of congestion on willingness to pay; and 2) to test the hypothesis that peak and nonpeak wilderness visitors exhibit heterogeneous preferences for congestion. The source of data is an on-site survey of visitors to the Caribou-Speckled Mountain Wilderness. The sampling period was from June through September of 1993. Results support the assumption that weekend and weekday visitors have different preferences for congestion (with weekday visitors being more sensitive to increases in congestion), and that prior expectations of congestion play an important role in determining the effect of actual levels of encounters on willingness to pay. Encountering more groups than expected reduces willingness to pay for weekend visitors by \$22.29. These results suggest that it may be inappropriate for wilderness managers to follow the lead of some profit-maximizing recreation providers such as ski resorts and amusements parks which charge higher prices for use on the weekends.

91. U.S. Department of Agriculture (Forest Service). (1997). Recreation Research Update #25. Riverside, CA: Wildland Recreation and Urban Cultures, USDA Forest Service, Pacific Southwest Research Station.

Keywords: summary, national forests, pre-implementation, attitudes, impacts, focus groups, post-implementation.

Type of citation: Report

This Forest Service research update gives a brief synopsis of results from two studies about recreation fees. The first study described is the first phase of a panel study which measured the perceptions of almost 600 visitors to the forests in southern California. Most respondents had not heard about the fee program and many said they thought the fee program would not impact either the number of times they visit the forest or the activities in which they engage on the forest. Their preference for daily fee amounts ranged from \$3-\$5, and \$25 or less for an annual fee. The second study examined the perceptions and reactions to the fee program from ten focus group discussions held in 1997, involving 115 individuals. Topics discussed included fee amounts, how the fees should be used, concerns about social impacts and equity, and possible changes in the recreation experience as a result of the fee program

1996

148. Alexander, Glen D. (1996). Increasing revenues in state parks -- What works and what doesn't. In Chad P. Dawson (Ed.), Proceedings of the 1995 Northeastern Recreation Research Symposium (pp. 36-40). Radnor, PA: USDA Forest Service, Northeastern Forest Experiment Station, General Technical Report NE-218.

Keywords: Ohio State Parks, revenues, customer satisfaction.

Type of citation: Proceedings paper

This paper discusses the methods Ohio State Parks used to increase their revenues, which have been increasing steadily since 1990. The main methods discussed are: 1) price comparability studies which serve as the basis for the annual price setting review for all fees charged for special services offered; 2) offering discounted prices, and offering differential pricing based on added amenities (campsites with electricity, for example), time (weekday versus weekend) and location (view or access to water, for example); 3) charging for services that were previously free; 4) introducing new "special services" for a fee; and 5) self-operation of concession facilities which were previously operated by a private business under contract.

73. Allen L. Lundgren, Ed. (1996). Recreation Fees in the National Park Service: Issues, Policies, and Guidelines for Future Action. St. Paul, MN: Cooperative Park Studies Unit, Department of Forest Resources, and the Tourism Center, Minnesota Extension Service, University of Minnesota. 146 pp.

Keywords: proceedings, overview, issues, agency programs, design, implementation.

Type of citation: Proceedings

This publication contains background papers addressing the need for research to help design more effective recreation fee policies and programs for the National Park Service, and papers summarizing the results of the workshop on recreation fees in the National Park Service. Topics include experience with fees at the legislative policy, administrative, and field level. Fee policies and programs of other federal and state agencies are also discussed. More than 15 papers are contained in this document.

63. Henderson, Jim E. (1996). Day Use Fee Collection - Innovative Methods and Success Stories (Natural Resources Technical Note REC-03). Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station. 7 pp.

Keywords: day use fees, implementation.

Type of citation: Report

Some of the successful day use fee collection ideas illustrated in this report include honor boxes and increasing compliance, decreasing the number of duplicate annual passes issued, and using automated entrance and fee collection procedures.

233. Laarman, Jan G. and Gregersen, Hans M. (1996). Pricing policy in nature-based tourism. *Tourism Management*, 17(4): 247-254.

Keywords: national parks, willingness to pay, fees, contingent valuation, pricing, revenue sharing.

Type of citation: Journal article

Pricing and revenue allocation in nature-based tourism (NBT) are seriously neglected in public policy, especially for the many governments around the world struggling with fiscal problems. This paper has three objectives: 1) to review the economist's concept of willingness to pay as a basis for NBT pricing; 2) to examine administrative criteria in NBT pricing from the perspective of a government agency; and 3) to discuss the elements of success in NBT pricing at policy and project levels. The issues of multiple pricing objectives, visitor categories, visitor activities, fee instruments and philosophical positions are examined in relation to improving pricing practices. Some suggestions for improving pricing practices are made.

3. McCarville, Ronald E. (1996). The importance of price last paid in developing price expectations for a public leisure service. *Journal of Park and Recreation Administration*, 14(4): 52-64.

Keywords: reference price, expectations, attachment, price sensitivity.

Type of citation: Journal article

Though fees may generate needed revenues for various initiatives, fees and charges may also provoke negative reactions among users. The psychological importance of price last paid in determining recreation participants' price expectations is examined in this paper. Users of a community indoor swimming pool were asked to complete a written survey while visiting the pool. Survey questions included current use patterns, perceived quality of the facility, attachment to the swim complex, what respondents would expect to pay for admission, and sociodemographic items. A total of 109 visitors completed the survey. Results show that price last paid was critical to the establishment of price expectations for the respondents who participated in open swims and lane swimming. Price last paid seemed relatively unimportant to those who participated in aquatic fitness classes or had children registered in swim classes. The importance of price last paid seems grounded in previous exposure to price levels, the cumulative effect of repeated fee payments, and even knowledge of prices charged by competing providers. Management implications discussed include the use of fee discount programs to encourage greater behavioral loyalty to the facility, and making a clear distinction between the "regular" prices charged at other facilities and the discount price.

40. McCarville, Ronald E.; Reiling, Stephen D. and White, Christopher M. (1996). The role of fairness in users' assessments of first-time fees for a public recreation service. *Leisure Sciences*, 18: 61-76.

Keywords: fairness, fees, indignation, reference price, public sector.

Type of citation: Journal article

This paper examines the effects of past experience with paying fees, level of service, and users' proximity to sites on possible displacement and perceptions of fairness of fees for

day use recreation areas. Six U.S. Army Corps of Engineers day use areas were selected. A mail survey of 1,405 visitors to these areas suggests the presence of two client types. The first type had paid fees in the past and seemed relatively less troubled by the prospect of doing so again in the future. In all cases, this group was more willing to pay fees and to pay higher fee levels than its counterpart. The second type typically had not paid fees for public leisure services and its members resent even the implication that they may be asked to do so. They assert that fees are unfair and that they feel victimized through the introduction of fees. User resentment is exacerbated by participants' familiarity with the recreational setting. Those living closest to the sites are most likely to be indignant at the thought of paying a first-time fee.

34. More, Thomas A.; Dustin, Daniel L. and Knopf, Richard C. (1996). Behavioral consequences of campground user fees. *Journal of Park and Recreation Administration*, 14(1): 81-93.

Keywords: user fees, expectations, behavior, camping.

Type of citation: Journal article

Not all implications of fees are fully understood. This study examines the effects of price on campers' expectations and examines the influence of price on campers' perception of appropriate behavior. Using telephone interviews, 910 campers who had applied for a campground reservation at any Forest Service campground in California between January of 1991 and May of 1992 were contacted. The interview consisted of items on general attitudes toward fees, attitudes about camping in general, campground attributes and appropriate camping behaviors, and socioeconomic data. Most subjects (73 percent) felt that fees currently charged at public campsites were about right, although 20.4 percent felt that current fees were too high. In addition, 84.7 percent felt that campgrounds should be financed with a combination of tax dollars and use fees, with 31.1 percent preferring a 50-50 match. Respondents were willing to pay a mean of \$8.19 for a primitive campground, and \$16.27 for a developed campground with services such as showers, electricity, and a small store. Although in this study fee increases were not related to a change in what behaviors are acceptable at campgrounds, there was a relationship between price and expectations. If fee increases prompt heightened expectations for facilities and services, it may lead to a spiral where more fee increases are needed to continue satisfying those heightened expectations.

136. Morgan, J. Mark. (1996). Resources, recreationists, and revenues: A policy dilemma for today's state park systems. *Environmental Ethics*, 18(3): 279-290.

Keywords: state park management, development, facilities.

Type of citation: Journal article

One of the most important policy issues facing state parks today involves the level of development, including both the amount and appropriateness of facilities. This paper

discusses this topic in relation to park resources, recreationists, and revenues. The mission and purpose of state parks, which is to maintain an equitable balance between resource conservation and public enjoyment, causes conflict. Modern tourism results in many forms of resource degradation. The primary justification used by lawmakers in the facility selection process appears to be based on revenue potential, which has led to the development of luxury-oriented facilities which bear little or no resemblance to the natural resources present on site. During the 1980's, state park visitation increased by 32.4 percent. It is possible that increasing user fees and upscale facility development has caused the "traditional" park visitor to be displaced by the "modern" park visitor. In conclusion, managers need to get back to "basics", which includes removing user satisfaction as the ultimate goal of recreation management services and replacing it with a commitment to maintaining a diverse and well-defined system of leisure settings. Revenue could be generated through concessionaire agreements, and zoning procedures could allow visitors to choose between a variety of recreation opportunities, and match personal preferences with established development zones.

98. Reiling, Stephen; Cheng, Hsiang-tai; Robinson, Chris; McCarville, Ronald and White, Christopher. (1996). Potential equity effects of a new day-use fee. In Chad P. Dawson (Comp.) Proceedings of the 1995 Northeastern Recreation Research Symposium (pp. 27-31). Radnor, PA: USDA Forest Service, Northeastern Forest Experiment Station, General Technical Report NE-218.

Keywords: Army Corps of Engineers, day use fee, impacts, low-income users, attitudes.

Type of citation: Proceedings paper

During the summer of 1993, visitors to 18 Army Corps of Engineers day use sites were surveyed to determine their attitudes toward fees and how they would respond to a day use fee. One of the major objectives of the study was to determine whether low-income users would be displaced. Questionnaire items were aimed at determining how current users would respond to a fee system and the number of trips they would make to the day-use area at alternative fee levels. A total of 1,405 surveys were completed and returned. A comparison of users who indicated they were not willing to pay any fee (40 percent) and those who were willing to pay a fee showed that low-income users have a higher probability of choosing to not pay a fee, thereby terminating their use of the day use sites at a greater rate than current users with higher levels of income. Results also show that low-income users who were willing to pay a fee are much more sensitive to the size of the fee.

150. Remington, Thomas E.; Manfredo, Michael J.; Vaske, Jerry J. and DeMasso, Suzanne M. (1996). Fee hunting pheasants in Colorado: Experimental evidence. *Human Dimensions of Wildlife*, 1(1): 51-59.

Keywords: fee hunting, pheasants.

Type of citation: Journal article

The objective of this study was to measure willingness of small game hunters to pay to hunt wild pheasants, and to predict the impact that fee rate and quality of hunting would have on rates of participation in a fee hunting program for pheasants. Data was collected using a telephone survey conducted during November and December of 1992. The survey sample was randomly selected from 1991 resident license buyers and small game license buyers of northeastern Colorado counties. The results of the study indicate a substantial interest in participating in a fee hunting program for pheasants. Willingness to participate and extent of participation were mediated by the fee charged and the perceived quality of the hunt. Daily fee charged and flush rate both significantly impacted likelihood of participation and the number of days hunters were likely to participate.

1995

59. Different Drummer. (1995). Building a solid foundation for our parks. *Different Drummer*, 2(1): 49-56.

Keywords: National Park Service funding, reform, user fees, incentives, self-sufficiency.

Type of citation: Journal article

The Different Drummer proposes Park Service reform by funding parks from user fees, and channeling those fees into giving park managers incentives to produce the highest net recreation values and protect the ecological, historic and prehistoric values of the parks. A discussion of the current incentives created by Congress and the political process shows why management decisions do not always favor the parks. An alternative set of seven "right" incentives are outlined, which is followed by a discussion of the benefits of user fees and incentive-based reforms over other proposals.

275. Eagles, Paul F.J. (1995). Tourism and Canadian parks: Fiscal relationships. *Managing Leisure*, 1: 16-27.

Keywords: tourism, Canadian parks, resource protection, financial self-sufficiency, visitor satisfaction.

Type of citation: Journal article

Since the 1970's, the number of parks and the area of parklands have increased in Canada and in Ontario. However, budgets also shrank over the same period. This paper argues for new approaches to financial management. An example is the agency, Parks Ontario, which was created after the Province of Ontario restructured the provincial parks management agency. Over time Parks Ontario must gain an increasingly larger portion of its finance from visitors, from new services, from volunteers and from donations. The implications of this approach are discussed. The link between tourism, protective management of the environment, providing outdoor recreation opportunities, and financial sufficiency are also discussed. If environmental quality is reduced, tourism will suffer and so will income. With a properly constructed park administration, tourism has

the potential to protect sensitive environments while providing outdoor recreation opportunities. This new approach will result in higher general use fees for all visitors, which will result in increased visitor services. Visitor satisfaction will receive a much higher emphasis. Generally, Canada is moving to a more business-like park management structure.

172. Fried, Brett M.; Adams, Richard M.; Berrens, Robert P. and Bergland, Olvar. (1995). Willingness to pay for a change in elk hunting quality. *Wildlife Society Bulletin*, 23(4): 680-686.

Keywords: contingent valuation, elk hunting, fees, Oregon, willingness to pay.

Type of citation: Journal article

Information on the value of recreational activities can assist public agencies in managing fish and wildlife species. This contingent valuation study measured net economic value and associated income effects for a change in elk hunting quality. Participants in five elk hunts (639 hunters) were surveyed from 1989 to 1991. Surveys were mailed to all individuals who obtained elk tags for hunting on the Starkey Forest in Oregon. The resulting figures of a \$287 mean and a \$90 median willingness to pay/trip for a virtually certain opportunity to shoot an elk provides managers and decision-makers with estimates of the magnitude of preferences for increases in the elk herd. Probability of accepting a fee increased as income increased. If a respondent increased the number of days he planned to hunt, his hypothetical willingness to pay decreased. Using willingness to pay estimates and the expected probability of obtaining a shot at an elk, a \$1,063 (or \$333 using the median) value was placed on a harvested elk.

278. Knapman, Bruce and Stoeckl, Natalie. (1995). Recreation user fees: An Australian empirical investigation. *Tourism Economics*, 1(1): 5-15.

Keywords: Australia, entry fees, visitation, revenue, efficiency, demand curve, equity.

Type of citation: Journal article

The dramatic increase in tourism and recreation usage of Australia's natural resources has led local government and national park management to consider extending the use of user fees. This research uses empirical estimates of demand curves for two World-Heritage-listed national parks (Kakadu and Hinchinbrook Island) to investigate the impact of entry fees on visitation and revenue, and the efficiency of fees as a revenue-raising device. Data were generated from visitor surveys. Results show that demand for recreation at the two national parks is highly price-inelastic. Entry fees must raise to almost \$100 before demand becomes elastic. Park visitors also appear to be better paid, better educated, and more likely to be employed in white-collar jobs than the 'average' Australian. It is concluded that modest entry fees would have little impact on visitor numbers, and provided the administrative costs of fee imposition are not prohibitive, fees could provide a relatively efficient means of raising revenue.

189. LaPage, Wilbur. (1995). New Hampshire's self-funding state parks. *Different Drummer*, Summer: 29-32.

Keywords: state parks, self-funding, user fees.

Type of citation: Journal article

After earning more income than its operating budget for three straight years, the New Hampshire state park system became a self-funded agency in 1991. The system retains all earning and reinvests its profit in new programs, expanded services, and accelerated maintenance. The park system's income of fees, rents, and commissions is supplemented by an extensive volunteer corps and a growing array of innovative partnership programs. The elements of the system's success is discussed in this paper as an example for other settings and fee systems.

4. McCarville, Ronald E. (1995). Pricing for public leisure services: An ethical dilemma? *Journal of Applied Recreation Research*, 20(2): 95-108.

Keywords: pricing, public sector, marketing.

Type of citation: Journal article

This paper reviews the conceptual and pragmatic issues surrounding the application of public-sector fees. The paper suggests that not all public initiatives are equally deserving of tax support. Consequently, fees are sometimes justified. Further, fees are not inconsistent with the service ethic of the public sector. Under conditions of scarcity, fees can help provide resources to aid socio-economically disadvantaged participants. A pricing policy which uses a strategic approach to pricing decisions is described. The suggestions are designed to reduce the potentially exclusionary nature of fees and charges. The author concludes that fees are dangerous not in their application, but in their misapplication.

218. Phillips, Clynn; Driver, B.L.; Roth, Karen L.; Arnold, Ross and Crandall, Derrick. (1995). *Prices Charged by Private Providers of Outdoor Recreation Opportunities* (Draft Report). Ft. Collins, CO: USDA Forest Service, Rocky Mountain Forest and Range Experiment Station. 62 pp.

Keywords: private-sector fees, Forest Service regions, prices.

Type of citation: Report

The study discussed in this draft report was conducted to: 1) provide information on private-sector fees being charged for ten selected outdoor recreation, hunting and fishing opportunities that are comparable to those provided by federal agencies, and 2) determine and compare fees being charged within the nine administrative regions of the USDA

Forest Service. Survey respondents names and addresses were obtained from the American Recreation Coalition, the USDA Forest Service, the USDI Park Service and Bureau of Land Management, and the U.S. Army Corps of Engineers. The Rand McNally Company also furnished price and service data for over 6,000 private campgrounds. Price, cost and fee information is presented for hunting, fishing, nonmotorized boating, rustic camping, swimming, and developed campgrounds.

66. Reiling, Stephen D. and Cheng, Hsiang-tai. (1995). Potential revenues from a new day-use fee. In Proceedings of the 1994 Northeastern Recreation Research Symposium (pp. 57-60). Radnor, PA: USDA Forest Service, Northeastern Forest Experiment Station, General Technical Report NE-198.

Keywords: Army Corps of Engineers, day-use fees, attitudes, revenue projections.

Type of citation: Proceedings paper

In 1984, the Army Corps of Engineers was granted authority to charge fees at its day use facilities. This paper presents the procedures used to estimate day use fee revenues and compare the estimated revenue projections to a "naive" estimate of revenue (which assumes that visitation to the sites would not change after fee implementation). Six fee projects were selected to participate in this study. The questionnaire contained general questions such as the recreational activities of respondents and the types of facilities and services they considered important, and questions about attitude toward fees and the number of trips they would make to the day use area at alternative fee levels. Over 1,400 surveys were filled out by day users. Almost half of respondents (48.5 percent) agreed they should not have to pay a fee to use the day use areas, and 40 percent indicated they would not visit the Corps day use areas if a fee was charged. The projected revenues range from a low of about \$900,000 to a high of \$1.6 million. Naive projections range from a low of \$1.3 million to a high of almost \$7 million.

1994

146. Anderson, Terry L. (1994). To fee or not to fee: The economics of below-cost recreation. In Terry L. Anderson (Ed.), Multiple Conflicts Over Multiple Uses (pp. 1-16). Bozeman, MT: Political Economy Research Center.

Keywords: recreational subsidies, policy changes, user fees, incentives.

Type of citation: Book chapter

This chapter points out that recreation as well as mining, grazing, and timber subsidies are driven by special interest groups. Mechanisms that can loosen the gridlock which has resulted from the winner-take-all battle over federal land use are explored. Impediments of, and incentives for, policy reform are discussed. Policy recommendations include: 1) the sale of an annual recreational license and dividing revenues among and within federal agencies according to visitor days of use; 2) increasing national park fees and allowing the parks to keep 80 percent of the increased collections; 3) allow agencies to use a share

of fees to purchase existing use permits where there is a conflict with recreation; and 4) place a share of fees into a "biodiversity trust fund", which would be available for proposals to fund projects for appropriate environmental purposes.

248. LaPage, W.F. (1994). America's self-funding park system: The New Hampshire model. In Mohan Munasinghe and Jeffrey McNeely (Eds.), *Protected Area Economics and Policy: Linking Conservation and Sustainable Development* (pp. 117-120). Washington, D.C.: The International Bank for Reconstruction and Development/The World Bank.

Keywords: state parks, self-funding.

Type of citation: Book chapter

The search for funding of parks and other public lands often begins and ends with user fees. Facing a growing general fund budget crisis, in 1991 the New Hampshire state park system became responsible for earning its own funds. This paper discusses the steps the state park system took after the first successful year of self-sufficiency to assure continued success. Programs vigorously pursued include: 1) corporate underwriting for all of its promotion, information and education programs; 2) expanding in-park and off-park merchandising; and 3) reducing operating costs through computerization and cooperative management. Increasing current fee levels was not being considered. The significance of this state park system's success extends well beyond its borders.

144. Teasley, R. Jeff; Bergstrom, John C. and Cordell, H. Ken. (1994). Estimating revenue-capture potential associated with public area recreation. *Journal of Agricultural and Resource Economics*, 19(1): 89-101.

Keywords: nonmarket valuation, public land management, resource economics.

