

COPING WITH CROWDING IN BACKCOUNTRY  
RECREATION AREAS: STUDIES OF  
TWO OREGON RIVERS

by

RICHARD B. COLVIN

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COPING WITH CROWDING IN BACKCOUNTRY

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ABSTRACT: Studies of crowding in backcountry recreation areas have generally shown that only a minor part of the total variance in perceived crowding is explained by density and interaction. This suggests that users of backcountry areas have learned ways of coping with people in these settings, where one of the major goals is often experiencing solitude. Three strategies are used by individuals to cope with crowding. Behavioral coping mechanisms are actions taken by individuals to avoid others. Cognitive coping is a reappraisal of the situation so the higher interaction level is no longer inappropriate. Perceptual coping focuses one's attention on other non-density related features, giving less attention to other people in the environment. Coping with crowding is hypothesized to occur in backcountry areas as users encounter more and more other people; that is, they will use the three strategies outlined above to reduce the impact of seeing "too many" people. Data are from crowding studies of two whitewater rivers in Oregon, the Rogue and the Illinois. Behavioral and cognitive coping data come from interview and questionnaire responses of 251 commercial

float trip passengers on the Rogue and 255 commercial and private floaters on the Illinois. Perceptual coping data are from records of trained observers who accompanied commercial trips on the Rogue; in this case, comparative data from a study of floaters on the Colorado River in Grand Canyon are also used. Results show the existence of behavioral and cognitive coping. However, perceptual coping results are ambiguous. Implications are discussed.

#### INTRODUCTION

Crowding in backcountry recreation areas has become a major research and management concern, primarily because of dramatic increases in use in recent years. For example, in the five year period between 1967 and 1972, float use of the Colorado River through Grand Canyon increased from 2,000 to 16,000 people annually. During that same period, use tripled on the Middle Fork of the Salmon in Idaho, from 1,300 to 4,000 floaters annually.<sup>1</sup> In the Bridger Wilderness in Wyoming, backcountry use increased 63 percent (from 12,508 to 20,345 visitors annually) between 1970 and 1974.<sup>2</sup> Reasons for such rapid growth include improvements in equipment, the availability of "do it yourself" guidebooks and professional guiding services, all of which help make the nation's backcountry areas more accessible to more people.<sup>3</sup> Increased population, more disposable income, and more leisure time will likely increase the demand for backcountry

recreation. Indeed, wilderness recreation has shown a greater use increase than any other type of outdoor recreation, with about a 15-fold increase since the late 1940's.<sup>4</sup>

Management problems resulting from such increases in use have led to several research efforts which attempted to relate objective characteristics of a setting (e.g., density and the amount of social interaction between groups) to subjective social psychological variables such as perceived crowding and satisfaction. However, the objective variables often explained only a minor part of a person's overall trip satisfaction or perception of crowding. Shelby, in a study of whitewater floaters in the Grand Canyon, found that density and interaction explained only 4% of the total variance in perceived crowding and only 3% of the total variance in satisfaction.<sup>5</sup> Similarly, Shelby and Colvin found that density and interaction explained only 10% of the total variance in perceived crowding and just 1% of the total variance in satisfaction.<sup>6</sup>

Amid statistics showing that backcountry users are becoming more numerous, findings from the studies cited above suggest that somehow individuals must be reducing the psychological impact of seeing ever-increasing numbers of people in these backcountry areas, where one of the major goals is to experience some degree of solitude. This paper will explore the issue of coping with crowding both theoretically and empirically, first through a review of literature dealing with coping, and then by analyzing data from studies of crowding on two whitewater rivers in Oregon.

## THEORETICAL BACKGROUND

### Stress and Coping

Psychological stress has been defined in several ways, but two definitions seem relevant here. Folkman et al. define stress in terms of cognitive appraisal and coping, both psychological processes that mediate between the person and the environment, and that lead to emotional and adaptive outcomes.<sup>7</sup> Cognitive appraisal of the environment determines one's stress reaction, emotions, and adaptational outcomes. These authors suggest that cognitive mediation between the person and the environment is what makes a theory of stress psychological as opposed to sociological or physiological.<sup>8</sup> In this definition, the interaction between stress and coping occurs through primary and secondary appraisal. Primary appraisal answers the question, "Am I okay or in trouble?" Here, one appraises the situation as positive, stressful, or irrelevant. Secondary appraisal next asks, "What can I do about it?" The answer depends, in part, on the viability of alternative actions or coping responses available to the person. If an appropriate coping response is selected, stress is reduced; if an inappropriate response is selected, stress continues or intensifies. Secondary appraisal and accompanying responses thus act as a mediator between primary appraisal and emotional outcomes. Coping is the functional response to secondary appraisal.

Averill suggests stress occurs when an individual must respond to a situation in which he or she has no adequate response available,



and when the consequences of not responding are important to the individual.<sup>9</sup> Under this definition, the nonavailability of an adequate response is a necessary if not sufficient condition for the occurrence of psychological stress. Furthermore, Averill equates the nonavailability of an adequate response with loss of personal control over one's environment, that one cannot control the factors within the environment which affect his or her well-being. The underlying cause of stress under his definition is thus loss of personal control.<sup>10</sup> By this definition, an appropriate coping response is one which allows the individual to regain some amount of control. Integrating the Folkman et al. and the Averill approach, primary appraisal asks, "Am I okay or am I losing personal control over the situation?" Secondary appraisal then asks, "What can I do to regain control?" By so doing, secondary appraisal determines one's coping reaction to the environment as the individual is motivated to regain personal control.

#### Crowding and Stress

The experience of crowding is said to exist when an individual's demand for space exceeds the available supply.<sup>11</sup> An individual's demand for space is determined by environmental, social, and psychological factors, so crowding is situational in nature. Stokols points out that the perception of spatial inadequacy for a situation (demand exceeding supply) may arouse feelings of psychological stress.<sup>12</sup> This viewpoint follows from the previous section, where psychological stress is the result of interaction between a person and the environment, given personal and social constraints. Primary

appraisal results in the evaluation that there are "too many" people in the setting, and if the response to secondary appraisal is not adaptive, then the emotional outcome of feeling crowded results. Psychological stress is thus the individual's negative affective reaction (known as "feeling crowded") due to perceived spatial limitations.

When exactly does density lead to perceptions of crowding? The key seems to be with normative definitions of what is appropriate for a specific situation.<sup>13</sup> A person expects certain levels of social interaction, depending on the situation. When these expectations are widely agreed upon, they become norms. When the level of social interaction exceeds the normative standard for that situation, a person may feel crowded.

The role of normative standards is suggested in theoretical discussions and empirical studies of crowding. Rapaport is quite explicit when he contends that crowding is a judgement of perceived density based on "... certain standards, norms and desired levels of interaction and information."<sup>14</sup> Proshansky et al. suggest that a person expects certain levels of behavioral freedom in a setting, and when that freedom is impinged upon by the presence of others, the person feels crowded.<sup>15</sup> Similarly, Altman notes that when desired levels of privacy (by an individual or a group) are less than realized, perceptions of crowding result.<sup>16</sup>

Shelby<sup>17</sup> and Vaske<sup>18</sup> provide empirical support for the influence of normative standards on perceptions of crowding. Shelby found that density and interaction explained only 4% of the total variance

in perceived crowding among river floaters in Grand Canyon, while individuals' encounter preferences and expectations explained 25% of the total variance in perceived crowding.<sup>19</sup> Vaske found that perceived crowding among canoers on the Bois Brule River in Wisconsin was highest when interparty contacts exceeded the social norm.<sup>20</sup>

These findings lead to a more specific conceptualization of crowding, where primary appraisal of a situation may result in the evaluation that the degree of social interaction is in excess of the norm. If one cannot somehow resolve the discrepancy, the negative affect of crowding (psychological stress) results.

#### Crowding and Coping

In terms of crowding, the coping process is the individual's attempt to reduce the impact of social interaction caused by density. Schmidt and Keating note that norms provide predictability of a situation by specifying common behavioral standards; this predictability increases personal control over the social situation while violation of norms tends to decrease personal control.<sup>21</sup> When norm violation decreases personal control, individuals are motivated to try to regain control to reduce psychological stress.<sup>22</sup> The conceptualization of crowding used here thus becomes more specific. Primary appraisal leads to the perception that the degree of social interaction exceeds the normative standard. This results in a loss of predictability about the situation which may decrease personal control. Personal control is maintained or regained, however, by using coping mechanisms in answer to the question "How can I regain control over the level of social interaction I am experiencing?" In this sense, coping

mechanisms are used either to adjust the amount or reduce the salience of social interaction. If control is maintained so the level of interaction is "about right," then the negative affect of crowding is minimized. If unsuccessful, loss of control results in the psychological stress of feeling crowded.

What are the ways by which individuals control the level of social interaction? Stokols has identified three broad categories of coping strategies: behavioral, cognitive, and perceptual.<sup>23</sup> These categories are used to illustrate more specifically how individuals cope with crowding.

Behavioral coping. Behavioral coping strategies are overt, active responses to aversive stimuli.<sup>24</sup> In terms of crowding, behavioral coping involves attempts by individuals to reduce the amount of social interaction in a setting.<sup>25</sup> These behaviors come in two forms. First, an individual may try to exercise direct control over the aversive stimulus. Corah and Boffa note that perceived control of an aversive stimulus (in this case a loud noise) operates to reduce the negative evaluation of the stimulus.<sup>26</sup> Similarly, Sherrod found that adverse aftereffects of experimental crowding were significantly ameliorated when subjects had the option of exercising direct control over the crowded situation (i.e., leaving the room).<sup>27</sup> Felipe and Sommer found that crowded students "insulate" themselves from an experimental intruder by placing stacks of books between themselves and the intruder.<sup>28</sup> By doing so they regulated the amount of social contact with the intruder.

The second form of behavioral coping is withdrawal. Withdrawal can involve either passive or active avoidance of social interaction. For example, Tucker and Friedman suggest that individuals may establish fewer interpersonal contacts as a strategy to reduce stress resulting from high density levels (passive avoidance).<sup>29</sup> In terms of active avoidance, Felipe and Sommer observed that students picked up their books and left the room if they could not insulate themselves from the experimental intruder.<sup>30</sup> Kutner noted that behaviors that protected subjects from the visual scrutiny of others increased over time in a high visual exposure environment.<sup>31</sup> Clearly, these are behaviors designed to reduce the amount of social interaction by active avoidance.

The behavioral coping process which may occur in backcountry areas probably entails similar active avoidance strategies designed to reduce the level of social interaction. This is one issue explored in this paper.

