

Sociological Contributions to Everglades Backcountry Use Management Plan

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Of the 1.4 million acres comprising Everglades NP, all but approximately 20,000 acres can be considered backcountry, much of it relatively inaccessible because of dense Mangrove thickets, pinnacle rock and extensive mud flats. Most of the use is seasonal, occurring in the drier winter months when insect pests, heat, and humidity are less intense.

Prior to the 1960s, recreational use of Everglades consisted largely of day-use boating and fishing. Opportunities for overnight camping in the backcountry were limited due to extreme scarcity of high, dry ground. The increased demands for overnight camping during the 1960s led managers to construct "chickees" (i.e., covered wooden decks approximately five meters square, raised above the water on pilings) which has its origins with the Miccosukee Indians. Chickees allowed flexibility in establishing additional sites while minimizing impacts to natural resources. Continued increases in backcountry use during the 1970s led to the initiation of a voluntary overnight permit system in 1977, which was made mandatory in 1983. The purpose of the permit system was to establish campsite capacities, provide data to determine use levels, extend contact between the NPS backcountry staff and visitors, and to aid in search and rescue operations within the park. A backcountry function in Resource Management was established in 1978 and a Backcountry Management Plan adopted in 1981. Backcountry use continued to increase throughout the 1980s, giving rise to concern about the effectiveness of policies and regulations stemming from the 1981 plan.

The primary goal of backcountry use management is to provide park visitors access to a variety of primitive recreational opportunities without incurring unacceptable change to the resource or disturbance to the experiences of others. If we were to revise adequately the 1981 plan, it was clear that we needed sociological information regarding the user experience.

The Backcountry User Study

To provide this sociological information, a study of wintertime backcountry users at Everglades NP was begun in 1988 and recently was completed. This study was formulated as a cooperative agreement between the NPS and Texas A&M University. After several telephone consultations and an onsite orientation meeting with researchers from both Texas A&M and the CPSU at Virginia Polytechnic Institute, the following study objectives were developed: (1) to identify the overnight and day users of the park's backcountry; (2) to determine the motivations, expectations and preferences for overnight and day users; (3) to measure overnight and day users' levels of satisfaction with their Everglades experience; (4) to evaluate overnight users' reaction to the present permit issuance and itinerary system; (5) to develop a sociological monitoring system that could be used by the park staff; (6) to provide the initial database to be used in backcountry travel simulation models; (7) to suggest management actions that best meet social needs.

Full cooperation between NPS and Texas A&M was essential. Development of the research proposal was a negotiated effort involving staff people from several ranks at Everglades and Texas A&M researchers. This research involved sending a map of the Everglades



Current-day "chickees" of Everglades National Park have their origins with the Miccosukee Indians. Photo by Garrett Moynihan.

backcountry to each of the sampled users, requesting the respondent to trace the route of their trip. The Everglades' staff, along with the graphics specialists from the NPS Harpers Ferry Center, developed an 11 x 17-inch map insert for the questionnaires. Part of the sampling procedures required a Graduate Research Assistant from Texas A&M to conduct face-to-face interviews with daytime users of the backcountry. During the three months of the study, the Everglades' staff provided park housing and office space for the student, and access to computer equipment, secretarial and mail assistance, along with facilitating lines of communication between the student and park employees.

A first draft of the technical report was submitted to Everglades NP in October 1989. During December 1989, the investigators from Texas A&M, along with Jeff Marion (Unit Leader and Research Biologist, CPSU at VPI), met at Everglades to discuss the study, the final report, and policy recommendations emerging from the study.

Backcountry User Study Synopsis

Since overnight and day users are found in most areas of the park's backcountry, information was needed from both of these user types. As a result, two concurrent surveys were administered during January, February and March of 1989. The results were based upon 482 day users (representing an 83% response rate) and 380 overnight users (representing an 81% response rate) who were randomly sampled and mailed-back completed questionnaires. The findings indicated that the characteristics of Everglades backcountry users represent a diverse array of previous backcountry experience, motivations, preferences, behavioral patterns and socio-demographic attributes. The majority of backcountry visitors surveyed achieved high levels of satisfaction with most aspects of their experience.

Of the respondents to the day user survey, 84 percent of the motorboaters and 46 percent of the canoe-

ists came from Florida. Of the respondents to the overnight user survey, 89 percent of the motorboaters and 36 percent of the canoeists reported Florida as their state of residence. *These data indicated that the Everglades backcountry is a popular resource for Florida motorboaters and a nationally recognized resource for canoeists.*

By a wide margin and across both samples, viewing wildlife surpassed all other reasons as the most popular motivation for visiting Everglades backcountry. Compared to canoeists, motorboaters were more likely to emphasize releasing tensions and fishing as motivations for visiting the backcountry. Compared to motorboaters, canoeists were more likely to emphasize solitude and physical exercise as motivations.

The issue of crowding is typically a concern for backcountry recreation managers. Respondents were asked to report their satisfaction level with the number of other people encountered during the daytime; 12 percent reported dissatisfaction. However, when asked to report on their satisfaction with the number of motorboats encountered, 46 percent of canoeists compared to 11 percent of motorboaters, expressed dissatisfaction. Also when asked to report on the degree of crowding during the daytime, 63 percent of canoeists, compared to 39 percent of motorboaters, expressed some feeling of crowding. These data suggest that if one were to be concerned with potential crowding problems in the backcountry at Everglades NP, reducing the number of encounters would be less relevant than reducing the likelihood of encounters between different types of groups.

The compliance rate to the permit itinerary system for overnight use was estimated, in part, based upon the respondents' traced route of their trip on a map enclosed with the questionnaire. Seventy-one percent

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of backcountry trips were in compliance with their permit itinerary. Thus, in terms of permit itinerary information being valid indicators of site-specific use information, it should be recognized that there were substantial discrepancies between recorded and actual use of the backcountry campsites.

The effect of *noncompliance* is an important consideration at Everglades, since designated campsites are relatively small. When overnight users were asked if they were bothered by campers who were not complying with the itinerary system, 10 percent responded that they were bothered. Another item was directed at respondents who had reported sharing their site with non-complying campers; the results indicated that campers who deviated from the itinerary of their permit can have a positive (3%), negative (11%), or neutral (9%) effect on other campers (percentages based upon the complete sample of overnight users). Thus, in terms of the sociological impact of permit non-compliance, the proportion of overnight visitors who were negatively affected by noncomplying campers was about one-third the proportion of noncomplying campers.

Use of campsites by day visitors also was a concern and could be related to the amount and quality of impacts. Of the respondents who were day users, 27 percent reported that they stopped at a backcountry campsite area and of those that stopped, 43 percent

reported that at least one person in their party used the restroom facility on the site.

Backcountry User Study Conclusion

The recommendations from this study were based upon the results of the study, the effectiveness of policies at analogue park areas, the collective professional judgments (as reported in literature) of scholars and land managers associated with outdoor recreation, and the authors' past experiences and opinions. The suggested order of importance of the recommendations was: (1) enhance and expand the diversity of recreational experiences afforded by the park's backcountry; (2) expand the number of designated sites within close proximity to trailheads; (3) maintain the current fixed itinerary system; (4) maintain and improve backcountry trip planning facilities; (5) adopt an advance reservation system for allocation of a portion of user nights; (6) modify the pumping schedule for sanitary facilities at heavily-used backcountry sites.

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