

D-318

A SURVEY OF VISITORS WHO PLANNED THEIR PARTY'S TRIP
TO THE WHITE RIVER AND SUNRISE AREAS
OF MOUNT RAINIER NATIONAL PARK

MARK E. VANDE KAMP
DARRYLL R. JOHNSON

Technical Report NPS/CCSOUW/NRTR-98-05
NPS D-318

FIELD STATION/PROTECTED AREA RESEARCH
USGS/BRD/FRESC
COLLEGE OF FOREST RESOURCES
BOX 352100
UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195-2100

B&W Scans
2.6.2003

The Field Station for Protected Area Research at the University of Washington was originally established by the National Park Service in 1970. Known as the Cooperative Park Studies Unit (CPSU) it was and still is located in the College of Forest Resources. In 1996, the CPSU was transferred to the U. S. Geological Survey (USGS) and administered out of the Biological Resources Division (BRD) of the Forest and Rangeland Ecosystem Science Center (FRESC) located in Corvallis, Oregon. The mission of FRESC and that of the Field Station is to work with others to provide the scientific understanding and technologies needed to support the sound management and conservation of our Nation's biological resources. Field Station programs are developed to provide the appropriate depth and breadth of objective science in order to meet the information needs of resource managers who encounter complex environmental problems driven by myriad biological, physical, social, and economic forces.

The National Park Service disseminates results of biological, physical, or social science research through the Natural Resources Technical Report Series. Natural resources inventories and monitoring activities, scientific literature reviews, bibliographies, and proceedings of technical workshops or conferences are also disseminated through this series. Documents in this series usually contain information of a preliminary nature and are prepared primarily for internal use within the National Park Service.

Mention of trade names or commercial products does not constitute endorsement or recommendation for use by the U. S. Geological Survey or the National Park Service. The contents of the report do not necessarily reflect the views and policies of the National Park Service or of the U.S. Geological Survey.

Copies are available from the following: Technical Information Center
Denver Service Center
National Park Service
P. O. Box 25287
Denver, CO 80225-0287
303-969-2130

**A SURVEY OF VISITORS WHO PLANNED THEIR PARTY'S TRIP
TO THE WHITE RIVER AND SUNRISE AREAS
OF MOUNT RAINIER NATIONAL PARK**

MARK E. VANDE KAMP
DARRYLL R. JOHNSON

Technical Report NPS/CCSOUW/NRTR-98-05
NPS D-318

FIELD STATION/PROTECTED AREA RESEARCH
USGS/BRD/FRESC
COLLEGE OF FOREST RESOURCES
BOX 352100
UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON 98195-2100

February 1998

Subagreement No. 4 to Cooperative Agreement No. 1443-CA-9000-95-019
National Park Service and University of Washington

CONTENTS

ACKNOWLEDGMENTS.....	IX
PREFACE.....	XI
SURVEY HIGHLIGHTS.....	1
Table Of Figures For Survey Highlights.....	3
Characteristics Of Trip Planners At The White River Entrance.....	5
Planning Visits To The White River/Sunrise Area.....	8
Evaluation Of Trips To The White River/Sunrise Area.....	15
Reactions To Management Scenarios Concerning Parking At Sunrise.....	22
I. INTRODUCTION.....	25
Survey Design and Questionnaire Development.....	26
Sampling and Visitor Contact Procedures.....	28
Mail Questionnaire Administration.....	29
Limitations.....	30
Accuracy of the Sample.....	32
Conventions Followed In This Report.....	33
II. VISITOR PROFILE.....	35
Table 2.1: Table Of Figures In Section II.....	37
Age and Gender.....	38
Size and Composition of Group.....	41
Distance From Place of Residence to White River Entrance.....	43
Education and Marital Status.....	44
Number of Visits to MORA.....	46

III. TRIP CHARACTERISTICS	49
Table 3.1: Table Of Figures For Section III.....	51
Planning the Trip.....	54
Getting to the White River Entrance	66
Use of Facilities: Planned and Actual.....	70
Day Hiking: Planned and Actual.....	76
Recreational Activities: Planned and Actual.....	80
Time in the White River/Sunrise Area.....	92
IV. TRIP MOTIVATION	93
Table 4.1: Table Of Figures For Section IV.....	95
Why Respondents Chose to Visit the White River/Sunrise Area	96
Recreation Experience Preferences.....	98
V. TRIP EXPERIENCES AND EVALUATION	111
Table 5.1: Table Of Figures For Section V.....	113
Density of Visitors	114
Impacts of Other Visitors	116
Unacceptable Visitor-caused Damage	118
Efforts by the National Park Service to Limit Visitor-caused Damage....	122
Overall Trip Satisfaction.....	126
VI. REACTIONS TO MANAGEMENT SCENARIOS CONCERNING PARKING AT SUNRISE.....	127
Table 6.1: Table Of Figures For Section VI.....	129
Learning that Sunrise Parking Lot is Full	130
APPENDIX A: ENTRANCE QUESTIONNAIRE.....	137
APPENDIX B: MAIL QUESTIONNAIRE.....	147

APPENDIX C: COMMENTS FROM THE MAIL QUESTIONNAIRE	159
Compliments.....	159
Criticism.....	161
Suggestions.....	162
Comments Concerning the Questionnaire	168
Miscellaneous Comments	170
APPENDIX D: HOW TO USE THIS REPORT	173
APPENDIX E: RECREATION EXPERIENCE PREFERENCE SCALES	177
APPENDIX F: 1990 MORA GVS MARKET SEGMENTATION ANALYSIS	183

ACKNOWLEDGMENTS

Special thanks for much of the data analysis and production of charts go to Jane Swanson. Thanks also to Stephanie Schulz for special efforts in data collection. Other Field Station employees who contributed substantially to the success of this project include Esther Hammerschlag and Stephen Nowers. Finally, Barbara Samora at Mount Rainier provided essential feedback and assistance throughout the course of this project.

PREFACE

This document reports the results from a survey of trip planners who visited the White River and Sunrise areas of Mount Rainier National Park (MORA) in the summer of 1993. The questionnaires used in this study are included in Appendix A and B. Before proceeding with the report, readers should review the questionnaires in order to familiarize themselves with these materials.

A number of respondents to the mail questionnaire took the opportunity to write comments about their trip to MORA. These comments have been transcribed and are presented here in Appendix C. Readers are encouraged to read through these comments which provide a qualitative description of visitors' reactions that quantitative measures do not typically capture.

It is anticipated that this report will be used primarily as a reference document and therefore, depending on each reader's objective, this report may be used in very different ways. However, any reader not familiar with statistical analysis of survey data is encouraged to refer to Appendix D, "How To Use This Report."

SURVEY HIGHLIGHTS

The 1993 Mount Rainier National Park White River Visitor Survey (WRVS) was the first survey at MORA that has specifically targeted the member of each party who was most responsible for planning the party's trip (hereafter referred to as the trip planner). This aspect of the survey is important because it means that managers can identify the group to whom information should be targeted in order to most effectively alter the plans and behaviors of MORA visitors. In addition, the survey measures the evaluations and perceptions of visitors who will probably have disproportionate input on future visitation.

In this section we present selected findings from the survey results. The highlighted findings have important implications that are likely to be of particular interest to MORA managers. However, they do not represent all findings that are likely to be of interest to any single reader. Therefore, readers wishing to make full use of this report should carefully read the sections that are relevant to their particular interests.

Survey Highlights

Survey Highlights

TABLE OF FIGURES FOR SURVEY HIGHLIGHTS

FIGURE SH.1: DISTANCE FROM HOME TO WHITE RIVER/SUNRISE AREA OF MORA.....5

FIGURE SH.2: GENDER OF WHITE RIVER SURVEY RESPONDENTS.....6

FIGURE SH.3: HIGHEST LEVEL OF FORMAL EDUCATION COMPLETED7

FIGURE SH.4: ATTEMPTED TO SPECIFICALLY SEEK OUT INFORMATION ABOUT THE WHITE RIVER/SUNRISE AREA.....8

FIGURE SH.5: VISITED ATTRACTIONS IN MORA BEFORE ARRIVING AT WHITE RIVER/SUNRISE AREA9

FIGURE SH.6: TIME WHEN DECISION TO VISIT THE WHITE RIVER/SUNRISE AREA WAS MADE10

FIGURE SH.7: CONSIDERED THE POSSIBILITY OF A LARGE NUMBER OF OTHER VISITORS WHEN DECIDING TO VISIT THE WHITE RIVER/SUNRISE AREA11

FIGURE SH.8: EFFECT OF CONSIDERING POTENTIAL FOR A LARGE NUMBER OF OTHER VISITORS ON DECISION TO VISIT WHITE RIVER/SUNRISE AREA12