Cognitive coping. Cognitive coping is the process by which an individual reappraises a potential threat, thereby reducing psychological stress or psychic costs of adaptation.<sup>32</sup> Langer and Saegert suggest that cognitive coping can reduce the experienced aversiveness of a situation in three ways: 1) through perceived control; 2) through cognitive reappraisal of a threatening event; and, 3) by having information about the impending situation.<sup>33</sup> The two important factors here are reappraisal and information gain.

Reappraisal refers to an individual's evaluation of a situation.<sup>34</sup> It is essentially an assessment of the amount of control an individual

perceived he or she may have over the environment. Desor<sup>35</sup> and Sherrod<sup>36</sup> both report that when density related factors in a situation are appraised as controllable, individuals report less crowding stress. Thus, coping occurs when individuals experience a potentially stressful situation, then reappraise it as less threatening to regain cognitive control and reduce stress.<sup>37</sup>

The other facet of cognitive coping is information gain. Langer and Saegert found that the psychological stress caused by a crowded supermarket was significantly reduced by giving subjects information about possible psychological effects of being in a crowded situation.<sup>38</sup> They suggest that the cognitive adjustment that accompanies information gain is one method of coping with a stressful situation. In this sense, information gain means having accurate expectations which increase an individual's sense of control.

The above findings suggest that backcountry users cognitively cope with crowding by either increasing the accuracy of their expectations with an increase in information, or by reappraising the situation so that a higher level of interaction becomes acceptable. The cognitive coping strategy of reappraisal is the second issue explored in this study.

Perceptual coping. Perceptual coping allows the individual to focus on situational characteristics besides density, thereby increasing the importance of these other characteristics and decreasing the importance of seeing "too many" other people.<sup>39</sup> This involves, in part, the process of selective attention in which the individual selects out some stimuli while ignoring or rejecting

others. Baum and Davis noted that visual complexity in experimental model-rooms led subjects to place more human figures in the model-rooms.<sup>40</sup> This led the authors to suggest that visual complexity allows individuals to attend to nonsocial stimuli in the environment, thereby diverting their attention away from social interaction. This is also related to what McGinnies calls perceptual defense where a person may unconsciously ward off threatening stimuli so that they are less easily perceived.<sup>41</sup> In terms of crowding, a person's normative standards may be "threatened" by a certain level of interaction. This could unconsciously activate perceptual coping mechanisms allowing one to selectively perceive those stimuli in the setting which are not threatening, making threatening stimuli less easily perceived.

In the context of backcountry recreation, individuals may concentrate on aspects of their environment that are unrelated to density or interaction, such as the scenic qualities of the setting. This results in less attention being made available to perceive other people. Perceptual coping, then, becomes the third issue explored in this paper: that individuals perceptually cope with crowding by selectively giving less attention to encounters with others.

#### Summary and Hypotheses

To summarize, density has the potential of creating spatial limitations. When these limitations exceed normative standards for the setting, personal control is reduced, which may cause psychological stress. When this occurs, individuals will engage in coping

mechanisms designed to alleviate stress by regaining control of the level of interaction. Individuals use behavioral, cognitive, and perceptual coping strategies to deal with loss of control.

The coping process has important implications for backcountry recreation. It is often said that as density increases, seekers of solitude become less satisfied and are "displaced" to areas with fewer visitors. But it is more likely that users attempt to cope with crowds before they are displaced. This paper explores the general contention that individuals use behavioral, cognitive, and perceptual coping strategies as their "first line defense" against crowding. While displacement is, in itself, a way of coping with too many people, it is probably a last resort because of the "costs" involved in moving to a new area.

Two studies of whitewater rivers in Oregon (the Rogue River and the Illinois River) will help illustrate the coping process in backcountry recreation areas. Specifically, it is hypothesized that as interparty encounters increase, individuals will (in no particular order):

- a) actively avoid contacts with others (behavioral coping);
- b) reevaluate the experience so the higher number of encounters will be appropriate (cognitive coping); and
- c) tend to place more importance on other aspects of the experience, giving less attention to encounters (perceptual coping).

In addition, it is expected that these coping strategies will occur with greater frequency than will indications of displacement.



## RESEARCH METHODS

Rogue River Study

The Rogue is one of the original eight rivers to be designated under the National Wild and Scenic Rivers Act. About forty contiguous miles are classified as "wild," and another forty miles are "scenic" or "recreational." The "wild" section of the Rogue is the primary concern of this study.<sup>42</sup>

River trips down the wild Rogue generally begin at Grave Creek and end at Foster Bar; they last from two to five days. At night, people camp on natural beaches along the river, or in a few cases stay at commercial lodges. During the day they float downstream, making stops at "visitor-attraction sites" such as waterfalls, swimming holes, or historic sites.

The field phase of the study was designated to simultaneously measure use levels, actual contacts, reported (perceived) contacts, users' reactions to contacts, and other user perceptions. Use level information (trips launching from Grave Creek each day) was obtained from Bureau of Land Management records of use and trip departure schedules. Data on the actual number of contacts and user reactions were collected by trained observers who accompanied river trips. Information regarding reported contacts, perceived crowding, and overall satisfaction was obtained from river users at completion of their trip.

Data were collected during a two-month period from June 21 to August 20, 1977. A stratified (by use level) random sample of thirty-four commercial float trips was designed, and a trained

observer accompanied each trip. Observers kept extensive records for each trip; their reports included records of all contacts with other trips, the nature of and users' reactions to each contact, an accurate trip schedule, and a summary sheet describing the trip as a whole. An "Observer Handbook" detailed the methods for collecting the data and gave common definitions for field situations. Each observer carried a handbook for reference while on the river. As a result, data collected by any particular observer are assumed to be comparable to those of any other observer. At the end of each trip, passengers were asked to complete a short, one-page interview form. Measures included reported contacts, contact expectations, and perceived crowding. There were 354 passengers on the sampled commercial trips; 343 completed the interviews, a 97% response rate.

In addition, a follow-up questionnaire was mailed to all interview respondents in the spring of 1978. The questionnaire measured various user perceptions, preferences, and opinions. Response rates for commercial passengers was 78%. Observer forms, the interview, and the follow-up questionnaire can be found in Appendix A.

#### Illinois River Study

The Illinois, a tributary to the Rogue, is a proposed National Wild and Scenic River. About 29 miles have a proposed "wild" classification, and access is limited to the river itself and a parallel trail. River trips last from 2 to 5 days. During the day, floaters run rapids and float through quiet pools, occasionally stopping at attraction sites such as side canyons, waterfalls,

and historic sites. At night they camp on natural sandy beaches along the river.

The field phase of the study measured use levels, contacts among parties, reported contacts, perceived crowding, and expectations. An Oregon State University researcher was stationed near the boat launch site and monitored the number of parties launching each day. Data on contacts among parties were collected by users who kept diaries. Information regarding reported contacts, perceived crowding, and expectations was obtained from all users at the end of their trip.

Data were collected from April 7 to June 3, 1977. Of the 44 river parties running the river during this period, 41 (93%) were contacted prior to departure. The researcher solicited one volunteer from each group to act as a "trip diary keeper." The researcher spent 15-20 minutes explaining procedures for collecting and recording information. Each volunteer was given the same oral instructions, and written instructions were included in the diary; as a result, data collected by any particular diary keeper is assumed to be comparable to those of other diary keepers.

Diaries were designed to be filled out as floaters moved down river. The diary keeper was instructed to record (a) the places the trip stopped and the reason for the stop; (b) every contact with another party, stressing that any sighting of another river party counted as a contact; (c) attraction site stops and encounters; and (d) campsite locations and proximity to other parties. Separate forms were provided for each category of information and a small map was attached.

At the end of the trip, another O.S.U. researcher contacted river parties, and collected the diaries. Of the 41 groups contacted at the put-in, all but one agreed to take a trip diary. Four groups took the diaries but did not fill them out once they were on the river. Another three groups took diaries but were not contacted by the researcher at the end of their trip. This resulted in completed diaries from 33 groups, an 80% response rate.

All trip participants were asked to complete a two-page self-administered interview at the end of the trip. Respondents recorded reported contacts, contact expectations, perceived crowding, and satisfaction with their trip. Of the 341 people who floated the Illinois during the study period, 284 were contacted by the researcher at the take-out point. Completed interviews were received from 263 of these, a response rate of 92%.

A follow-up questionnaire was also sent to all interview respondents during the summer of 1979. The questionnaire measured user perceptions, preferences, and opinions. Response rates were 90%. Diary forms, the interview, and the follow-up questionnaire can be found in Appendix B.

#### Measures of Coping

Behavioral and cognitive coping measures come from self-reports on the interview form and the follow-up questionnaire for both river studies. The unit of analysis for these measures is the individual. Respondents were asked the following questions, which they answered "yes" or "no."

If you saw more people than you expected, did you:

- attempt to avoid others by:
  - speeding up or slowing down?
  - getting off the river to allow people to pass?
  - passing up places at which you'd planned to stop?
  - changing your campsite?
- change the way you thought about the river, deciding it was less remote than you had believed?
- became unhappy or dissatisfied with the trip?
- decide to go somewhere more remote next time?

The first four questions deal with behavioral coping; they are questions designed to determine whether individuals had tried to avoid encounters with others by some form of withdrawal. The next question concerns cognitive coping: is seeing "too many" people causing river runners to reappraise the river as being less remote, thereby accepting the higher number of encounters as being appropriate? The final two questions involve alternatives to coping, namely dissatisfaction and displacement. Are users becoming dissatisfied with their experience and/or going somewhere else because of crowding? These responses may occur if the coping strategies are unsuccessful or if the individual did not try to deal with crowding by coping.

Perceptual coping measures come from observer records describing encounters. These data are available for the Rogue study only, with parallel data from an earlier study of river runners in Grand Canyon by Shelby and Nielsen.<sup>43</sup> The unit of analysis here is the contact. For the Rogue study, the sample size (the total number of contacts for the sampled trips) was 1,717. For the Grand Canyon study, the sample size was 1,560. For each contact, the observer recorded the nature of the encounter (the level of recognition given to the

contacted party by the observer's party: ignored, wave only, verbal greeting only, chat, or prolonged conversation), and user reactions to the party (negative, neutral, positive). The perceptual coping hypothesis suggests that as interaction increases, individuals will pay less attention to each encounter. The nature of and reaction to encounters, then, are used as indicators of the amount of attention paid to the other party. These classifications were made for each contact for the group as a whole, which necessitates some generalizing. For example, if no one comments one way or the other about the contacted party, their reaction is neutral. If one person is negative and five are positive, the reaction is positive. If reactions are equally split between negative and positive, the reaction is neutral.

## RESULTS

### Behavioral Coping

Respondents were asked to indicate whether they had tried to avoid contacts with others if they saw more people than they had expected. Results are shown in Table 1. For Rogue respondents, the most common way in which people avoided others was changing campsites (44%). This is followed by speeding up or slowing down (38%), passing places at which they had planned to stop (37%), and getting off the river to allow others to pass (26%).