Type of citation: Journal article

This article focuses on developing techniques for measuring revenue-capture potential via comparison of two alternative user fee mechanisms. The general study area consisted of two national forests in the Southeast. Dichotomous choice contingent valuation (a consumer is given a fixed quantity of a commodity and asked to value the commodity) and trip response (a consumer is given a fixed price and asked to state the quantity he or she would "purchase" at that price) data were collected in on-site interviews with recreationists who were leaving the area. The two revenue-capture strategies produced differing amounts of revenue potential. Higher fees price higher percentages of trips by current users out of the market, thereby reducing revenue potential. Expected visitation appears sensitive to the type of fee payment scheme used. It is possible that the trip response method may provide a more neutral means of asking revenue-capture questions in a survey format.

1993

1. Benson, John F. (1993). A technique for valuing nonpriced recreational features of commercial forests. *Leisure Sciences*, 15: 149-158.

Keywords: access, commercial forests, interpretation, landscape, recreation, values, wildlife.

Type of citation: Journal article

This article describes a method for estimating recreational visitors' valuations of environmental attributes at 14 commercial forest districts throughout Great Britain. The method is proposed as an alternative method for estimating monetary values for nonmarketed benefits. A sample of 3,623 day visitors was surveyed between July and September in 1987 and 1988. Use values for recreation in existing forests were calculated using the travel-cost calculation method. The second objective was to discover the relative valuations that visitors would give to as many as five attributes of the forests. Respondents could spend imaginary "tokens" to reflect their valuation of wildlife, forest landscape, recreational facilities, and information center or museum attributes. Generally, respondents consistently rated wildlife and the landscape over the recreational, information, and museum facilities. The token scores were then used to break down the total value of the visit, which was estimated using the travel-cost method. The total value of the visit exceeded the recreation and amenity facility provision costs in 1988 by a considerable amount.

134. Christensen, Neal A.; Stewart, William P. and King, David A. (1993). National forest campgrounds: Users willing to pay more. *Journal of Forestry*, 91(7): 43-47.

Keywords: willingness to pay, national forest campgrounds, fees.

Type of citation: Journal article

This article presents evidence that users are willing to pay higher fees for use of public recreation facilities. Data from over 1,000 on-site interviews with campers at 10 national forest campgrounds in central Arizona in 1985 demonstrated a willingness to pay more. Willingness varies with the characteristics of the campground and of the campers. Willingness to pay was positively related to length of stay, number of trips to the given campground, level of site development, whether the campground was the only destination, and household income. Age had no influence.

22. Fletcher, James E.; Sheffield, Emilyn A. and Furr, H. Leslie. (1993). Assessing public recreation service and facility preferences of tourists and residents at North Lake Tahoe, California. *Journal of Park and Recreation Administration*, 11(4): 60-77.

Keywords: tourism, user fees, financing recreation infrastructure, free rider, payment mechanisms.

Type of citation: Journal article

Little research has focused on the role of public park and recreation infrastructure in meeting the demands and expectations of tourists as well as local residents. A successful tourism development program, including local public park and recreation services, must be funded through mechanisms that are politically acceptable to local voters and political decision makers, and equitable to both local residents and visitors or tourists. Data on preferences for recreation services and facilities, and evaluation of different funding strategies of tourists, and local voters and recreation users were collected through two surveys: 1) an on-site survey of a sample of 520 summer recreation users at the Truckee-Donner Recreation and Park District in northern California, and 2) a mail survey of a sample of 750 registered voters in the District. Results show that tourists rated all eight recreation services and 11 of 13 recreation facilities higher in priority than local voters. Although user fees were rated acceptable for funding recreation programs, traditional funding mechanisms such as outside grants and a local sales tax also received fairly high levels of support. The authors conclude that no one funding mechanism is applicable to all programs and facilities. A "package" of funding mechanisms must be utilized to fund all of the facilities desired by local residents and tourists, including user fees, grants, a local sales tax, negotiations with school districts to facilitate more joint use of facilities, and promoting local funding.

2. Lindberg, Kreg and Huber, Richard M., Jr. (1993). Economic issues in ecotourism management. In Kreg Lindberg and Donald E. Hawkins (Eds.), *Ecotourism: A Guide For Planners and Managers* (pp. 82-115). North Bennington, Vermont: The Ecotourism Society.

Keywords: ecotourism, tourism fees, conservation programs, economic development.

Type of citation: Book chapter

In an effort to expand ecotourism's contribution to conservation or economic development, this chapter outlines strategies for setting tourism fees, using these fees to finance ecotourism development and traditional conservation management, and increasing ecotourism's contribution to the economic development of communities near ecotourism destinations. Basic principles together with a mix of strategies for achieving common economic goals relating to ecotourism are outlined. Information needs of managers and how to utilize data are discussed. Several case studies are discussed to illustrate points.

104. Lowry, William R. (1993). Land of the fee: Entrance fees and the National Park Service. *Political Research Quarterly*, 46(4): 823-845.

Keywords: national parks, fee policy, history of fees, appropriations, Congress.

Type of citation: Journal article

What are the implications of increasing a public agency's ability to generate its own revenue for political control of the bureaucracy? This article uses lessons from other cases of public land user fee increases and a theoretical explanation of political behavior to argue that under certain conditions, such a change, rather than increasing agency autonomy, actually facilitates congressional intervention and control. The argument is illustrated by examining congressional behavior and the impacts of increased entrance fees on the National Park Service in recent years. The ability of an agency to raise its own revenue does not translate to increases in agency autonomy when the changed behavior comes without guarantees of matching appropriations and maintained levels of discretion. Instead, the author argues, new revenue may be used to supplant current levels of funding and with new strings attached.

94. McCarville, Ron. (1993). Prices and pricing for outdoor recreation opportunities. In Gail A. VanderStoep (Ed.), *Proceedings of the 1993 Northeastern Recreation Research Symposium* (pp. 38-39). Radnor, PA: USDA Forest Service, Northeastern Forest Experiment Station, General Technical Report NE-185.

Keywords: pricing, prices, choices.

Type of citation: Proceedings paper

This paper contains the response of Ron McCarville as part of a roundtable discussion about pricing public leisure services. The perspective offered is that prices need not be restrictive. Insights gathered from the social psychological and recreation literature can help to create imaginative and strategic applications of prices. Three suggestions are offered: 1) price strategies must offer choices to potential users; 2) pricing strategies must recognize the importance of user expectations; and 3) pricing strategies must recognize that tolerance for price changes will vary from program to program.

53. McCarville, Ronald E.; Crompton, John L. and Sell, Jane A. (1993). The influence of outcome messages on reference prices. *Leisure Sciences*, 15: 115-130.

Keywords: experiment, prospect theory, public sector, recreation programs, reference price.

Type of citation: Journal article

This study attempted to encourage the development of higher price expectations by offering messages that describe alternative potential outcomes for a hypothetical aerobics program. These potential outcomes included a change in program cost, the possibility of losing the program, taking money from another program due to inadequate fee revenues to cover costs, or using excess fees to improve the program. A total of 224 undergraduate sociology students were randomly assigned to one of six treatment groups, with each group receiving a different outcome message. Results show that respondents were particularly responsive to the message suggesting that other participants would suffer if sufficient revenues from fees to meet program costs were not generated. The mean

reference price (what they expected to pay) reported by this group was 41 percent greater than other groups. Level of involvement toward aerobic activity was found to influence price expectations, current activity patterns, and intent to enroll in future aerobics programs.

154. Mills, Thomas J. and Chandler, William J. (1993). At issue: Is the Clinton administration's plan to collect higher fees from visitors to federal recreation areas fair to the public? *The CQ Researcher*, 3(20): 473.

Keywords: recreation fees, proponents.

Type of citation: Journal article

The viewpoints expressed here are from testimony before the House Natural Resources Subcommittee on National Parks, Forests and Public Lands. Mills supports user fees, and Chandler proposes more attention should be paid to potential revenues from commercial users of parks.

102. Teasley, R. Jeff; Bergstrom, John C. and Cordell, H. Ken. (1993). Assessing the revenue-capture potential from recreational fees. In Howard A. Clouts (Ed.), *Proceedings of the 1993 Southeastern Recreation Research Conference* (pp. 7-17). Asheville, NC: USDA Forest Service, Southeastern Forest Experiment Station, General Technical Report SE-90.

Keywords: resource economics, public land management, valuation, non-marketed commodities.

Type of citation: Proceedings paper

It is useful for the resource manager to be aware of the relationship between user fees and trips demanded to assess total revenue capture potential and different fee collection strategies. In this study, the "trip response method" (TRM) was used to directly estimate changes in visitation, revenue capture potential, revenues collected as a result of different fee structures, and demand elasticities. Survey respondents in two national forests in the Southeast were given a hypothetical user fee amount and asked to state how many trips they would make to the site at that fee amount. Approximately 1,100 surveys were collected. Using pure revenue capture maximization as the decision rule in determining price, a \$45 annual vehicle pass and a \$5 daily admission pass would have maximized revenue. However, these prices would also price an estimated 67 percent of trips by current users out of the day use market, and 71 percent out of the annual pass market.

164. Thomas, Jack Ward. (1993). Getting what you pay for: The case for fee-hunting on the National Forests. *Forest Watch*, 13(7): 20-22.

Keywords: fee hunting, national forests.

Type of citation: Journal article

This paper discusses the application of user-pay concepts to hunting. The most effective way to sustain big game hunting on public lands may be for hunters to pay for producing big game at levels that support hunting. One possible approach is for the States to act on the Sikes Act of 1974, which offers States the opportunity to take the lead in prescribing fees for hunting on federal lands.

202. Utah Science. (1993). Fees on public lands: Not all users pay a fair share. *Utah Science*, 54(3): 71-74.

Keywords: fair market value, grazing fees, recreation fees, willingness to pay, public lands.

Type of citation: Journal article

The inconsistent methods used to assess fees on public lands are discussed in this paper. Although all users of public lands are subsidized to some degree, the current fees charged are not based on fair market value. The ability to make sound decisions about public land management requires assigning economic value to resources and making users pay for the benefits they receive.

93. White, Christopher M. (1993). The role of fees in the provision of outdoor recreation opportunities. In Gail A. VanderStoep (Ed.), *Proceedings of the 1993 Northeastern Recreation Research Symposium* (pp. 36-37). Radnor, PA: USDA Forest Service, Northeastern Forest Experiment Station, General Technical Report NE-185.

Keywords: history of fees, legislation.

Type of citation: Proceedings paper

This is a summary of panel members' comments from a session at a recreation research symposium in 1993. The history, evolution, and future of recreation fees in the United States is discussed, with particular focus on the Land and Water Conservation Fund Act.

1992

269. Carr, Deborah S. and Williams, Daniel R. (1992). Understanding diverse recreationists: Beyond quantitative analysis. In Paul H. Gobster (Ed.), *Managing Urban and High-Use Recreation Settings* (pp. 101-106). Chicago, IL: USDA Forest Service, North Central Forest Experiment Station, General Technical Report NC-163.

Keywords: social field, Hispanic visitors, recreation, urban-proximate national forests.

Type of citation: Proceedings paper

Outdoor recreation on national forests near large urban centers is changing and diversifying as users of many ethnic backgrounds increasingly choose urban-proximate forests as recreation sites. Understanding the recreation experiences of these ethnically diverse populations requires a broadening of research questions and methodologies. This study, focused on Hispanic recreationists on national forests in southern California, employs the concept of a social field as a way of increasing understanding of Hispanic people's recreation experiences. A combination of four data collection methods, including an on-site survey and open-ended interviews, were used to study different aspects of the social field. Results show that the sites with the highest percentage of Hispanic recreationists were the sites with the least acculturated individuals, and the sites with the highest percentage of Anglo recreationists had more acculturated individuals of Hispanic origin. Results also seem to support the existence of a different land ethic among many of the Hispanic visitors rather than the absence of a land ethic.

206. Ajzen, Icek and Driver, B.L. (1992). Contingent value measurement: On the nature and meaning of willingness to pay. *Journal of Consumer Psychology*, 1(4): 297-316.

Keywords: willingness to pay, behavioral intention, theory of planned behavior.

Type of citation: Journal article

The meaning of contingent valuation measures for five outdoor activities was explored using the theory of planned behavior, which treats willingness to pay for public goods as a behavioral intention. When respondents assign dollar values to goods that are not traded in the marketplace, they can either rely on their experience with or knowledge about such transactions, or in the absence of directly relevant information, they can base their judgments on intuitive guidelines or rules of thumb. Participants in the questionnaire consisted of 150 undergraduate students representing a broad range of liberal arts and social science majors. Analysis showed that the perceived affect (desirable consequences) of the activity, and ethical and moral considerations were predictive of willingness to pay a user fee. Normative expectations and available resources also added to moral considerations in determining how much money one would be willing to pay. Overall, this shows that respondents appear to use intuitive guidelines to make their judgments. These findings indicate that willingness to pay judgments may reflect only some, and not necessarily the most important, variables that would be expected to influence these judgments.

223. Downing, Paul B. (1992). The revenue potential of user charges in municipal finance. *Public Finance Quarterly*, 20(4): 512-527.

Keywords: revenues, municipal governments, user charges, efficient prices.

Type of citation: Journal article

User charges have become a major source of revenue for financing municipal governments. This article explores the potential for further expansion of the role of user charges in city finance, and methods to achieve that potential. The first section of the article presents estimates of increased revenue potential from user charges using the outliers experience approach and the marginal costs and externalities approach. Next, some examples of innovations in user charges are presented, with particular attention given to the introduction of the fiscal impact fee. The author concludes that if cities adopted charges for other services not typically employed, and adopted charges that cover full marginal costs, an increase from the current user charge reliance of 20 percent up to 60 percent or more is possible.

36. Fletcher, James E.; Kaiser, Ronald A. and Groger, Susan. (1992). An assessment of the importance and performance of park impact fees in funding park and recreation infrastructure. *Journal of Park and Recreation Administration*, 10(3): 75-87.

Keywords: developer fees, equity, impact fees, importance-performance analysis, infrastructure financing, park exactions.

Type of citation: Journal article

Municipal park and recreation directors in six states were surveyed to evaluate their satisfaction with park impact fee programs (a government condition imposed on land developers and builders requiring them to pay a fee to provide park and recreation land and facilities). The directors were asked to assess current park impact fee practices and to evaluate the performance of the impact fees. Specifically, they were asked to evaluate three areas related to impact fee program performance: 1) equity of fees in paying for growth; 2) administrative ease in implementation of the fee program; and 3) political support for impact fees. Overall, directors were satisfied with the applicability of impact fees to all types of developments, the resulting improvements in comprehensive planning necessitated by fee programs, and the support of citizens for impact fees. They were dissatisfied with performance related to increased housing costs, discouragement of growth, avoidance of lengthy negotiations with developers, lack of support from developers, and discouragement of private parks.

139. Huebner, Anne. (1992). Using market and nonmarket values of wilderness lands in alternative revenue-sharing strategies. In Claire Payne; J.M. Bowker and Patrick C. Reed (Comps.), *The Economic Value of Wilderness: Proceedings of the Conference* (pp. 217-223). Asheville, NC: USDA Forest Service, Southeastern Forest Experiment Station, General Technical Report SE-78.

Keywords: national forest wilderness, revenue, values.

Type of citation: Proceedings paper

Since 1908, 25 percent of all money received during any fiscal year from user fees and sale of products from national forests are returned to the counties of origin on a per acre

basis for use on public schools or county roads. Shifts in public demands from national forests toward goods and services which are not revenue producing (from timber sales to conservation) means that counties are facing reductions in payments. The objectives of this paper are to analyze and describe alternative revenue-sharing strategies which would: 1) explicitly recognize the social values of wilderness, and 2) equitably and predictably compensate counties containing National Forest System acreage. Five national forests which contain wilderness areas are examined to determine the effectiveness of three suggested alternatives which include the use of nonmarket values for wilderness use, and county property values and tax formulas for similar parcels of land that are in private ownership. In addition, the policy questions of addressing market and non-market values in policy decisions involving public goods, and local financial impact on counties containing national forest acreage are presented for further thought. Results show that counties with wilderness acres would receive greater revenue-sharing payments using any of the three alternatives. All the alternatives better meet the objectives of recognizing the social value of wilderness and more equitably compensate counties containing national forest acreage.

204. Kahneman, Daniel and Knetsch, Jack L. (1992). Valuing public goods: The purchase of moral satisfaction. *Journal of Environmental Economics and Management*, 22: 57-70.

Keywords: willingness to pay, embedding, moral satisfaction.

Type of citation: Journal article

The contingent valuation method (CVM) has gained prominence as the major technique for assessing the value of environmental amenities. This paper is a critique of this method. Specifically, this paper addresses whether the assessed value of a public good using the CVM is arbitrary, and whether willingness to pay may be best interpreted as the purchase of moral satisfaction (the warm glow of giving), rather than as a measure of the value associated with a particular public good. The effect of embedding (assessing a good as part of an inclusive package rather than on its own) is also investigated. Approximately 240 residents of the Vancouver region were surveyed over the telephone. The results confirm the hypothesis that willingness to pay for public goods is actually an expression of willingness to pay to acquire moral satisfaction. Results also showed embedding had no effect on willingness to pay, suggesting that people have a difficult time removing a good from the bundle it's provided with and related to.

216. Kaiser, Ronald A.; Fletcher, James E. and Groger, Susan. (1992). Exacting land and fees from land developers for park purposes: A profile of municipal practices. *Journal of Park and Recreation Administration*, 10(1): 12-30.

Keywords: impact fees, land dedication, park exactions, park standards, rational nexus.

Type of citation: Journal article

One approach to solving the physical and financial problems in park acquisition and development that confront municipal park and recreation agencies is to impose land and monetary exactions on the builders and real estate developers who are creating the population growth in an area. The three main forms of exactions are land dedication, a fee in lieu of land requirement, and an impact fee. After an analysis of the legal parameters of park exactions, this article examines municipal practices in six states that have been at the forefront in the use of park exactions. There are wide variations in park exaction practices among these states. It appears that cities are increasingly imposing fees on developers as an alternative to exacting land.

38. Loomis, John B. and Thomas, Michael H. (1992). Pricing and revenue capture: Converting willingness to pay into state and private revenue. In George L. Peterson; Cindy Sorg Swanson; Daniel W. McCollum and Michael H. Thomas (Eds.), *Valuing Wildlife Resources In Alaska* (pp. 255-274). Boulder, CO: Westview Press, Inc.

Keywords: use value, existence value, revenue, pricing, price elasticity, Alaska, nonresidents.

Type of citation: Book chapter

The sections of this chapter cover the following topics in relation to wildlife in Alaska: 1) types of uses, users and values to be captured; 2) pricing theory and revenue; 3) use of price elasticity to determine change in revenue; 4) effective pricing with excess demand; 5) methods of price discrimination; and 6) avenues for visitor revenue capture. This chapter presents several approaches for raising the amount of revenue collected by the State of Alaska, and increasing the amount of local income and employment generated by current visitor spending in Alaska.

141. Luzar, E. Jane; Gan, Christopher; Kanjilal, Barun and Messonnier, Mark. (1992). Quality as a latent variable in recreation access analysis. *Southern Journal of Agricultural Economics*, 24(2): 105-112.

Keywords: latent variable, quality, recreation.

Type of citation: Journal article

Recreation trends indicate an increasing demand for quality recreation experiences. This suggests that efforts to develop and promote fee based recreation activities should address the quality issue to ensure competitiveness in providing the recreation experiences most in demand. Quality can be conceptualized as a latent variable, which is unobservable but is reflected through other characteristics, such as congestion. In the context of fee-based activities, quality might influence the price recreationists are willing to pay. The activity of deer hunting is used to test an empirical model to evaluate fee access prices paid and the recreationists' perception of the quality of the activity. Results indicate that the model

captures the interdependence of hunting lease price and quality. In addition, quality is influenced by hunter skill, access price, and other access characteristics including travel time and hunting location.

95. McCarville, Ronald E.; Driver, B.L. and Crompton, John L. (1992). Persuasive communication and the pricing of public leisure services. In Michael J. Manfredo (Ed.), *Influencing Human Behavior* (pp. 263-291). Champaign, IL: Sagamore Publishing Inc.

Keywords: role of price, model of persuasion, price literature review.

Type of citation: Book chapter

This chapter has four sections. The first section reviews the traditional role of price in the provision of public recreation services. The second offers an integrative, general model of persuasion which incorporates current thinking on persuasive communication and suggests directions for future research efforts on pricing and persuasion. Past studies which suggest considerable potential for future applications of this integrative model are reviewed in the third section of the chapter. These studies have generally considered price in terms of patterns of use, notions of equity or fairness, and persuasive communication. The fourth section offers recommendations for promoting more research on this topic within the most recent theory.

201. McLean, Daniel D. and Russell, Ruth V. (1992). Future visions for public park and recreation agencies. *Journal of Park and Recreation Administration*, 10(1): 46-61.

Keywords: future visions, management ethics, values, decision making.