FIGURE SH.9: PLANNED TO DRIVE UP TO SUNRISE AND PARK IN VISITORS' LOT.....13

FIGURE SH.10: PLANNED LOCATION/DESTINATION OF DAY HIKE.....14

FIGURE SH.11: IMPORTANCE VS OPPORTUNITY TO SATISFY VARIOUS REASONS FOR VISITING THE WHITE RIVER/SUNRISE AREA.....15

FIGURE SH.12: NUMBER OF VISITORS SEEN VS NUMBER EXPECTED17

FIGURE SH.13: NUMBER OF VISITORS SEEN VS NUMBER PREFERRED...18

FIGURE SH.14: HOW VISITORS DETRACTED FROM ENJOYMENT OF THE WHITE RIVER/SUNRISE AREA19

FIGURE SH.15: DEGREE DAMAGE DETRACTED FROM ENJOYMENT OF THE WHITE RIVER/SUNRISE AREA.....20

Survey Highlights

FIGURE SH.16: DEGREE NPS EFFORTS TO LIMIT DAMAGE DETRACTED FROM ENJOYMENT OF THE WHITE RIVER/SUNRISE AREA.....21

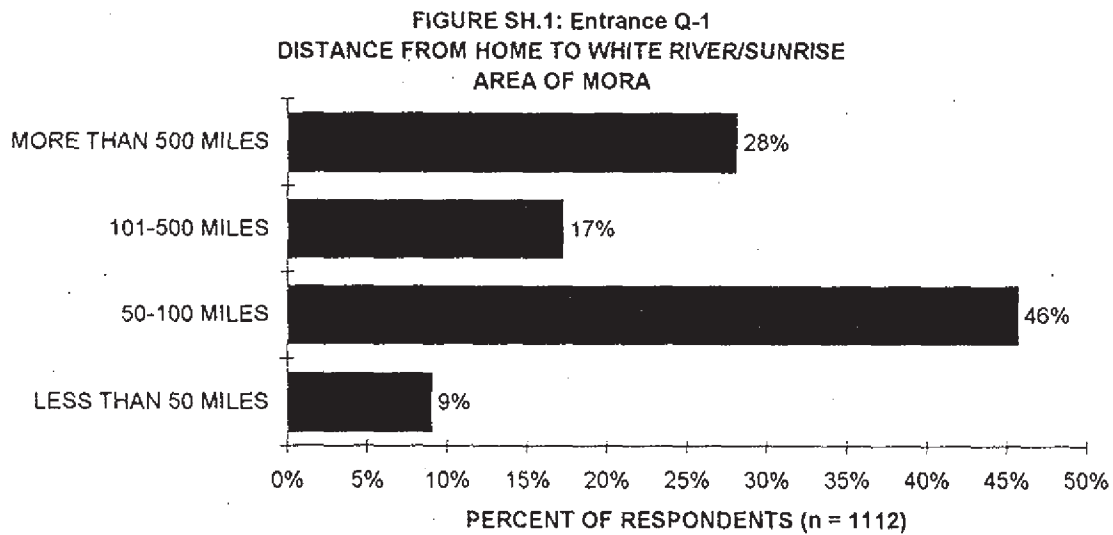
FIGURE SH.17: RESPONSE TO A HYPOTHETICAL ELECTRONIC SIGN THAT SAYS SUNRISE VISITOR LOT IS FULL22

FIGURE SH.18: ALTERNATE DESTINATIONS IF NOTIFIED BY SIGN THAT LOT AT SUNRISE WAS FULL.....23

Survey Highlights

Characteristics Of Trip Planners At The White River Entrance

More than half of the trip planners visiting the White River/Sunrise area live less than 100 miles away. Figure SH.1 displays the distances that visitors traveled to reach the White River entrance of MORA. More than half of the White River trip planners lived less than 100 miles from the entrance and most of them were between 50 and 100 miles from their homes.¹



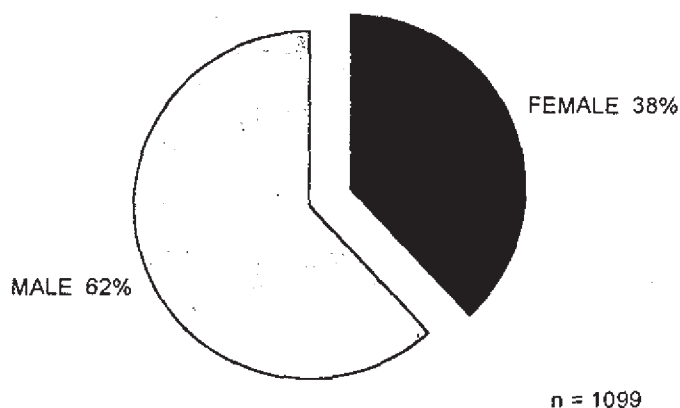
¹ These data suggest that most White River visitors were from the greater Seattle-Tacoma metropolitan area. Future analysis of Zip codes provided by respondents could be used to more accurately describe the distribution of trip planners' homes.

Survey Highlights

Repeat visitors to Mount Rainier National Park account for a disproportionately large number of trips. Question 8 on the entrance questionnaire asked trip planners how often they had visited Mount Rainier in the last five years. Although persons who reported that they visited 20 or more times in the last three years made up slightly less than five percent of respondents, they accounted for 34 percent of the total reported trips. Clearly, policies or information that affect this small group of visitors will have a disproportionately large effect on conditions in the Park.

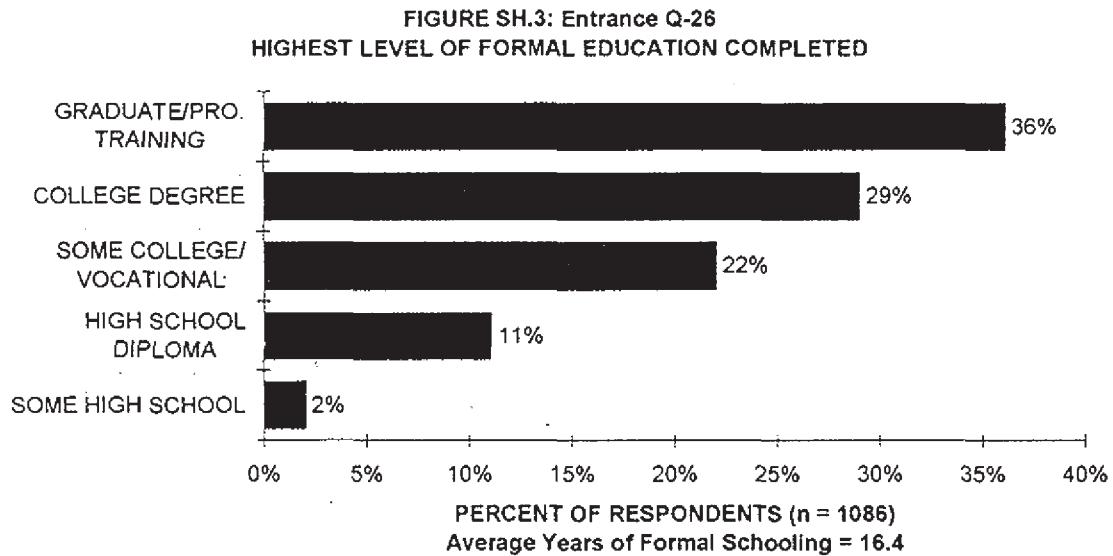
Trip planners are predominantly male and are more highly educated than general MORA visitors. Figure SH.2 shows that more than 60 percent of trip planners are male. This gender distribution is different from that of general MORA visitors and suggests that men are more likely than women to be considered the party member most responsible for planning the trip.

FIGURE SH.2: Entrance Q-22
GENDER OF WHITE RIVER SURVEY RESPONDENTS



Survey Highlights

Figure SH.3 shows that trip planners were highly educated, having completed an average of more than 16 years of formal education. Although general MORA visitors² are also highly educated, trip planners were more likely to have post-secondary training (87% vs. 78%) and were more likely to have college degrees (65% vs. 50%).



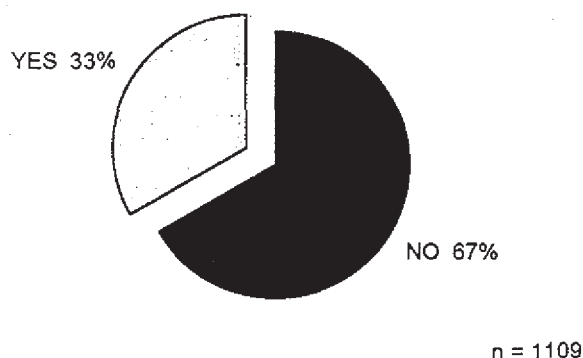
² All comparisons to MORA general visitors are made using data from the 1990 MORA General Visitor Survey (Technical Report, University of Washington Field Station for Protected Area Research). This survey described "general" MORA visitors by sampling at all major MORA entrances on a year-round basis.

Survey Highlights

Planning Visits To The White River/Sunrise Area

Most trip planners did not specifically seek out information concerning the White River/Sunrise area. Figure SH.4 shows that about two-thirds of trip planners reported that they made no attempt to seek out information concerning the White River/Sunrise area of Mount Rainier. This result suggests that if managers plan to use information to alter visitation patterns they can not depend on visitors to find that information through their own efforts.

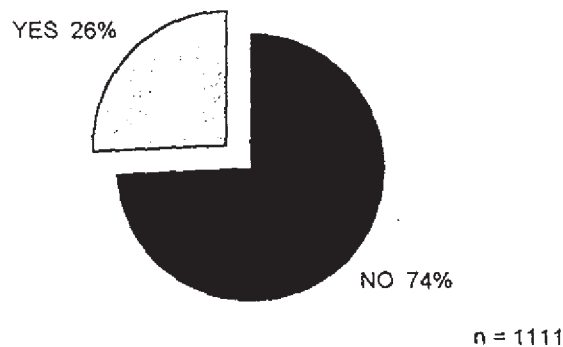
**FIGURE SH.4: Entrance Q-20
ATTEMPTED TO SPECIFICALLY SEEK OUT INFORMATION ABOUT THE WHITE
RIVER/SUNRISE AREA**