On the Illinois, the most common method of behavioral coping was speeding up or slowing down (31%), followed by changing campsites (30%), and getting off the river to allow people to pass (21%). Only 16% of the Illinois respondents reported that they had passed places at which they had intended to stop.

Table 1. Behavioral and cognitive coping mechanisms.

If you saw more people than you expected, did you: <sup>a</sup>	Rogue	Illinois
- attempt to avoid others by		
- speeding up or slowing down	38% (68)	31% (24)
- getting off the river to allow people to pass	26% (45)	21% (15)
- passing up places at which you'd planned to stop	37% (65)	16% (12)
- changing your campsite	44% (77)	30% (22)
- change the way you thought about the river, deciding it was less remote than you had believed	42% (76)	31% (26)
- decide to go somewhere more remote next time	23% (41)	8% (6)
- became unhappy or dissatisfied with the trip	15% (26)	15% (12)

<sup>a</sup> All percents are significantly different from zero at the .01 level.

It appears, then, that floaters on both rivers use behavioral coping mechanisms to deal with seeing too many other floaters. By changing campsites or adjusting travel speeds, users are actively avoiding contact with other parties.

#### Cognitive Coping

The next question on Table 1 concerns cognitive coping. Respondents from both studies were asked if they had changed the way they thought about the river, deciding it was less remote than they had believed because they saw more people than expected. On the Rogue, 42% of the respondents reported that they felt the river was less remote than they had believed; on the Illinois, 31% reported a similar re-evaluation. The conclusion to be drawn from these data is that individuals are cognitively adjusting their normative standards, thus accepting the higher level of interaction.

#### Displacement and Dissatisfaction

The final two questions on Table 1 are concerned with displacement and dissatisfaction. For Rogue floaters, less than one-fourth of the respondents (23%) said they would go somewhere more remote on their next river trip, and only 15% said they were dissatisfied with their trip. For the Illinois, only 5% of the respondents said they would go somewhere more remote on their next trip, and 15% said they were dissatisfied with their trip.

Are users who employ behavioral or cognitive coping strategies less likely to be displaced or dissatisfied? Almost two-thirds of the Rogue users (63%) engaged in either behavioral or cognitive coping and were not displaced or dissatisfied; conversely, 37% used



the coping strategies but were also displaced or dissatisfied. On the Illinois, 66% of the users employed behavioral or cognitive coping mechanisms and were not displaced or dissatisfied; 34% used coping mechanisms but were also displaced or dissatisfied. A chi-square was calculated for each sample, and from this, it appears that both Rogue and Illinois users are less likely to be displaced or dissatisfied if they used behavioral or cognitive coping strategies ( $\chi^2 = 9.6$  and  $11.7$ , respectively,  $p < .01$ ).

#### Perceptual Coping

Perceptual coping information is available for the Rogue study only, with similar data about river runners on the Colorado from the Shelby and Nielsen study. As one reads the following analysis, it will be noted that both Tables 2 and 3 contain several low but significant correlations ( $p < .05$  or better). This is due to the large sample sizes in the studies which give high significance to correlations of little substantive importance. For the purposes of this paper, only those significant correlations with a coefficient of  $.20$  are considered of enough substantive importance to warrant discussion.

The bivariate correlations between several objective contact characteristics and the nature of and reaction to encounters for the Rogue River are shown in Table 2. For river contacts, users are more apt to wave or speak to others the longer they remain in view ( $r = .22$ ,  $p < .001$ ), and the longer they remain within speaking distance ( $r = .28$ ,  $p < .001$ ). Density (trips leaving Grave Creek each day) and contacts while on the river have no effect on the nature of the encounter, nor does the size of the other party. User reactions

Table 2. Correlations between perceptual coping and objective contact characteristics, Rogue River.

Variable	<u>River Contacts</u>		<u>Attraction Site Contacts</u>	
	Nature	Reaction	Nature	Reaction
Time in sight of other parties while on the river	.22***	.08***	--	--
Duration of the contact	.28***	.10***	--	--
Size of the contact	.10***	-.07**	.41***	.03
Density (trips leaving from Grave Creek landing each day)	-.07*	-.06**	-.26*	-.25*
Contacts with other parties each day while on the river	-.09***	-.04	-.40**	-.36**
Percent of attraction sites with contacts	.06	.01	.11	.26*

n = 1,717

\* p < .05

\*\* p < .01

\*\*\* p < .001

to river encounters are not related to any of the contact variables measured.

For attraction site contacts on the Rogue, a different pattern emerges. Here, as density increases, users are less apt to wave or speak to others at attraction sites ( $r = -.26$ ,  $p < .05$ ). They are also less apt to wave or speak as river contacts increase ( $r = -.40$ ,  $p < .01$ ). However, users are more liable to wave or speak as the size of the contacted group increases ( $r = .41$ ,  $p < .001$ ). User reactions to encounters at attraction sites are also correlated with these variables. As density increases, reactions to attraction site encounters tend to be negative ( $r = -.36$ ,  $p < .01$ ). Surprisingly, an opposite relationship exists between user reactions to encounters at attraction sites and the percent of attraction sites with contact; here, as users encounter other parties at more sites, they tend to react positively towards the people they meet at these sites ( $r = .26$ ,  $p < .05$ ).

Similar data from the Grand Canyon are shown in Table 3. Like the Rogue data, the nature of river contacts is correlated with time in sight of others while on the river and the duration of the contact. Users are more apt to recognize the others' presence the longer they remain in view ( $r = .33$ ,  $p < .001$ ) and the longer they remain within speaking distance ( $r = .40$ ,  $p < .001$ ). Density, the number of river contacts, the size of the contact, and the percent of attraction sites with contacts are all unrelated to the nature of river encounters. Furthermore, user reactions to river encounters are not correlated with any of the contact variables.

Table 3. Correlations with perceptual coping and objective contact characteristics, Grand Canyon.

Variable	River Contacts		Attraction Site Contacts	
	Nature	Reaction	Nature	Reaction
Time in sight of other parties while on the river	.33***	.05	--	--
Duration of the contact	.40***	.02	--	--
Size of the contact	.07*	-.04	.02	-.20***
Density (trips leaving Lee's Ferry each week)	-.05	.03	.05	-.02
Contacts with other parties each day while on the river	-.05	.07**	.12*	.09
Percent of attraction sites with contacts	-.02	-.01	-.19**	.02

n = 1,560

\* p < .05

\*\* p < .01

\*\*\* p < .001

In terms of attraction site contacts, results from Grand Canyon are quite different from those found on the Rogue. In Grand Canyon, the nature of attraction site encounters is not related to the contact variables, except for a low correlation with the percent of attraction sites with contact. Here users are somewhat less likely to wave or speak to others at attraction sites as the number of places with contact increases ( $r = -.19, p < .01$ ). User reactions to attraction site encounters are also generally uncorrelated with the contact variables. The exception to this is that users tend to react negatively to larger parties ( $r = -.20, p < .001$ ).

#### DISCUSSION

It appears that behavioral and cognitive coping strategies take place on both the Rogue River and the Illinois River when users see "too many" other people. Behavioral coping occurs by actively avoiding others while on the river. It entails changing campsites, adjusting travel speeds, or passing up planned stopping places. These findings are consistent with those of Felipe and Sommer<sup>44</sup> and Kutner<sup>45</sup> in which individuals generally tried to avoid interaction with others when the degree of interaction was subjectively defined as "too high." Cognitive coping is essentially accomplished by a reappraisal of the situation as being less remote, thus allowing for a higher "appropriate" number of contacts. This indicates that some users are redefining the normative standard for interparty contacts as a way of reducing psychological stress, as suggested by Stokols<sup>46</sup> and Altman.<sup>47</sup>

Data on perceptual coping are not as easily interpreted. It was hypothesized that as interaction increased, individuals would pay less attention to other parties. However, it seems clear that density and river contacts (measures of interaction) have little effect on the nature of river encounters or user reactions to river encounters. Users are no less apt to wave, speak, or react negatively toward others at high interaction levels than they are at low interaction levels. Significant correlations between the nature of encounters and time in sight of others, contact duration, and contact size may simply show that it is harder to ignore other groups the longer they are nearby and the larger the group, and given the norm of "being friendly" to other recreationists in the same setting doing similar activities.

Anomalies exist, however, when one compares correlations for attraction site encounters between the two studies. On the Rogue, density and river contacts are negatively correlated with the nature of and reaction to encounter at attraction sites but not with the nature of and reaction to encounters on the river. Furthermore, in Grand Canyon, density and river contacts are not correlated with the nature and reaction to encounters either on the river or at attraction sites. Why is this so? One possible explanation lies with differences between characteristics of river trips in each setting. The absolute number of contacts per day is much higher on the Rogue than in Grand Canyon. This may be causing a threshold effect where contacts increase to some point beyond which people engage in perceptual coping at attraction sites. This may be analogous to the findings of Sherrod

who found negative aftereffects caused by crowding.<sup>48</sup> Users may not use perceptual coping while on the river (assumed crowded situation) but once they are off the river at an attraction site (assumed uncrowded situation), they may use perceptual coping to reduce the impact of seeing others there.

Unfortunately, the data do not allow for substantive conclusions about perceptual coping. Some sort of perceptual screening process is suggested by Shelby and Colvin who found that Rogue users generally underreport actual contacts (those recorded by trained observers) by about half.<sup>49</sup> However, refinement of perceptual coping measures is needed before conclusions can be made with any confidence.

Data lend support to the conclusion that users seem to engage in behavioral or cognitive coping strategies more frequently than they are being displaced or becoming dissatisfied by seeing "too many" people. What is important here is the notion that displacement and dissatisfaction generally occur after coping strategies have been used. Schreyer alludes to this when he notes that for displacement to occur, there must be unacceptable change (perceived by the user) in the recreation setting.<sup>50</sup> This change is likely to become unacceptable after coping strategies are no longer effective. This puts displacement into a perspective of being a more extreme form of coping with crowding. However, this statement must be qualified. Like the coping process, displacement and dissatisfaction are complex phenomena involving users' psychological states, social constraints, and environmental and management attributes. It may be that the single measures of displacement and dissatisfaction used here are

inadequate to accurately discern their part in the coping process.