Type of citation: Journal article

An agency's preparation for and response to the future can be enhanced if the agency is attuned to changing societal values and is willing to respond ethically to those value shifts. This article identifies perceived shifting values in our culture and potential response approaches to those value shifts. Some examples of these shifts include structural economic change towards an information economy based on telecommunication and other information technologies, the greening movement, which has increased awareness of an environment in danger, and the opportunity revolution, promoted by people who imagine, create and implement opportunities for better futures. Then, based on the deliberations of park and recreation administrators and supervisors who attended an executive development program, an ethical decision-making model is proposed and discussed. The model suggests a move from individual ethics to group ethical decision-making.

163. O'Toole, Randal. (1992). Paying to play and preserve: The case for recreation fees on the national forests. *Forest Watch*, 12(11): 18-21.

Keywords: Forest Service, recreation funding, recreation fees.

Type of citation: Journal article

The author presents his support for user fees, and makes a variety of suggestions for possible types of fees and their advantages.

39. Peterson, George L. (1992). Using fees to manage congestion at recreation areas. In *Park Visitor Research For Better Management* (pp. 58-67). Glen Waverly, Victoria, Canada: Hepper Marriott and Associates.

Keywords: congestion, user fees, price rationing, costs, willingness to pay, revenue.

Type of citation: Book chapter

The purpose of this paper is review some of the concerns about using fees to manage congestion at recreation areas. Two required conditions for efficient free market price rationing are first discussed. Then the concepts of fixed cost, marginal cost, and transaction cost of collecting fees are reviewed, followed by a discussion of the components of potentially capturable value. Alternative justifications for fees are then examined, with discussion centering on revenue, value capture, demonstration of value for equal treatment in policy decisions, management of demand through price rationing, and social equity policy aimed at redistribution of income. Next, the question of who should pay is discussed. And finally, the paper turns to a review of various types of fees that can be used for price rationing, legal and political questions that surround price rationing, and the distributional effects of price rationing.

71. Rechisky, Allison A. and Williamson, Bradford N. (1992). Impact of user fees on day use attendance at New Hampshire state parks. In *Proceedings of the 1991 Northeastern Recreation Research Symposium* (pp. 106-108). Radnor, PA: USDA Forest Service, Northeastern Forest Experiment Station, General Technical Report NE-160.

Keywords: variations in attendance, user fees, New Hampshire State Parks.

Type of citation: Proceedings paper

This study examines existing state park data for variations in attendance relative to increased user fees at 27 New Hampshire state beaches, day use areas, and historic sites over a ten year period. Overall, there was a decline in park attendance during the study period of 1980 to 1990. Results suggest that park visitation is influenced to a great degree by the weather and to a much lessor degree by user fees. Beaches appear to be weather dependent more than price dependent. Historic sites appear to be unaffected by user fees and unlike beaches, do well when the weather is inclement. Day use areas appear immune to the effects of either weather or increased user fees.

46. Reiling, Stephen D.; Cheng, Hsiang-tai and Trott, Cheryl. (1992). Measuring the discriminatory impact associated with higher recreational fees. *Leisure Sciences*, 14: 121-137.

Keywords: discriminatory impact, fee equity, recreation fees, users' income, outdoor recreation, recreationists' responses to higher fees.

Type of citation: Journal article

This article presents an approach for determining whether higher fees may cause low-income users to reduce their use of outdoor facilities. Data were obtained from a random sample of 1,066 users of Maine state park campgrounds during 1984. The mail survey gathered data on actual camping behavior (number of nights camped), and used open-ended contingent valuation questions to determine if there would be a change in the number of nights camped at campgrounds with higher fee levels. The approach outlined in the paper uses this estimated demand for camping at Maine state parks to empirically show that campers will respond differently to higher fees depending on their level of income. Specifically, low income campers would reduce their camping activity.

69. Reiling, Stephen D.; Cheng, Hsiang Tai and Trott, Cheryl. (1992). Measuring users' response to higher recreation fees. In *Proceedings of the 1991 Northeastern Recreation Research Symposium* (pp. 98-101). Radnor, PA: USDA Forest Service, Northeastern Forest Experiment Station, General Technical Report NE-160.

Keywords: recreation fees, differential impacts, visitor income levels.

Type of citation: Proceedings paper

One of the important issues surrounding user fees at publicly-provided recreation facilities is that higher fees may affect current users with different income levels in different ways. This paper presents a conceptual framework that can be used to test for the existence of a differential impact across income groups as fees are increased. No empirical results are presented.

232. White, Chris. (1992). Legislative history of outdoor recreation fees. In *Recnotes, Natural Resources Research Program* (Vol. R-92-3, pp. 1-5): U.S. Army Corps of Engineers, Waterways Experiment Station.

Keywords: legislative history, fees.

Type of citation: Report

It is helpful to look back to the history of fee development to understand today's feelings about user fees for outdoor recreation. This article describes the long, winding and complicated legislative path that led to the fee structure present in the early 1990's.

1991

234. Baldares C., Manuel J. and Laarman, Jan G. (1991). User fees at protected areas in Costa Rica. In Jeffrey Vincent, R.; Eric W. Crawford and John P. Hoehn (Eds.), *Valuing Environmental Benefits in Developing Economies* (Special Report 29, pp. 87-108). East Lansing, MI: Michigan State University, Agricultural Experiment Station.

Keywords: Costa Rica national parks, willingness to pay, entrance fees, residents, non-residents.

Type of citation: Proceedings Paper

The political aspects of charging fees compared with alternative funding mechanisms and fairness of fee structure are particularly critical when a substantial proportion of visitation is by non-residents having higher incomes than residents. In Costa Rica National Parks, both foreigners and nationals are charged the same fee. Reexamination of this fee policy begins by analyzing willingness to pay of both foreigners and nationalists. During selected days in August through October of 1989, over 860 visitors were surveyed at three of Costa Rica's most heavily visited parks and one private reserve. The key finding is that both groups of visitors are willing to pay higher fees than those charged currently. Moreover, both groups of visitors agree that foreigners should pay higher fees than nationals.

151. Johnson, Randy. (1991). Pay to play: A rationale for user fees. *American Forests*, 97(3/4): 52-54, 72-73.

Keywords: proponent, recreation fees.

Type of citation: Journal article

This article discusses the support for user fees which was present before legislation was passed in 1996 enabling federal agencies to charge fees. Although the idea of fees is catching on slower than expected, the apparent level of support from managers and recreationists indicates that it won't disappear as a possibility for an alternative source of funding for public lands.

35. Kelsey, Craig W. and Rubio, Steve. (1991). Nonresident pricing structures of municipal parks and recreation agencies. *Journal of Park and Recreation Administration*, 9(2): 25-33.

Keywords: nonresidents, differential pricing theory, fees and charges.

Type of citation: Journal article

Differential pricing theory suggests that different prices are charged for services based on differences in time, location, visitor status, and popularity of the event. This research

examines the extent to which public parks and recreation agencies charge higher fees to people who are not residents of the agencies' service areas for recreation center admission, lessons, league fees and tournaments. Surveys were mailed to public parks and recreation agencies in each state, with the number sent being proportional to that state's share of the total U.S. population. A total of 470 usable questionnaires were returned. The findings support the hypothesis that nonresidents pay a higher fee than residents. A significantly higher percentage of agencies charge nonresidents additional fees for lessons (up to 35 percent higher), and 33.8 percent of recreation centers charge additional fees for use of selected programs and facilities once admission is gained to the center.

24. Kerr, Geoff N. and Manfredo, Michael J. (1991). An attitudinal based model of pricing for recreation services. *Journal of Leisure Research*, 23(1): 37-50.

Keywords: pricing, attitudes, persuasion, economic pricing model, willingness to pay.

Type of citation: Journal article

An attitudinal model of pricing is tested in response to the need for an approach that predicts acceptance of paying fees, but also explains the basis for people's tolerances. The model proposes that attitudes and past behavior are the primary determinants of fee paying intentions. Study participants were sampled from recreationists who used backcountry huts in New Zealand's Arthur's Pass National Park and Tararua Forest Park. Recreationists were contacted in 1988 using trailhead interviews. A total of 437 usable questionnaires were obtained. Items on the survey measured responses to belief statements about proposed fee levels at huts, paying intentions, past use, and past paying experience. Price was found to have no direct impact on intentions to pay fees but had a strong indirect impact via attitude. This supports the hypothesis that price information is used in determining attitude toward fee paying intentions. The model can be a useful prediction tool in making pricing decisions, and provide useful information in developing pricing strategies that incorporate information programs to mediate the negative reactions to fee increases.

57. McCarville, Ronald E. (1991). An empirical investigation of the influence of cost information on willingness to pay for public aerobics classes. *Leisure Sciences*, 13: 85-96.

Keywords: experiment, contextual cues, willingness to pay, cost and program information, involvement, participant.

Type of citation: Journal article

This study considers how consumers form willingness to pay levels for publicly offered aerobics classes. It is hypothesized that willingness to pay levels will be altered by program cost information, and that the influence of this information will be consistent for aerobics class participants and nonparticipants. Seventy-seven university students

completed a survey. The treatment group received the cost information, while the control group did not. The results indicate that maximum willingness to pay levels of participants in the treatment group were 27 percent higher than those in the control group. Respondents who had both a high level of emotional commitment toward aerobics and had participated in an aerobics program within the last year displayed a 55 percent willingness to pay increase, whereas nonparticipants' levels were increased by 20 percent.

229. McCarville, Ronald E. and Smale, Bryan J.A. (1991). Involvement in pricing by municipal recreation agencies. *Journal of Applied Recreation Research*, 16(3): 200-219.

Keywords: pricing, fees and charges, municipal recreation, goals and objectives, policy.

Type of citation: Journal article

Some research has shown that the use of pricing is not solely based on the desire to offset the presumed shortfalls in the local tax base. This study examines the ways in which pricing strategies are applied in selected municipal leisure service agencies and the conditions within the agency and the community under which pricing strategies are being applied. A total of 122 Ontario municipal recreation directors completed mail surveys which asked questions on a range of topics related to current operating conditions and the municipal recreation agencies' involvement in pricing activity. Almost half of the recreation directors (49.6 percent) reported that their departments placed a price on at least some of their programs. Approximately two-thirds of respondents felt that budgets were keeping pace with or were exceeding the rate of inflation. Also, those agencies which had not prepared a written policy regarding fees (n=48) were no more likely than those agencies who had developed written plans to consider client characteristics when establishing prices.

158. Murdock, Steve H.; Backman, Kenneth; Hoque, Md. Nazrul and Ellis, David. (1991). The implications of change in population size and composition on future participation in outdoor recreational activities. *Journal of Leisure Research*, 23(3): 238-259.

Keywords: demography, population, projections, forecast.

Type of citation: Journal article

In this study, data from a detailed population projection model are used to assess the likely effects of future demographic factors on the number of persons likely to participate in recreational activities in the United States in the coming decades (1990 to 2025). Using age and race/ethnicity specific rates of participation for different activities, the effects of population, growth, age, and race/ethnicity on the number of participants in several different outdoor recreational activities are examined. The results of the analysis indicate that rates of increase in most outdoor recreational activities are likely to slow in the future because population growth will slow, and the population will grow older and be composed of a larger proportion of persons from minority groups. Results also suggest

that recreation management is likely to require the development of new skills for planning for slower growth and for increasing diversity in the characteristics of customers.

56. O'Toole, Randal. (1991). Recreation fees and the Yellowstone forests. In Robert B. Keiter and Mark S. Boyce (Eds.), *The Greater Yellowstone Ecosystem: Redefining America's Wilderness Heritage* (pp. 41-48). New Haven, CT: Yale University Press.

Keywords: Yellowstone national forest management, timber sales, recreation fees, incentives.

Type of citation: Book chapter

Although the Forest Service estimates that more than 80 percent of the annual benefits of the Yellowstone forests come from recreation, 60 percent of the resource dollar is spent on timber. Only 18 cents out of every resource management dollar are spent on recreation. Timber sales on all of the Yellowstone forests lose money. The author first explores the reasons for this pattern, and then discusses how recreation fees can be used to give forest managers new incentives to promote recreation, wildlife habitat, and clean water. The paper concludes with several additional suggestions for reforming national forest management, including repealing the Knutson-Vandenberg Act, using conservation easements, and eliminating national forest appropriations.

96. White, Christopher M.; Cobus, Mike; Manning, Robert E.; Seffel, Joel and More, Tom. (1991). Trends in the economics of sustainable outdoor recreation and tourism: The future of outdoor recreation fees for the public sector. In Jerrilyn Lavarre Thompson; David W. Lime; Bill Gartner and Wayne M. Sames (Comps.), *Proceedings of the Fourth International Outdoor Recreation and Tourism Trends Symposium and the 1995 National Recreation Resources Planning Conference* (pp. 285-293). St. Paul, MN: University of Minnesota, College of Natural Resources and Minnesota Extension Service.

Keywords: trends, history of fees, legislation, fee research.

Type of citation: Proceedings paper

This paper examines the historical development of fees to provide a basis for understanding current attitudes about fees. The evolution of fees in relation to the Land and Water Conservation Fund Act is discussed. Prior research on fees is also discussed from equity, economics, social, psychological, and political perspectives. From these topics, a series of twenty-two trends regarding fees are presented. The authors conclude that the few research studies that consider fees explicitly provide a scanty basis of knowledge. Consequently, decisions about fees and fee programs are often made without awareness of their full impacts.

105. Clawson, Marion. (1990). The federal role in outdoor recreation. *Resources*, 99(Spring): 11-14.

Keywords: recreation use patterns, government, recreation funding.

Type of citation: Journal article

The rate of increase in visits to national parks and other federal recreation areas has diminished in comparison to that of the decades before 1970. This and other trends in outdoor recreation have prompted a reassessment of recreation demand and supply and of the federal government's role in providing future outdoor recreational opportunities. Findings of the 1962 Outdoor Recreation Resources Review Commission and the 1987 President's Commission on Americans Outdoors are discussed in relation to their support of user fees and the trend toward greater use of local and private recreational areas. If the growth in recreation demand is now primarily local, then the best way to meet the demand is through local providers such as local governments and private landowners. How to accomplish this and what role user fees will play is uncertain.

210. Crompton, John L. (1990). The perspectives of impacted stakeholder groups toward park and recreation exactions. *Journal of Park and Recreation Administration*, 8(4): 1-22.

Keywords: park and recreation exactions, mandatory dedication, fees in lieu, impact fees, stakeholders' perspectives, development.

Type of citation: Journal article

Development exaction policies provide local governments with at least a partial solution to their park and recreation capital-funding problems. The three main forms of development exactions used to acquire and develop recreation park resources (land dedication, fees in lieu, and impact fees) are described and the bases for legal challenges to exactions are briefly reviewed in this paper. The focus is on articulating the perceived merits and demerits of exactions from the perspectives of local government officials, developers, new residents, and existing residents. The intent is to heighten managers' awareness of the concerns of stakeholders so they are better able to anticipate and respond to controversy arising from an exaction ordinance.

45. Manning, Robert E. and Zwick, Rodney. (1990). The relationship between quality of recreation opportunities and support for recreation funding. In *Proceedings of the 1990 Northeastern Recreation Research Symposium* (pp. 9-12). Radnor, PA: USDA Forest Service, Northeastern Forest Experiment Station, General Technical Report NE-145.

Keywords: recreation funding, attitudes, perceived quality.

Type of citation: Proceedings paper

The relationships between perceived quality of recreation opportunities and public support for recreation funding were investigated using data from a telephone survey of a representative sample of Vermont residents. In general, respondents favored funding mechanisms which place much of the financial burden more directly on the recreation user (user fees and equipment taxes), and least favored government taxes. A weak relationship between quality of recreation opportunities and support for governmental funding was found. This suggests that positive public assessment of the quality of recreation resources may enhance public support for broad-based governmental funding of recreation programs.

279. McCarville, Ronald E. (1990). The role of cognitive processes in explaining reactions to price changes for leisure services. *Journal of Park and Recreation Administration*, 8(3): 74-86.

Keywords: price, demand, rationality, information processing, price, discount.

Type of citation: Journal article

This paper compares and contrasts the traditional rationalist model of the price/demand relationship with an information-processing or cognitive model. Both approaches offer insights that facilitate the development of effective pricing strategies. The rationalist model assumes an inverse relationship between demand and price. The information processing perspective assumes that price-related stimuli are interpreted, manipulated, and assessed in such a way that rising prices may not lead to decreased demand. The second stage of the decision process, information acquisition and evaluation, is discussed in relation to a suggested theoretical framework which reflects the often reciprocal relationship between information acquisition and expectation. Comparative price information may contribute to price elasticity by moving perceptual price anchors or expectations closer to new price levels, thus influencing the acceptability of new price levels. Administrative actions that can influence response to price increases and subsequent demand for services are suggested.

11. McCollum, Daniel W.; Gilbert, Alphonse H. and Peterson, George L. (1990). The net economic value of day use cross country skiing in Vermont: A dichotomous choice contingent valuation approach. *Journal of Leisure Research*, 22(4): 341-352.

Keywords: cross country skiing, recreation values, logit model, dichotomous choice, contingent valuation.

Type of citation: Journal article

The net economic value placed on cross country skiing is estimated using survey data collected from cross country skiers at several sites in Vermont. Sites ranged from urban

areas to relatively secluded areas of the Green Mountain National Forest. Data was collected from a 1987 mail survey of cross country skiers whose addresses were obtained from license plate numbers collected at various ski areas, from skier registration lists at three commercial ski areas, and ski club members. Seven hundred ninety-four (794) surveys were mailed and 386 were returned for a 49 percent response rate. Estimates of maximum willingness to pay were obtained using a dichotomous choice contingent valuation mechanism in a logit model. For Vermont cross country skiing, mean willingness to pay values ranged from \$7.34 to \$35.50. The sites in or near Green Mountain National Forest yielded higher values than those located closer to urban areas.

30. Whitehead, John C. (1990). A comment on "differential campsite pricing". *Journal of Leisure Research*, 22(3): 276-279.

Keywords: substitutes, differential user fees, demand elasticity, economics.

Type of citation: Journal article

This article revisits the findings of a paper by Bamford, et al. (1988) which reported that, among other results, campsite revenues increase with user fees. This result, the author contends, should be viewed with caution because campers who participated in the Vermont experiment were not given ex-ante information about the implementation of user fees before choosing the state park destination, therefore the additional cost of access was not considered. Short-term total demand for state park campsites should be virtually unaffected since campers are not given sufficient time to gather information about, and react to, the differential fee. Households will substitute away from the park if there is a lower cost substitute available, or the increased fee will lead to fewer camping days. A method for calculating the effects of differential user fees on changes in state park revenue is presented.

1989

137. Adams, R. M.; Bergland, O.; Musser, W. N.; Johnson, S. L. and Musser, L. M. (1989). User fees and equity issues in public hunting expenditures: The case of ring-necked pheasant in Oregon. *Land Economics*, 65(4): 376-385.

Keywords: user fee, willingness to pay, hunting, equity.

Type of citation: Journal article

The overall purpose of this study was to investigate economic aspects of implementing user fees for a public game enhancement program for ring-necked pheasants in Oregon. Due to increasing costs, the Oregon Department of Fish and Wildlife decided to eliminate the pheasant propagation and stocking program. A user-supported program involving access fees was suggested as a means to continue the program. The analysis is based on a closed-form contingent valuation survey of 97 hunters during the 1986 western Oregon pheasant season. Contingent valuation methods were used to elicit hunter willingness to pay estimates for the continuation of the pheasant stocking program, which were then

used to generate information on the likelihood that a user fee system could maintain such a program. Results suggest that the program is an efficient expenditure of public funds, with a surplus of \$49,000. However, a revenue-maximizing fee of \$14 per hunter per season would not generate sufficient expenditures to support the program because of substantial decline in participation among lower income groups.

231. Daniel, Terry C.; Brown, Thomas C.; King, David A.; Richards, Merton T. and Stewart, William P. (1989). Perceived scenic beauty and contingent valuation of forest campgrounds. *Forest Science*, 35(1): 76-90.

Keywords: forest scenic beauty, forest recreation, recreation value, contingent valuation, forest campgrounds, ponderosa pine.

Type of citation: Journal article

Contingent valuation and scenic beauty estimation methods were applied in this study to assess the effects of forest conditions in developed campgrounds on campers' perceptions of the value of their camping experience and of the scenic beauty of the surrounding forest. The study areas consisted of 20 timber stands and 12 USDA Forest Service campgrounds, located on four National Forests in northern Arizona. Over 700 campers' photo-based scenic beauty judgments of these areas were compared with over 700 campers' photo-based judgments of their willingness to pay to camp at the same areas. A nearly perfect linear relationship was found between the scenic beauty and willingness to pay judgments, indicating that both sets of respondents were sensitive to the same variations in forest characteristics. The forest characteristics that influence perceived scenic beauty also influence perceived value of camping. Thus, campers' expressed willingness to pay for forest characteristics is closely related to scenic beauty. The scenic beauty of the surrounding forest makes an important contribution to the value of recreators' camping experience.

17. Dwyer, John F.; Schroeder, Herbert W.; Louviere, Jordan J. and Anderson, Donald H. (1989). Urbanites willingness to pay for trees and forests in recreation areas. *Journal of Arboriculture*, 15(10): 247-252.