Survey Highlights

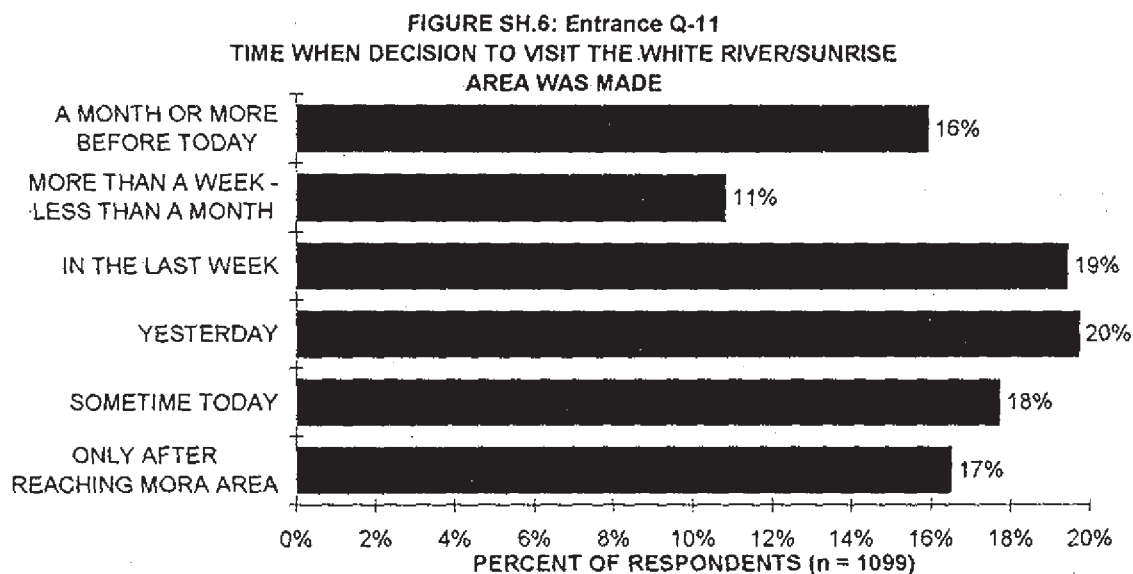
Most parties arrive at the White River entrance before visiting any other attractions in MORA. Figure SH.5 shows that for almost three-quarters of surveyed parties the White River/Sunrise area was the first attraction at MORA that was visited. This result illustrates another limitation on the provision of information. Much of the information that visitors receive concerning the park is contained in the brochure and park newspapers given out at park entrances and facilities. Most trip planners have not received such information prior to reaching the White River entrance.

FIGURE SH.5: Entrance Q-12
VISITED ATTRACTIONS IN MORA BEFORE ARRIVING AT
WHITE RIVER/SUNRISE AREA



Survey Highlights

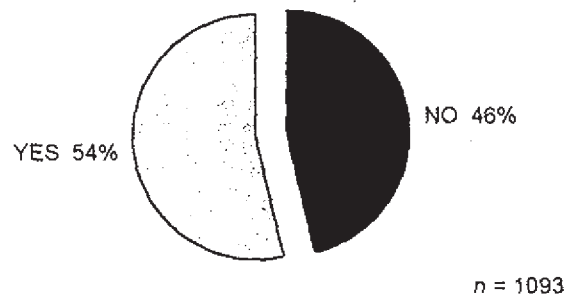
More than half of the trip planners visiting the White River/Sunrise area made the decision to visit less than 32 hours earlier. Although respondents varied widely in the amount of time that had passed since they first decided to enter MORA at the White River entrance, Figure SH.6 shows that for most visitors the decision was recent. Only 16 percent of trip planners had decided to visit the White River/Sunrise area a month before their trip, almost three-quarters had made the decision in the last week, and 17 percent had decided to enter at White River only after reaching the vicinity of MORA.



Survey Highlights

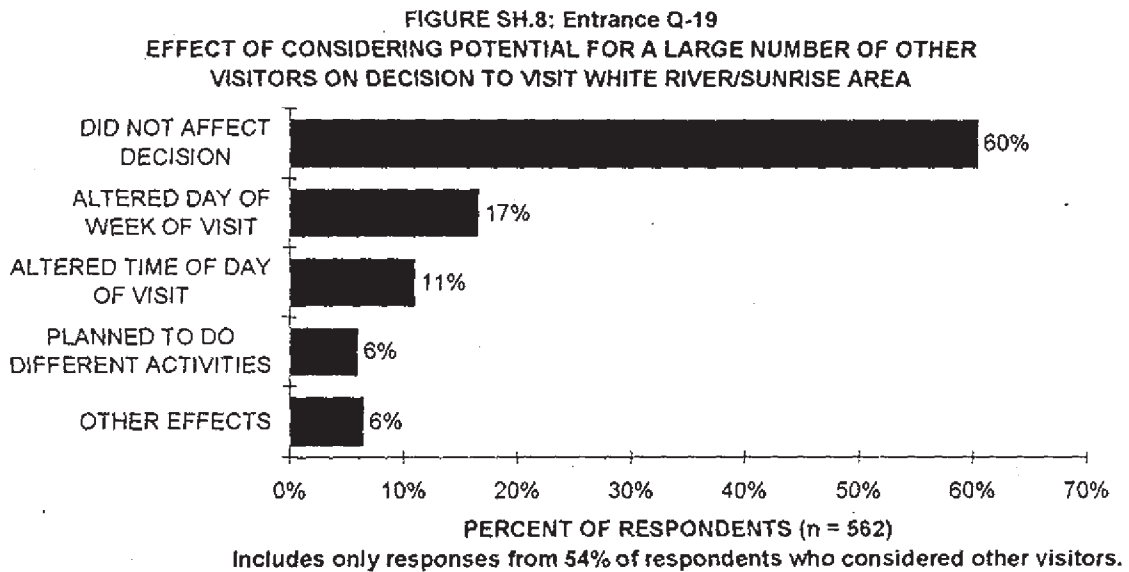
About 21 percent of all trip planners altered their plans due to the expected presence of other visitors. In Question 19 of the entrance questionnaire respondents were asked if, in their decision to visit the White River/Sunrise area, they had taken into consideration the possibility that there would be a large number of visitors in the area. Figure SH.7 shows that a little more than half the trip planners considered the possibility that there would be a large number of other visitors in the area.

FIGURE SH.7: Entrance Q-19
CONSIDERED THE POSSIBILITY OF A LARGE NUMBER
OF OTHER VISITORS WHEN DECIDING TO VISIT
THE WHITE RIVER/SUNRISE AREA



Survey Highlights

A follow up portion of Question 19 asked how the consideration of other visitors affected trip planners' decisions to visit. Figure SH.8 shows that about 60 percent of respondents who considered the number of others said that it had no effect on their plans. Together, these figures show that about 21 percent of all respondents (40% of those who considered others at all) altered their plans due to the expected presence of other visitors. The most common alteration was to visit on a different day of the week (17% of trip planners who considered other visitors), presumably visiting on a weekday rather than a weekend. Clearly, visitor density has an effect on current visitation patterns.



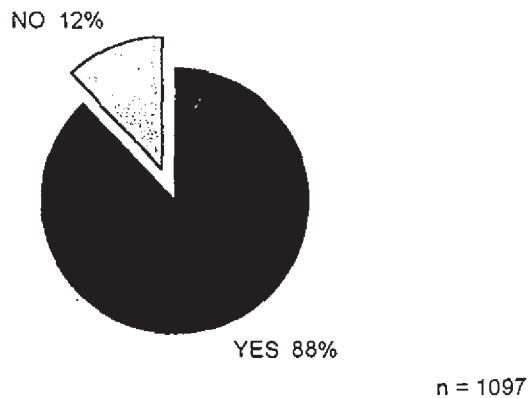
Respondents who altered their plans due to the expected presence of other visitors were less likely to live 500 or more miles from MORA (17% vs. 31%) than were other trip planners. Visitors who live closer to MORA apparently have more opportunity to modify their visiting plans.

Survey Highlights

Almost all trip planners entering at White River plan to park at Sunrise.

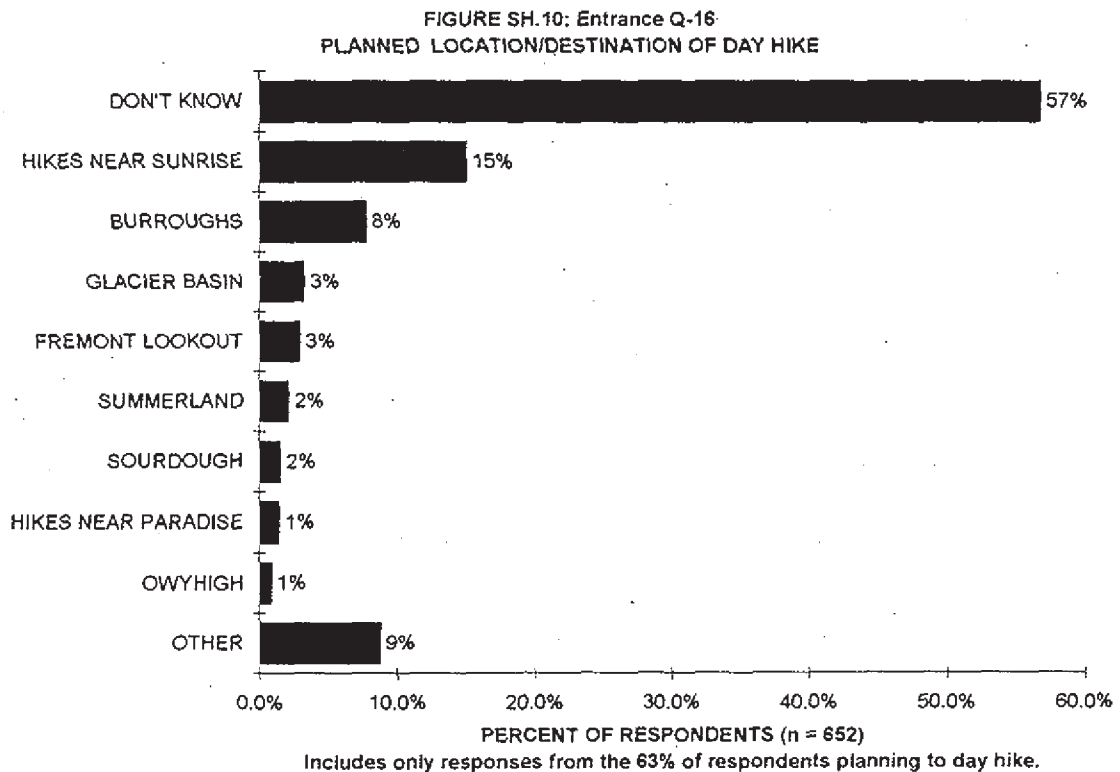
Figure SH.9 shows that almost 90 percent of respondents planned to drive to the end of the road and park at Sunrise. This is consistent with the fact that most development, parking space, and visitor attractions in the area are concentrated at Sunrise.