On the Illinois, users appear more likely to report dissatisfaction than they are to be displaced. It seems only logical that users dissatisfied with their experience will go somewhere more suited to their needs. Why is this apparently not occurring on the Illinois? Becker et al. suggest that substitutes must be available for people to be displaced; they must have somewhere else to go.<sup>51</sup> The Illinois is probably the most remote whitewater river in Oregon and one of the most pristine. As such, users may not have other realistic substitutes more remote than the Illinois. If users see "too many" people, and if there are no rivers "more remote," dissatisfaction is one possible consequence. On the Rogue, more users say they will go somewhere else (23%) than say they have become dissatisfied (15%). Although these findings are unlike those on the Illinois, they make intuitive sense based on the assumption that there are probably more substitutes available to Rogue River users.

The existence of coping strategies among backcountry users has importance for managers of these areas. Implicit in most crowding literature is the notion that coping is desirable because it may reduce psychological stress. However, the occurrence of coping means users are probably seeing too many other people for the experience they desire. Coping with crowding may change the experience from one characterized by low contact levels to something in which more contact is acceptable. The end result is that an experience potentially characterized by high degrees of solitude has been



replaced by a different experience, where more interparty interaction is the standard. Managers must be aware that these changes in the experience (where more interparty contact is the norm) may be occurring without corresponding changes in perceptions of crowding or trip satisfaction. Knowing the nature and extent of coping strategies can alert managers to such changes.

## FOOTNOTES

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APPENDIX A

Rogue River Study  
Observer Forms,  
Interview, and  
Questionnaire

**TRIP SCHEDULE**

OUTFITTER: \_\_\_\_\_

TRIP: \_\_\_\_\_

LOCATION	ARRIVE		LEAVE		STOP FOR
	TIME	DAY	TIME	DAY	
GRAVE CREEK					

**DAILY CONTACT LOG**

DAY \_\_\_\_\_ OF \_\_\_\_\_

TRIP: \_\_\_\_\_

		CONTACT	1	2	3	4	5	6	7	8	9	10	11	12
TRIP TYPE	(1) Private (2) Commercial													
	TIME OF DAY													
	TIME IN SIGHT (MIN)													
	DURATION OF CONTACT (MIN)													
WAS YOUR PARTY	(1) Afloat (2) On Shore													
WAS THE OTHER PARTY	(1) Afloat (2) On Shore (3) On A Trail													
CONTACT SIZE	# Of People # Of Boats													
	# Times You've Seen This Party													
PASS. NATURE	(1) Ignored (2) Wave Only (3) Verbal Greeting (4) Chat (5) Conversation													
PASS. REACTION	(1) Neutral (2) Positive (3) Negative													
BOATMAN NATURE	As Above													
BOATMAN REACTION	As Above													

ADJUSTMENTS FOR CROWDING:

TOTAL: \_\_\_\_\_



ATTRACTION SITE STOPS

SITE #	1	2	3	4	5	6	7	8	9
SITE NAME									
DAY OF TRIP									
TIME OF DAY									
LENGTH OF STOP									
# OF PEOPLE									
TRIP TYPE (1) RIVER PARTY (2) NON-RIVER PARTY (3) BOTH									
PASS. NATURE (1) IGNORED (2) WAVE ONLY (3) VERBAL GREETING (4) CHAT (5) CONVERSATION									
PASS. REACTION (1) NEGATIVE (2) NEUTRAL (3) POSITIVE									
BOAT MAN NATURE AS ABOVE									
BOAT MAN REACTION AS ABOVE									

RAPIDS LOG

TRIP: \_\_\_\_\_

SITE #	1	2	3	4
NAME OF RAPIDS RAINIE FALLS				
DAY OF TRIP				
# OF PEOPLE				
TOTAL TIME STOPPED (MIN.)				
WAITING TIME (MIN.)				
PASS. NATURE (1) Ignored (2) Wave Only (3) Verbal Greet (4) Chat (5) Conversation				
PASS. REACTION (1) Negative (2) Neutral (3) Positive				
BOAT MAN NATURE AS ABOVE				
BOAT MAN REACTION AS ABOVE				

CAMPSITE LOG

TRIP: \_\_\_\_\_

Site #	1	2	3	4
LOCATION				
PROXIMITY (1) See or Hear (2) See and Hear (3) Right Next To (4) Camped Alone				
Alternate Camp? (1) Yes, (2) No				
OWN PARTY NATURE: (1) Ignored (2) Wave Only (3) Verbal Greeting (4) Chat (5) Conversation				
OWN PARTY REACTION: (1) Negative (2) Neutral (3) Positive				

SUMMARY SHEET  
FOR YOUR TRIP

(To be attached to observer forms and questionnaires from your trip)

OBSERVER:

TRIP LEAVING DATE:

OUTFITTER:

LENGTH OF TRIP \_\_\_\_\_ DAYS (FIRST AND LAST INCLUDED)

TRIP SIZE:

PEOPLE IN PARTY (INCLUDE BOAT PERSONS):

NUMBER OF BOATS:

NUMBER OF PASSENGER QUESTIONNAIRES: \_\_\_\_\_ OF \_\_\_\_\_ POSSIBLE

NUMBER OF BOAT MAN QUESTIONNAIRES: \_\_\_\_\_ OF \_\_\_\_\_ POSSIBLE

DEBARKATION POINT:

ADDITIONAL COMMENTS OR UNIQUE ASPECTS OF THIS TRIP:

SUMMARY SHEET  
FOR PRIVATE TRIPS

(To be attached to questionnaires from private trip)

OBSERVER:

TRIP LEAVING DATE:

LENGTH OF TRIP:

TRIP SIZE:

PEOPLE IN PARTY (TOTAL):

NUMBER OF BOATS:

NUMBER OF QUESTIONNAIRES: \_\_\_\_\_ OF \_\_\_\_\_ POSSIBLE

DEBARKATION POINT:

1977

YOUR TRIP ON THE ROGUE

Overall, how would you rate your trip?

- 1 Poor
- 2 Fair; it just didn't work out very well
- 3 Good, but I wish a number of things could have been different
- 4 Very good, but could have been better
- 5 Excellent; only minor problems
- 6 Perfect

During your trip, about how many times each day did you see another river party?  
 If you saw the same party more than once, count each occasion separately.  
 (circle one)

<u>Day 1:</u>	0	1-3	4-6	7-9	10-15	16-20	21-30	over 30
<u>Day 2:</u>	0	1-3	4-6	7-9	10-15	16-20	21-30	over 30
<u>Day 3:</u>	0	1-3	4-6	7-9	10-15	16-20	21-30	over 30
<u>Day 4:</u>	0	1-3	4-6	7-9	10-15	16-20	21-30	over 30
<u>Day 5:</u>	0	1-3	4-6	7-9	10-15	16-20	21-30	over 30

During your trip, about how many hikers did you see each day? (circle one)

<u>Day 1:</u>	0	1-3	4-6	7-9	10-15	16-20	21-30	over 30
<u>Day 2:</u>	0	1-3	4-6	7-9	10-15	16-20	21-30	over 30
<u>Day 3:</u>	0	1-3	4-6	7-9	10-15	16-20	21-30	over 30
<u>Day 4:</u>	0	1-3	4-6	7-9	10-15	16-20	21-30	over 30
<u>Day 5:</u>	0	1-3	4-6	7-9	10-15	16-20	21-30	over 30

Did you feel the river was crowded?

1	2	3	4	5	6	7	8	9
not at all		slightly crowded			moderately crowded			extremely crowded

Did you feel:

There were too many river parties?  no  not sure  yes

There were too many hikers?  no  not sure  yes

Did you expect to see more \_\_\_\_\_, about the same \_\_\_\_\_, or fewer \_\_\_\_\_ river parties?

Did you expect to see more \_\_\_\_\_, about the same \_\_\_\_\_, or fewer \_\_\_\_\_ hikers?

So that we can send you a follow-up questionnaire, we need your name and address.  
 This information will be kept confidential.

Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

THANK YOU FOR FILLING OUT OUR QUESTIONNAIRE.

Bo Shelby, Assistant Professor  
 Oregon State University

## ROGUE RIVER USER SURVEY

Everyone wants the Rogue River to remain a high quality recreation area. But this requires careful planning. To help protect the unique aspects of the "Rogue River experience," we need to learn more about you--what you do and what you prefer. This questionnaire is designed to help provide that information.

Please try to answer every question, since a single missing answer decreases the value of all your answers. Try to answer what you believe to be true for you. There are no right or wrong answers; the best response is the one which most closely reflects your own personal feelings and beliefs, or what you actually saw and did.

Some questions may seem similar. But some of the concepts we are trying to measure are quite complex, and we need to approach them from several different angles. Although some questions seem the same, they really are different.

We realize that you may have run the Rogue more than once during the 1977 season. We are interested in the particular trip when you filled out a one-page questionnaire for an Oregon State University researcher. The details are important, so please do the best you can to describe the trip when you were interviewed.

The questionnaire is divided into sections to make it easier for you to answer.

*In this first section, we would like to ask some questions about the trip when you were interviewed.*

When you made plans to run the Rogue, how far in advance did you decide to go? Please fill in the appropriate numbers.

\_\_\_\_\_ months \_\_\_\_\_ weeks \_\_\_\_\_ days

The way people plan a trip depends partially on how far they live from the river.

Where do you live most of the year?

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

About how many miles is the Rogue from your permanent address?  
\_\_\_\_\_ miles

In planning this trip, did you attempt to avoid crowds by choosing a time when you thought there would be fewer people on the river?

\_\_\_\_\_ no \_\_\_\_\_ yes \_\_\_\_\_ it really didn't matter

Overall, was this trip less enjoyable because you met:

floaters \_\_\_\_\_ no \_\_\_\_\_ yes \_\_\_\_\_ didn't meet any  
jet boaters \_\_\_\_\_ no \_\_\_\_\_ yes \_\_\_\_\_ didn't meet any

*In this next section are a number of statements about the Rogue River and your trip down it. For each one, just circle the response which is closest to the way you feel. "Probably agree" means you agree more than you disagree with the item. "Probably disagree" means you disagree more than you agree.*

	Strongly Disagree	Probably Disagree	Neutral	Probably Agree	Strongly Agree
Our trip travelled at a leisurely pace.	1	2	3	4	5
Our trip would have been better if we had met fewer people along the way.	1	2	3	4	5
The places we stopped (like Howard Creek) were often too crowded.	1	2	3	4	5
On our trip we mostly sat on the boat rather than taking side trips.	1	2	3	4	5
I didn't think we met too many people during our trip down the river.	1	2	3	4	5
I would have preferred to have more of the "conveniences of home."	1	2	3	4	5
I would have enjoyed the trip more if we had seen less people while floating on the river.	1	2	3	4	5
I would have enjoyed the trip more if we had seen less people at side stops.	1	2	3	4	5
On our trip we had plenty of time for hiking and exploring.	1	2	3	4	5

	Strongly Disagree	Probably Disagree	Neutral	Probably Agree	Strongly Agree
The character of a river trip on the Rogue is not changed by meeting other parties.	1	2	3	4	5
It bothered me to meet so many people while floating on the river.	1	2	3	4	5
More developments (like the commercial lodges) should be built along the river.	1	2	3	4	5
Our trip travelled too fast.	1	2	3	4	5
I would have enjoyed the trip more with better camping facilities.	1	2	3	4	5
The Rogue seems relatively unaffected by the presence of man.	1	2	3	4	5
The Rogue would be more of a wilderness if use were more restricted.	1	2	3	4	5
The Rogue River environment is not being damaged by overuse.	1	2	3	4	5
The Rogue River is too crowded to be considered wilderness.	1	2	3	4	5
I think float trips should be banned from the wild section of the river.	1	2	3	4	5
I think jet boat trips should be banned from the wild section of the river.	1	2	3	4	5

Indicate the degree to which you agree that each of the following environmental damage conditions exists on the Rogue River.