Keywords: willingness to pay, attributes, market segments, preferences.

Type of citation: Journal article

Studies of people's preferences for trees, forests, and associated greenspace in urban environments have shown that people value these resources, but there is little direct evidence of what people are willing to pay for them. To estimate willingness to pay for particular attributes of recreation areas, park and forest preserve users from northwest Chicago and its suburbs were sent mail surveys which were designed to gather data to estimate the importance of each attribute in choosing a site. Two hundred and ten usable surveys were returned. While users are willing to pay a substantial amount for trees and forests (\$1.60), they are willing to pay even more for water resources and lack of

crowding, vandalism or litter (over \$3.00), and a certain age distribution of users (\$1.90). To identify variation preferences, respondents were clustered into market segments based on similarities in their park visitation patterns and socio-economic characteristics. Three market segments (containing 29 percent of the respondents) were attracted to sites with higher fees. The segment with the highest willingness to pay for a heavily forested site has the strongest aversion to mowed grass, and likes hiking, but not picnicking.

54. Fedler, Anthony J. and Miles, Ann F. (1989). Paying for backcountry recreation: Understanding the acceptability of use fees. *Journal of Park and Recreation Administration*, 7(2): 35-46.

Keywords: backcountry, use fees, willingness to pay, revenue.

Type of citation: Journal article

This study identified hiker attitudes towards use fees and determined which combination of overall attitude towards use fees and type of fee, amount of fee, or willingness to pay is needed in order to assess various fee implementation alternatives. A random sample of 100 hikers from Great Smokey Mountain National Park, Linville Gorge Wilderness Area and Grandfather Mountain were sent mail surveys. Approximately one-third of respondents favored fees and one-third opposed fees. Hikers preferred to pay by voluntary contribution, but they were willing to pay \$1-\$2 for a daily fee and \$5-\$10 for an annual permit. Some willingness to pay amounts increased if the revenue was returned directly to the local site. The majority of hikers also indicated they would be willing to pay fees to participate in other backcountry recreation activities.

211. Havitz, Mark E. (1989). An analysis of preferences for commercial-sector and public-sector alternatives for two recreation activities. *Journal of Park and Recreation Administration*, 7(3): 23-32.

Keywords: sector bias, public sector, commercial sector, aerobics, camping.

Type of citation: Journal article

This paper explores the extent to which recreation choices are influenced by who provides the service - the public sector or the commercial sector. The activities of camping and aerobics were chosen for this study. The 120 undergraduate students who were selected for this study were those who scored highest on a battery of twenty questions that measured their involvement in both camping and aerobics. The experimental procedure consisted of randomly assigning subjects into three groups, and then asking them to fill out three questionnaires and view two videotapes which depicted camping and aerobics facilities and programs. The video tapes shown to the control group did not address the sector issue at all. The private-sector group was told the videotapes were of private-sector programs, and the public-sector group was informed they were viewing public-sector programs. Results show that nearly half of the sample preferred the

public-sector option for camping, and over 70 percent preferred the commercial-sector option for aerobics.

149. Riley, Jill P.; Caldwell, Linda L.; Eagles, Paul F. J. and Graham, Robert. (1989). An analysis of visitors' desire and willingness to pay for an expanded service level in Ontario provincial parks. In Thomas A. More; Maureen P. Donnelly; Alan R. Graefe and Jerry J. Vaske (Eds.), *Proceedings of the 1989 Northeastern Recreation Research Symposium* (pp. 85-89). Radnor, PA: USDA Forest Service, Northeastern Forest Experiment Station, General Technical Report NE-132.

Keywords: willingness to pay, level of service, Ontario provincial parks.

Type of citation: Proceedings paper

Provincial parks in Ontario are governed by policy documents which determine the standard level of service provided to the visitor. The question arises whether this is the desired level of service by the visitor. If an expanded level of service is sought by visitors, the next question is how should these services be paid for? Three park classifications - wilderness parks, natural environment parks, and recreation parks - were used to examine visitors' desire and willingness to pay for an expanded service level. An eight-page questionnaire was administered to 60 respondents at three parks. The results illustrate that respondents do desire some level of expanded services. Respondents prefer wilderness and natural environment parks to recreation parks, and semi-serviced campsites and rental cabins. They were willing to pay for the opportunity to rent camping and recreational equipment. Day users were more willing to pay for the expanded levels of in-park activities than campers.

14. Stevens, T.; More, T. and Allen, P.G. (1989). Pricing policies for public day-use outdoor recreation facilities. *Journal of Environmental Management*, 28: 43-52.

Keywords: outdoor recreation, recreation demand, benefit-cost analysis, price policy.

Type of citation: Journal article

Visitors at four state-operated day use outdoor recreation areas in western Massachusetts were surveyed during the summer of 1984. A total of 324 completed questionnaires were returned. The questionnaire asked visitors about their visitation, trip and party characteristics, and how the cost of recreation facilities should be financed. Willingness-to-pay was measured using the statement, "If the law required all costs to be paid from entry fees, and if fees were charged per person, what is the maximum amount you would pay to visit per day?" The willingness-to-pay data was used to estimate site demand, park benefits, and visitor response to different pricing strategies. Annual benefits and annual costs for the four parks were calculated, and it was determined that under the current fee structure, only 25 percent of cost was recovered through entry fees. Total benefits were estimated to exceed costs. Alternative price policies and their implications are explored. None of the alternatives discussed guarantee that a fee increase would result in complete

cost recovery. The most frequently chosen option for financing facilities (42 percent) was to pay half by taxes and half by increased admission fees. About one-fifth (23 percent) had no opinion, 19 percent wanted an increase in State taxes to pay for the entire cost, and 16 percent wanted an increase in admission fees to pay the entire cost.

21. Stevenson, Sid. (1989). A test of peak load pricing on senior citizen recreationists: A case study of Steamboat Lake State Park. *Journal of Park and Recreation Administration*, 7(1): 58-68.

Keywords: senior citizen recreationists, senior citizen discounts, differential pricing, peak load pricing, fees, state parks, intergenerational equity, income.

Type of citation: Journal article

In the search for optimal pricing of outdoor recreation opportunities, discounts for senior citizen recreationists are being challenged. Pre- and post-test instruments were used to determine any behavioral changes resulting from a peak load pricing policy (charging a higher fee during peak use) fee increase. Senior recreationists at Steamboat Lake State Park in Colorado were surveyed by mail in 1984 and 1986, and on-site measurements were taken in 1985. Respondents provided information on their socioeconomic status, willingness to pay for camping, and anticipated impact of a weekend fee change on their camping behavior. The results show that peak load pricing achieved three pricing objectives. First, it increased efficiency. The senior recreationists' demand for weekend camping reduced significantly, allowing access to other nonsenior campers who may have been previously excluded by the crowded conditions. Second, it increased revenue. Third, it increased equity because seniors were paying more proportionately for their use of the park system.

70. Walsh, Richard G.; Peterson, George L. and McKean, John R. (1989). Distribution and efficiency effects of alternative recreation funding methods. *Journal of Leisure Research*, 21(4): 327-347.

Keywords: travel cost method, recreation benefit, efficiency, distribution, entrance fee, travel tax.

Type of citation: Journal article

This paper reviews the distribution and efficiency effects of alternative recreation pricing systems and presents two applications of the travel cost method. Case studies of the Boundary Waters Canoe Area Wilderness (BWCAW) and the Pikes Peak Marathon illustrate the distribution effects of different pricing methods. The data consisted of the entire population of groups (17,677) who obtained entry permits for the BWCAW in 1980 and 3,138 runners who competed in the Marathon during 1981 to 1984. Census data was consulted for independent variables of distance, population, per capita income, age, ethnicity and urbanization. Estimates of recreation values and net willingness to pay were calculated. The geographic effects of a travel tax for the Pikes Peak Marathon, and an

entrance fee in the BWCAW and the Marathon, show that local people are more affected by an increase in entrance fees. This is because the fees create a larger percentage price rise for locals.

1988

29. Bamford, Tara E.; Manning, Robert E.; Forcier, Lawrence K. and Koenemann, Edward J. (1988). Differential campsite pricing: An experiment. *Journal of Leisure Research*, 20(4): 324-342.

Keywords: prices, differential fees, demand, economics, camping.

Type of citation: Journal article

To test the effectiveness of differential pricing on altering use patterns, a differential pricing system was implemented at campsites in 14 Vermont state parks. Upon arrival at the campground, campers were given a map showing the sites and their costs. Campers' site choices were recorded, and their names and addresses were obtained from campsite receipts. Half of the sample was also mailed a questionnaire to gather socioeconomic and attitudinal data. Results show that the "prime" (most popular) campsites experienced a decreased occupancy rate. Generally, campground use was more evenly distributed, and there was an increase in revenues. Families with higher incomes were more likely to select prime campsites (which are higher cost). Lower income campers were less satisfied with the camping fee, tended to be less favorably inclined toward the concept of fee differentials and the size of the differentials, and tended to consider price more important in the campsite selection process. Care should be taken in implementing and monitoring new pricing policies, since they can alter recreation participation patterns.

274. Barborak, James R. (1988). Innovative funding mechanisms used by Costa Rican conservation agencies. In J. Thorsell (Comp.) *New Challenges for the World's Protected Areas* (pp. 104-118). Gland, Switzerland: International Union for the Conservation of Nature and Natural Resources.

Keywords: Costa Rica, proprietary funds, operating revenue, conservation.

Type of citation: Book chapter

The foreign debt crisis and economic difficulties facing developing countries like Costa Rica adversely affect their conservation programs. Of greatest importance for offsetting the problems arising from inadequate funding has been creation of proprietary funds which generate large amounts of revenue, primarily through user fees and fiscal stamps. This paper reviews the role of proprietary funds in generating operating revenue for Costa Rica's National Parks and Wildlife Services. This case study reviews the different fees, taxes and fund transfers which go into the proprietary funds, how much revenue they generate, and what they are used for. It also examines fund management problems, and gives recommendations for other countries regarding use of proprietary funds in conservation programs.

161. Epstein, Mark. (1988). The uses of user fees. *Kansas Government Journal*, 74(2): 54-55.

Keywords: user fees, costs, local government services.

Type of citation: Journal article

The author supports using fees to provide local government services. A method for determining the true cost of providing services is described.

190. Gillette, Clayton P. (1988). User fees and environmental protection: A legal perspective on user fees. In Thomas D. Hopkins (Ed.), *Administrative Conference of the United States: Federal User Fees, Proceedings of a Symposium* (pp. 19-27). Washington, D.C.

Keywords: allocation efficiency, revenue, user fees, legal context.

Type of citation: Proceedings paper

This paper builds on some of the arguments emerging from economic theory concerning user fees and tests them in the current legal context. In conclusion, the author suggests that the most important question regarding user fees, "What is the underlying function that we're trying to serve with user fees?", is not being addressed adequately.

152. Kwong, Jo. (1988). Evolving institutions in wildlife management: The case for fee hunting. *Western Wildlands*, 14(1): 26-31.

Keywords: resource ownership, conflict, fee hunting, wildlife management.

Type of citation: Journal article

This article examines the range of conflicts caused by current patterns of resource ownership and use (such as wildlife that migrate across lands of mixed ownership and compete with livestock for forage). In addition, it explores various arrangements, represented by fee hunting, that could be beneficial to hunters, recreationists, and environmentalists. One example is for the state or federal government to explore lease options with owners of proposed private hunting preserves. Much of the nation's wildlife habitat is privately owned, so landowners have considerable influence on the size and distribution of wildlife populations. The key question at this point is how to replace conflict with cooperation among sportsmen, recreationists, landowners and state fish and game agencies. Innovative contractual arrangements represented by fee hunting may well provide one workable answer.

16. McCarville, Ronald E. and Crompton, John L. (1988). Selected local park and recreation financial indicators in the first half of the 1980's: A challenge to conventional wisdom. *Journal of Park and Recreation Administration*, 6(3): 46-54.

Keywords: local government, finance, self-generated revenue.

Type of citation: Journal article

The purpose of this study was to review financial- and employment-related indicators that suggest how park and recreation departments fared in the wake of the tax reform movement and the trends toward a pay-as-you-go policy. Data was collected from 1980 to 1985. The indicators used are: a) revenue self-generated by local park and recreation agencies; b) local government expenditures on parks and recreation as a proportion of total direct general expenditures of local government; and c) the number of full- and part-time park and recreation personnel. Data in the U.S. Department of Commerce's Census of Governmental Finances were also examined for annual financial and employment trends in local and park recreation agencies. The indicators were adjusted with the gross national product (GNP) deflator and compared longitudinally to determine relative losses or gains. All adjusted totals are considered in terms of 1982 dollars. Overall, data suggest that self-generated revenues increased, but they augmented rather than replaced local tax support which, in turn, experienced moderate growth. The number of full-time employees declined slightly, however. This data shows that the tax reduction movement did not result in substantial cutbacks in resources for local park and recreation services across the country.

157. Reiger, George. (1988). User fees: Curse or cure? *American Forests*, 94(3/4): 26, 76-78.

Keywords: user fees, government.

Type of citation: Journal article

The inequities of grazing and mining fees, and the political and other difficulties associated with user fee policies are discussed in this paper.

28. Reiling, Stephen D.; Criner, George K. and Oltmanns, Steven E. (1988). The influence of information on users' attitudes toward campground user fees. *Journal of Leisure Research*, 20(3): 208-217.

Keywords: user fees, attitudes, information program, willingness to pay.

Type of citation: Journal article

To determine whether an educational program can alter user's attitudes about fees, resident and non-resident visitors of Maine state park campgrounds were surveyed in 1984. Just over 700 completed mail surveys were obtained. Respondents were asked to

indicate whether the current fee of \$5 per site/night for a campsite was too high, too low, or about right in three scenarios. Each scenario provided different information about other fees and costs. The first scenario offered no additional information. The second asked them to rate the current fee with the knowledge that the average fee at commercial campgrounds was \$8. The third scenario informed respondents that it actually cost the Maine Bureau of Parks and Recreation about \$11 per site/night to provide a state park campsite. After receiving the information, respondents were asked to rate the current fee of \$5 again. Results for the first scenario show that the majority (87 percent) of Maine residents felt that the current fee was about right. After being provided with the information in the second scenario, Maine residents who felt the current fee was too low went up from 9 percent to 14 percent. And again, after the third scenario, that percentage went up from 14 percent to 38 percent. Similar results are reported for non-residents of Maine. These results suggest that an information program may be an effective way to improve the willingness of users to accept a fee increase.

49. Schultz, John H.; McAvoy, Leo H. and Dustin, Daniel L. (1988). What are we in business for? Parks and Recreation, January: 52-55.

Keywords: recreation fees, commercial recreation, ethics.

Type of citation: Journal article

The authors argue that applying private sector marketing principles to the problems faced by public parks and recreation is not the most appropriate solution. Important public benefits flow from park and recreation services, which should not be commodified.

43. U.S. Department of the Interior, National Park Service. (1988). Federal Recreation Fee Report 1988, Including Federal Recreation Visitation and Fee Data (A Report to the Congress). Washington, D.C. 21 pp.

Keywords: recreation fees, visitation, federal land management agencies, fee receipts, Golden Eagle Pass, Golden Access Pass.

Type of citation: Report

This report includes the 1988 recreation fee and visitation information of the following seven Federal land managing agencies which administer outdoor recreation resources: 1) Bureau of Land Management; 2) Bureau of Reclamation; 3) Corps of Engineers Forest; 4) Service; 5) Fish and Wildlife Service; 6) National Park Service; and 7) Tennessee Valley Authority. First the Federal Recreation Passport Program (Golden Eagle, Golden Age, Golden Access) is discussed in relation to the number of passes sold or issued and Golden Eagle Pass receipts. Then each of the seven agencies report the number of fee management units and non-fee management units they operate. Finally, visitation data and fee receipts for each agency are presented.

197. Wilman, Elizabeth A. (1988). Pricing policies for outdoor recreation. *Land Economics*, 64(3): 234-241.

Keywords: pricing, allocation, revenue, outdoor recreation supply, wilderness, demand elasticity.

Type of citation: Journal article

This paper explores an alternative method to marginal cost pricing, called Ramsey pricing. Ramsey pricing requires that the fee covers costs, which means that prices should be raised above marginal cost. According to the author, this method is the most economically efficient form of public good pricing under a budget constraint, because it is designed to cover costs in a way which reduces consumers' surpluses by the least amount. Some examples showing the method's application and usefulness are described. These examples show that Ramsey pricing is a flexible strategy which can offset costs and ration use fairly.

1987

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

Keywords: recreation costs, willingness to pay, allocating use, revenue, fees.

Type of citation: Journal article

The economic basis for recreation fees involves both willingness to pay and the costs of supplying recreation. These concepts together with a discussion of how fees can allocate use, how to distribute costs and benefits, and how to generate revenue are the basis of this author's economic argument for increasing recreation user fees.

25. Daniels, Steven E. (1987). Marginal cost pricing and the efficient provision of public recreation. *Journal of Leisure Research*, 19(1): 22-34.

Keywords: recreation supply, recreation demand, equilibrium price, economic efficiency.

Type of citation: Journal article

Efficient resource allocation requires an understanding of the expenditures necessary to provide recreational opportunities (the supply function) and the prospective recreators' willingness to pay for the recreation opportunity (the demand function). Cost and use data were obtained from four campgrounds in western Montana using aggregated expenditure data, interviews with recreation managers, and campground fee envelopes filled out by visitors. The cost analysis revealed that the marginal costs of campground use were low and relatively constant over a wide range of use levels. The demand analysis showed that average gross economic value per recreation-visitor-day was \$17.82. From the aggregate supply and demand equations, an optimal fee is derived. This fee is below the current fee,

which suggests that changing the current fee to this optimal fee would potentially increase social welfare. However, the results also show that use is inelastically related to the fee (use is not responsive to changes in fee levels), and therefore use would increase by only 3.5 percent. Therefore, changing to the optimal fee would have significant negative revenue effects, and may not be pragmatically feasible.

72. Davis, Robert K.; Parsons, Edward G. and Randall, Robert M. (1987). Role of access fees in managing wildlife habitat on the federal lands. *Transactions of the 52nd North American Wildlife and Natural Resource Conference*, 52: 544-551.

Keywords: hunting access fees, wildlife habitat management, fee history, Sikes Act Stamp program.

Type of citation: Journal article

Access fees for recreation on public lands deserve serious consideration. The Sikes Act of 1960 and its 1974 Amendment enabled states to impose an access fee in the form of a stamp as a requirement for hunting, trapping, or fishing on federal public land that is subject to a conservation and rehabilitation program. However, the lack of enthusiasm on the part of the states for these stamps, and the seeming unwillingness by Congress to allow federal access fees leads the authors to believe that public lands and national forests could be put on a self-financing basis using a private landowner investment model. This model proposes that private landowners who invest in habitat improvement and wildlife management practices in a mix of private and public lands would be rewarded by revenues from access fees on the private lands.

153. Guldin, Richard W. and Kroon, Henk J. (1987). Economic and social aspects of user fees. In Fred Kaiser and Perry Brown (Comps.), *Proceedings of the 18th IUFRO World Congress for Economic Value Analysis of Multiple Forestry* (pp. 217-229). Corvallis, OR: Printed by the Department of Resource Recreation Management, Oregon State University.

Keywords: recreation fees, market economy, private goods, public goods, mixed goods, pricing.

Type of citation: Proceedings paper

The objective of this paper is to review the alternative strategies available to public financiers for setting recreation use fees in a market economy. Different types of goods and services situations (private producer, public goods, mixed goods), each leading to different conditions for imposing user fees, are examined. The various outcomes of using marginal cost to set fees for private goods and services from public land, such as those produced by concessionaires, are discussed. In the case of public goods and services from public land, such as watching a sunset, there is no cost involved, therefore there is also no economic basis for a user fee. Most recreation goods and services are mixed goods.

Marginal cost pricing is not an efficient method of setting fees in this case. A two-part tariff and an annual license are discussed as possible alternative methods.

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

Keywords: recreation fees, opposition, support.

Type of citation: Journal article

After discussing the evolution of user fees in federal agencies from the early 1900's to the 1980's, the authors give their arguments either in opposition of, or in support for, fees. Opposing arguments discussed include historic precedent (tradition), public recreation opportunities as a merit good and the necessity of public subsidies for some segments of society. Supporting arguments discussed include increased quality of recreation services, reduced congestion and resource damage, and that on-site users should bear a larger part of the costs associated with recreation. In conclusion, the authors suggest that fees, although an undesirable necessity, could serve to legitimize recreation management and conserve our wildlands.

61. Howard, Dennis R. and Selin, Steven W. (1987). A method for establishing consumer price tolerance levels for public recreation services. *Journal of Park and Recreation Administration*, 5(3): 48-59.

Keywords: pricing, price tolerance, willingness to pay, recreation consumers, fees and charges.

