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PREFERENCES OF MINNESOTA CANOE ASSOCIATION MEMBERS COMPARED TO KETTLE RIVER USERS*

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ABSTRACT

Questionnaires were administered to a sample of Minnesota Canoe Association (MCA) members and to a sample of watercraft users on the Kettle Wild and Scenic River. The two groups had generally similar preferences for river recreation environments and management alternatives consistent with the preferences. MCA members tended slightly toward more natural environments and stricter management policies.

organization of canoeing and kayaking enthusiasts with over 1200 members. The Kettle River is Minnesota's first State Wild and Scenic River and is being managed by the Minnesota Department of Natural Resources so as to preserve its unique natural qualities and provide opportunities for dispersed river recreation (Minn. Dept. Natural Resources, n.d.).

METHODS

Information from MCA members was obtained through a mailed survey questionnaire to a sample of the organization's membership during the late summer of 1976. A similar questionnaire was used on-site to survey a sample of all types of watercraft users on the Kettle River during the summer of 1977. Seventy-one percent of the river users were in canoes without motors, 19.6 percent were in other nonmotorized craft (kayaks, rafts, row boats, tubes), and 9.4 percent were in motorized canoes or motorboats.

INTRODUCTION

As competition increases for the use of finite public outdoor recreation resources, various special user groups vie for influence on management policies pertaining to these resources. However, the extent to which the opinions of these organized user group members differ from or agree with those of the resource's general user population has received little systematic attention. The purpose here is to address the question: "Are members of the Minnesota Canoe Association (MCA) representative of the general watercraft user population of the Kettle Wild and Scenic River regarding their environmental and river management preferences?" The MCA is a Minnesota based

A 20 percent interval sample was drawn from the alphabetized 1976 MCA membership list. A cover letter explaining the study, a questionnaire, and a stamped return envelope were sent to each of the 289 selected MCA members. An article appearing in "HUT", the official MCA newsletter, about 3 weeks later served as the first follow-up. Approximately one week later a follow-up letter was sent to each nonrespondent. One hundred and seventy-nine usable questionnaires (62%) were received. Nearly one-third of these respondents had used the Kettle, and all others knew of it.

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A stratified cluster sample design was used to sample Kettle River watercraft users (Ballman, 1977). On 12 weekends between April 16 and June 3, 1977, all watercraft users over 14 years old who put in or took out of the Kettle at any of three main access points during specified times were contacted (Table 1). Field workers stationed at each location conducted short interviews and distributed questionnaires to 372 users to be taken home and returned in the stamped envelopes provided. Three hundred and ten usable questionnaires (83%) were returned after three waves of follow-up letters spaced at about 10 day intervals after the initial contact. About 9 percent of these respondents were MCA members but none of them appeared in the MCA sample.

The two questionnaires had 39 environmental preference items and 10 management alternative items in common. The environmental items consisted of features and situations a watercraft user might encounter while using the Kettle. They fell into 8 broad categories: other uses and users, presence of management personnel, amenities, wildlife, shoreline landscape, water characteristics, evidences of prior use, and other elements of the natural environment (Table 2). Management items consisted of 10 management alternatives that could be instituted on the Kettle (Table 3). Respondents were asked to indicate on an ordinal scale from "most undesirable" to "most desirable" their opinion about encountering each feature, situation, or management alternative on the Kettle. For analysis, the responses to each item have been classified into one of three categories: undesirable, neutral or desirable. Chi-square tests were then made to determine if there existed any significant differences in response distributions of MCA members and general watercraft users. For those items where a significant difference was found, Cramer's V, a nonparametric measure of association for nominal or higher level data (Loether and McTavish, 1974) was used to measure the strength of the association between response and group membership (MCA member or general watercraft user).

RESULTS

Environmental Preference Items

The major finding is that a majority of both MCA members and Kettle River watercraft users (excluding those who were neutral) agreed on all 39 environmental items as to whether they were undesirable or desirable (Table 2). There were no significant differences between the two groups on 13 of the 39 items. Excluding neutral respondents, most of both groups favored firewood at campsites, no shallows to hinder progress, historic sites and buildings, large wildlife, and rare wildlife. Both groups equally saw as undesirable:

rural farm landscape, roads and railroads crossing river, 10 to 30 other craft without motors, others sharing campsite, residential development, industrial/commercial development, and the presence of litter.

Small but significant differences in responses between MCA members and general users were found on the remaining 26 environmental items including five of the seven items dealing with other uses and users. While both groups preferred to find no other groups on the river, one or two other craft without motors, and a campsite all to themselves, MCA members were more likely to respond positively. Again while a majority of both groups reported that encountering 1 or 2 other craft with motors or 10 to 30 other craft without motors would be undesirable, MCA members were slightly more likely to see these as negative. These differences suggest that MCA members are slightly more sensitive to crowding and motorized use than general watercraft users.