Excessive litter	1	2	3	4	5
Trampling of natural vegetation	1	2	3	4	5
Overuse of campsites	1	2	3	4	5
Overuse of attraction sites	1	2	3	4	5

Overall, how would you rate this particular Rogue River trip?

- \_\_\_\_\_ poor
- \_\_\_\_\_ fair, it just didn't work out very well
- \_\_\_\_\_ good, but I wish a number of things could have been different
- \_\_\_\_\_ very good, but could have been better
- \_\_\_\_\_ excellent, only minor problems
- \_\_\_\_\_ perfect

In general, what was the weather like during the trip on which you were interviewed?

- terrible  
 generally bad  
 some bad, some good  
 generally good  
 great

*The statements in this section refer to personal aspects of the trip which attract some people to the Rogue. For each item, circle the response which best reflects your own personal feelings.*

	Strongly Disagree	Probably Disagree	Neutral	Probably Agree	Strongly Agree
I didn't expect the rapids to be so powerful.	1	2	3	4	5
I really didn't have a very clear idea of what a trip down the Rogue would be like.	1	2	3	4	5
I learned a great deal about:					
geology	1	2	3	4	5
rivers	1	2	3	4	5
ecology	1	2	3	4	5
history	1	2	3	4	5
nature in general	1	2	3	4	5
I wasn't very well prepared for the trip.	1	2	3	4	5
I learned things about myself.	1	2	3	4	5
The experience was personally challenging.	1	2	3	4	5
I acquired new skills.	1	2	3	4	5
The trip provided me an opportunity to get to know people better than I usually do.	1	2	3	4	5
I particularly enjoyed this trip because the people were friendly and interesting.	1	2	3	4	5
Since this trip, I have met with or written to new friends made on the trip.	1	2	3	4	5
The people on our trip got along particularly well.	1	2	3	4	5

Try to think over your river running experiences--the good ones along with the bad. What makes a good river trip, the kind you remember with pleasure for a long time? For each item below, please indicate how that aspect of a trip affects your overall satisfaction.

	Greatly Decreases Satis- faction	Slightly Decreases Satis- faction	No Effect on Satis- faction	Slightly Increases Satis- faction	Greatly Increases Satis- faction
	GD	SD	N	SI	GI
Being in a beautiful area.	GD	SD	N	SI	GI
Seeing wildlife.	GD	SD	N	SI	GI
Being with the people in your own group.	GD	SD	N	SI	GI
Seeing people outside your own group.	GD	SD	N	SI	GI
Using your river-running skills.	GD	SD	N	SI	GI
Running rapids.	GD	SD	N	SI	GI
Being in a backcountry area.	GD	SD	N	SI	GI
Seeing people in hiking parties.	GD	SD	N	SI	GI
Seeing people in jet boat parties.	GD	SD	N	SI	GI

Some people feel that our questions don't really capture the essence of their river trip down the Rogue. Therefore, we would like to give you a chance to express in your own words the most meaningful aspects of your trip.

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Everyone answers the above question somewhat differently. To help us better understand the most meaningful aspects of your experiences, we would like you to list five single words which best describe your trip on the Rogue. Please list all five words.

- |          |          |
|----------|----------|
| 1. _____ | 4. _____ |
| 2. _____ | 5. _____ |
| 3. _____ |          |



We are interested in how you feel about encounters with other groups during the trip. For each question, indicate the highest number of encounters you would tolerate before the experience became unpleasant. Please assume that all encounters are with float parties.

Number of encounters with other parties while floating on the river each day.  
OK to have as many as \_\_\_\_\_ encounters per day.  
\_\_\_\_\_ makes no difference to me.

Amount of time in sight of other parties while floating on the river each day.  
OK to spend as much as \_\_\_\_\_ hours and \_\_\_\_\_ minutes in sight of others.  
\_\_\_\_\_ makes no difference to me.

Number of stops (to hike, swim, etc.) at which you meet another group.  
OK to meet others at as many as \_\_\_\_\_ out of 5 stops.  
\_\_\_\_\_ makes no difference to me.

Chances of meeting 5-20 people (outside your own group) at places like Howard Creek, Tate Creek, or Zane Grey's cabin.  
OK to have \_\_\_\_\_ % chance of meeting others.  
\_\_\_\_\_ makes no difference to me.

Number of nights spent camping within sight or sound of another party.  
OK to be near as many as \_\_\_\_\_ out of 5 nights.  
\_\_\_\_\_ makes no difference to me.

Would you be willing to do any of the following to get your "preferred" encounter levels? (Circle one answer for each item.)

Pay \$50 more.	no	yes
Wait a month longer to go on the trip.	no	yes
Take the trip in May or September.	no	yes
Follow a schedule while on the river.	no	yes

Would you be willing to do any of the following in order to be assured of camping alone?

Travel further during the day.	no	yes
Have a less desirable campsite.	no	yes
Have a rigid schedule of campsites.	no	yes

In this section we'd like to know about what you expected before going on the trip. Do the best you can to answer each question in relation to the trip on which you were interviewed.

Before you went on this particular Rogue River trip, about how many parties did you expect to see each day while floating the river?

I expected to see \_\_\_\_\_ other parties per day.  
\_\_\_\_\_ didn't know what to expect.

How does the number of parties you actually encountered on your trip compare with the number that you expected to encounter?

\_\_\_\_\_ quite a few less than I expected  
\_\_\_\_\_ a few less  
\_\_\_\_\_ about the same  
\_\_\_\_\_ a few more  
\_\_\_\_\_ quite a few more  
\_\_\_\_\_ I didn't know what to expect

If you saw more people than you expected, did you:

- become unhappy or dissatisfied with the trip?      no      yes
- change the way you thought about the Rogue,  
deciding it was less remote than you had  
believed?      no      yes
- decide to go somewhere more remote next time?      no      yes
- attempt to avoid others by:
  - speeding up or slowing down?      no      yes
  - getting off the river to allow people to pass?      no      yes
  - passing up places at which you'd planned to  
stop?      no      yes
  - changing your campsite?      no      yes

Which size of float trip would you rather meet while travelling down the river?

- small (5 people or less)       large (16-25 people)  
 medium (6-15 people)       makes no difference

With which size trip would you rather run the river?

- small (5 people or less)       large (16-25 people)  
 medium (6-15 people)       makes no difference

What about encounters with jet boats? Indicate the highest number you would tolerate before the experience became unpleasant.

- OK to have as many as \_\_\_\_\_ encounters per day with jet boats.  
 \_\_\_\_\_ makes no difference to me.

Which of the following activities or facilities do you think are appropriate on the "wild" section of the Rogue? (Check those which are appropriate.)

- motorized boating       roads (paved or gravel)  
 non-motorized boating       campsites w/tables & fireplaces  
 hiking and backpacking       campsites with outhouses  
 motorcycle riding       campsites with plumbing

*In this section we'd like to know about your outdoor activities and river running experience.*

Do you participate in any of the following activities?

	Never	Once a Year Or Less	Several Times A Year	Once a Month Or More
Backpacking	1	2	3	4
Hiking	1	2	3	4
Camping	1	2	3	4
Mountain climbing	1	2	3	4
River tripping	1	2	3	4

Before this trip on the Rogue, what was your river-running experience?

- Total number of float trips on the Rogue.  
 Total number of jet boat trips on the Rogue.  
 Total number of other whitewater river trips.

How many years ago did you start going on whitewater river trips?

- years ago       this was my first trip

If it was not possible to go on a Rogue River trip, what would you do instead?

Would you take a river trip on a different river?      no      yes

What other river(s) would be reasonable substitutes for the Rogue?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ for me there is no substitute

If it was not possible to run the Rogue, would you become involved in some other activity?      no      yes

What other activities would be reasonable substitutes for river running on the Rogue?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ for me there is no substitute

For some people, running rivers is one of the most important things in their lives. To others, it may be just one of a number of interests--something they enjoy but to which they are not strongly committed. Check one statement below that best describes your own position.

\_\_\_\_\_ If I couldn't go river-running, I would soon find something else I enjoyed just as much.

\_\_\_\_\_ If I had to give up running rivers, I would miss it, but not as much as a lot of other things I now enjoy.

\_\_\_\_\_ If I couldn't go river-running, I would miss it more than almost any other interest I have.

\_\_\_\_\_ Running rivers is one of the biggest things in my life; if I had to give it up, a great deal of the total enjoyment I now get out of life would be gone.

*In this section we would like to ask some questions about your background which will help us compare your answers to those of other people. All of your answers are strictly confidential.*

How old are you? \_\_\_\_\_ years old

Are you \_\_\_\_\_ male; \_\_\_\_\_ female?

How many years of school have you completed?

1 2 3 4 5 6 7 8 9 10 11 12

Some college? \_\_\_\_\_ B.A. or equivalent? \_\_\_\_\_ M.A. or equivalent? \_\_\_\_\_

Advanced degree (M.D., Ph.D., etc.)? \_\_\_\_\_

What is your primary occupation? Please be as specific as possible; if you are a homemaker or student, please indicate the occupation of your spouse or parent. If retired, give former occupation.