Type of citation: Journal article

This research explores the extent to which public recreation consumers are willing to pay fee increases before expressing measurable resistance. Three kinds of prices (low, medium, and high) were determined for a set of different recreation activities. The low price alternative would recover as much as 50 percent of the costs of producing the activity. The medium price represented the "break-even" point where the fee would cover all the costs. The high price represented the "going rate", or what was being charged for comparable services elsewhere in the region. Pricing questionnaires were sent to 720 randomly selected participants, with one-third of the respondents receiving low price figures, one-third medium price, and one-third high price. Clear price threshold levels were found, and they varied substantially from one activity to another. For example, tennis respondents expressed the greatest price tolerance for increased charges for tennis lessons. In contrast, whitewater rafters responded largely negatively to proposed price increases.

26. Leuschner, William A.; Cook, Philip S.; Roggenbuck, Joseph W. and Oderwald, Richard G. (1987). A comparative analysis for wilderness user fee policy. *Journal of Leisure Research*, 19(2): 101-114.

Keywords: recreation policy, travel cost method, user characteristics, user attitudes.

Type of citation: Journal article

Party leaders at the Linville Gorge Wilderness (non-fee) and the Grandfather Mountain backcountry area (a privately owned fee area) were sent mail surveys during the summer season in 1985. Survey topics included user characteristics, trip characteristics, fees, and travel cost method (TCM). It was determined that the two study areas were similar enough in recreation experiences offered and their users to be appropriate for making valid comparisons. User characteristics, trip characteristics and TCM all indicated fees did not cause a difference between populations or trip behavior. Responses indicated that users would rather not pay fees than pay them, but that behavior and use patterns would not be drastically altered if fees were implemented. Fees are more strongly supported by those already paying them but are strongly supported by both groups if paying fees will prevent deterioration of wilderness areas. The authors conclude that these results make a strong case for consideration of a wilderness fee system.

44. Mangun, William R. and Loomis, John B. (1987). An economic analysis of funding alternatives for outdoor recreation in the United States. *Policy Studies Review*, 7(Winter): 421-431.

Keywords: outdoor recreation funding, alternative funding mechanisms, efficiency, equity.

Type of citation: Journal article

In response to the major shortfall in financial support for outdoor recreation, in 1986 the President's Commission on Americans Outdoors agreed that \$1 billion per year is needed for funding of local, state and federal recreation opportunities. This paper provides a preliminary analysis of excise taxes on equipment, entrance fees at federal facilities, and punitive taxes for the extraction of renewable and nonrenewable resources based on efficiency and equity. Excise taxes, entrance fees and general appropriations are capable of raising an estimated \$1-1.7 billion. Logistics and equity would strongly argue against entrance fees for provision of urban parks and open space, whereas excise taxes on many items of camping equipment would allow for indirect charges for outdoor recreation in settings where collection of user fees would be infeasible (e.g., dispersed recreation). Optimal funding of outdoor recreation requires a package balanced among the different types of recreation users and the many "indirect" users of the recreation environments.

68. McCarville, Ronald E. and Crompton, John L. (1987). An empirical investigation of the influence of information on reference prices for public swimming pools. *Journal of Leisure Research*, 19(3): 223-235.

Keywords: reference price, swimming pools, information.

Type of citation: Journal article

The purpose of this study was to investigate the influence of information on level of reference price (the price which a consumer expects to pay for a service) for admission to public swimming pools. The sample consisted of 254 Texas city residents who were contacted by phone. Depending on which experiment group respondents were randomly assigned to, they were given one of four information messages. These messages were: 1) no information was provided (control group); 2) cost of service delivery to the agency; 3) price charged by a private competitor; and 4) cost of service delivery and the private competitor's price. After receiving this information all respondents were asked, "What would you expect to pay for a swim at a city pool?" Analysis of the data shows that each of the three treatment groups exhibits a mean reference price which was higher than that of the control group. Also, reference prices given by non-users were higher than those provided by users.

133. McCarville, Ronald E. and Crompton, John L. (1987). Propositions addressing perceptions of reference price for public recreation services. *Leisure Sciences*, 9(4): 281-291.

Keywords: reference price, public recreation services, propositions.

Type of citation: Journal article

This paper reviews the literature which relates to consumers' perceptions of reference price. Nine propositions are suggested as a result of the literature review, which are grouped under three headings: 1) the roles of perception and reference price; 2) the influence of information on reference price; and 3) the role of equity in reference to price perception. The intent is to provide a framework for discussion and stimulate future research into understanding the role of reference prices in the context of public recreation services.

180. McCarville, Ron. (1987). Pricing and the equity issue in public leisure service delivery. *Recreation Canada*, February: 6-11.

Keywords: fees and charges, equity, consumer, pricing strategy.

Type of citation: Journal article

Under what conditions are fees and charges considered fair or equitable by the potential consumer? This paper places this issue in perspective and offers some insights that past research efforts provide. First, public leisure services are discussed in relation to a continuum, with public services and private services on either end, and merit services in the middle. Next, the three fundamental rules of contributions, need and equality are reviewed as methods to apply when evaluating a situation as fair or unfair. The next section discusses the importance of considering time, convenience, and psychic costs as well as monetary costs in minimizing resistance to pricing. Managers can alter program variables which influence these costs so that the varied needs of customers can be met.

18. McDonald, Cary D.; Noe, Frank P. and Hammitt, William E. (1987). Expectations and recreation fees: A dilemma for recreation resource administrators. *Journal of Park and Recreation Administration*, 5(2): 1-9.

Keywords: willingness to pay, visitor fees, recreation fees, cost-benefit, exchange theory.

Type of citation: Journal article

An expanded fee program may have negative consequences for administrators if visitors expect more benefits as fees increase. The logic of exchange theory and cost-benefit analysis was used to examine the hypothesis that the amount of money an individual would be willing to pay is positively related to the desire for additional services. Over 300 visitors completed a mail questionnaire during the spring of 1984 at the Big South Fork National River and Recreation Area. The survey assessed their willingness to pay and preference for development. A weak relationship between willingness to pay and preference for development was found only for visitors in the high fee group (visitors willing to pay \$5.00 or more). Administrators may be able to charge a low to moderate fee without visitors desiring additional benefits.

177. More, Thomas A. and Echelberger, Herbert E. (1987). Social Equity and Pricing Policy in State Parks (Unpublished paper presented at the 1987 NRPA Research Symposium). 3 pp.

Keywords: user fees, social equity, Vermont state parks, attitudes.

Type of citation: Report

Perhaps the most pivotal and emotional issue surrounding fees is the concern of social equity. In this study, public perception of the equity issue is examined by surveying Vermont residents regarding their attitudes toward fees in Vermont state parks. In November of 1986, a random sample of 1,318 Vermont residents was contacted by telephone and asked to participate in a survey. Results show that most Vermonters (55 percent) felt that fees should be kept as low as possible. Current park users (as opposed to former or potential users) were particularly prone to favor this view. The pay-as-you-go philosophy received greatest support among non-users. When asked about actual camping fees, 49 percent of the sample favored full pricing, while an additional 46 percent favored subsidies of 25 or 50 percent. However, for day use areas, only 19 percent of all respondents favored charging the full fee needed to cover costs. Most preferred was a combination of 50 percent tax dollars and 50 percent user fees, which indicates respondents feel that day use of Vermont state parks is worthy of public subsidy.

181. Soderberg, Jon P. (1987). User Fees for Public Recreation: A Question of Equity (Unpublished paper presented at the San Diego State University Department of Recreation Symposium on Fees and Charges). 12 pp.

Keywords: user fees, equity, regional park agencies, pricing strategy, pricing model.

Type of citation: Report

There are no universal blueprints all park and recreation agencies can follow in establishing an equitable pricing strategy. This paper first discusses the evolution of the fiscal climate that many regional park agencies, especially in California counties, find themselves in. This includes inflation, rising costs, and declining income. Then the unique circumstances of agencies, such as resources managed, political philosophies, perceived market share, and role in tourism and local economies, are discussed. A model to determine equitable price and how to use it is finally discussed.

215. U.S. Department of Agriculture. (1987). Estimating Prices for Access to Opportunities for Hunting, Fishing, and Viewing Wildlife on Public and Private Lands (Final Report of Natural Resources and Environment Steering Committee on Wildlife and Fish Access Prices). 26 pp.

Keywords: access prices, hunting, fishing, viewing wildlife, commensurate prices, pricing methods.

Type of citation: Report

The purpose of this report is to recommend procedures for estimating prices for hunting and fishing access that are commensurate with market prices for other commodities. Before presenting and comparing different pricing methods, the need for access prices, and the concepts of access, and demand and supply are discussed. Four different pricing methods are reviewed: 1) market price appraisal; 2) contingent valuation; 3) hedonic pricing and household production models; and 4) travel cost method. It is concluded that each of these methods has applicability in different situations, and that additional research is needed before commensurate hunting and fishing prices can be provided for investment analyses and land management planning.

247. Abala, Daniel O. (1987). A theoretical and empirical investigation of the willingness to pay for recreational services: A case study of Nairobi National Park. *Eastern Africa Economic Review*, 3(2): 111-119.

Keywords: willingness to pay, Nairobi National Park, socio-economic characteristics, physical attributes, congestion.

Type of citation: Journal article

This paper examines the factors that influence willingness to pay for park services. Study data was obtained from interviews with 333 Nairobi National Park visitors during January and February in 1983. Information on willingness to pay, socioeconomic characteristics, and expectations was obtained from the interviews. The results show that visitors with more education and higher incomes tend to exhibit higher willingness to pay for park services. Travel cost, distance traveled, and travel time negatively influence the visitor's willingness to pay. The probability of encounters with other visitors inside the park also had a significant negative impact on the visitor's willingness to pay. Surprisingly, the probability of seeing animals does not seem to be significant in determining the park visitor's willingness to pay. The results also show that visitors were willing to pay more than the present fee.

1986

87. Driver, B.L. and Koch, Niels Elers. (1986). Cross-cultural trends in user fees charged at national outdoor recreation areas. In 18th IUFRO World Congress, Division 6 (pp. 370-385). Yugoslav IUFRO World Congress, Organizing Committee.

Keywords: support, opposition, user fees, trends.

Type of citation: Book chapter

This paper offers an introductory overview of cross-cultural trends in user fees charged for outdoor recreation opportunities provided by national (federal or central) agencies in 11 countries - Australia, Canada, Denmark, Finland, Great Britain, Holland, New Zealand, Norway, Sweden, the United States, and West Germany. The paper first describes the rationales that have been used in arguments favoring and opposing expansion of fee programs, then presents an overview, by country, of trends in fees for outdoor recreation. An attempt is made to interpret any patterns found and to speculate about likely future cross-cultural trends in fees and their implications. In a nutshell, the tradition of relatively free access still remains, but significant increases in use fees for some of the opportunities which require additional investment/development costs (such as parking lots, camp sites and visitor centers) have occurred since 1980.

194. Dustin, Daniel L. (1986). Outdoor recreation: A question of equity. *Forum for Applied Research and Public Policy*, 1(3): 62-67.

Keywords: equity, outdoor recreation, cost, rationing use, environmental impact.

Type of citation: Journal article

Outdoor recreation research may indicate a trend that people with differing needs and interests are competing for the same recreational space. In times of plenty, distribution is the main concern. However in times of scarcity, a concern for equity prevails. This issue of equity in respect to outdoor recreation opportunities emerges as the next great challenge for the framers of recreation land policy. Equity is addressed in relation to

recreation costs, access, management policies, and environmental and natural resource protection.

264. Jensen, Roy. (1986). Mandatory land dedication and impact fees for parks and recreation. In *A Literature Review: The President's Commission on Americans Outdoors* (pp. 29-35 Financing). Washington, D.C.

Keywords: mandatory land dedication, impact fee, exaction, subdivision, ordinance, park, recreation.

Type of citation: Chapter of report

This paper discusses the findings of a literature review on the topic of land dedication and impact fees for parks and recreation. Findings and recommendations are summarized.

97. Martin, Burnham H. (1986). Hikers' opinions about fees for backcountry recreation. In Robert C. Lucas (Comp.) *Proceedings -- National Wilderness Research Conference: Current Research* (pp. 483-488). Ogden, UT: USDA Forest Service, Intermountain Research Station, General Technical Report INT-212.

Keywords: hikers, attitudes, New Hampshire, fee system.

Type of citation: Proceedings paper

This study compared the attitudes of hikers in the White Mountains who were paying fees during their trip with those who were not paying fees. The questionnaire was administered during the summer in 1984 at overnight sites, at trailheads, and along the trail. A total of 584 usable questionnaires were collected. Approximately 44 percent of both fee- and non-fee paying visitors supported reallocating federal budgets to fund backcountry management. Approximately the same percentages of both visitor groups supported a combination of user fees and increased volunteerism. Thirty-nine percent of respondents felt that fees would have a negative effect on their experience. Hikers favored returning fee revenues locally. Differences between fee- and non-fee paying hikers were ambiguous.

142. Noe, Francis P.; McDonald, Cary D. and Hammitt, William E. (1986). Exchange satisfaction for fees: Willingness to pay for a park environment. *Journal of Environmental Systems*, 16(2): 111-122.

Keywords: social exchange theory, willingness to pay, visitor satisfaction, fee programs.

Type of citation: Journal article

Instituting a user fee policy may change role relations between visitors and management. It may also change visitor expectations toward programs, facilities, and services, and increase the real potential for adversary confrontations. This paper evaluates the merit of charging a fee by measuring an individual's level of satisfaction and possible unintended consequences associated with their willingness to pay. Two hypotheses are tested: 1) satisfied visitors would be unwilling to pay more in return for what they already have received and found satisfying; and 2) satisfied visitors would be willing to provide support for a continued satisfying experience by spending a higher dollar amount. A whitewater river study, a rafting study, and a deer hunter study were used to test these two hypotheses. The social exchange model used in analysis found support for the argument that if park visitors are highly satisfied, they will be willing to pay more for a park experience.

15. Stevens, T.H.; Allen, P.G. and More, T. (1986). Benefits, Costs, Revenues and Pricing Of Public Forest Day-Use Recreation Areas (Research Bulletin Number 708). Amherst, MA: University of Massachusetts at Amherst, College of Food and Natural Resources, Massachusetts Agricultural Experiment Station. 29 pp.

Keywords: day-use, costs, revenues, entry fees, economic benefits, travel cost method, willingness to pay.

Type of citation: Report

Visitors at four state-operated day use outdoor recreation areas in western Massachusetts were surveyed during the summer of 1984. A total of 324 completed questionnaires were returned. The questionnaire asked visitors about their visitation, trip and party characteristics, and how the cost of recreation facilities should be financed. Willingness-to-pay (WTP) was measured using the statement, "If the law required all costs to be paid from entry fees, and if fees were charged per person, what is the maximum amount you would pay to visit per day?" The willingness-to-pay data was used to estimate site demand, park benefits, and visitor response to different pricing strategies. Annual benefits and annual costs for the four parks were calculated, and it was determined that under the current fee structure, only 25 percent of cost was recovered through entry fees. Total benefits were estimated to exceed costs. Alternative price policies and their implications are explored. None of the alternatives discussed guarantee that a fee increase would result in complete cost recovery. The most frequently chosen option (42 percent) for financing facilities was to pay half by taxes and half by increased admission fees. About one-fifth (23 percent) had no opinion, 19 percent wanted an increase in State taxes to pay for the entire cost, and 16 percent wanted an increase in admission fees to pay the entire cost.

268. Tellis, Gerard J. (1986). Beyond the many faces of price: An integration of pricing strategies. *Journal of Marketing*, 50(October): 146-160.

Keywords: pricing, pricing strategy, differential pricing, discounting, competitive pricing, product line pricing, taxonomy.

Type of citation: Journal article

Because the principles underlying different pricing strategies have not been presented together, it has not been possible to develop a unifying taxonomy of strategies that shows their relatedness or differences. Therefore it has also not been possible to suggest circumstances under which each pricing strategy can be adopted. The first objective of this article is to present a number of normative pricing strategies. The second objective is to demonstrate the principles underlying each strategy and their relationship to each other, their practical applications, and the legal and policy implications of each. The third objective is to propose a classification of these strategies.

140. Walsh, Richard G. (1986). Pricing practices and market structure. In *Recreation Economic Decisions: Comparing Benefits and Costs* (pp. 463-553). State College, PA: Venture Publishing, Inc.

Keywords: user fees, park and recreation program costs, resource protection, pricing, fee policies.

Type of citation: Book chapter

The six main topics discussed in this chapter are: 1) the problem of charging users for part of the cost of park and recreation programs and the protection of natural, historic, and cultural resources; 2) evaluating pricing patterns in terms of agency policy, costs, benefits, comparable prices, and feasibility of collection; 3) the effect of alternative levels of demand on the three basic pricing problems (when marginal costs are less than, equal to, or exceed average costs); 4) distinguishing between several types of price discrimination and related practices such as peak load pricing; 5) a summary of results of recent studies of user fee policies in public agencies; and 6) the implications for improving future fee practices.

263. Warren, Roger. (1986). Fees and charges. In *A Literature Review: The President's Commission on Americans Outdoors* (pp. 5-13 Financing). Washington, D.C.

Keywords: fees, user fees, revenue producing, differential fees, policy manuals, pricing strategies.

Type of citation: Chapter of report

This paper presents general findings and recommendations from a review of the fees and charges literature. Some of the topics include a summary of arguments for and against user fees, a fee classification system, and discussions about pricing strategies and the equity issue. Possible criteria for inclusion in a fee policies and procedures manual are presented. According to the author, the literature review generally indicates that fairly

administered systems of fees are acceptable to the using public, and widespread use of fees in the future is inevitable. However, the author also acknowledges that there has been very little meaningful research conducted on the topic of fees. More research is needed to provide baseline data and the effects of fees on users. Case studies of some of the well developed fee programs should also be researched and published.

224. Wicks, Bruce E. and Crompton, John L. (1986). Citizen and administrator perspectives of equity in the delivery of park services. *Leisure Sciences*, 8(4): 341-365.

Keywords: parks, equity, user fees, allocation of resources, distribution.

Type of citation: Journal article

This paper discusses what constitutes fairness and equity in the allocation of park resources, and builds upon the work of philosophers and the interpretations of the courts to expand understanding of decision making about equity at the policy formulation stage of the political process. The four alternative equity models of equality, need, market and demand are presented. The objectives of the study presented here were to: 1) determine the level of support among a population of general citizens for each of the alternative equity models; 2) determine the level of support for the alternative equity models among a population of local government recreation and park directors; 3) compare the opinions of the directors and citizens; and 4) analyze the usefulness of this approach for measuring perspectives of equity. The sample for surveys were taken from the Texas Department of Public Safety's most current list of registered drivers and identification-card holders. A total of 833 questionnaires were returned. Data also were collected from 64 surveys of municipal park and recreation directors in Texas. Both citizens and administrators supported (74 percent and 92 percent, respectfully) the view that parks should be allocated to all areas equally, rather than on the basis of need, demand, or amount of taxes paid. There was lack of consensus on whether entrance fees should be set at a level that recover operating costs.

1985

47. Becker, R.H.; Berrier, Deborah and Barker, G.D. (1985). Entrance fees and visitation levels. *Journal of Park and Recreation Administration*, 3: 28-31.

Keywords: fees and charges, park management, use levels, regional parks.

Type of citation: Journal article

In 1982, South Carolina State Parks began a program of collecting entrance fees for parks which had traditionally been free. Particular interest centered around the effects of this fee program on attendance at parks used predominantly by a local or regional population. Reported visitation at these state parks in 1982 showed a marked decrease over visitation figures for 1980 and 1981. This paper is an analysis of whether that reported decrease in visitation could be attributed to the new entrance fee program. A test for statistical

significance revealed that the reduction in 1982 visitation was not associated with the initiation of the entrance fee.

19. Cockrell, David and Wellman, J. Douglas. (1985). Democracy and leisure: Reflections on pay-as-you-go outdoor recreation. *Journal of Park and Recreation Administration*, 3(4): 1-10.

Keywords: user fees, merit goods, conservation history, psychology of leisure, recreation policy.

Type of citation: Journal article

The authors present a philosophical discussion about outdoor recreation as a public good and the appropriateness of fees. The discussion centers around the ideas of Frederick Law Olmsted, and historical and modern leisure theories. It is concluded that outdoor recreation is a public good which should be subsidized, and user fees, when applied judiciously and as part of a well-formed management philosophy, are justifiable. Four general policy guidelines which could lead to management guidelines for user fee systems are proposed.

55. Cockrell, David and Wellman, J. Douglas. (1985). Against the running tide: Democracy and outdoor recreation user fees. In 1985 Proceedings National Outdoor Recreation Trends Symposium II (Vol. 2, pp. 193-203). Atlanta, GA: USDI National Park Service, Science Publications Office.

Keywords: user fees, merit goods, conservation history, psychology of leisure, recreation policy.

Type of citation: Proceedings paper

To contribute to the policy discussion about the coverage and level of user fees, several arguments are presented in this paper which favor using fees for public provision of outdoor recreation opportunities. Historical, philosophical, and social psychological arguments address the benefits of outdoor recreation for a democratic society. Among the topics discussed are the ideals of Frederick Law Olmsted, the classical leisure ideal, and leisure subcultures.