FIGURE SH.9: Entrance Q-II
PLANNED TO DRIVE UP TO SUNRISE AND PARK IN VISITORS' LOT



Survey Highlights

More than half of trip planners who expect to day-hike have no specific hiking destination. Although nearly two-thirds of respondents planned to hike (63%), the majority had not chosen a specific hike or hiking destination (see Figure SH.10). Even among those who specified a location the most common response was the general Sunrise vicinity. This lack of specific hiking destinations represents an opportunity for MORA to manage visitor distribution so as to maximize visitor enjoyment and minimize resource damage.

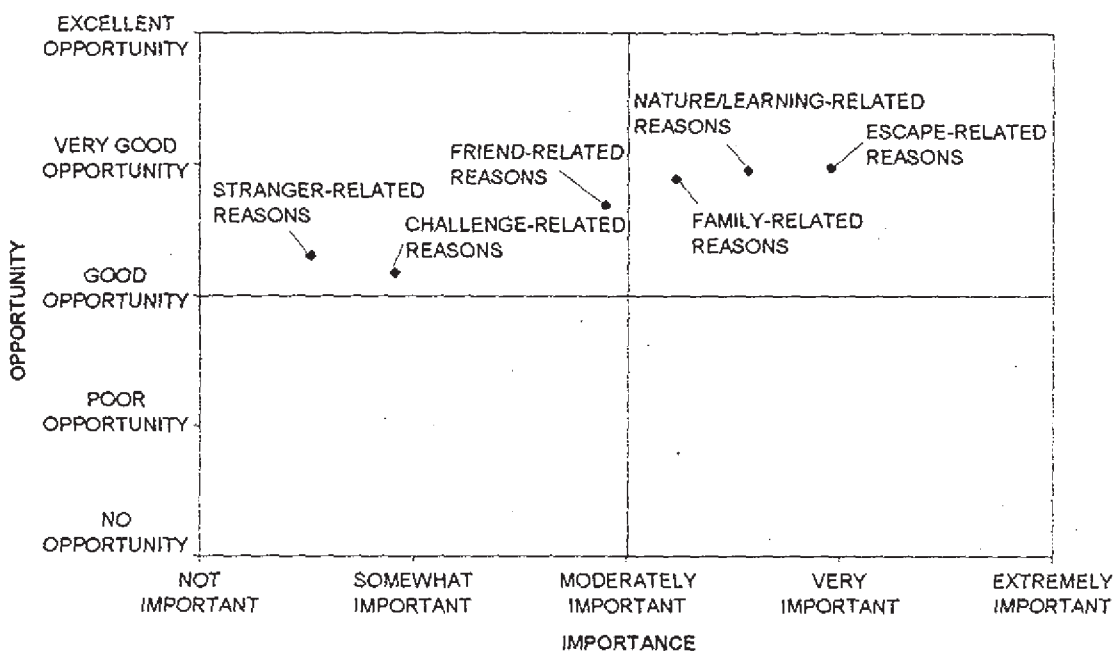


Survey Highlights

Evaluation Of Trips To The White River/Sunrise Area

Trip planners generally report that there is good opportunity to satisfy a variety of motivations for visiting the White River/Sunrise area. Question 7 of the mail questionnaire asked respondents to rate the importance of a variety of reasons why they may have visited the White River/Sunrise area. Question 8 then asked them how much opportunity the area provided for them to satisfy each reason for visiting. One useful way of summarizing the managerial implications of these importance and opportunity ratings is to simultaneously consider both sets of ratings. Figure SH.11 allows such a consideration by showing the average importance and opportunity ratings for the various reasons (collected into six groups, see Section IV for clarification).

FIGURE SH.11: Mail Q-7 & 8
 IMPORTANCE by OPPORTUNITY TO SATISFY VARIOUS REASONS FOR VISITING THE WHITE RIVER/SUNRISE AREA

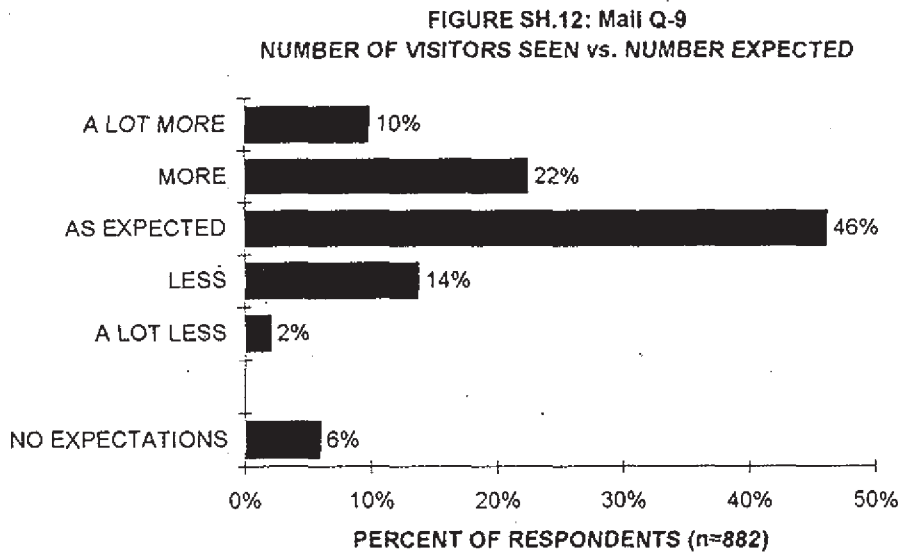


Survey Highlights

The importance of the six reasons ranges quite widely, with the average rating of the stranger-related reasons falling between *not important* and *somewhat important*, and the escape-related reasons falling at the very *important* level. The opportunity to satisfy those reasons falls in a much smaller range, from *good opportunity* to *very good opportunity*. Considered together, these ratings suggest that changes in management policy to address the measured dimension of the White River/Sunrise experience are perceived as unnecessary by trip planners. Such action would have been supported by a pattern of data in which respondents indicated that there was little opportunity to satisfy an important reason for visiting (i.e., if one of the data points had fallen in the lower-right quadrant of Figure SH.11). The fact that respondents reported good opportunity to satisfy relatively unimportant reasons for visiting could be seen as a management problem, but only if current management effort is being expended to provide those opportunities.

Survey Highlights

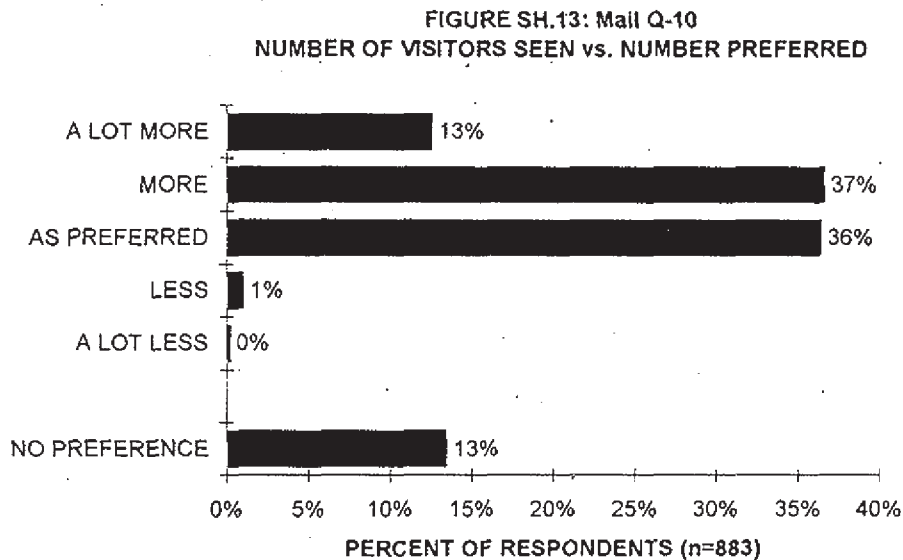
About one-third of trip planners saw more visitors than they expected. When asked about their expectations concerning the number of visitors they would see in the White River/Sunrise area, 32 percent of respondents saw more visitors than expected (see Figure SH.12). Almost half said they saw the number they expected.



Survey Highlights

About half of trip planners saw more visitors than they preferred.

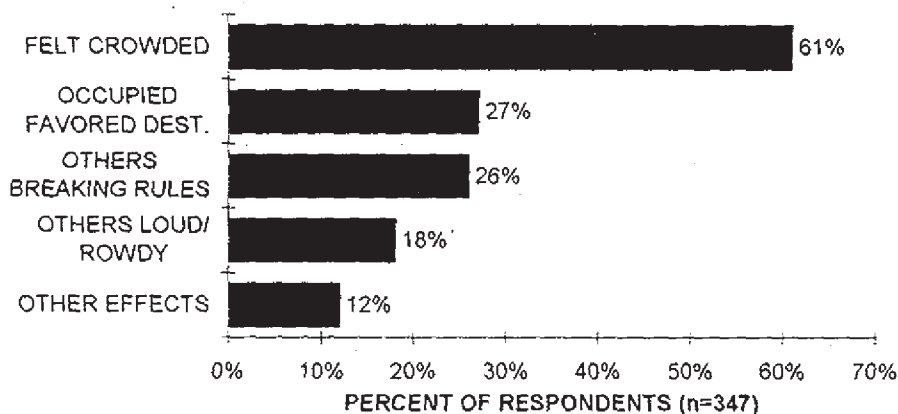
When asked about their preferences concerning the number of other visitors in the White River/Sunrise area, 50 percent said they saw more than preferred (see Figure SH.13). When visitors who expressed no preference are excluded, the percentage of respondents who saw more visitors than they preferred rises to 57 percent. A comparison of Figure SH.12 and Figure SH.13 suggests that some trip planners visit even though they expect to see more other visitors than they prefer, and thus, that the number of other visitors present is not always a deciding factor in visitation decisions.