\_\_\_\_\_

Please check the space that comes closest to your total family income before taxes:

- |  |   |
|--|---|
| <input type="checkbox"/> \$0 - 3,999       | <input type="checkbox"/> \$28,000 - 31,999  |
| <input type="checkbox"/> \$4,000 - 7,999   | <input type="checkbox"/> \$32,000 - 35,999  |
| <input type="checkbox"/> \$8,000 - 11,999  | <input type="checkbox"/> \$36,000 - 39,999  |
| <input type="checkbox"/> \$12,000 - 15,999 | <input type="checkbox"/> \$40,000 - 43,999  |
| <input type="checkbox"/> \$16,000 - 19,999 | <input type="checkbox"/> \$44,000 - 47,999  |
| <input type="checkbox"/> \$20,000 - 23,999 | <input type="checkbox"/> More than \$48,000 |
| <input type="checkbox"/> \$24,000 - 27,999 |   |

Are you:  
 single  
 married  
 separated, divorced, or widowed

How many children do you have? \_\_\_\_\_

Where do you presently live?  
 rural area  
 small city  
 large city  
 small town  
 suburban area

Are you now a member of an outdoor or conservation organization such as a mountain club or a sportsman's club? \_\_\_\_\_ no \_\_\_\_\_ yes

*The following section asks some questions which you have already answered. We are asking you to think of the "Rogue River experience" in three different ways, and your answers may vary from one to another. At the end you can indicate which kind of place you think the Rogue should be. We hate to ask you these questions so many times, but the information is important.*

I. Imagine the Rogue as a "wilderness," a place generally unaffected by the presence of man. If the Rogue were this kind of area, which of the following encounter levels would be appropriate? Indicate the highest level you would tolerate before the trip would no longer be a "wilderness experience."

Number of encounters with other parties while floating on the river each day.

OK to have as many as \_\_\_\_\_ encounters per day.  
 \_\_\_\_\_ makes no difference to me.

Amount of time in sight of other parties while floating on the river each day.

OK to spend as much as \_\_\_\_\_ hours and \_\_\_\_\_ minutes in sight of others.  
 \_\_\_\_\_ makes no difference to me.

Number of stops (to hike, swim, etc.) at which you meet another group.

OK to meet others at as many as \_\_\_\_\_ out of 5 stops.  
 \_\_\_\_\_ makes no difference to me.

Chances of meeting 5-20 people (outside your own group) at places like Howard Creek, Tate Creek, or Zane Grey's cabin.

OK to have \_\_\_\_\_% chance of meeting others.  
 \_\_\_\_\_ makes no difference to me.

Number of nights spent camping within sight of another party.  
 OK to be near others as many as \_\_\_\_\_ out of 5 nights.  
 \_\_\_\_\_ makes no difference to me.

In this situation, which of the following activities or facilities would be appropriate? (Check as many as are appropriate.)

_____ motorized boating	_____ roads (paved or gravel)
_____ non-motorized boating	_____ campsites w/tables & fireplaces
_____ backpacking	_____ campsites with outhouses
_____ motorcycle riding	_____ campsites with plumbing

- II. Now imagine the Rogue as a "semi-wilderness," the kind of place where complete solitude is not expected. In this case, which encounter levels would be appropriate? Indicate the highest level you would tolerate before the trip would no longer be a "semi-wilderness experience."

Number of encounters with other parties while floating on the river each day.

OK to have as many as \_\_\_\_\_ encounters per day.  
 \_\_\_\_\_ makes no difference to me.

Amount of time in sight of other parties while floating on the river each day.

OK to spend as much as \_\_\_\_\_ hours and \_\_\_\_\_ minutes in sight of others.  
 \_\_\_\_\_ makes no difference to me.

Number of stops (to hike, swim, etc.) at which you meet another group.

OK to meet others at as many as \_\_\_\_\_ out of 5 stops.  
 \_\_\_\_\_ makes no difference to me.

Chances of meeting 5-20 people (outside your own group) at places like Howard Creek, Tate Creek or Zane Grey's cabin.

OK to have \_\_\_\_\_% chance of meeting others.  
 \_\_\_\_\_ makes no difference to me.

Number of nights spent camping within sight of another party.

OK to be near others as many as \_\_\_\_\_ out of 5 nights.  
 \_\_\_\_\_ makes no difference to me.

In this situation, which activities or facilities would be appropriate?

_____ motorized boating	_____ roads (paved or gravel)
_____ non-motorized boating	_____ campsites w/tables & fireplaces
_____ backpacking	_____ campsites with outhouses
_____ motorcycle riding	_____ campsites with plumbing

- III. Now imagine the Rogue as an "undeveloped recreation area," the kind of place where a natural setting is provided but meeting other people is part of the experience. In this case, which encounter levels would be appropriate? Indicate the point at which there would be too many people for even this kind of "undeveloped recreation experience."

Number of encounters with other parties while floating on the river each day.

OK to have as many as \_\_\_\_\_ encounters per day.  
 \_\_\_\_\_ makes no difference to me.

Amount of time in sight of other parties while floating on the river each day.

OK to spend as much as \_\_\_\_\_ hours and \_\_\_\_\_ minutes in sight of others.  
 \_\_\_\_\_ makes no difference to me.

Number of stops (to hike, swim, etc.) at which you meet another group.

OK to meet others at as many as \_\_\_\_\_ out of 5 stops.

\_\_\_\_\_ makes no difference to me.

Chances of meeting 5-20 people (outside your own group) at places like Howard Creek, Tate Creek, or Zane Grey's cabin.

OK to have \_\_\_\_\_% chance of meeting others.

\_\_\_\_\_ makes no difference to me.

Number of nights spent camping within sight of another party.

OK to be near others as many as \_\_\_\_\_ out of 5 nights.

\_\_\_\_\_ makes no difference to me.

In this situation, which activities or facilities would be appropriate?

_____ motorized boating	_____ roads (paved or gravel)
_____ non-motorized boating	_____ campsites w/tables & fireplaces
_____ backpacking	_____ campsites with outhouses
_____ motorcycle riding	_____ campsites with plumbing

The following questions ask you to evaluate these three alternatives.

Of the three kinds of experiences described above, which do you think the Rogue River trip currently provides (circle one)?

wilderness                      semi-wilderness                      undeveloped recreation

Of the three kinds of experiences described above, which do you think the Rogue River trip should provide (circle one)?

wilderness                      semi-wilderness                      undeveloped recreation

If you prefer "wilderness," would you be willing to do any of the following things in order to accomplish this? (Circle one answer for each item.)

Pay \$50 more for the trip.	no	yes
Wait a month longer to go on the trip.	no	yes
Take the trip in May or September.	no	yes

If you had to choose, would you rather

\_\_\_\_\_ pay \$50 more OR \_\_\_\_\_ have a semi-wilderness experience.  
 \_\_\_\_\_ wait a month longer OR \_\_\_\_\_ have a semi-wilderness experience.  
 \_\_\_\_\_ take the trip in May or September OR \_\_\_\_\_ have a semi-wilderness experience

*This last question is the same as one you answered at the beginning of the questionnaire. Please answer it without looking back to your earlier answer, and don't worry about being consistent. Just answer in relation to the trip on which you were interviewed.*

Overall, how would you rate this particular Rogue River trip?

\_\_\_\_\_ poor  
 \_\_\_\_\_ fair, it just didn't work out very well  
 \_\_\_\_\_ good, but I wish a number of things could have been different  
 \_\_\_\_\_ very good, but could have been better  
 \_\_\_\_\_ excellent, only minor problems  
 \_\_\_\_\_ perfect

Future years may bring changes in the way the Rogue River is used and managed. Because we are interested in your opinions of these changes, we would like to contact you again in five years. You may move in the meantime, so we would like to have the addresses of a relative and a close friend who would be likely to know your correct address at that time.

Relative: Name \_\_\_\_\_  
Street \_\_\_\_\_  
City, State, Zip \_\_\_\_\_

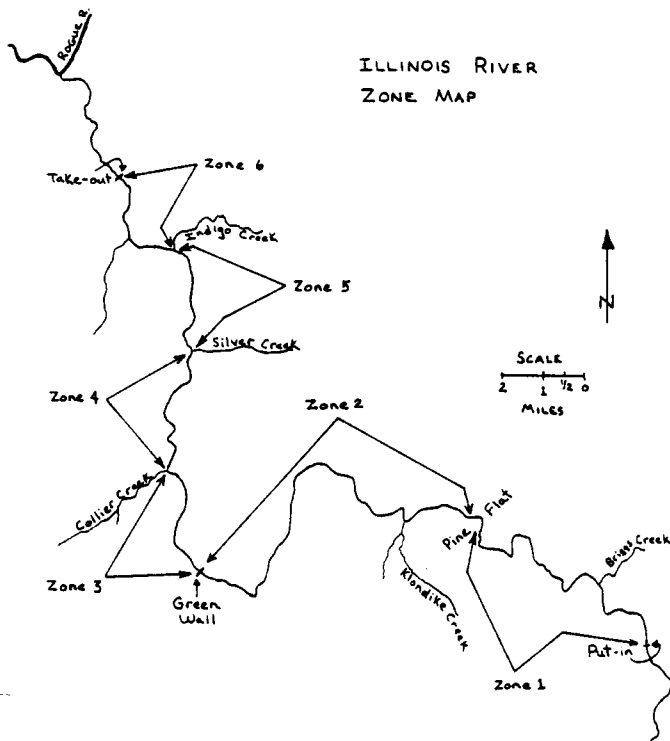
Close friend: Name \_\_\_\_\_  
Street \_\_\_\_\_  
City, State, Zip \_\_\_\_\_

*We hope you have found this questionnaire interesting. Please return it as soon as possible in the enclosed envelope. Thank you for your help and cooperation.*

APPENDIX B

Illinois River Study  
Diary Forms,  
Interview, and  
Questionnaire





#### ZONE DESCRIPTIONS

- Zone 1: Put-in to Pine Flat (7 miles)  
Pine Flat: Wide, open area. Right shore has large grey boulders, left has a flat, grassy bench above river level. River is divided; most water goes into an obvious chute on the right with reversal at the bottom.
- Zone 2: Pine Flat to Green Wall (7 miles)  
Green Wall: High, vertical rock wall on right, large boulder bar on left; largest and most difficult rapid on river.
- Zone 3: Green Wall to Collier Creek (3 miles)  
Collier Creek: 1st major creek on left after the series of rapids which follows Green Wall. Flows from deep, V-shaped canyon cut to river level. River canyon opens up and rock changes from dark to light color.
- Zone 4: Collier Creek to Silver Creek (4 miles)  
Silver Creek: Major stream on right flowing from deep, V-shaped canyon cut to river level. Foot bridge across creek is visible from river.
- Zone 5: Silver Creek to Indigo Creek (4 miles)  
Indigo Creek: Next major stream on right after Silver Creek; also flows from deep, V-shaped canyon cut to river level. no foot bridge.
- Zone 6: Indigo Creek to Take-out at Oak Flat road-end (3 miles)

TRIP SCHEDULE

LOCATION	Arrive		Leave		STOP FOR
	TIME DAY	TIME DAY	TIME DAY	TIME DAY	

DAILY CONTACT LOG

CONTACT	1	2	3	4	5	6	7	8	9
DAY									
ZONE									
TIME OF DAY									
EMPT BOATS?									
TYPE OF CONTACT									

ADJUSTMENTS

ATTRACTION SITE LOG

SITE #	1	2	3	4
SITE NAME				
DAY OF TRIP				
# OF PEOPLE				

CAMPSITE LOG

SITE #	1	2	3
LOCATION			
PROXIMITY 1) See or hear 2) See and hear 3) Flight next to 4) Camped alone			
ALTERNATE CAMP? 1) yes 2) no			

## ILLINOIS RIVER RUNNER'S DIARY

In cooperation with the U.S. Forest Service, Oregon State University is conducting research on the Illinois to find out how different use levels affect float trips. As you probably know, the Illinois has been proposed as a National Wild and Scenic River. In order to make good planning decisions, the Forest Service needs an accurate data base. We need your help in order to learn more about you and your trip.

