

WASO SOCIAL SCIENCE PROGRAM

1/10/92

#60

SOCIAL CARRYING CAPACITY

Spare that tree!

Under Green Guise, Multi-use Groups
Work Against Environment

Some landowners
at battlefields fear
they'll be casualties

Parking: Traffic jams,
mar recreation areas

Many Yosemite Visitors
Want Their View and Comfort Too

Rocky Mountain parks overflow

History, recreation
can coexist within
U.S. historic sites

**Welcome to political
science – NPS style**



United States Department of the Interior



NATIONAL PARK SERVICE
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Washington, D.C. 20013-7127

IN REPLY REFER TO:

January 10, 1992

Memorandum

To: Park Superintendents

From: Assistant to the Director for Science and Technology

Subject: **STATUS REPORT: SOCIAL CARRYING CAPACITY**

Some 18 months ago I initiated a social carrying capacity research project with Dr. Robert Manning, an NPS Schedule A consultant at the University of Vermont. The goal of this work was to provide information and guidelines that would help Superintendents deal with problems caused by overcrowding and other visitor-related interactions in parks.

At the outset, I thought this would be a fairly straight-forward project, building upon extensive earlier studies on ecological carrying capacity. Not so. Even arriving at a suitable definition of the term, "social carrying capacity" proved difficult and controversial. And it quickly became evident that social carrying capacity issues are much more complex than ecological carrying capacity issues. With ecological carrying capacity, we are interested in interactions between visitors and resources. Here one makes a determination concerning the adverse impacts of visitors on the park ecological system, and then establishes exclusion areas, or whatever, to protect the resource as needed.

Conversely, with social carrying capacity we are concerned with interactions between one visitor group and another visitor group rather than with interactions between visitors and their surroundings. With social carrying capacity, one must deal with the problems that arise because of competing interests of many diverse publics who have different reasons for coming to the parks, different expectations, and different perceptions about what constitutes a satisfactory park experience . . . e.g., park users such as canoeists versus motorboaters; tent campers vs RV'ers; cross-country skiers vs snowmobilers; hikers vs bikers, etc. Under some circumstances, interactions between visitors or between visitor groups can result in conflict situations or other adverse social impacts. For example, visitor enjoyment might be reduced by direct encounters such as visitor-to-visitor competition for available space or competition for available recreation opportunities. Or alternatively, visitor satisfaction might be diminished because of indirect encounters associated with an environment degraded by previous visitors' trash or inappropriate behavior. We use the term "social carrying capacity" to express a measure of how much visitor use can be accommodated before such direct and indirect encounters between visitors begin to cause significant problems.

In its simplest form, the concept of social carrying capacity involves setting limits on the number of visitors so as to avoid the adverse social impacts that result from overcrowding conditions. In its more complex form, determination of social carrying

capacity involves a process wherein the park takes appropriate management actions to prevent or to mitigate the adverse consequences that otherwise would result from direct and indirect visitor-to-visitor encounters. By so doing, the park seeks to maintain the quality of the visitor experience at an acceptable level for the greatest number of visitors. Within this framework there is an implied goal of not having to restrict numbers of visitors, except as a last resort. This is a very important element of the social carrying capacity concept . . . i.e., park management will take steps to deal with visitor-to-visitor problems as they occur and will resort to limiting number of visitors only after other measures have proved inadequate.

In dealing with social carrying capacity issues, one must gather certain information to support visitor management decision processes . . . for example, information about conflicts arising from visitor encounters; information about what constitutes acceptable visitor behavior from the perspective of other visitors; information about the costs, the benefits and the likely effectiveness of possible control measures that could be taken to mitigate visitor conflict situations; and information about the quality of the visitor experience being provided. And then one must use these data to make management judgments about what kinds and what frequency of visitor encounters are "inappropriate", what kinds of visitor behavior are "unacceptable", how many visitors are "too many", and what steps, if any, should be taken to limit visitor use. This matter of setting social carrying capacity limits is complicated further because park managers may have to make decisions on the basis of subjective conclusions drawn from visitor surveys, with which they have had limited previous experience, or because park managers may have to resolve visitor conflict situations where clear-cut standards do not exist for what constitutes "acceptable" visitor behavior or an "acceptable" park experience.

In other words, social carrying capacity indeed can be complex. Yet it is important to recognize that the things about social carrying capacity that make it difficult to deal with in a quantitative sense are precisely the same things that are central to providing a quality park experience . . . for example, understanding relationships between visitor encounters and social impacts; understanding how management actions or education initiatives can affect visitor behavior; or understanding what contributes to visitor perceptions of overcrowding, be that numbers of encounters, or types of encounters, or site-locations of encounters, or combinations thereof.

In any event, our ongoing study is attempting to address this full range of issues and to suggest ways of responding to social carrying capacity problems likely to occur in parks. At this point Dr. Manning has completed a draft report titled, "Social Carrying Capacity in the National Parks." This is a fairly long document . . . roughly 70 pages. The next step is to have the report reviewed by other carrying capacity researchers. However, I also would like to give interested Superintendents and others the opportunity to comment on Dr. Manning's draft report. Those who would like to do so may contact Jean Handsberry for a review copy on FTS 343-8123.



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