Survey Highlights

About one-fourth of trip planners reported that crowding due to other visitors detracted from their enjoyment of the White River/Sunrise area. In Question 11 of the mail questionnaire we asked if other visitors had detracted from the respondent's enjoyment of the White River/Sunrise area, and if so, what the effect had been. Figure SH.14 shows that of the 39 percent of respondents who felt other visitors had detracted from their enjoyment of the area, more than half reported that other visitors caused the area to feel crowded. Thus, about 24 percent of all trip planners reported that crowding due to other visitors detracted from their enjoyment. Similarly, about a quarter of respondents affected by other visitors (i.e., about 10 percent of all trip planners) reported that the failure of other visitors to follow rules and the presence of other visitors at favored destinations detracted from their enjoyment. All of these findings have important management implications because they affect visitor perceptions of MORA and may influence future visitation.

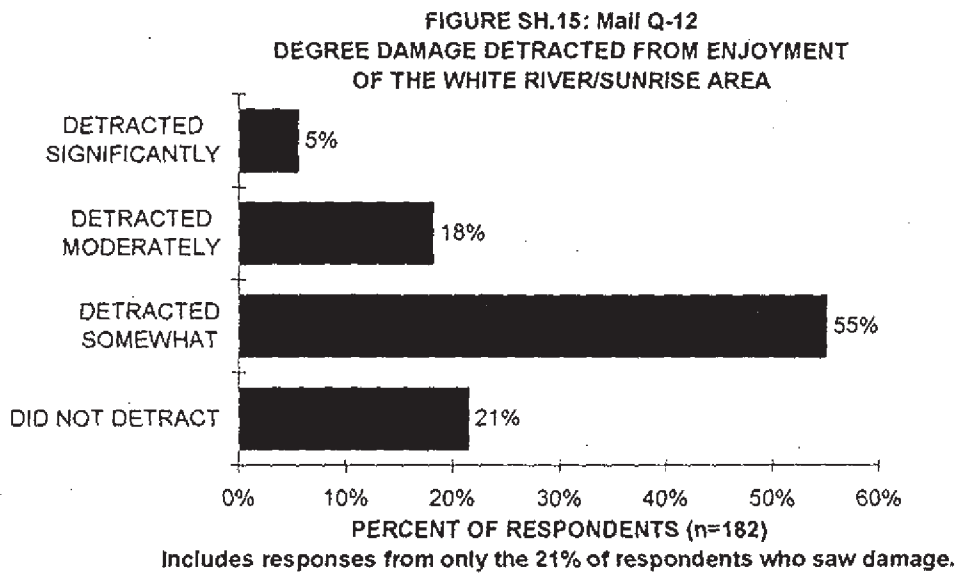
FIGURE SH.14: Mail Q-11
HOW VISITORS DETRACTED FROM ENJOYMENT
OF THE WHITE RIVER/SUNRISE AREA



Includes responses from only the 39% of respondents affected by others.
Percentages sum to more than 100% because multiple effects could be reported.

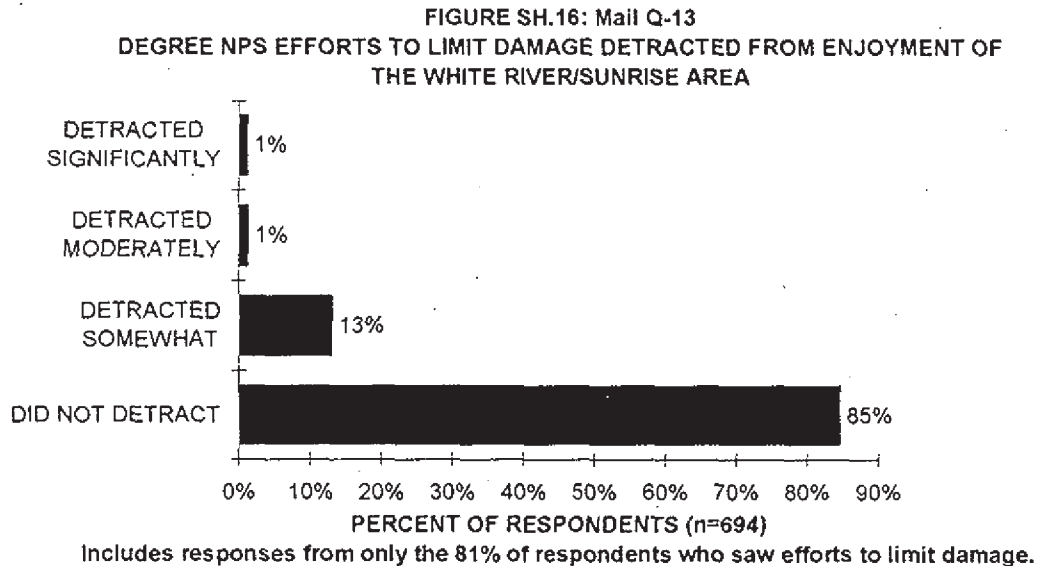
Survey Highlights

Damage caused by visitors and NPS efforts to limit such damage both detract from visitor experiences. About 17 percent of trip planners reported seeing evidence that other visitors unacceptably damaged the White River/Sunrise area and that such damage detracted from their experience (79% of the 21% who saw damage; see Figure SH.15).



Survey Highlights

When asked about NPS efforts to limit visitor-caused damage, 12 percent of trip planners reported that the efforts they had seen detracted from their experience (15% of 81% who saw efforts to reduce damage; see Figure SH.16).

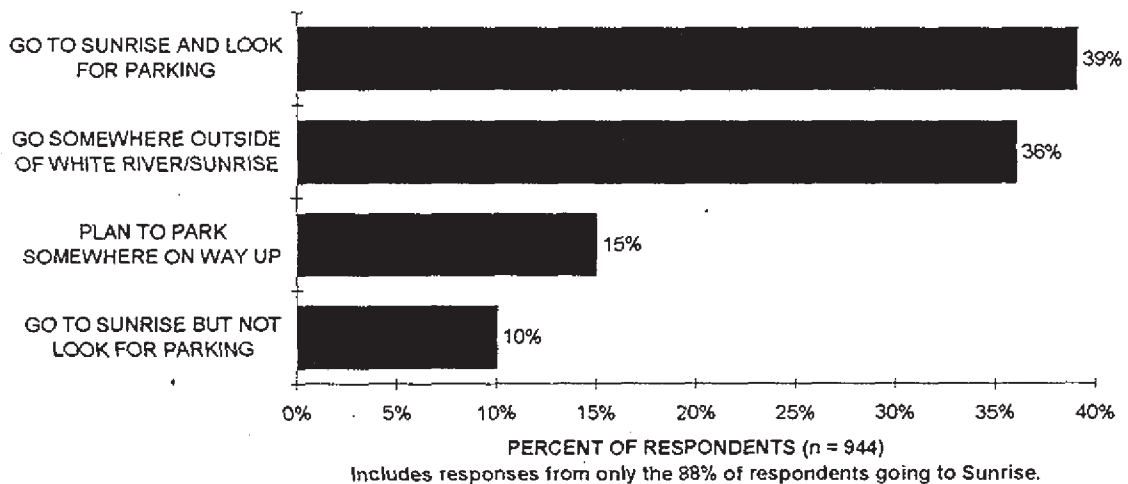


The percentage of trip planners who said the NPS efforts to limit visitor-caused damage detracted from their experience was not dramatically smaller than the percentage who reported that visitor-caused damage detracted from their experience. However, it is not clear that these numbers mean that the negative effects are nearly equivalent. It is possible that some visitors who felt that NPS efforts had a negative impact could, nonetheless, support those efforts because they felt they were necessary to prevent a greater negative impact due to visitor-caused damage. Further research is necessary to fully understand the relative impacts of visitor-caused damage and NPS efforts to deter it.

Reactions To Management Scenarios Concerning Parking At Sunrise

Telling trip planners that the Sunrise parking lot is full could reduce demand for parking by more than half. In the first scenario of the entrance interview trip planners were asked, "Imagine that when you were about 1/2 hour away from this entrance to the White River/Sunrise area an electronic road sign notified you that the Sunrise parking lot was full. If that happened what would you do?"³ Figure SH.17 shows that almost 40 percent of trip planners would continue to Sunrise and look for parking. This represents a substantial drop from the 88 percent of all trip planners who said they planned to park at Sunrise. However, it is not clear that such a reduction would be sufficient to eliminate parking lot congestion. Management may need to do more than provide information if overflow parking problems are to be alleviated.