This diary is designed to be completed as you float down the river. It is important to fill it out as you go along, because it will be hard to recollect all the information at the end. You need to write something down every time you stop and every time you see another party. We have divided the river into sections so we can keep track of the areas you use. A small map is attached delineating these sections, and you have been given a larger, more detailed recreation map. Please be as accurate as you can.

## INSTRUCTIONS

**TRIP SCHEDULE:** Here we'd like you to record the places you stop and for what reason.

**Location:** Note the place name, if known. If unknown, put in zone number from map.

**Arrive and Leave:** Put in AM if you arrive or leave in the morning, and PM if you arrive or leave in the afternoon. Also, put in the day of the trip (e.g. enter "2" if it's the second day of your trip).

**Stop For:** Note the reason you stopped here. The following code should help:

R = Scout Rapids	A = Attraction Site
L = Lunch	H = Hike
C = Camp	S = Swim
W = Get Drinking Water	

**DAILY CONTACT LOG:** Here we'd like you to record each contact you have with another river party. If you see the same party more than once, and if there is more than 5 minutes between sightings, count each sighting as a separate contact. Any sighting counts as a contact.

**Day:** The day of your trip. Record as before.

**Zone:** Refer to the map and note the proper zone. If you're not sure, note some prominent features and make your "best guess." The researchers at the end of the trip will help you figure it out.

**Time of Day:** Enter AM or PM as before.

**Empty Boats:** Check this column only if the contact consists of empty boats with no people in sight.

**Type of Contact:** Enter one of the following:

- 1 = you and other party both on river
- 2 = your party on river, other party on shore
- 3 = your party on shore, other party on river
- 4 = you and other party both on shore

**Adjustments:** Please make a slash in this space each time you make a major change of plans because another party was (1) at your preferred campsite, (2) at an attraction site where you wished to stop, or (3) just "in your way."

**ATTRACTION SITE LOG:** Fill this out whenever you stop at a site, whether or not you see other people there. Sites include things like side canyons, waterfalls, etc.; a stop means your boats were landed and people got out. Contacts under this category mean that both parties (yours and the one contacted) stopped at the same place. All other contacts count as river contacts.

**Site Name:** If known; if unknown, describe the site and put in zone number.

**Day of Trip:** List as before (day 1, 2, etc.)

**Number of People:** The number of people stopped at the site other than your own party; if no one is there, enter "0."

**CAMPSITE LOG:** Note the pertinent information for each night you are camped on the river.

**Location:** Name of campsite, if known; otherwise, describe the camp and list the zone number.

**Proximity to other parties:** Enter one of the following:

- 1 = see or hear other party
- 2 = see and hear other party
- 3 = right next to other party
- 4 = camped alone

If you can see smoke only, record as (4).

**Was this an alternate camp?** 1 = Yes, 2 = No.

Enter (1) if this camp was an alternate because the preferred camp was being used. This would also be counted as an "Adjustment."

So there it is - that's all there is to it. It may look complicated, but once you're on the river, you'll see that it is easy to record the information and still enjoy the river. At the end of your trip, another OSU researcher will get the diary from you and give you your "reward." Thanks for your cooperation.

## YOUR TRIP ON THE ILLINOIS

Overall, how would you rate your trip?

- Poor  
 Fair, it just didn't work out very well  
 Good, but I wish a number of things could have been different  
 Very good, but could have been better  
 Excellent, only minor problems  
 Perfect

In general, what was the weather like?

- Terrible  
 Generally bad  
 Some bad, some good  
 Generally good  
 Great

How well did the people in your group get along with each other?

- We had some real problems  
 The group was indifferent, neither good nor bad  
 We got along pretty well  
 We got along extremely well

Did you feel the river was crowded?

1	2	3	4	5	6	7	8	9
not at all		slightly crowded			moderately crowded			extremely crowded

When you made plans for this trip on the Illinois, how far in advance did you decide to go? Please fill in the appropriate numbers.

months
   
  weeks
   
  days

The way people plan a trip depends partially on how far they live from the river. About how many miles is the Illinois from your permanent address?  miles

In planning this trip, did you attempt to avoid crowds by choosing a time when you thought there would be fewer people on the river?

no  
 I didn't expect crowds on the Illinois
   
  yes  
 it really didn't matter

Before you went on this trip, about how many times each day did you expect to see other river parties?

I expected to see other parties about  times per day  
 I didn't know what to expect

During your trip, about how many times each day did you actually see another river party? If you saw the same party more than once, count each occasion separately.

We actually saw other parties about  times per day

PLEASE COMPLETE BOTH SIDES!

How does the number of parties you actually saw compare with the number you expected to see? 58

- We saw quite a few less than I expected
- A few less
- About the same
- A few more
- We saw quite a few more than I expected
- I didn't know what to expect

If you saw more people than you expected, did you:

- become unhappy or dissatisfied with the trip? no      yes
- change the way you thought about the Illinois, deciding it was less remote than you had believed? no      yes
- decide to go somewhere more remote next time? no      yes
- attempt to avoid others by:
  - speeding up or slowing down? no      yes
  - getting off the river to allow people to pass? no      yes
  - passing up places at which you'd planned to stop? no      yes
  - changing your campsite? no      yes

Not applicable; didn't see more than I expected

In general, how did you feel about seeing other river parties?

- Enjoyed it a great deal
- Enjoyed it somewhat
- Made no difference to me either way
- It bothered me some
- It bothered me a great deal

How many times each day would you prefer to see other parties? \_\_\_\_\_ times per day

We are interested in how you feel about encounters with other groups on the Illinois. For each question, indicate the highest number of encounters you would tolerate before the experience became unpleasant.

Number of encounters with other parties while floating on the river each day.  
OK to have as many as \_\_\_\_\_ encounters per day  
\_\_\_\_\_ Makes no difference to me

Amount of time in sight of other parties while floating on the river each day.  
OK to spend as much as \_\_\_\_\_ hours and \_\_\_\_\_ minutes in sight of others  
\_\_\_\_\_ Makes no difference to me

Number of stops (to hike, swim, etc.) at which you meet another group.  
OK to meet others at as many as \_\_\_\_\_ out of 5 stops  
\_\_\_\_\_ Makes no difference to me

Chances of meeting 5-10 people (outside your own group) at these places.  
OK to have \_\_\_\_\_% chance of meeting others  
\_\_\_\_\_ Makes no difference to me

Number of nights spent camping within sight or sound of another party.  
OK to be near others as many as \_\_\_\_\_ out of 3 nights  
\_\_\_\_\_ Makes no difference to me

Would you be willing to do any of the following in order to be assured of camping alone?  
Travel further during the day no      yes  
Have a less desirable campsite no      yes  
Have a rigid schedule of campsites no      yes

So that we can send you a follow-up questionnaire, we need your name and address. This information will be kept confidential.

Name: \_\_\_\_\_  
Street Address: \_\_\_\_\_  
City, State, Zip: \_\_\_\_\_

### ILLINOIS RIVER USER SURVEY

At present, the Illinois is a little known and little used river. But many rivers have had use increases in recent years, and some have become crowded and over-used. To help protect the unique aspects of the "Illinois River experience," we need to know more about you -- what you do and what you prefer. This questionnaire is designed to help provide that information.

Please try to answer every question, since a single missing answer decreases the value of all your responses. There are no right or wrong answers; the best response is the one which most closely reflects your own personal feelings and beliefs, or what you actually saw or did.

Some questions may seem similar. But some of the concepts we are trying to measure are quite complex, and we need to approach them from several different angles. Although some questions seem the same, they really are different.

The questionnaire is divided into sections to make it easier for you to answer.

Try to think over your river running experiences -- the good ones along with the bad. What makes a good river trip, the kind you remember with pleasure for a long time? For each item below, please indicate how that aspect of a trip affects your overall satisfaction.

	<u>Generally Decreases Satisfaction</u>	<u>Slightly Decreases Satisfaction</u>	<u>No Effect on Satisfaction</u>	<u>Slightly Increases Satisfaction</u>	<u>Greatly Increases Satisfaction</u>
Being in a beautiful area.	1	2	3	4	5
Seeing wildlife.	1	2	3	4	5
Being with the people in your own group.	1	2	3	4	5
Seeing people outside your own group.	1	2	3	4	5
Using your river-running skills.	1	2	3	4	5
Running rapids.	1	2	3	4	5
Being in a backcountry area.	1	2	3	4	5

Indicate the degree to which you agree that each of the following environmental damage conditions exist at the Illinois River.

	<u>Strongly Disagree</u>	<u>Probably Disagree</u>	<u>Neutral</u>	<u>Probably Agree</u>	<u>Strongly Agree</u>
Excessive litter	1	2	3	4	5
Trampling of natural vegetation	1	2	3	4	5
Overuse of campsites	1	2	3	4	5
Overuse of attraction sites	1	2	3	4	5



In this section we'd like to know about your outdoor activities and river running experience.

Do you participate in any of the following activities?

	<u>Never</u>	<u>Once a Year or Less</u>	<u>Several Times a Year</u>	<u>Once a Month or More</u>
Backpacking	1	2	3	4
Hiking	1	2	3	4
Camping	1	2	3	4
Mountain Climbing	1	2	3	4
River Tripping	1	2	3	4

What is your river-running experience?

\_\_\_\_\_ total number of float trips on the Illinois (including this year)

\_\_\_\_\_ total number of other whitewater river trips

How many times did you float the Illinois during the 1979 season?

\_\_\_\_\_ times

How many years ago did you start going on whitewater river trips?

\_\_\_\_\_ years ago

\_\_\_\_\_ this was my first trip

With which size trip would you rather run the river?

\_\_\_\_\_ small (5 people or less)

\_\_\_\_\_ large (13-20 people)

\_\_\_\_\_ medium (6-12 people)

\_\_\_\_\_ makes no difference

For some people, running rivers is one of the most important things in their lives. For others, it may be just one of a number of interests -- something they enjoy but to which they are not strongly committed. Check one statement below that best describes your own position.

