

Identifying and Evaluating Alternatives for Managing Crowding at Wilderness Campsites on Isle Royale

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Two phases of research were conducted at Isle Royale National Park during the 2001 and 2002 visitor use seasons to address the descriptive and evaluative components of tradeoffs associated with managing backcountry camping at the park. In the first phase of research, computer simulation modeling was used to assist park managers in defining and assessing management alternatives both in terms of how effective they are at reducing or eliminating campground crowding, as well as in terms of their consequences with respect to visitor freedoms, public access, and campground development. Following a series of training sessions, park staff are now using the computer simulation model to assess potential management strategies as they emerge throughout the park's current wilderness and backcountry planning process.

The second phase of research at Isle Royale was designed to evaluate visitors' attitudes concerning alternative strategies for managing backcountry camping at the Park. A representative sample of visitors chose preferred backcountry management scenarios from a series of paired comparisons that incorporated tradeoffs among campsites sharing, visitor use levels, visitor freedoms, and campground development. Management scenarios were based on output from the computer simulation model to ensure they were feasible and realistic. Responses to the paired comparison questionnaire were analyzed using stated choice modeling.

Study findings from the first phase of research suggest that under the Park's current management approach, an average of about 9 % of groups are required to share campsites per night during July and August, with 24 % sharing during the busiest two weeks of this period. Further, the results suggest that the Park would need to reduce visitor use during July and August by nearly 25 % to ensure that an average of no more than 5 % of groups share campsites per night. The model estimates that by instituting a fixed itinerary system, the Park could issue approximately 30 % more permits than they did during the 2001 visitor use season, while at the same time virtually eliminating campsites sharing.

Results from the second phase of research suggest that visitors may be willing to forfeit some campsites solitude in order to avoid restrictive limits on visitor use, regulated backcountry camping experiences, and/or the construction of a large number of new campsites in the Park. For example, study results suggest that among the management alternatives evaluated, visitors would be most likely to support those that would not require visitors to follow fixed itineraries or involve building additional campsites, even though visitors may have to share campsites with other groups. These and related findings offer important insights into the relative importance of campsites solitude and the tradeoffs (e.g., reductions in visitor use, more regulation, additional campsites development) that visitors are (or are not) willing to make to achieve it. In this way, the results of the study assist managers in reaching "informed judgements" concerning how to manage backcountry camping at Isle Royale National Park. Further, the research presented in this sequence of papers provides a model for integrating descriptive and prescriptive research findings into the planning and management of parks and wilderness.