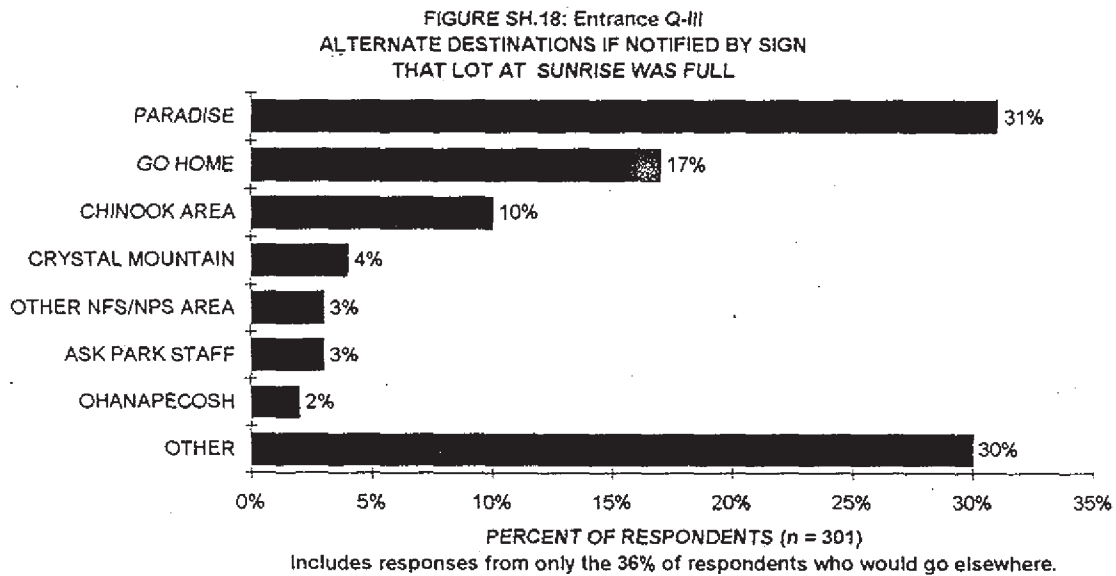
FIGURE SH.17: Entrance Q-III
RESPONSE TO A HYPOTHETICAL ELECTRONIC SIGN THAT SAYS
SUNRISE VISITOR LOT IS FULL



³ The second scenario asked them to imagine that they received the same information from the gate attendant. Responses to both scenarios were similar (see Section VI).

Survey Highlights

Telling trip planners that the Sunrise parking lot is full could add about 7.5 percent of all parties planning to visit Sunrise to the number planning to park at Paradise. Of the trip planners going to Sunrise, 36 percent said they would go elsewhere if notified via electronic sign that the Sunrise parking lot was full (see Figure SH.17). When asked about alternate destinations, responses from these trip planners varied widely (see Figure SH.18).



The most common alternate destination was Paradise -- an attraction with parking problems equal to or greater than those at Sunrise. Of the 31 percent of trip planners who said they would go to Paradise, 67 percent had not previously planned to make a stop there. Thus, the roadside sign (as described in the survey) would be expected to add about 7.5 percent of all parties planning to visit Sunrise to the number planning to park at Paradise. On sunny summer

Survey Highlights

weekends, this would constitute approximately 111 vehicles (based on estimates from *Describing and Estimating the System of Visitor Distribution in Mount Rainier National Park: 1995 Visitor Distribution Survey*).

I. INTRODUCTION

The 1993 Mount Rainier National Park White River Visitor Survey (WRVS) was administered by the Cooperative Park Studies Unit (CPSU) at the College of Forest Resources, University of Washington (now the Field Station for Protected Area Research). The study was proposed and funded by Mount Rainier National Park (MORA).

This is the first survey at MORA that has specifically targeted the member of each party who was most responsible for planning the party's trip (hereafter referred to as the trip planner). This aspect of the survey is important because it means that managers can identify the group to whom information should be targeted in order to most effectively alter the plans and behaviors of MORA visitors.

The survey objectives included the following: (1) to determine the effect of information about parking lot conditions at Sunrise by asking trip planners to consider management scenarios describing the presentation of such information at two different points in their trip; (2) to identify the characteristics of trips to the White River/Sunrise area that visitors expect prior to their experience, and compare those to the characteristics of the trips that they actually have; (3) to identify visitors' motivations for visits to the White River/Sunrise area of Mount Rainier; (4) to describe visitors' evaluation of several aspects of their trip including perceived visitor density, resource conditions, and general level of trip satisfaction; and (5) to identify demographic characteristics of trip planners entering the White River entrance at MORA.

The White River entrance was selected as the site of data collection because the large numbers of visitors using the Sunrise area of MORA on sunny summer

I. Introduction

weekends currently fill the official and overflow parking areas. Park staff are necessary to deal with subsequent parking congestion, which nonetheless is believed to have a negative influence on visitors' experiences and on natural resources (due to visitors parking off the pavement along the road). Managers believe that such conditions are a growing problem requiring management action. Because vehicular access to Sunrise is limited to a single road, the White River entrance gate provided an opportunity to contact visitors headed to Sunrise and request that they participate in the survey.

Survey Design and Questionnaire Development

One of the most interesting characteristics of the WRVS is the two-questionnaire design. Visitors were contacted upon entry to the White River/Sunrise area of MORA and again within a few weeks of their trip via mail questionnaire. The use of the entry point questionnaire was motivated partly by an interest in the possible differences between the expectations and the reality of visitors' trips to the area. In post-trip questionnaires it may be difficult for visitors to accurately recollect the expectations and preferences they held prior to their experience. Therefore, it was important to contact visitors prior to their entry into the White River/Sunrise area. By comparing responses to the on-site and mail questionnaires we can detect differences between the trips they expected and the trips they experienced, and make hypotheses concerning the reasons for such differences. A second important reason for utilizing the entrance questionnaire was to provide an opportunity to verbally interview the respondents when asking for their reactions to the hypothetical

I. Introduction

management scenarios. It was expected that verbal interview techniques used at a location where the hypothetical decisions would actually take place would provide more reflective and valid responses than would written questionnaires filled out weeks after the trip.

The use of a mail questionnaire for the final set of questions was motivated by a number of reasons. First, we were concerned that an undue burden would be placed on visitors during their trip if they were asked to stop and answer questions both when entering and when leaving the White River/Sunrise area. Second, the physical layout of the entrance gate area did not provide a safe area in which exit questionnaires could be administered. Finally, and most importantly, during pre-testing we had attempted to stop visitors as they drove past a turnout located between the entrance gate and the turn-off from Highway 410 and administer the exit questionnaire. We found that visitors disliked stopping on their way out of the area and often refused to complete the questionnaire. Using this procedure also made it extremely difficult to collect surveys from the same visitors who had completed entrance questionnaires.

The survey procedures as well as the questionnaires (see Appendices A and B) were produced by the CPSU in cooperation with the MORA staff. Initial meetings were held in the fall of 1991 to establish general project objectives. Input from park staff was essential in ensuring that the questionnaires addressed management needs. A pretest was conducted in the summer of 1992. After final changes based on the pretest process were made, the draft questionnaires were sent to the Office of Management and Budget for review and approval in September, 1992.

Sampling and Visitor Contact Procedures

The population to which statistical generalization is intended in the WRVS is to all visitors entering the White River area of Mount Rainier National Park who were identified as the person in their party most responsible for planning their trip, and is limited to parties entering between July 9, 1993 to September 6, 1993. The study design called for initial visitor contacts to be made by the MORA entry gate worker who would be signaled by the field station's survey worker when an eligible vehicle approached. The first vehicle to arrive at the entry gate was selected and every seventh vehicle thereafter was asked to participate in the survey. Buses were not included in the sampling plan because the study design focused on parties that planned their own trips and therefore might be influenced by information concerning parking conditions for automobiles. The fee collector on duty at the gate told selected vehicles' occupants that the University of Washington was conducting a survey for Mount Rainier and asked the driver to park in one of the spaces just inside the entrance and consult with the survey worker (clearly visible wearing a reflective vest). After the vehicle pulled over the survey worker asked occupants to identify the person who was most responsible for planning their trip to Mount Rainier. This person was then asked to fill out the entrance questionnaire and was told that the survey worker would have a few verbal questions to ask after they completed the written questions.¹ After completing the written

¹ Other party members over the age of 15 were also given a shorter questionnaire. This task served to limit their opportunity to comment on or influence the trip planner's responses and was also intended to reduce time pressure on the trip planner. The questions asked are largely redundant with those asked of trip planners and the data are not discussed in this report, which focuses on trip planners due to their role as "tour guides" for their respective parties. Survey responses of other party members could be

I. Introduction

portion of the entrance questionnaire, respondents were asked four questions, primarily concerning how they would react to information about parking conditions at Sunrise. Finally, respondents were asked to provide their names and addresses so as to be included in the follow-up mail survey. Compliance with the request to complete the entrance survey was about 90 percent and more than 90 percent of those respondents provided names and addresses.²

Mail Questionnaire Administration

Every respondent who provided their name and address on the entrance questionnaire was sent a mail questionnaire three to six weeks after their initial contact. In the mail survey instructions, respondents were instructed to complete the questionnaire and return it by mail, in postage-paid envelopes that were provided.

As a follow-up, all respondents were sent a thank-you-reminder letter about ten days after they received the questionnaire. Non-respondents received a second reminder letter and an additional copy of the questionnaire. A third letter was sent to those who did not respond to the second reminder.

Of the mail questionnaires sent to the 1116 trip planners who had completed

analyzed in the future.

² It is not possible to assess evidence of non-response bias due to the 10 percent of visitors who refused to complete the entrance survey. However, the possible effects of any such bias are small due to the relatively small number of such visitors. Parties who refused commonly reported that they were in a hurry or were on a tight schedule. Response rates were highest on days when no fee was being collected due to electrical problems with the entrance gate, suggesting that waiving the entrance fee for survey participants might be an effective incentive to increase participation. Possible non-response bias associated with refusal to provide name and address is included in the discussion of non-response found later in this section.

I. Introduction

entrance questionnaires, 887 were completed and returned, resulting in a response rate for the WRVS of approximately 79 percent.

Limitations

The WRVS has several general limitations that should be kept in mind in interpreting the data. (1) In all surveys it is assumed that respondents provide accurate and honest answers to the questions asked. (2) The data represent visitor attitudes and opinions at a particular point in time (i.e., the time of the survey) and changes can occur at any time. (3) Statistical inferences can only be made for the subset of Mount Rainier National Park visitors entering the White River gate who were most responsible for planning their trip. In addition, there are other limitations, noted in the body of the report, that are due to the manner in which individual questions were interpreted. Finally, there are other limitations that revolve around the issue of non-response. That is, possible bias in the sample due to differences between the visitors who completed the questionnaires and those who didn't.