Disregarding the neutral respondents, a majority of both groups saw all amenities as desirable. General users were more likely to favor tables and fireplaces at campsites, signs indicating location, prepared tent spaces, booklet on natural features, and a detailed map of route. MCA members were more likely to favor pit latrines. That general users were more likely to favor most of the amenities is consistent with their attitudes toward other uses and users and suggests that they have a slightly greater tolerance for deviations from a natural environment than MCA members.

The two groups essentially agreed that it was desirable to have rangers on the river to enforce regulations but not to have them there to give aid. In each case the MCA majority was larger, and from 1/3 to 1/2 of each group was neutral.

General users were slightly more positive toward three of the wildlife items; very good fishing, a few fish in the river, and a variety of small wildlife. This may be explained by a higher proportion of general users who fished.

A large majority of both groups viewed encountering 4 water characteristic items as desirable: easy rapids, difficult rapids, water clean enough to drink, water clean enough for swimming. It is surprising that general users were more likely to view the rapids items as desirable because a significantly greater proportion of MCA members reported shooting rapids as an activity they participated in when using the Kettle.

SUMMARY AND IMPLICATIONS

Majorities of both groups disliked finding evidences of prior use and liked natural vegetation/landscape. MCA members, however, were more likely to view structures at camp and bare, worn ground at campsite as negative and to prefer natural vegetation/landscape. Again, this conforms to the previous indication that MCA members are more strongly oriented toward the natural environment than general users. General users were more likely to find clear/warm weather and spectacular rock formations desirable and biting insects undesirable. The implication is that MCA members would more readily accept natural conditions regardless of what they were.

Management Alternatives

The chi-square test for independence revealed no significant difference between MCA and general user respondents on two of the ten management items: provide more access points and encourage commercial outfitters (Table 3). The large negative response to these items along both groups probably reflects their desire to see the Kettle remain free of heavy use.

There were significant differences between two groups on the eight remaining management items. Three of these items related to controlling use on the river. A strong majority of both groups indicated that allowing motor boats on the river was undesirable. MCA members were more likely to hold this view, however. This difference may be attributable to the motor users sampled. Regarding limiting the number of people on the river at one time and limiting group size to ten, a majority of the MCA respondents favored both alternatives while a majority of general users saw both as undesirable. These two items are the first for which a majority of the two groups clearly differed in opinion. The greater acceptance among MCA members for use controls is consistent with their greater desire for low density use and emphasis on the natural environment.

Two other management items on which the two groups differed significantly were: charge a fee to finance management and construct more campsites. Disregarding the third of each group who were neutral, a majority of the MCA members saw both items as desirable while a majority of the general users viewed them as undesirable. The willingness to pay to use the river and the desire for more campsites is possibly related to the MCA group's significantly higher rate of camping and desire for campsites all to themselves as well as a possible greater appreciation for the need for controls to maintain the type of environment they want.

On three additional management alternatives the groups agreed, but a slightly larger majority of the general users favored policies requiring that litter be packed out, that hunting not be allowed along the river, and that lightning fires be controlled.

The results compare the preferences of a sample of Kettle River users with a sample of MCA members. Both groups tended to oppose heavy development and use while favoring maintenance of a natural environment and the provision of some amenities. MCA members were slightly more likely to hold these views except concerning the provision of more campsites. MCA members were also more likely to be willing to accept restrictive use controls.

This study provides the type of information which should help planners evaluate input from organized user groups. In many situations, an organization can act as a surrogate for the participants in providing user input for a given activity. This reduces the need for more costly, time consuming surveys of the entire user population. This judgement must be made cautiously, however, because the relationships between opinions of all organized user groups and general user populations may not be the same as those found here. Periodic comparisons of the type resulting from our study are necessary to establish valid relationships between general user populations and spokesperson organizations and to monitor possible changes over time.

LITERATURE CITED

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- Loether, Herman J. and D. G. McTavish. 1974. Descriptive Statistics for Sociologists. Allyn and Bacon, Inc. Boston, MA. 319 p.
- Minnesota Department of Natural Resources, n.d. A Management Plan for the Kettle River: Preliminary Draft. St. Paul, MN. 141 p.