276. Cordell, H. Ken. (1985). Criteria for outdoor recreation pricing policies. In *Forest Recreation Research in the South* (pp. 1-17). Athens, GA: USDA Forest Service, Southeastern Forest Experiment Station.

Keywords: use rationing, price elasticity, outdoor recreation participation, discriminatory effects, user attitudes, willingness to pay.

Type of citation: Book chapter

This paper examines the possibility of expanding user fee systems for U.S. public lands. A politically realistic recreation pricing strategy is offered and then scrutinized in relation to potential rationing effectiveness for fourteen outdoor recreation activities, possible discrimination, and user attitudes. Data from the 1982-83 National Recreation Survey are used to support this examination. Price elasticity results show that the relationships between fee levels, price elasticities, and total revenues are not clearly understood and need further research. For example, some activities, depending on their price elasticity, would experience increased participation with decreased fees, thus raising revenues overall. Backcountry activities (hunting, backpacking, canoeing, kayaking) are less price elastic than other activities, such as fishing and snowmobiling, and may not be good candidates for management through fee rationing. Results also show that the activities most likely to discriminate against lower income groups, if fees were raised, are fishing and hunting. None of the National Recreation Survey respondents indicated they would not be willing to pay an entrance fee to use National Parks. Overall, the result show a widespread willingness to pay both an entrance fee and specific users' fees.

195. Cory, Dennis C. (1985). Congestion costs and quality-adjusted user fees: A methodological note. *Land Economics*, 61(4): 452-455.

Keywords: congestion, distributive equity, user fees, rationing use.

Type of citation: Journal article

Previous research demonstrated that the optimal fee for use of a fixed capacity facility depends on the pattern by which congestion cost is distributed among facility users. This optimal fee will differ from one derived from standard analysis when it is assumed that visitors have homogeneous preferences for avoiding congestion. The purpose of this paper is to: 1) incorporate considerations of distributive equity into this model; 2) analyze the allocative significance of this extension; and 3) discuss the implications of heterogeneous tastes and equity considerations for empirical studies. In particular, it is argued that in some applications it may be reasonable to ignore both heterogeneous taste and equity considerations in estimating an optimal fee. Also, for researchers to determine an equitable and efficient fee system, knowledge of the income characteristics of facility users and the distribution of congestion costs is required.

48. Driver, B.L.; Bossi, James E. and Cordell, H. Ken. (1985). Trends in user fees at federal outdoor recreation areas. In 1985 Proceedings National Outdoor Recreation Trends Symposium II (Vol. 1, pp. 222-241). Atlanta, GA: USDI National Park Service, Science Publications Office.

Keywords: user fee trends, recreation user fees, public user fees.

Type of citation: Proceedings paper

This paper considers four trends related to user fees at federal recreation areas: 1) trends in rationale for fees; 2) trends in federal agency attempts to obtain broader fee-levying

authorities; 3) trends in user fees under existing federal authorities; and 4) possible trends under broader authorities. The paper suggests that user fees have increased in several agencies (camping fees have increased at a slightly higher rate than inflation). Agencies want to levy a wider array of fees, but are constrained by existing fee-levying authorities.

9. McDonald, Cary D.; Hammitt, William E. and Dottavio, F. Dominic. (1985). An individual's willingness to pay for a river visit. In Joseph S. Popadic; Dorothy I. Butterfield; Dorothy H. Anderson and Mary R. Popadic (Eds.), 1984 National River Recreation Symposium Proceedings (pp. 605-618). Baton Rouge, LA: Louisiana State University.

Keywords: willingness to pay, entry fee, regression model.

Type of citation: Proceedings paper

The hypothetical market approach was used to determine an individual's willingness to pay for an entry fee per river visit at the Big South Fork National River and Recreation Area in Tennessee. Visitors were surveyed on site (n=402) during the spring of 1984, and 268 of those visitors were then mailed a survey. A total of 233 questionnaires were returned. On the average, individuals were willing to pay \$4.21 per visit, with the willingness to pay value ranging from \$0 to \$25. About one-fifth (21.5 percent) of respondents were not willing to pay any fee. Of the variables age, education, income, distance traveled, past visitation, number of rivers floated, and attitude toward fees, income was the only variable not related to willingness to pay. The two most important explanatory variables were number of rivers floated and attitude toward fees.

169. Peterson, George L.; Loomis, John B. and Sorg, Cindy F. (1985). Trends in the value of outdoor recreation. In Proceedings 1985 National Outdoor Recreation Trends Symposium II (Vol. 1, pp. 243-256). Atlanta, GA: USDI National Park Service, Science Publications Office.

Keywords: trends in outdoor recreation value, concepts and definition, methods and measures, research needs.

Type of citation: Recreation value

Changes in the value of money, in recreation supply and demand, and in research methods, concepts, and definitions influence trends in outdoor recreation value. This paper first discusses how and why economic values change over time. This is followed by a discussion of historical trends and events in the evolution of valuation methods, including the travel cost method and contingent valuation method. The third section evaluates the trend in benefit estimates after adjustment for the effect of differences in methodology. This analysis shows that recreation values have increased in real terms (relative to the increase in price of all other goods) since the late 1960's. The paper ends with some recommendations for research.

143. Reiling, Stephen D. and Anderson, Mark W. (1985). Equity and efficiency in public provision of forest-based recreation opportunities. *Journal of Environmental Management*, 20: 149-161.

Keywords: costs, forest-based recreational facilities, fees, underpricing, efficiency, equity.

Type of citation: Journal article

The first objective of this paper is to present the costs of provision data collected for forest-based public outdoor recreational facilities in Maine, and compare them to the fees paid by the users of the facilities. The second objective is to show the efficiency effects of underpricing these services. The third objective is to analyze some of the arguments that have been used to rationalize the subsidization of public recreation facilities. The results reconfirm what other cost of provision studies have found, which is that user fees at forest recreation facilities fail to cover the costs of providing services. It is concluded that not only does such under-pricing lead to economic inefficiency, but it may also represent an inequitable redistribution of society's resources.

1984

107f. Brown, Bruce R. (1984). Recreational use fees on public lands administered by the Bureau of Land Management. *Trends*, 21(4): 31-35.

Keywords: Bureau of Land Management, fee policies.

Type of citation: Journal article

This article looks at the Bureau of Land Management's new role in providing recreation opportunities, reviews the special recreation permit policy and fee schedules adopted in 1984, and discusses future challenges facing the permit program.

107b. Bossi, James E. (1984). Recreation user fees -- a much maligned subject. *Trends*, 21(4): 9-11.

Keywords: fee program implementation, fee policy, federal agencies.

Type of citation: Journal article

Outdoor recreation is not, and never has been, free. The need for a user fee system and the components of a successful fee system are outlined.

107h. Baldacchino, Nell Prior. (1984). Recreation fees on national wildlife refuges. *Trends*, 21(4): 39-41.

Keywords: national wildlife refuges, recreation fees, fee areas.

Type of citation: Journal article

Previous, current and possible future fee programs for the National Wildlife Refuge System are discussed in this paper.

51. Crandall, Derrick A. and Driver, B.L. (1984). Recreation on public lands: Should the user pay? *American Forests*, 90(3): 10-11, 49-53.

Keywords: recreation user fees, support, implementation.

Type of citation: Journal article

In its investigation of the fee issue, *American Forests* found that most knowledgeable observers seem to believe recreation user fees are inevitable. This article presents two views on fees. Derrick A. Crandall, President of the American Recreation Coalition, puts forth the rationale in favor of a system of user fees, while Dr. B.L. Driver, a research forester with the U.S. Forest Service, addresses the difficulties that must be faced in implementing such a system.

107c. Crompton, John L. (1984). How to establish a price for park and recreation services. *Trends*, 21(4): 12-21.

Keywords: price, cost, cost recovery, fees, differential pricing.

Type of citation: Journal article

The approach to establishing a price discussed in this article consists of three stages. Stage 1 requires an agency to determine what proportion of the costs incurred in delivering a service should be recovered from direct pricing. Stage 2 recognizes that a service's price has to be perceived as reasonable by potential client groups or they will either refuse to pay and/or will vigorously protest through the political process. In Stage 3 the appropriateness of varying this price for some user groups or in specified contexts is considered. This approach is an alternative to arbitrarily choosing an initial price with the main purpose being to raise revenue.

174. Crompton, John L. (1984). The equitability of full-price policies for senior citizens. *Journal of Park and Recreation Administration*, 2(1): 3-8.

Keywords: senior citizens, pricing.

Type of citation: Journal article

The rationale for offering leisure services to senior citizens at reduced prices rests on the assumption that senior citizens are a low-income sector of the population and cannot afford to pay regular prices. The data (national averages) presented in this paper, however, demonstrate that senior citizens are no worse off than the rest of the population.

The poverty problem in the United States is indigenous across all age groups and is not concentrated among senior citizens. Thus, it is unfair to the non-elderly to offer price discounts to the elderly. Since senior citizens constitute one of the fastest-growing target markets in the country, continuing to give them price discounts will inflict an increasing and inequitable burden of subsidy on all other citizens.

179. Crompton, John L. (1984). Treating equals equally: Common abuses in pricing public services. *Parks and Recreation*, September: 67-71.

Keywords: prices, equity, discount passes, senior citizen discounts, youth recreation.

Type of citation: Journal article

The first requirement of any public recreation and park agency in establishing prices for its services is that the prices should be fair. This article describes three contexts in which this rule calling for fair treatment is frequently broken: 1) offering of season and multi-use discount passes; 2) discounts for senior citizens; and 3) the fee structure for youth recreation activities. The purposes of each type of discount is discussed, with examples of situations when the discount is unfair or not meeting its goals.

107g. Fargo, Heather and Nakata, Lynne. (1984). Minimizing the impact of fees on low income users. *Trends*, 21(4): 36-38.

Keywords: low income visitors, fees, public agencies.

Type of citation: Journal article

Regardless of the studies which show support for fees among all segments of the public, the problem of minimizing the negative impact of fees on low income visitors must still be addressed. Recreation rates are lower among low income populations. This paper outlines a number of options and examples to consider and possibly implement to minimize the impact of fees on low income visitors.

101. Fletcher, James Edward. (1984). The effect of controlled access and entrance fees on park visitor safety and security. *Journal of Park and Recreation Administration*, 2(4): 13-23.

Keywords: crime, depreciative behavior, law enforcement, nonuse, perceptions, safety, security, visitor protection.

Type of citation: Journal article

This research is a follow-up to a previous study on park safety and security problems conducted at five Somerville Lake parks in Texas. The findings of that study led to the formulation of the research objective for this study, which was to evaluate the effect of

controlled visitor access and entrance fees on actual and perceived safety and security problems in the parks. Data were collected from two sources: 1) crime and incident reports from area law enforcement agencies and the park managers; and 2) structured on-site interviews with park users. It was concluded that controlled access parks with entrance fees were safer than parks with uncontrolled access and no entrance fees. This could be because persons who could potentially commit a criminal act may be uncomfortable with the visibility that they receive at entrance booths, and prefer parks with uncontrolled access and no fees.

182. Funkhouser, G. Ray. (1984). Using consumer expectations as an input to pricing decisions. *Journal of Consumer Marketing*, 6: 35-41.

Keywords: consumer price expectations, reactions to price, purchasing experience, self-image.

Type of citation: Journal article

This paper presents experimental evidence that, for at least some purchase situations, consumers' expectations of what a thing ought to cost may be a better predictor of choice between offerings than are the predictions from some consumer behavior price theories. To test this theory, 100 MBA students were given two tasks: 1) to state what they felt they would typically pay for one of two goods (a measure of their price expectation), and 2) to select one of two alternatives of the other good, the only difference being price. Results support the hypothesis that buyers may judge the appropriateness of a price not so much on the basis of economic advantage or assumed quality differentials, but on what they feel the price ought to be. Price expectations may derive from a number of influences, including purchasing experience, comparisons with other similar goods, social expectations, and self-image.

280. Jones, Sarah M. (1984). Nationwide study documents: State of the art in park and recreation finance. *Trends*, 21(4): 42-48.

Keywords: park and recreation departments, funding sources, fees and charges, innovative funding techniques, attitudes.

Type of citation: Journal article

A nationwide survey of public park and recreation departments was conducted in 1982. This paper reports the results of the financial aspects of the survey. The topics discussed include funding sources, budget cuts, fees and charges, innovative funding techniques, private sector involvement, and attitudes towards charging fees.

107e. Kozlowski, James C. (1984). Fees may have adverse impact on recreational use immunity. *Trends*, 21(4): 26-30.

Keywords: negligence suits, sovereign immunity, fees.

Type of citation: Journal article

The most significant developments in public recreation law appear to be in the area of personal injury liability. Persons injured on public recreational facilities are now able to bring negligence suits against governmental entities under the various state tort claims acts. A landowner loses immunity (becomes responsible) for providing safe premises and warning the recreation user of potential hazards when a fee is charged. A case study of an incident in Nevada is used to illustrate how fees are involved in this process.

107a. Mackintosh, Barry. (1984). Visitor fees in the National Park system: A look back. *Trends*, 21(4): 4-8.

Keywords: national parks, history of fees, going rate price.

Type of citation: Journal article

This paper reviews the history of fees on public lands. Specifically addressed are auto permit fees, visitor fees, the Land and Water Conservation Fund Act, Corps of Engineers and Forest Service fees, and the National Park Service visitor fee study in 1976-77.

60. Manning, Robert E.; Callinan, Elaine A.; Echelberger, Herbert E.; Koenemann, Edward J. and McEwen, Douglas N. (1984). Differential fees: Raising revenue, distributing demand. *Journal of Parks and Recreation Administration*, 2(1): 20-38.

Keywords: user fees, differential fees, revenue, demand, peaking, park management.

Type of citation: Journal article

To determine the extent to which differential fees would influence campsite selection patterns, a range of differential fees based on campsite popularity was assigned at three Vermont state parks. Campers had knowledge of the differential costs of campsites before they chose one and paid for it. Campsite receipts from August 1982 were used to collect selection data and to obtain addresses to send questionnaires to campers. The questionnaires collected data on their camping visit, experience and equipment, level of satisfaction with the park experience, socioeconomic characteristics, and the importance of price in selecting a campsite. The findings suggest that the differential fee system did cause a small but statistically significant shift in campsite selection patterns from more heavily used to less used sites. No socioeconomic or other discriminatory effects were found as a result of the differential fee system.

107d. Nakata, Lynne. (1984). Revenue management in the National Park Service. *Trends*, 21(4): 22-25.

Keywords: National Park Service, recreation fees, revenue management program.

Type of citation: Journal article

To adjust for some inequities of public land recreation (costs vs. revenues) and to let fees rise to a fair level, the National Park Service initiated a revenue management planning program in 1983. The intent was to explore the range of services which might qualify for user fees, and to consider any changes in fees for existing services and any options for private sector support. Some of the strategies proposed in this program, and their benefits, are described in this paper.

8. Rosenthal, Donald H.; Loomis, John B. and Peterson, George L. (1984). Pricing for efficiency and revenue in public recreation areas. *Journal of Leisure Research*, 16(3): 195-208.

Keywords: recreation, pricing, marginal cost, economic efficiency.

Type of citation: Journal article

This article advances the viewpoint that rationing outdoor recreation use by using marginal cost pricing is best because it maximizes net economic benefits. The necessary conditions for pricing outdoor recreation to be economically appropriate are that the marginal cost of using the area be greater than zero, and the costs of charging fees not be excessive. Marginal costs arise from three sources: 1) overcrowding; 2) ecological damage; and 3) operating expenses. Assessing fees for wilderness, dispersed, and lake and reservoir recreation are discussed. In addition to raising revenues, pricing can be a valuable tool to redistribute recreation use over time and space, to encourage people to adjust their timing and location choices to save money, and to help make recreation programs more self-supporting.

199. Schreyer, Richard and Knopf, Richard C. (1984). The dynamics of change in outdoor recreation environments--Some equity issues. *Journal of Park and Recreation Administration*, 2(1): 9-19.

Keywords: change, succession, displacement, satisfaction, recreation behavior.

Type of citation: Journal article

Changes in patterns of participation in outdoor recreation environments may have a significant impact on visitor satisfaction and may affect the kinds of recreation opportunities available. This paper concentrates on two concepts of change - social succession and displacement - to show how change can occur and why it is important to understand the forces affecting change. Six concepts taken from recreation motives research are discussed in relation to their importance to understanding the dynamics of succession and displacement. Next, five classes of recreationists most likely to encounter problems as a result of uncontrolled change are identified. Persons most attuned to the specificity and relative uniqueness of a resource are those most likely to be affected by

the process of change. The most endangered recreationists are those who strive for intense and non-robust outcomes (such as solitude, achievement, and self-awareness), have developed strong relationships with their settings, have accurate knowledge of what the environment offers, and have limited opportunities for finding alternatives.

168. Walsh, Richard G.; Loomis, John B. and Gillman, Richard A. (1984). Valuing option, existence, and bequest demands for wilderness. *Land Economics*, 60(1): 14-29.

Keywords: wilderness preservation, contingent valuation method, value of wilderness.

Type of citation: Journal article

While this paper is concerned with the benefits and costs of wilderness recreation, it differs from previous research by introducing public nonuse values to the analysis of wilderness designation. Recently, some people have questioned whether the benefits of additional wilderness designation exceed opportunity costs. The preservation value of wilderness was measured using the contingent valuation method. A sample of 218 Colorado residents participated in a mail survey in 1980. Study respondents were asked to make a series of four budget allocation decisions based on total annual benefits received from increments in wilderness designation. Then they were asked to allocate the highest amount reported among the four categories of value: recreation use, option, existence, and bequest demands. Analysis shows that nonuse demands increase at a decreasing rate with added designation. An empirical procedure was adopted to explore the effects of a large number of socioeconomic and preference variables on willingness to pay for preservation values. The results confirm that the general population may be willing to pay for the preservation of natural environments, and their option, existence, and bequest values should be added to the consumer surplus of recreation use to determine the total economic value of wilderness to society.

76. Burnham H. Martin and Dorothy T. Taylor, Eds. (1984). *Fees For Outdoor Recreation On Lands Open To The Public*, Conference Proceedings. Gorham, NH: Research Department, Appalachian Mountain Club. 153 pp.

Keywords: proceedings, overview, perceptions, pricing, case studies.

Type of citation: Proceedings

This conference was organized in response to the lack of information and research about fees for backcountry use. This proceedings contains over 30 papers. Its contents come from transcripts of talks and discussions with topics covering cultural, economic and legal principles and theories, public perceptions of and reactions to fees, case studies, and the future of fee programs. Manager and user perspectives are represented.

214. Zalatan, Antoine. (1984). Pitfalls in recreation pricing. *Recreation Research Review*, 11(1): 38-42.

Keywords: pricing, user fees, government intervention, costs, recreation services.

Type of citation: Journal article

The imposition of user fees can raise several problems. This paper discusses three of these problems to illustrate some pitfalls and to highlight the need for a comprehensive approach to pricing. The first problem discussed is related to the objective of government intervention in the recreation sector, and the rationale for treating recreation as a public good. The second dilemma discussed is cost separation: 1) each recreation service or group of services should possess its own costs, and 2) costs should be separated into fixed and variable costs. The third problem discussed is how to allocate economic resources to maximize aggregate welfare. The author concludes that the most optimal method of pricing recreation services is marginal cost.

1983

173. Bumgardner, Walter H. (1983). Review of Recreation Fees and Charges at Selected Campgrounds and Recreation Areas (Draft Letter Report, Prepared for the Department of the Army Office of the Chief of Engineers). Vicksburg, MS: Recreation Research Program, Environmental Laboratory, U.S. Army Waterways Experiment Station. 13 pp.

Keywords: fee programs, federal recreation areas, state parks, commercial campgrounds.

Type of citation: Report

The purpose of this study was to provide the Corps of Engineers personnel with information that would be useful in the event the Corps expands its fee-collection program. The study was carried out through telephone inquiries in May and June of 1983, and a thorough review of selected literature. The federal agencies contacted were the U.S. Forest Service, U.S. Fish and Wildlife Service, Bureau of Land Management, Bureau of Reclamation, National Park Service, and Tennessee Valley Authority. Eleven state park systems were also included. Contacts were made with persons who were knowledgeable about agency fees and programs. Information was obtained on the topics of types of fees being collected, pricing approaches, existing fee levels, methods of collection, and the use of campsite reservation systems. The findings did not enable statistical analysis, and conclusions should therefore be viewed as illustrative only.

271. Crompton, John L. (1983). Recreation vouchers: A case study in administrative innovation and citizen participation. *Public Administration Review*, 43(6): 537-546.

Keywords: recreation vouchers, case study.

Type of citation: Journal article

Efforts are continually being made to increase the responsiveness of local government to citizens' needs and demands. The basic idea of vouchers is that citizens exchange them

for services delivered by their preferred supplier. The provider of the services then returns the vouchers to the agency and receives cash for the vouchers acquired. The city of South Barwon in Australia has operated a recreation voucher scheme for six years. This case study was developed from personal interviews with South Barwon officials, citizens of the city, and city documents. The case study describes the operating procedures adopted to implement the recreation vouchers; the expectations of city officials when the voucher scheme was introduced; the scheme's limitations; and the lessons which have emerged. The potential problems and opportunities associated with introducing a similar scheme into North America are discussed.