Non-response. Although 79 percent of the persons completing the entrance questionnaire also completed the mail questionnaire, it is mathematically possible that the remaining 21 percent (the non-respondents) might be sufficiently different from the respondents so as to affect the accuracy with which the sample data represent the population. A wide range of data were available from the entrance questionnaire, allowing statistical tests to be used to search for possible differences between respondents and non-

1. Introduction

respondents. Specifically, possible differences were assessed using Chi-square tests for independence which determined whether response rates were independent of a particular visitor characteristics (using a .05 significance level). Nine visitor characteristics were selected from the entrance questionnaire and used in assessing possible non-response bias. These characteristics included gender, age, distance between respondent's home and MORA, party size, route used to reach the area, how long before the trip the respondent decided to visit MORA, whether the respondent planned to hike during their visit, whether the respondent sought information about MORA prior to their trip, and number of previous visits to MORA.

For the visitor characteristics listed above, statistically significant differences in response rates were found for age, party size, and whether the respondent planned to hike during their visit. Older visitors were more likely to return the mail questionnaire than younger visitors with a 31 percent non-response rate in the youngest age category (17-29) and only 8 percent non-response among visitors 60 or older (Chi-square (4) = 29.3; $p < .001$; ages greater than 30 coded into 10 year categories). Visitors from smaller parties were more likely to return the mail questionnaire than were those in large parties with an 18 percent non-response rate in parties of size one or two and 31 percent non-response in parties with more than five members (Chi-square (2) = 10.9; $p < .005$; coded as 1-2, 3-5, and 6+). Finally, respondents who planned to hike had a non-response rate of 19 percent while non-response among non-hikers was 24 percent (Chi-square (1) = 4.1; $p < .05$). Differences in response rates neared significance (p-levels between .05 and .06) for two additional characteristics: the route respondents used to reach the area (lower response

1. Introduction

was observed in visitors approaching MORA via highway 410 from the East), and the number of previous visits to MORA (repeat visitors were more likely to return the mail questionnaire).

The results of the non-response analysis clearly show that there are detectable differences between the visitors who responded to the mail questionnaire and those that did not. However, the magnitude of these differences is consistently small. To illustrate how small, let's focus on the largest bias observed, the differences in response rates among visitors of different ages. Response differences by age are very common in this type of survey; similar differentials have been observed in previous surveys at MORA and they are generally the largest differences observed. In the entrance survey, 43.0 was the average age. For the mail survey respondents, 44.2 was the average age. Thus, the largest non-response bias that we observed (by far) changed our estimate of trip planners' average age by 1.2 years, or 2.8 percent. Although we can not rule out the possibility that undetected examples of non-response bias may have important effects on the results of the WRVS mail survey, effects smaller than those associated with age are not large enough to alter the representativeness of the sample in important ways.

Accuracy of the Sample

Subject to the limitations stated previously, the authors generally believe that the data are representative of Mount Rainier National Park visitors to the White River/Sunrise area who were most responsible for planning their party's trip and who visited during the

I. Introduction

time of the survey. This confidence is based on the large sample sizes, the small differences in response rates observed for different types of visitors, and the fact that deviations from the sampling plan were relatively minor. Therefore, the data should be highly relevant to many park management decisions and planning efforts.

Assuming a random sample and questions of yes/no type in which the true occurrences of these values in the population are 50%/50%, the data from the smallest sample in this survey (the 887 respondents completing the entrance and mail questionnaires) can be generalized to the population of White River/Sunrise area trip planners with a 95 percent assurance that the obtained or observed percentages to any item will vary by no more than $\pm 3.3\%$. For the largest sample (the 1116 respondents to the entrance questionnaire) the same confidence interval is $\pm 2.9\%$.

Conventions Followed In This Report

As mentioned previously, two questionnaires were used to collect the data presented in this report. The specific questionnaire and question used to collect the data reported in each chart are noted in the chart titles. The number of respondents (n) whose data are represented in each chart is also reported, generally at the bottom of the chart. For questions asked on the entrance questionnaire, the maximum number of respondents is 1116. For questions asked on the mail questionnaire, the maximum number of respondents is 887. When a chart reports data for a subset of respondents (c.f., Figure 3.4: Initial Destination in MORA), a note describes the sub-sample included

I. Introduction

in the chart.

Missing data for up to 10% of respondents to a particular question are generally not considered to be a major threat to the interpretation of that question. Throughout this report, few questions had more than 10% missing data. Exceptions are noted in the text.

It is neither possible nor desirable that this report describe all possible analyses of the data collected by the survey, or even all analyses that are potentially of interest to MORA managers. However, some analyses that may be of interest are briefly noted throughout this report and described as potential future analyses.

II. VISITOR PROFILE

The WRVS asked trip planners for a variety of demographic information that can be used to describe, or provide a profile, of the survey respondents.

This section reports such demographic data.

II. Visitor Profile

II. Visitor Profile

TABLE 2.1: TABLE OF FIGURES IN SECTION II

FIGURE 2.1: AGE OF WHITE RIVER SURVEY RESPONDENTS.....	39
FIGURE 2.2: GENDER OF WHITE RIVER SURVEY RESPONDENTS	39
FIGURE 2.3: GROUP SIZE OF WHITE RIVER VISITORS.....	41
FIGURE 2.4: NUMBER OF CHILDREN UNDER AGE 16 IN PARTY	42
FIGURE 2.5: DISTANCE FROM HOME TO WHITE RIVER/SUNRISE AREA OF MORA.....	43
FIGURE 2.6: HIGHEST LEVEL OF FORMAL EDUCATION COMPLETED.....	44
FIGURE 2.7: MARITAL STATUS OF RESPONDENTS	45
FIGURE 2.8: NUMBER OF TRIPS MADE TO MORA IN THE LAST THREE YEARS.....	46
FIGURE 2.9: NUMBER OF TRIPS MADE TO WHITE RIVER/SUNRISE AREA IN THE LAST THREE YEARS.....	47

II. Visitor Profile

Age and Gender

The average age of the White River trip planners was approximately 43 years. Ages ranged from 17 to 89 years. Figure 2.1 shows that visitors 24 years of age and under accounted for 6% of trip planners; those between 25 and 34 years of age comprised 24% of the sample; 29% of visitors sampled were 35 to 44 years of age; 21% of those sampled were between 45 and 54 years of age; 11% were between 55 and 64 years of age; and 9% of visitors sampled were 65 years of age or older. Based on the analysis of non-response discussed earlier, age of respondents is one of the characteristics most likely to be affected by non-response bias. However, because these data were collected in the entrance questionnaire which very few visitors refused to complete, it is unlikely that such bias had an important effect. The sample of trip planners consisted of 62% males, 38% females (see Figure 2.2).

II. Visitor Profile

FIGURE 2.1: Entrance Q-23
AGE OF WHITE RIVER SURVEY RESPONDENTS

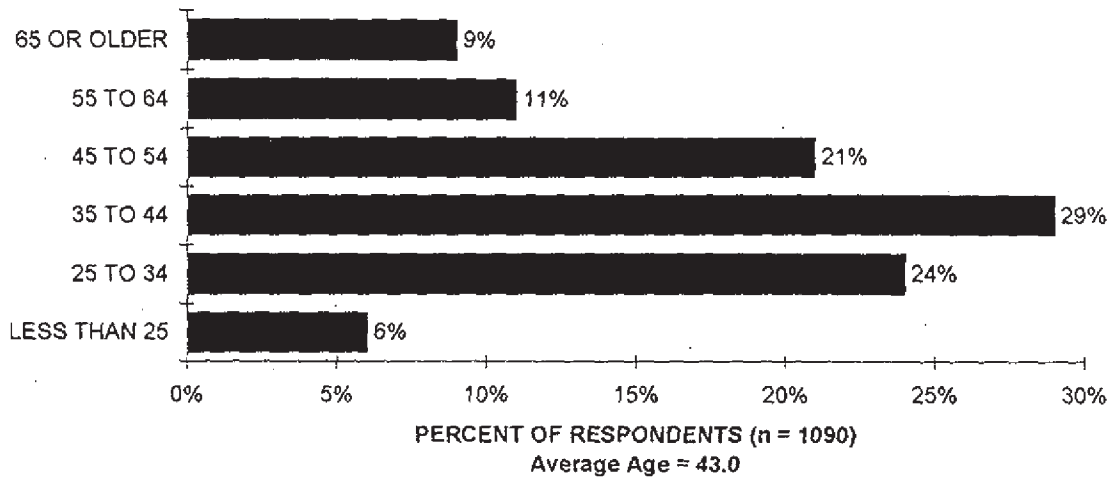
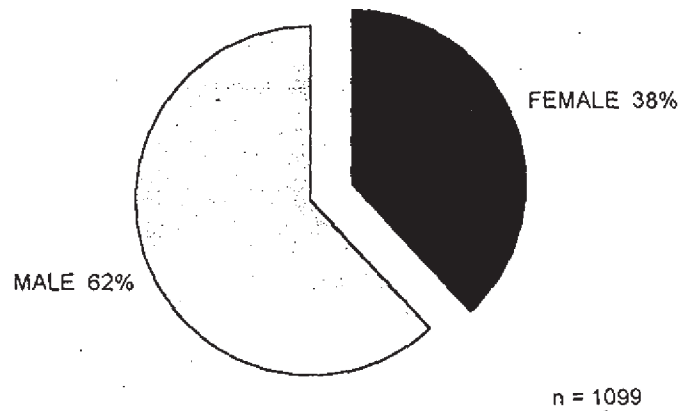


FIGURE 2.2: Entrance Q-22
GENDER OF WHITE RIVER SURVEY RESPONDENTS



II. Visitor Profile

Trip planners entering MORA at White River had an average age very similar to general visitors to MORA¹ (M=43.0 years and M=43.5 years, respectively). One might expect trip planners to be older than the general survey sample because young visitors are less common in the trip planner sample than in the general visitor sample (17% of trip planners were less than 30 years old versus 23% of the general visitor sample); however the oldest visitors were also less likely to be trip planners (14% of trip planners were over 60 versus 19% of the general visitors). Thus, although the average age of trip planners is similar to general MORA visitors, more trip planners fall between the ages of 30 and 60.