Table 1. -- Number of Watercraft Users Contacted at Three Locations on the Kettle River During the 1977 Study Period

| Date | Day of Week | Time Period* | Number of Watercraft Users Contacted | | |
|----------|-------------|--------------|--------------------------------------|---------------|--------------------|
| | | | Hwy 48 | Robinson Park | Banning State Park |
| April 16 | Saturday | AM | 4 | 6 | 2 |
| April 24 | Sunday | AM | 5 | 11 | 11 |
| April 30 | Saturday | PM | 12 | 10 | 5 |
| May 8 | Sunday | PM | 12 | 12 | 5 |
| May 15 | Sunday | AM | 8 | 7 | 0 |
| May 22 | Sunday | PM | 5 | 0 | 0 |
| May 28 | Saturday | PM | 28 | 33 | 23 |
| June 4 | Saturday | AM | 12 | 17 | 11 |
| June 12 | Sunday | AM | 19 | 2 | 10 |
| June 18 | Saturday | PM | 15 | 9 | 0 |
| June 25 | Saturday | AM | 14 | 21 | 10 |
| July 3 | Sunday | PM | 20 | 11 | 2 |
| TOTALS | 12 | | 154 | 139 | 79 |

*AM = 7:00 AM to 2:00 PM; PM = 2:00 PM to 9:00 PM.

Table 2. -- The Opinions of Minnesota Canoe Association (MCA) Members and General Kettle River Watercraft Users and the Relation Between Membership and Opinion on 39 Environmental Items.

| ENVIRONMENTAL PREFERENCE ITEM | OPINION BY GROUP** | | CRAMER'S V |
|-------------------------------------|--------------------|--------------|------------|
| | MCA | GENERAL USER | |
| No other groups on the river | ++ | + | .25 |
| 1 or 2 other craft without motors | ++ | + | .22 |
| A campsite all to ourselves | ++ | + | .20 |
| 1 or 2 other craft with motors | -- | - | .26 |
| 10 to 30 other craft with motors | -- | - | .25 |
| Signs indicating location | + | ++ | .27 |
| Detailed map of route | + | ++ | .24 |
| Tables and fireplaces at campsites | + | ++ | .27 |
| Prepared tent spaces | + | ++ | .27 |
| Booklet on natural features | + | ++ | .26 |
| Pit latrines | ++ | + | .22 |
| Rangers on river to give aid | -- | - | .18 |
| Rangers enforcing regulations | ++ | + | .18 |
| Variety of small wildlife | ++ | + | .18 |
| A few fish in the river | + | ++ | .17 |
| Very good fishing | + | ++ | .20 |
| Natural vegetation, landscape | ++ | + | .27 |
| Water clean enough to drink | ++ | + | .23 |
| Water clean enough for swimming | ++ | + | .20 |
| Some easy rapids | + | ++ | .28 |
| Some difficult rapids | + | ++ | .19 |
| Makeshift structures at campsite | -- | - | .32 |
| Bare, worn ground at campsites | -- | - | .21 |
| Clear, warm weather | + | ++ | .34 |
| Biting insects | - | -- | .32 |
| Rock formations | + | ++ | .22 |
| Firewood at campsites | + | + | * |
| No shallows to hinder progress | + | + | * |
| Historic sites and buildings | + | + | * |
| Large wildlife | + | + | * |
| Rare wildlife | + | + | * |
| Rural farm landscape | - | - | * |
| Roads and railroads crossing river | - | - | * |
| Powerlines crossing river | - | - | * |
| 10 to 30 other craft without motors | - | - | * |
| Others sharing campsite | - | - | * |
| Residential development | - | - | * |
| Industrial/commercial development | - | - | * |
| Presence of litter | - | - | * |

*No significant difference between MCA members and general users at $P = .01$.

**Excluding neutral responses, a "+" indicates that a majority of that group viewed the item as desirable, while a "-" indicates the majority viewed the item as undesirable. A "++" denotes the larger majority (%) when a majority of both groups saw an item as desirable, while a "--" indicates the larger majority when a majority of both groups viewed an item as undesirable.

Table 3. -- The Opinions of Minnesota Canoe Association (MCA) Members and General Kettle River Watercraft Users and the Relation Between Membership and Opinion on 10 Management Alternatives.

| MANAGEMENT ALTERNATIVE | OPINION BY GROUP** | | CRAMER'S V |
|---|--------------------|--------------|------------|
| | MCA | GENERAL USER | |
| Provide more access points | - | - | * |
| Encourage commercial outfitters | - | - | * |
| Allow motor powered craft on the river | -- | - | .30 |
| Limit number of people on river at one time | + | - | .39 |
| Charge a fee to finance management | + | - | .22 |
| Construct more campsites | + | - | .22 |
| Pack out litter policy | + | ++ | .19 |
| Do not allow hunting | + | ++ | .21 |
| Permit lightning fires to burn | - | -- | .18 |

*No significant difference between MCA members and general users at $P = .01$.

**Excluding neutral responses, a "+" indicates that a majority of that group viewed the item as desirable, while a "-" indicates the majority viewed the item as undesirable. A "++" denotes the larger majority (%) when a majority of both groups saw an item as desirable, while a "--" indicates the larger majority when a majority of both groups viewed an item as undesirable.