220. Downing, Paul B. and Frank, James E. (1983). Recreational impact fees: Characteristics and current usage. *National Tax Journal*, 36(4): 477-490.

Keywords: impact fees, states, parks and playgrounds.

Type of citation: Journal article

This article reports the results of a national survey on the use of impact fees (one-time charges levied by local governments against new development) as a revenue device to raise capital outlay funds for parks and playgrounds. To determine current practices in the design and administration of recreational impact fees, a mail survey of 219 local governments nationwide was conducted. The results show that 12 states use some type of impact fee (cash only fees, impact taxes, or fees with in-lieu land), and that the fee is used almost exclusively for capital expenditures. California communities accounted for 40% of the responses. The amount charged for a single family, the kind of facility for which the fee is charged, and type of standard used as a basis for setting the fee are also discussed.

217. Fesenmaier, Daniel R. and Schroeder, Timothy D. (1983). Financing public outdoor recreation: A study of user fees at Oklahoma State Parks. *Review of Regional Economics and Business*, 8(1): 29-35.

Keywords: Oklahoma state parks, recreation fees, attitudes, recreation spending.

Type of citation: Journal article

This article presents the principle findings of a study which investigated alternative pricing policies for Oklahoma state parks. Telephone interviews were conducted with 1,801 randomly selected residents at Oklahoma, and 1,600 on-site interviews were conducted with visitors at Oklahoma state parks and cultural attractions. Information collected included perceptions of the importance of recreation, acceptance of the concept of user fees, and the level of monetary support the public is willing to provide. Oklahoma residents reported a high level of participation, indicating they were actively involved in outdoor recreation. Seventy percent of state park visitors would be willing to pay a \$10.00 annual fee, and 54 percent would be willing to pay a \$3.00 per night camping fee.

A majority (65 percent) of Oklahoma residents indicated that state support supplemented by user fees was the best way to finance the state park system.

7. Mackintosh, Barry. (1983). *Visitor Fees in the National Park System: A Legislative and Administrative History*. Washington, D.C.: Department of the Interior, National Park Service, History Division. 118 pp.

Keywords: visitor fees, national parks, Land and Water Conservation Fund.

Type of citation: Report

This study's purpose is to prepare a comprehensive history of national park visitor fees. Its purpose is not to arrive at or recommend specific solutions, but rather to provide a broader context within which program managers can address concerns.

192. Reiling, Stephen D.; Anderson, Mark W. and Gibbs, Kenneth C. (1983). Measuring the costs of publicly supplied outdoor recreation facilities: A methodological note. *Journal of Leisure Research*, 15(3): 203-218.

Keywords: recreation facilities, costs of provision, pricing.

Type of citation: Journal article

This paper addresses the methodological issues associated with doing cost studies and outlines the procedures that should be used to measure costs in various situations. First the paper reviews how previous cost-of-provision studies have contributed to understanding three issues: 1) increased awareness of recreation land values; 2) heightened concern for managerial efficiency; and 3) the size of and the rationale behind public subsidies. Next, some methodological issues in cost-of-provision studies are discussed. Then three cost categories (opportunity cost of land, capital improvement costs and operation and maintenance costs) which should be considered in cost provision studies are discussed. Methods in previous cost-of-provision studies are summarized and various capital improvement costs of outdoor recreation facilities are presented. The last section discusses the difficulties associated with the measurement of recreational use. The authors conclude that the cost of providing outdoor recreation facilities is larger than many realize, and there is no one "correct" way of estimating the cost of providing public outdoor recreation facilities and services.

183. Schroeder, Timothy D. and Fesenmaier, Daniel R. (1983). Pricing policies in outdoor recreation: A study of state park financing in Oklahoma. In Stanley R. Lieber and Daniel R. Fesenmaier (Eds.), *Recreation Planning and Management* (pp. 55-65). State College, PA: Venture Publishing.

Keywords: Oklahoma state parks, pricing policy, attitudes, costs, recreational spending.

Type of citation: Book chapter

This chapter presents the principle findings of a study which investigated alternative pricing policies for Oklahoma state parks. The study identified three factors that are considered essential in implementing a pricing policy: 1) the public's perception of the importance of recreation; 2) the public's acceptance of the concept of paying user fees; and 3) the level of monetary support the public is willing to provide for recreation opportunities. A telephone survey of 1,801 randomly selected residents of Oklahoma provided the data. Sixty-five percent of those interviewed indicated that state support supplemented by user fees was the best way to finance the state park system. Comparisons of cost effectiveness indicate that the economic value of individual activities varies substantially. For many activities, the actual costs of provision can easily be recovered, while others, such as backpacking or day hiking, require that the state carry most of the financial burden.

230. Walsh, Richard G.; Miller, Nicole P. and Gilliam, Lynde O. (1983). Congestion and willingness to pay for expansion of skiing capacity. *Land Economics*, 59(2): 195-210.

Keywords: downhill skiing, willingness to pay, congestion, external benefits.

Type of citation: Journal article

New or expanded skiing capacity in Colorado may enhance opportunities for visitors to substitute areas and to reduce congestion at existing sites. Increased willingness to pay by those who continue to use existing ski areas on peak days should be considered an external benefit of the new or expanded areas. This paper provides an empirical test and confirmation of the economic significance of this external benefit to the valuation of new or expanded ski areas. The analysis assumes that congestion has a negative effect on willingness to pay. The study sites consisted of three popular ski resorts in Colorado, and data were obtained from on-site interviews with 236 skiers during the winter of 1980. Willingness to pay to avoid congestion was positively associated with items including annual household income and distance to the next most preferred ski area, and was negatively related to items including annual days of skiing at the site and years of skiing experience in general and medium-sized ski areas. Results also indicate that the estimates of economic optimal capacity for two of the study sites are substantially lower than the Forest Service's comfortable capacity standards for these sites. Adopting the lower economic capacity standards would lower congestion and lift-line waiting, resulting in higher willingness to pay for lift tickets at all sites.

1982

205. Crompton, John L. (1982). Psychological dimensions of pricing leisure services. *Recreation Research Review*, 9(3): 12-20.

Keywords: pricing, psychological dimensions, reactions to price.

Type of citation: Journal article

The method for establishing a specific price should consider the psychological impact which that price will have on potential clients. The reactions of client groups to price changes are sometimes based on emotion rather than on the rationale and logic of the economist. This paper explores eight psychological dimensions of pricing leisure services and gives some examples of public reactions. These dimensions are: 1) expected price threshold; 2) tolerance zone; 3) client adjustment period; 4) price quality relationships; 5) anchor pricing; 6) changing the perceived value of services; 7) customary pricing; and 8) odd pricing. A routine evaluation of all prices should be undertaken annually, and prices should be adjusted appropriately to reflect changes in objectives, costs or demand.

42. Ellerbrock, Mike. (1982). Some straight talk on user fees. *Parks and Recreation*, January: 59-62.

Keywords: user fees, benefits, costs, recreation.

Type of citation: Journal article

A straightforward discussion of the pros and cons of implementing user fees is presented in this paper. Moral values, egalitarian concerns, and democratic ideals are explored in connection with fees.

6. Ellerbrock, Michael J. (1982). *Implementing User Fees at Public Parks and Recreation Areas* (Staff Paper No. 201). Gainesville, FL: University of Florida, Food and Resource Economics Department, Institute of Food and Agricultural Sciences. 10 pp., 4 pp., 12 pp.

Keywords: user fees, implementation, cost tracking, revenue projection, pricing.

Type of citation: Report

This paper is primarily concerned with practical aspects of implementing user fees. The discussion focuses on monitoring costs of providing recreation services, projecting revenues, setting price to break-even (average cost pricing), and setting price above costs (marginal cost pricing) for profit maximization. Appendix A is an article discussing philosophical and equity considerations in adopting user fees at public parks and recreation areas. Appendix B is a paper explaining theoretical principles of the demand for recreation, the concept of price-elasticity of demand, and the approaches for measuring the economic value of a recreation program, resource, or facility.

12. Fractor, David T. (1982). Evaluating alternative methods for rationing wilderness use. *Journal of Leisure Research*, 14(4): 341-349.

Keywords: wilderness, rationing, economics.

Type of citation: Journal article

This paper evaluates and compares alternative methods for rationing wilderness use. A fixed wilderness supply for which there is excess demand at a zero price is assumed. The rationing methods considered are price, random selection (lottery), queuing (waiting in line), and reservation. Using standard measurements of social benefit, rationing by price maximizes social benefit. Rationing by price guarantees that those who most avidly desire wilderness access (as measured by willingness to pay) will obtain it, and to some degree, wilderness users will also be providing revenue that can be used to expand the wilderness supply.

273. Holland, Daniel M. (1982). User charges in the wake of tax and expenditure limitations. In *The Impact of Fiscal Restraints: Alternative Financing by Localities* (Monograph #82-7, pp. 1-13). Cambridge, MA: Lincoln Institute of Land Policy.

Keywords: user fees, state revenues, alternative funding source, attitudes.

Type of citation: Report

Restraints on tax revenue have directed attention of state and local governments to alternative sources of revenue. This report examines some of the advantages and disadvantages of user charges, discusses the range of charges in a number of Massachusetts cities and towns, and discusses what taxpayers think of user charges. Results from a survey of U.S. taxpayers in 1981 and a poll of Massachusetts taxpayers in 1980 give dramatically opposed answers. One study showed respondents favored user fees, and the other showed support for taxes. Overall, there appears to be a pervasive move towards increased user charges in all states.

265. Loomis, John B. (1982). Effect of non-price rationing on benefit estimates from publicly provided recreation. *Journal of Environmental Management*, 14: 283-289.

Keywords: recreation benefits, hunting, travel cost model, resource allocation and wildlife management.

Type of citation: Journal article

Setting hunting permit fees too low may result in under-valuation of lottery-rationed species. The primary purpose of this paper is to: 1) estimate empirically what the minimum increase in permit fees is likely to be for bighorn sheep and buffalo in Utah, whose hunting is now rationed by a lottery; and 2) estimate the difference between average willingness-to-pay to hunt these species and the maximum willingness-to-pay, if prices were set to equate the quantity demanded with the available number of permits. Using a modified travel cost model, losses in recreation benefits associated with lottery rationed hunting permits are estimated. The results suggest that the minimum permit fee for bighorn sheep is \$172 (compared to the current fee of \$100), and \$188.50 for buffalo (compared to the current fee of \$88.50). The difference in benefits under pricing and

lottery reflects the difference between maximum and average willingness-to-pay. When a lottery is used, the benefits generated by hunting for these two species is reduced by about 40 percent over the maximum willingness-to-pay benefits. The authors suggests that these results could be relevant to other non-price rationed recreation such as whitewater float trips and wilderness trips. Many recreation resources are rationed with non-priced means, resulting in a willingness-to-pay substantially below that of market resources.

188. U.S. General Accounting Office. (1982). Increasing Entrance Fees -- National Park Service (Report to the Congress, GAO/CED-82-84). Washington, D.C. 51 pp.

Keywords: entrance fees, National Park Service, revenue potential, costs.

Type of citation: Report

At the time this report was written in 1982, National Park Service fees had not been raised for over 10 years. Congress placed a temporary moratorium on raising or initiating fees in 1979 until its concerns about the impact of fees on visitors and the link between entrance fees and operations and maintenance costs were properly addressed. Onsite and telephone interviews with park superintendents were conducted to obtain opinions and documents. The report recommended that Congress lift the moratorium and raise fees at 25 parks, initiate new fees at 23 parks, extend collection hours at 14 parks, and amend the Land and Water Conservation Fund to raise the price of the Golden Eagle Passport.

1981

166. Cordell, H. Ken. (1981). Pricing for allocating low-density recreational use between private and commercial users of natural areas. In Leon J. Buist (Ed.), Proceedings of the National Conference on Allocation of Recreation Opportunities on Public Land between Outfitted and Nonoutfitted Publics (Publication R-149, pp. 77-103). Reno, NV: Nevada Agricultural Experiment Station, College of Agriculture, University of Nevada.

Keywords: recreation use allocation, private users, commercial users, price rationing, pricing strategy.

Type of citation: Book chapter

This paper addresses the issue of allocating for recreation use of low-density public recreation resources between private users and users of commercial outfitting services. The description and analysis of this issue includes the activities of river running, backpacking, and fishing. After reviewing the economics literature and discussing the problem of allocation and rationing, a pricing strategy is introduced. A discriminatory pricing system where different prices are charged at different areas for different recreational pursuits and where different prices are charged for peak and off-peak periods is proposed. This system is an efficient way of distributing use according to consumer

demand and producing revenues which are sufficient to cover marginal supply costs. Private and commercial users should be charged the same price.

58. Crompton, John L. (1981). How to find the price that's right. *Parks and Recreation*, 16(3): 32-39, 64.

Keywords: pricing methods, public goods.

Type of citation: Journal article

This paper describes various pricing approaches and the rationale used to justify each. There are two pricing methods which are not directly based on costs: 1) going rate pricing, which establishes a price that reflects the average of those charged for similar services; and 2) demand oriented pricing, which establishes price by determining what various groups are willing to pay. There are three methods which are based on costs: 1) variable cost pricing covers all variable costs; 2) partial overhead pricing, which covers all variable costs and some proportion of fixed costs; and 3) average cost pricing, which covers all fixed and variable costs.

175. Gibbs, Kenneth C. and van Hees, Willem W.S. (1981). Cost of operating public campgrounds. *Journal of Leisure Research*, 13(3): 243-253.

Keywords: cost analysis, campgrounds, economic analysis, cost functions, USFS campgrounds.

Type of citation: Journal article

This paper examines U.S. Forest Service campgrounds in Oregon and Washington to illustrate costs per site and per recreation visitor-day (12 hours) of operating public campgrounds of various development levels. Data sources consisted primarily of personal interviews with recreation and timber specialists and other personnel, and campground usage figures. Facility costs were the most significant, representing 66 percent of the total cost per site and per recreation visitor day (RVD). The relationship between costs and both campground size (number of sites) and use (RVD's) indicate that facilities should be fully utilized to reduce unit costs. A manager can identify a campground as having high cost per site but low cost per RVD, perhaps indicating a high level of use, or the cost per RVD may be high, which indicates low use. This information can be useful in setting fees.

283. Kirsch, Sondra (Ed.). (1981). *Public Policy Model for Charges and Fees*. Arlington, VA: National Recreation and Park Association. 45 pp.

Keywords: fees and charges, policy model, public parks and recreation agencies.

Type of citation: Report

Public officials are searching for guidelines, supportive rationale, or policy models from which to develop local policies on fees and charges. In response to this need for direction, this publication provides an in-depth probe into fees and charges. Results from selected studies are discussed, which is followed by a proposed fees and charges policy model. The seven steps of this model are outlined. A sample fees and charges policy for a Parks and Recreation Department is offered as an example. The appendices of this report are examples of fee policies and/or programs of four different local parks and recreation departments in the U.S.

187. Manning, Robert E. and Baker, Sidney C. (1981). Discrimination through user fees: Fact or fiction? *Parks and Recreation*, September: 70-74.

Keywords: state park, entrance fees, visitor use, park quality, activities, discrimination.

Type of citation: Journal article

To determine how an entrance fee might effect visitation to a park, an entrance fee at a Vermont park was instituted in 1980, and its effects on visitor use were closely monitored. Visitors were surveyed in 1979 (pre-fee) and in 1980 (post-fee) to gather information on user characteristics, attitudes toward park financing and evaluation of park facilities and services. Detailed measurements of park use were also obtained using traffic counters and visual observations. Conclusions drawn include: 1) a majority (99 percent) of visitors supported establishment of the entrance fee in 1979, and there was a similar amount of support after the fee was instituted in 1980; 2) the fee had little effect on total park use, but did effect the types of activities occurring in the park; 3) after the fee was established, the number of cars entering the park was halved, although total park use remained the same (20 percent of park users walked or biked to the park more often); 4) facility and other improvements as a result of fee revenues were noticed and approved of by visitors; and 5) the fee did not discriminate against older persons.

92. Menz, Fredric C. and Mullen, John K. (1981). Expected encounters and willingness to pay for outdoor recreation. *Land Economics*, 57(1): 33-40.

Keywords: willingness to pay, user contact levels, wilderness, expectations, willingness to travel.

Type of citation: Journal article

The hypothesis tested in this research is that individual willingness to pay for a trip to the Adirondack High Peaks Wilderness is influenced by the expected number of encounters with other groups during the trip, family income, education, number of days-on-site, seasonal visits, number of people in the recreationist's party, and experience. Data was collected from a survey which was mailed to a random sample of 600 Adirondack High Peaks users in May of 1975. Results from 482 completed surveys indicate that an increased number of encounters adversely affects willingness to pay for certain types of

outdoor recreation activities. Visitor income, party size, and experience had no effect on willingness to pay.

186. Monroe, Kent B. and Petroshius, Susan M. (1981). Buyers' perceptions of price: An update of the evidence. In H. Kassarian and T. Robertson (Eds.), *Perspectives in Consumer Behavior* (pp. 43-55). Glenview, IL: Scott, Foresman.

Keywords: price, buying behavior, price perception.

Type of citation: Book chapter

In this paper, the traditionally assumed role of price as a determinant of buyer behavior is contrasted with the emerging evidence of the complexity of price as an influence on purchase decisions. After examining and critiquing the traditional model of buyer behavior, the multidimensional role of price in buyers' perceptions is discussed with references to other economic theories and previous research findings. The evidence suggests that the lowest and highest prices in the product line are more noticeable, and may accentuate the perceived value for a given product (a bargain) or diminish the perceived value (too expensive). A price is evaluated in comparison with a reference price. When actual price is perceived to be too different from the reference price, the price is not likely to be considered as fair. When prices are perceived to be similar, then price is unlikely to be influential when the buyer chooses from similar product/service alternatives.

193. Price, Colin. (1981). Charging versus exclusion: Choice between recreation management tools. *Environmental Management*, 5(2): 161-175.

Keywords: charging, exclusion, recreation management, consumers' surplus, distribution of recreational opportunity, substitute sites, intuitive expectations, visit rate, site carrying capacity, equilibrium price, elasticity, utility functions.

Type of citation: Journal article

This paper compares the tools of fees and site use quotas as means of managing use at overused recreation sites. Regulation and the cost of recreation, visitor origins, site substitution, and the unpredictability of visitation are examined. Both fees and site use quotas seem equally costly to administer, and both involve equal costs to consumers if visitors come from one origin. If visitors come from different origins, costs may be greater and consumer satisfaction less under either tool depending on the type of demand for the site. The more equitable tool depends on the representation of higher and lower income participants from near and distant origins. The positive and negative aspects of each tool are discussed.

1980

200. Baumol, William J. (1980). Theory of equity in pricing for resource conservation. *Journal of Environmental Economics and Management*, 7: 308-320.

Keywords: equity, pricing, resource conservation, demand elasticity, superfair distributions.

Type of citation: Journal article

This paper constructs some theoretical tools that can be used to examine equity issues raised in the case of using pricing as a means to conserve scarce resources. Particular attention is given to the criteria that can be used to judge the equity of price increases, and the problem raised by differences in elasticity of demand by different customer groups. Price discrimination places a higher burden on people with inelastic demands. Lower income groups facing fewer substitute sites are more adversely affected by price increases. A "superfair" distribution (a distribution under which each and every participant obtains a share of the total which is equal to or greater than that individual's pro-rata share) is introduced and discussed.

219. Cory, Dennis C. (1980). Equity-efficiency tradeoffs in natural resource management: The case of congestion. *Journal of Environmental Systems*, 9(4): 325-334.

Keywords: equity, efficiency, congestion, user fees, rationing policies.

Type of citation: Journal article

Resources are allocated efficiently when the net benefits resulting from their use are maximized. When the benefits and costs of a resource are distributed equally among affected parties, distributive equity exists. The interrelatedness of equity and efficiency goals is poorly understood. This paper argues that by extending the traditional efficiency analysis to include the relationship between equity and efficiency, valuable information for decision making is acquired. The paper discusses the welfare implications of facility overuse, and analyzes the efficiency and equity limitations of traditional rationing policies, including user fees and reservation systems. An alternative solution of socially efficient user fees, which incorporate differential weighting of gains and losses to various income groups, is proposed.

184. Gibbs, Kenneth C. (1980). Public campgrounds: Are they profitable? *Journal of Forestry*, August: 466-468.

Keywords: cost analysis, national forest campgrounds, user fee revenues.

Type of citation: Journal article

This article focuses on the costs and profitability (difference between revenue from fees and all costs) of U.S. Forest Service campgrounds in Washington and Oregon. Cost analysis indicates that managing the average campground costs from \$0.28 to \$3.01 per recreation visitor day (RVD), with the amount depending on level of campground development. Revenue per RVD ranged from 0 to \$.27. Cost implications of four

possible management goals are examined: 1) total subsidization; 2) no subsidization; 3) users pay operation and maintenance costs; and 4) subsidize only primitive campgrounds.