\_\_\_\_\_ If I couldn't go river-running, I would soon find something else I enjoyed just as much.

\_\_\_\_\_ If I had to give up running rivers, I would miss it, but not as much as a lot of other things I now enjoy.

\_\_\_\_\_ If I couldn't go river-running, I would miss it more than almost any other interest I have.

\_\_\_\_\_ Running rivers is one of the biggest things in my life; if I had to give it up, a great deal of the total enjoyment I now get out of life would be gone.

*If it was not possible to go on an Illinois River trip, what would you do instead?*

Would you take a trip on a different river?      no                      yes

What other river(s) would provide an experience similar to the "Illinois River experience?"

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ for me there is no substitute

If it was not possible to run the Illinois, would you become involved in some other activity?                      no                      yes

What activities besides river running would be realistic substitutes for a trip on the Illinois?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ for me there is no substitute

What is the most important reason the Illinois would become undesirable for you?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

In the next section, we're interested in your experience on other rivers and how you would compare those rivers. Listed below are three major western rivers popular among Northwest river runners. Please answer the following questions for any that you have run. If you haven't run any of these rivers, place a check here \_\_\_\_\_ and go on to the next (Rogue River) section.

	Colorado in Grand Canyon	Snake in Hells Canyon	Middle Fork Salmon
Have you run any of these rivers? Check those you <u>have run</u> .	_____	_____	_____
Of the rivers you have run, are there any you now run less frequently? Check those you now run <u>less frequently</u> .	_____	_____	_____
For the rivers you run less frequently, we would like to know why you run them less frequently. Check <u>all</u> the reasons that apply to each river.			
-- too far to go	_____	_____	_____
-- too costly	_____	_____	_____
-- difficult to reach access points	_____	_____	_____
-- long shuffle	_____	_____	_____
-- too hard to get a permit	_____	_____	_____
-- too many people	_____	_____	_____
-- use of motors on the river	_____	_____	_____
-- mandatory scheduling of campsites	_____	_____	_____
-- too much competition for campsites	_____	_____	_____
-- environment damaged by overuse	_____	_____	_____
-- poor weather during running season	_____	_____	_____
-- below my skill level	_____	_____	_____
-- above my skill level	_____	_____	_____
-- it was a once in a lifetime trip	_____	_____	_____
-- other (please specify)	_____	_____	_____
_____	_____	_____	_____

In the next section, we'd like to learn about your experience on the Rogue River. If you have run the Rogue, please answer the following questions. If you haven't run the Rogue, place a check here \_\_\_\_\_ and go on to the next section.

About how many times have you run the Rogue River? \_\_\_\_\_ times

When did you first start running the Rogue? \_\_\_\_\_ years ago

Listed in the left column are a number of factors which may affect your use of the Rogue. We are interested in the following questions:

Column A: Which of the factors do you feel apply to the Rogue?

Column B: Have any of these factors caused you to run the Rogue less frequently?

Column C: Did any of these factors cause you to run the Illinois instead of the Rogue?

	<u>A</u>	<u>B</u>	<u>C</u>
<u>Factors which may affect Rogue use</u>	<u>Check those which apply to the Rogue</u>	<u>Check those which have caused you to run the Rogue less frequently</u>	<u>Check those which prompted you to run the Illinois instead of the Rogue</u>
Too far to go	_____	_____	_____
Too costly	_____	_____	_____
Difficult to reach access points	_____	_____	_____
Long shuttle	_____	_____	_____
Too hard to get a permit	_____	_____	_____
Too many people	_____	_____	_____
Use of motors on the river	_____	_____	_____
Mandatory scheduling of campsites	_____	_____	_____
Too much competition for campsites	_____	_____	_____
Environment damaged by overuse	_____	_____	_____
Poor weather during running season	_____	_____	_____
Below my skill level	_____	_____	_____
Above my skill level	_____	_____	_____
It was a once in a lifetime trip	_____	_____	_____
Other (please specify)	_____	_____	_____

If you continue to run the Rogue in spite of the problems you have checked above, how have you solved or "gotten around" those problems?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

The following section asks some questions which are similar to those you answered right after your trip. We are asking you to think of the "Illinois River experience" in three different ways, and your answers may vary from one to another. At the end you can indicate which kind of place you think the Illinois should be. We hate to ask you these questions so many times, but the information is important.

- I. Imagine the Illinois as a place offering solitude, generally unaffected by the presence of man. If the Illinois were this kind of area, which of the following encounter levels would be appropriate? Indicate the highest level tolerable for this kind of experience.

Number of encounters with other parties while floating on the river each day.

OK to have as many as \_\_\_\_\_ encounters per day.  
\_\_\_\_\_ makes no difference to me.

Amount of time in sight of other parties while floating on the river each day.

OK to spend as much as \_\_\_\_\_ hours and \_\_\_\_\_ minutes in sight of others.  
\_\_\_\_\_ makes no difference to me.

Number of stops (to hike, swim, etc.) at which you meet another group.

OK to meet others at as many as \_\_\_\_\_ out of 5 stops.  
\_\_\_\_\_ makes no difference to me.

Number of nights spent camping within sight of another party.

OK to be near others as many as \_\_\_\_\_ out of 3 nights.  
\_\_\_\_\_ makes no difference to me.

- II. Now imagine the Illinois as the kind of place where complete solitude is not expected. In this case, which encounter levels would be appropriate? Indicate the highest level tolerable for this kind of experience.

Number of encounters with other parties while floating on the river each day.

OK to have as many as \_\_\_\_\_ encounters per day.  
\_\_\_\_\_ makes no difference to me.

Amount of time in sight of other parties while floating on the river each day.

OK to spend as much as \_\_\_\_\_ hours and \_\_\_\_\_ minutes in sight of others.  
\_\_\_\_\_ makes no difference to me.

Number of stops (to hike, swim, etc.) at which you meet another group.

OK to meet others at as many as \_\_\_\_\_ out of 5 stops.  
\_\_\_\_\_ makes no difference to me.

Number of nights spent camping within sight of another party.  
 OK to be near others as many as \_\_\_\_\_ out of 3 nights.  
 \_\_\_\_\_ makes no difference to me.

III. *Now imagine the Illinois as the kind of place where a natural setting is provided, but meeting other people is part of the experience. In this case, which encounter levels would be appropriate? Indicate the highest level tolerable for this kind of experience.*

Number of encounters with other parties while floating on the river each day.

OK to have as many as \_\_\_\_\_ encounters per day.  
 \_\_\_\_\_ makes no difference to me.

Amount of time in sight of other parties while floating on the river each day.

OK to spend as much as \_\_\_\_\_ hours and \_\_\_\_\_ minutes in sight of others.  
 \_\_\_\_\_ makes no difference to me.

Number of stops (to hike, swim, etc.) at which you meet another group.

OK to meet others at as many as \_\_\_\_\_ out of 5 stops.  
 \_\_\_\_\_ makes no difference to me.

Number of nights spent camping within sight of another party.

OK to be near others as many as \_\_\_\_\_ out of 3 nights.  
 \_\_\_\_\_ makes no difference to me.

Of the three kinds of experiences described above, which do you think the Illinois River trip currently provides? (Circle one.)

- I. Generally unaffected by the presence of man.
- II. Complete solitude is not expected.
- III. Meeting other people is part of the experience.

Of the three kinds of experiences, which do you think the Illinois River trip should provide? (Circle one.)

- I. Generally unaffected by the presence of man.
- II. Complete solitude is not expected.
- III. Meeting other people is part of the experience.

The opportunity to run a river and see very few other people sometimes involves trade-offs. Would you be willing to do any of the following in order to be assured of getting the kind of experience you think the Illinois should provide?

- |  |    |     |
|--|----|-----|
| Take the trip during mid-week rather than on a weekend.  | no | yes |
| Take the trip earlier in the season when the weather is less likely to be good.  | no | yes |
| Schedule your departure time for morning or afternoon.   | no | yes |
| Have less chance to get a permit for a weekend day, knowing that when you get a permit there would be fewer people on the river. | no | yes |

Combine your group with another group, agreeing to travel and camp together. no    yes

Other (please specify) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

*In this section, we would like to ask some questions about your background which will help us compare your answers to those of other people. All of your answers are strictly confidential.*

How old are you? \_\_\_\_\_ years old

Are you \_\_\_\_\_ male; \_\_\_\_\_ female

How many years of school have you completed?

1    2    3    4    5    6    7    8    9    10    11    12

Some college \_\_\_\_\_ B.A. or equivalent \_\_\_\_\_  
M.A. or equivalent \_\_\_\_\_ Advanced degree (M.D., Ph.D.) \_\_\_\_\_

What is your primary occupation? Please be as specific as possible. If retired, give former occupation; if dependent on parent, please give parent's occupation.

\_\_\_\_\_

Please check the space that comes closest to your total family income before taxes.

_____ \$0 - 3,999	_____ \$28,000 - 31,999
_____ \$4,000 - 7,999	_____ \$32,000 - 35,999
_____ \$8,000 - 11,999	_____ \$36,000 - 39,999
_____ \$12,000 - 15,999	_____ \$40,000 - 43,999
_____ \$16,000 - 19,999	_____ \$44,000 - 47,999
_____ \$20,000 - 23,999	_____ More than \$48,000
_____ \$24,000 - 27,999	

Are you: \_\_\_\_\_ single  
\_\_\_\_\_ married  
\_\_\_\_\_ separated, divorced, widowed

How many children do you have? \_\_\_\_\_

Are you now a member of an outdoor or conservation organization such as a mountain club or sportsman's club? \_\_\_\_\_ no \_\_\_\_\_ yes

How many weeks of vacation do you have each year? \_\_\_\_\_ weeks

How far in advance does your job permit you to plan your vacation?  
\_\_\_\_\_ months \_\_\_\_\_ weeks \_\_\_\_\_ days

Where did you first hear about running the Illinois River?

\_\_\_\_\_ from a friend or acquaintance  
\_\_\_\_\_ from the U.S. Forest Service  
\_\_\_\_\_ from a brochure published by a river outfitter  
\_\_\_\_\_ from a book  
\_\_\_\_\_ from a magazine or newspaper  
\_\_\_\_\_ from the radio or television  
\_\_\_\_\_ other (please specify) \_\_\_\_\_

\_\_\_\_\_

*Future years may bring changes in the way the Illinois River is used and managed. Because we are interested in your opinions of these changes, we would like to contact you again in five years. To do this we would like to have your permanent address and the address of a relative or close friend who would be likely to know your address at what time.*

Your name \_\_\_\_\_

Street \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Close friend or relative's name \_\_\_\_\_

Street \_\_\_\_\_

City, State, Zip \_\_\_\_\_

We hope you found this questionnaire interesting. Thank you for your help and cooperation.