1979

281. U.S. Department of the Interior, Heritage Conservation and Recreation Service. (1979). Fees and Charges Handbook: Guidelines for Recreation and Heritage Conservation Agencies . Washington, D.C.: Heritage Conservation and Recreation Service, U.S. Department of the Interior. 77 pp.

Keywords: fees and charges, self-sufficiency, public agencies, nonprofit organizations, impacts, implementation,

Type of citation: Report

This handbook discusses how fees and charges can be used to increase the self-sufficiency of public agencies or nonprofit organizations in providing leisure services and heritage protection. The handbook discusses: 1) the benefits and issues facing agencies considering new or expanded fee programs; 2) potential impacts from fees; 3) assessing the feasibility of new fees or changing existing fees; and 4) considerations for implementing fee programs.

1978

212. Hoover, Robert L. (1978). User Fees for Hunting and Fishing on Public Lands (Prepared for the U.S. Forest Service, State Publication Code DOW-R-M-6-78). Denver, CO: Colorado Division of Wildlife. 65 pp.

Keywords: hunting, fishing, user fees, legislation, federal agencies, state agencies, impacts, funding alternatives.

Type of citation: Report

The purpose of this paper is to address the question, "Should hunters and anglers pay for the goods and services provided on public lands?" The information provided is to assist the U.S. Forest Service in fulfilling its responsibilities under the Forest and Rangeland Renewable Resources Planning Act. The report first presents a history and summary of policies, laws and regulations pertaining to state and federal user fees. Following is a description of state and federal fees in the present time, and a discussion of concerns, conflicts and impacts of user fees. Finally, a brief evaluation of a number of alternatives which represent various methods for raising or reallocating revenue from hunters and anglers is presented.

1977

198. Gibbs, Kenneth C. (1977). Economics and administrative regulations of outdoor recreation use. In Jay M. Hughes and R. Duane Lloyd (Comps.), Outdoor Recreation Advances in Application of Economics, Proceedings of a National Symposium (pp. 98-104): USDA Forest Service, General Technical Report WO-2.

Keywords: outdoor recreation, economics, demand, recreation fees.

Type of citation: Proceedings paper

The combination of low fees and vastly increased demand at outdoor recreation areas is causing overcrowding, which creates a need for regulation to preserve the quality of the resource. Fees can be an effective allocative mechanism. This paper first establishes outdoor recreation as an economic good, and then clarifies some economic concepts, including demand, and discusses the role of economics in administering outdoor recreation. A discussion of the main functions of price in reference to a market follows. Arguments in support of fees are then considered.

1976

23. Economics Research Associates. (1976). Evaluation of Public Willingness to Pay User Charges for Use of Outdoor Recreation Areas and Facilities (Prepared for U.S. Department of the Interior, Bureau of Outdoor Recreation). 45 pp.

Keywords: willingness to pay, fee policy, fee programs, user fees, attitudes, participation.

Type of citation: Report

The Bureau of Outdoor Recreation authorized this study to develop base data on fee policies of government agencies, fee levels in comparable public and private areas, and public willingness to pay for recreation services. Data were collected from a national citizen survey of 800 households, interviews with state, local, and federal recreation administrators, interviews with 240 state, city, and county recreation departments, and interviews with representatives of private recreation areas. Most respondents (52 percent to 76 percent, depending on the demographic group) felt recreation services should be on more of a pay-as-you-go basis. The greatest support for pay-as-you-go fees came from the elderly, the lower income groups, and rural residents, which often corresponded to persons with lower rates of recreation participation. Generally, participants would also be willing to pay significantly higher user fees at public areas for all activities. Respondents felt that 52 percent of fee revenues should contribute to special facilities, 47 percent to operations and maintenance, and 33 percent to land acquisition. An entrance fee was heavily favored (76 percent) over activity fees (24 percent). Considerably more city and county recreation administrators felt that users should not pay for outdoor recreation activities (21 percent and 25 percent, respectively) than state administrators (3 percent). Administrators felt that public reaction to fees was generally one of approval or acceptance. Administrators frequently commented that fees should be one of a group of funding sources, rather than the primary source.

171. Grimes, Michael D.; Pinhey, Thomas K. and Campos, Daniel E. (1976). Pay as you play: An analysis of attitudes toward a fee-for-use approach to outdoor recreation. In Robert M. Linn (Ed.), Proceedings of the First Conference on Scientific Research in the

National Parks, Volume II (National Park Service Transactions and Proceedings Series, Number 5, pp. 1013-1019). Washington, D.C.: U.S. Department of the Interior.

Keywords: outdoor recreation opportunities, user fees, attitudes.

Type of citation: Proceedings paper

As demand for recreation continues to increase, additional strains are placed on already crowded facilities. This paper focuses on fees as a means of expanding outdoor recreation opportunities. Of particular interest are: 1) the attitudes of Louisiana citizens toward fees to augment governmental expenditures for recreational development; and 2) a tentative willingness to pay assessment for access to several popular outdoor activities and facilities. A total of 926 Louisiana residents participated in the study. Almost one-third of the entire sample suggested fees and one-third suggested diverting money from the budget as means of providing additional revenues and resources. Other results include rural residents favored the budget diversion over fees, and more recreationally active people favored fees more than the inactives.

1975

67. Becker, Boris W. (1975). The pricing of educational-recreational facilities: An administrative dilemma. *Journal of Leisure Research*, 7(2): 86-94.

Keywords: pricing, museums, merit goods, user fees.

Type of citation: Journal article

This paper presents an economic analysis of the financial problems of educational-recreational facilities, and discusses three pricing schemes as potential solutions. The pricing schemes discussed are zero price, marginal cost pricing, and average cost pricing. In conclusion, the author identifies a series of five issues which must be addressed by the decision-maker to implement a rational pricing plan: 1) all fixed and variable costs must be identified; 2) socioeconomic characteristics and motivations of present users of the facility must be determined; 3) a demand function for the facility must be identified; 4) the external benefits that flow to society because of the use of the facility must be determined; and 5) the cost of implementing a fee program must be considered.

222. Aronson, J. Richard and Schwartz, Eli. (1975). User charges and special districts. In J. Richard Aronson and Eli Schwartz (Eds.), *Management Policies in Local Government Finance* (pp. 166-183). Washington, D.C.: International City Management Association.

Keywords: user charges, special districts, local government, pricing.

Type of citation: Book chapter

This chapter considers the use of special districts (special local government units which provide services that cannot easily be provided by existing general-purpose local governments) and their use of user fees. It opens with a discussion of independent special districts, their functional responsibilities, fiscal characteristics, and interstate differences. Then the nature and use of pricing mechanisms, including user fees is discussed. Theoretical academic developments which have been used as a justification for increased use of fees as a means of supporting governmental activities are outlined. Five theoretical developments are presented: 1) the character of public goods and services; 2) the extent to which fees can contribute to allocative efficiency; 3) how fees can correct or change the undesirable aspects of existing patterns of economic activity such as highway congestion and the pollution of air, water and landscape; 4) the concept of equity; and 5) theories of marginal cost pricing and peakload pricing.

170. LaPage, Wilbur F.; Cormier, Paula L.; Hamilton, George T. and Cormier, Alan D. (1975). Differential Campsite Pricing and Campground Attendance (Research Paper NE-330). Upper Darby, PA: USDA Forest Service, Northeastern Forest Experiment Station. 6 pp.

Keywords: campsite pricing, recreation expenditures, differential fees, camper behavior, park attendance, fee policies, New Hampshire State Parks.

Type of citation: Report

In 1973, Idaho, Maine, New Hampshire, and Vermont state park campgrounds established differential camping fees based on residence. An analysis of 1972 and 1973 camping permits for a New Hampshire state park discovered several changes in the characteristics of campers' visits. Differentials at this park included a premium charge for waterfront sites and a preferential rate for New Hampshire residents. Attendance by state residents increased significantly over the average for the preceding 2 years. Total revenue increased by 61 percent. The preferential rates did not produce longer visits or more frequent repeat visits by state residents. Use of waterfront sites did not decline.

208. Mumy, Gene E. and Hanke, Steve H. (1975). Public investment criteria for underpriced public products. *American Economic Review*, 65(4): 712-720.

Keywords: underpricing, zero-pricing, user fees, public products, efficiency.

Type of citation: Journal article

It's frequently assumed that marginal cost pricing will be used in benefit-cost analyses. However, political and institutional realities often tend to support policies in which public products are priced below marginal cost. This paper develops evaluative and investment criteria appropriate for cases in which public products are underpriced by reformulating the zero-price evaluative criterion and building upon it. Utilization of the new criteria that assume underpricing leads to an increase in efficiency.

185. Nautiyal, J.C. and Chowdhary, R.L. (1975). A suggested basis for pricing campsites: Demand estimation in an Ontario Park. *Journal of Leisure Research*, 7(2): 95-107.

Keywords: marginal and average cost pricing, experience type, recreation calendar, consumer surplus.

Type of citation: Journal article

Decisions regarding the number of campsites to provide can be made if the marginal benefits associated with additional campsites can be assessed. This paper quantified demand for campsites in a provincial Canadian park by dividing the camping season at the park into groups of days (experience types) that exhibit different demands. The demand curve for campsites was obtained by summing the demand curves for each experience type. Using the demand curve information and the average cost for making sites available, an optimum number of 368 campsites was derived for the park. Based on these results, a differential pricing system which sets price based on experience types is suggested.

267. Tyre, Gary L. (1975). Average costs of recreation on national forests in the South. *Journal of Leisure Research*, 7(2): 114-120.

Keywords: recreation management, cost-benefit analysis, recreation cost, recreation use.

Type of citation: Journal article

Cost-benefit analysis has been suggested as a method to help public resource managers allocate capital resources over an increasingly broad range of competitive alternatives. This paper relates recreation use to recreation costs and shows average costs of recreation opportunities for most types of recreation sites or areas on national forests in the South. Operation, maintenance, construction, overhead, and opportunity costs were gathered, and costs per visitor-day were computed. Costs varied considerably, but many recreation activities proved more expensive than might be expected. Family campgrounds, for instance, cost \$1.28 per visitor-day. Wilderness areas often regarded as expensive but thought to provide a high quality experience, cost \$6.03. Use of places where visits are typically brief, such as observation sites, may cost as little as \$.07 per visit. Average costs are shown along with suggestions as to how the cost-use ratio might be used. For example, roads can be designed to serve as many forest functions as possible, and managers may find such ratios helpful in requesting funds or in allocating funds to various sites and areas, especially when budgeted funds are less than those needed.

20. Willis, C.E.; Canavan, J.J. and Bond, R.S. (1975). Optimal short-run pricing policies for a public campground. *Journal of Leisure Research*, 7(2): 108-113.

Keywords: pricing policies, demand elasticity, regression analysis, quadratic programming.

Type of citation: Journal article

This paper investigates optimal pricing policies for a Massachusetts state park campground in which water-based and non-water-based sites are considered to be substitutes. Estimates of demand relations were made based on data from the daily campground logs during the 1971 camping season. Then a quadratic programming formulation for setting differential prices is described, and results of the optimizations recorded. The demand estimations suggest that where there are rather close substitutes, the demand for outdoor public recreation is responsive to price. Price might therefore be more fruitfully used as a rationing device for matching demands and supplies in a short-run context. The authors contend that the framework demonstrated is operational, straightforward, and will provide improved decisions regarding the selection of short-run prices to allocate fixed recreational facilities.

1974

196. Huszar, Paul C. and Seckler, David W. (1974). Effects of pricing a "free" good: A study of the use of admission fees at the California Academy of Sciences. *Land Economics*, 50(4): 364-373.

Keywords: museum, admission fee, attendance, revenue, distribution impact.

Type of citation: Journal article

In July of 1970, the California Academy of Sciences began charging an admission fee for its facilities. To determine the "before and after" effects of the fee on the size and class distribution of users, over 2,000 questionnaires were completed in a random sample of every fortieth user in May and June in 1970 and 1971. Reduced attendance due to the fees was estimated to be 20-25 percent in 1971. This can either be good or bad depending on whether the museum was initially over-attended or not. The Academy realized a net increase in income of approximately \$323,296 in 1971. Results also show that some lower income groups were priced out of the Academy, while all of the upper income groups increased as a proportion of total attendance. Lower income persons eliminated by the fee tended to be San Francisco residents who previously walked or rode a bus to the Academy. Student attendance also declined by 42 percent after the fee.

1973

246. Cicchetti, Charles J. and Smith, V. Kerry. (1973). Congestion, quality deterioration, and optimal use: Wilderness recreation in the Spanish Peaks Primitive Area. *Social Science Research*, 2: 15-30.

Keywords: congestion, willingness to pay, wilderness experience, encounters.

Type of citation: Journal article

With increasing demand for low-density recreational services and limited supply of facilities to provide them, congestion is becoming an important management problem. The purpose of this paper is to outline a model of congestion, estimate the effect of it upon individual willingness to pay for wilderness experiences, and illustrate how these results might be used for efficient management. A total of 195 users of the Spanish Peaks Primitive Area were surveyed. Respondents were asked to assess their willingness to pay for a finite number of possible trail-camp encounter and length of stay combinations. The results indicate that willingness to pay is significantly affected by encroachments upon the solitude that respondents experience during their trip. Different types of encounters (such as trail versus camp) also seem to affect willingness to pay differently.

1972

138. Fisher, Anthony C. and Krutilla, John V. (1972). Determination of optimal capacity of resource-based recreation facilities. In John V. Krutilla (Ed.), *Natural Environments: Studies in Theoretical and Applied Analysis* (pp. 115-141). Baltimore, MD: The Johns Hopkins University Press.

Keywords: demand, congestion, capacity, maximum recreation benefits, willingness to pay.

Type of citation: Book chapter

Rapid and sustained growth in demand for wildland recreation seems likely to continue and poses some problems regarding the allocation of lands among the various uses. In most instances, the problem is one of determining the most efficient allocation of land. This paper illustrates how a wilderness area with low density recreational use might be managed in accordance with economic principles to provide maximum recreation benefits. The authors present a model for determining optimal capacity and some of the problems in making the model operational. Then to illustrate the model, a hypothetical situation is used assuming chosen numbers of recreation days, encounters, number of users, and willingness to pay bids.

31. James, George A.; Sanford, Gordon R. and Searey, Andrew, Jr. (1972). Origin of visitors to developed recreational sites on national forests. *Journal of Leisure Research*, 4(3): 108-118.

Keywords: travel, visitor origin, self-registration, fee collection.

Type of citation: Journal article

This paper explores how information on visitor origin and recreation use can be obtained from fee areas' self-registration receipts, and examined using various computer outputs. Distances to zipcode centers are determined using longitude/latitude calculations. Information on visitor origin, distances traveled, and destinations can aid in describing future recreational use and understanding benefit-cost relationships. "RECZIP" information (data on origin of visitors and straight-line distances, in miles, to national

forest recreational sites) from 30 national forests having fee sites during 1970 was used to illustrate computer outputs on pattern of visitation to designated campgrounds and day-use sites.

191. Moss, Philip I. (1972). Pricing recreation services. In Selma Mushkin (Ed.), *Public Prices for Public Products* (pp. 335-350). Washington, D.C.: The Urban Institute.

Keywords: pricing, user fees, costs, demand, price elasticity.

Type of citation: Book chapter

This chapter provides a general discussion of the components involved in pricing public recreation services. Before discussing pricing strategies, the following are discussed: 1) types of benefits derived from recreation activities and problems associated with measuring these benefits; 2) identifying who the users are, and who else benefits from the facilities (such as businesses); 3) obtaining provision and use costs; 4) different types of user fees, and 5) income and price elasticities of recreation expenditure or consumption. In addition to marginal cost pricing, other methods that can be used when the goal of user fees is to maximize revenue or minimize cost of fee collection are discussed

1971

165. Brown, Gardner, Jr. (1971). Pricing seasonal recreation services. *Western Economic Journal*, 9(2): 218-225.

Keywords: recreation demand, prices, recreation facilities, capacity.

Type of citation: Journal article

Following a brief discussion of short-run and long-run pricing methods for recreation services, a model using marginal variable cost is presented. The model reflects the value of the quality of the recreation site. Data from a California state park is used to illustrate the practicality of the model and derive an optimum peak-period demand price. This price takes quality of the park and park capacity into consideration. The author argues that this framework is a suitable alternative to the travel-cost expenditure method, which has a number of inadequacies.

270. Kalter, Robert J. and Stevens, Thomas H. (1971). Resource investments, impact distribution, and evaluation concepts. *American Journal of Agricultural Economics*, 53(2): 206-215.

Keywords: equity, equity evaluation, framework, social welfare.

Type of citation: Journal article

The equity consequences of public programs have never been evaluated on an equal basis with their contribution to national economic growth. Since any project-induced change

involves distributional considerations, a framework for equity evaluation is needed. Such a framework needs to consider the distribution of efficiency benefits and positive intergroup transfers, and also cost and reimbursement questions. A potential framework for such an analysis is the principle topic of this paper. Although the model presented can be used in conjunction with different equity classifications, the case study used to test the relevance of the model to empirical situations is the personal income distribution consequences of a proposed water resource investment. The test brought up numerous empirical difficulties and the need for improved data on equity impacts.

1970

100. McCurdy, Dwight R. (1970). Recreationists' attitudes toward user fees: Management implications. *Journal of Forestry*, 68(10): 645-646.

Keywords: attitudes, user fees, national wildlife refuge.

Type of citation: Journal article

To determine what segment of the public favors paying fees and why, the author studied recreationists' opinions of the Land and Water Conservation Fund user fees at the Crab Orchard National Wildlife Refuge in southern Illinois. The study sample consisted of 840 user-groups in 1966 and 283 in 1969. The proportion of recreationists favoring fees did not change greatly from 1966 (61 percent) to 1969 (69 percent). Several factors were found to be related to recreationists' approval of fees: 1) improvements in facilities and services; 2) understanding why fees were being charged; 3) awareness of fees prior to the visit; 4) non-local residents were more apt to approve of fees; 5) users with less than 5 years experience in visiting the site were more likely to favor fees; and 6) family groups were more likely to support fees.

1968

65. LaPage, Wilbur F. (1968). The Role of Fees in Campers' Decisions (U.S. Forest Service Research Paper NE-118). Upper Darby, PA: USDA Forest Service, Northeastern Forest Experiment Station. 24 pp.

Keywords: camping fees, New Hampshire state parks, attitudes, willingness to pay, demand.

Type of citation: Report

To probe into the role camping fees play in decisions of where to camp and how long to stay, the U.S. Forest Service and New Hampshire Division of Parks conducted a study of 712 family camping groups. The study was designed to survey a cross-section sample of campers who visited the New Hampshire state park system between mid-June and Labor Day in 1967. Five main independent variables were found to influence camping decisions: 1) the amount and variety of a family's past camping experience; 2) the amount of money invested in camping equipment; 3) preferences for specific campground facilities, locations, and management; 4) awareness of alternatives; and 5) other factors

including weather, health, and personal finances. Overall, only 7 percent of respondents were opposed to fees or were undecided whether they favored a fee or not. Other methods of paying the fee, willingness-to-pay, and differences in demand for camping by region are also discussed.

1966

167. Knetsch, Jack L. (1966). Financing public outdoor recreation. In *Proceedings of the National Conference on Policy Issues in Outdoor Recreation* (pp. 83-103). Washington, D.C.: U.S. Department of the Interior, Bureau of Outdoor Recreation.

Keywords: outdoor recreation costs, user charges, commodity.

Type of citation: Book chapter

This paper provides a general overview and discussion of pricing policies and principles, the role of the government in the provision of recreation, and the possible effects, both positive and negative, of user fee programs. The last section of the paper contains a discussion section on policy issues and the responses of conference participants.

1964

221. Wennergren, E. Boyd. (1964). Valuing non-market priced recreational resources. *Land Economics*, 40(3): 303-314.

Keywords: demand estimates, costs, value of recreation resources.

Type of citation: Journal article

The intent of this discussion is to develop the logic and rationale for an approach to the problem of valuing resources used in outdoor recreation. The activity of pleasure boating is used to illustrate the model which is presented. The model argues that the travel costs to and from the site plus on-site expenditures constitute the marginal costs of the boating experience and thus simulate the role of price in the consumption process. Although the model is limited by quantification problems associated with attempts to estimate demand, it reveals a logical and rational basis for demand derivation which is comparable to that of other commodities.

1963

178. Argow, Keith A. and Fedkiw, John. (1963). Recreation user fee income: How far does it go toward meeting costs? *Journal of Forestry*, 61: 751-753.

Keywords: user fees, public recreation areas, revenues, costs.

Type of citation: Journal article

This paper discusses the results of a study conducted by the Outdoor Recreation Resources Review Commission in 1960 which inventoried the use of user fees by all

publicly owned outdoor recreation areas. Usable responses were received from 4,888 outdoor recreation areas. Data from the surveys showed that three out of every ten of these recreation areas charged user fees in 1959. Only 14 percent of these areas collected fees equal to or greater than their total noncapital expenses. User fee income was applied directly toward operations at about one-half of the areas. The most important source of operating funds was appropriations from a general fund.