Although slightly more men (53%) than women (47%) visit MORA, the base rates are too small to account for the discrepancy between men and women among trip planners (62% and 38% respectively). Men are more likely than women to be considered the person most responsible for planning trips to the White River/Sunrise area of MORA.

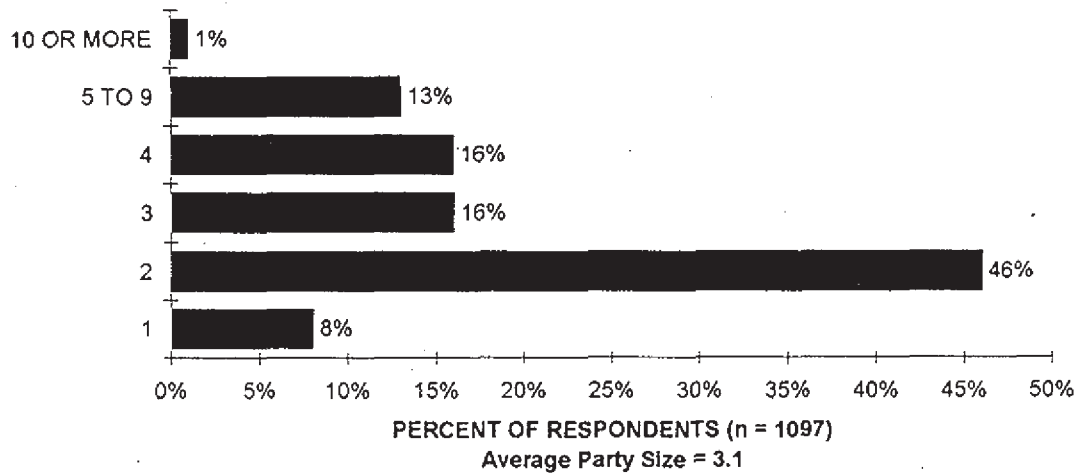
¹ All comparisons to MORA general visitors are made using data from the 1990 MORA General Visitor Survey (Technical Report. University of Washington Cooperative Park Studies Unit). This survey described "general" MORA visitors by sampling at all major MORA entrances on a year-round basis.

II. Visitor Profile

Size and Composition of Group

Figure 2.3 shows that most frequent group size for visitors to the White River/Sunrise area was two (46%); the next most common group sizes, three and four, each comprised 16% of the parties surveyed. Approximately 8% of the visitors were alone and about 14% were in groups of five or more people.

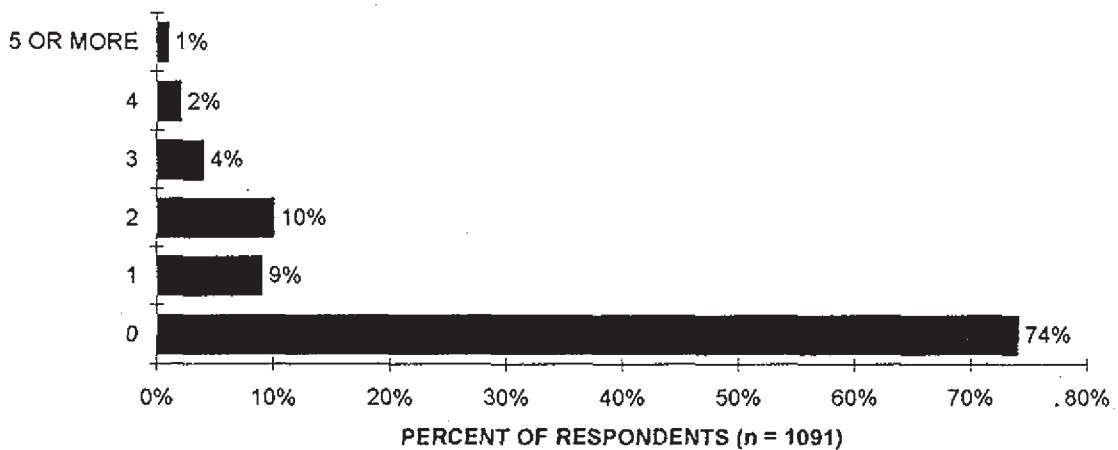
FIGURE 2.3: Entrance Q-27
GROUP SIZE OF WHITE RIVER VISITORS



II. Visitor Profile

A total of 26% of visitors' groups included children under age 16. Groups with one child present comprised 9% of all visitors; 10% had two children present and 7% had three or more children (see Figure 2.4). Among groups of three or more visitors, 47% included children under age 16.

FIGURE 2.4: Entrance Q-28
NUMBER OF CHILDREN UNDER AGE 16 IN PARTY



Visitors to the White River/Sunrise area did not differ from general visitors to MORA in their average group size ($M=3.1$ and $M=3.2$, respectively). Additionally, the two distributions were comparable in shape.

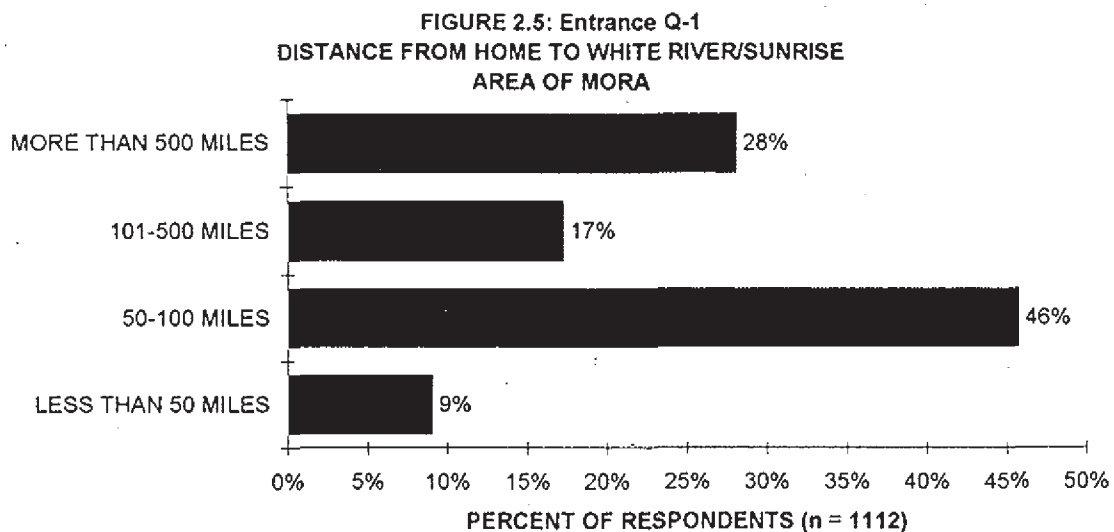
Although no differences in group size were noted, slightly fewer parties to White River (26%) had children under age 16 than general visitors to MORA (30%). Among parties with children, the number of children present was similar for White River and the general visitor sample. Parties containing one or two children were the most common (9% and 10% of all parties, respectively) with

II. Visitor Profile

only one percent of parties including more than four children.

Distance From Place of Residence to White River Entrance

Figure 2.5 displays the distances that visitors traveled to reach the White River entrance of MORA. Nearly half of White River visitors were between 50 and 100 miles from their homes.² Nonetheless, a considerable number of visitors come from much greater distances. More than one-fourth of White River visitors had traveled more than 500 miles.

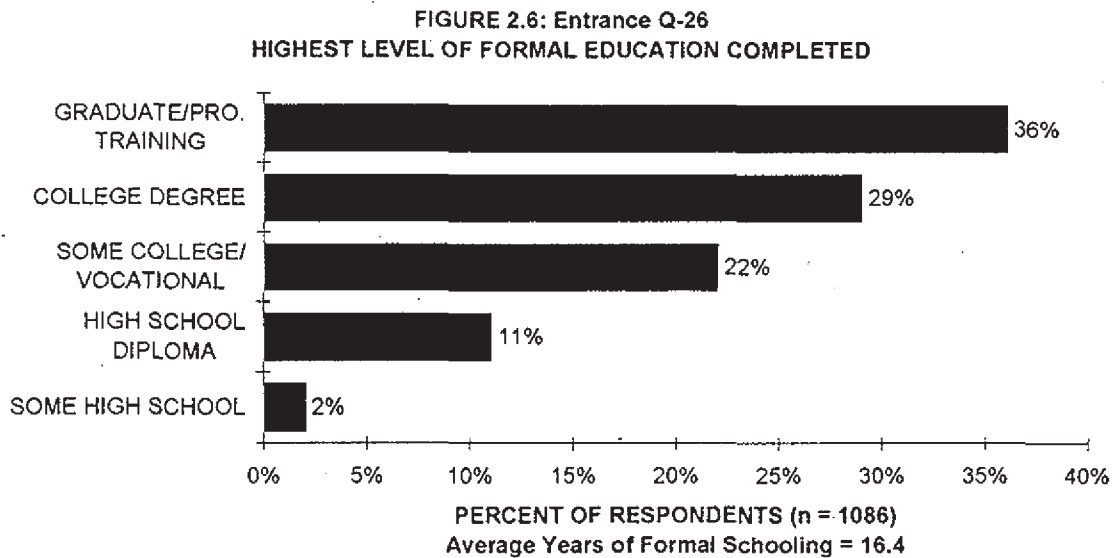


² These data suggest that most White River visitors were from the greater Seattle-Tacoma metropolitan area. Future analysis of Zip codes provided by respondents could be used to more accurately describe the distribution of trip planners' homes.

II. Visitor Profile

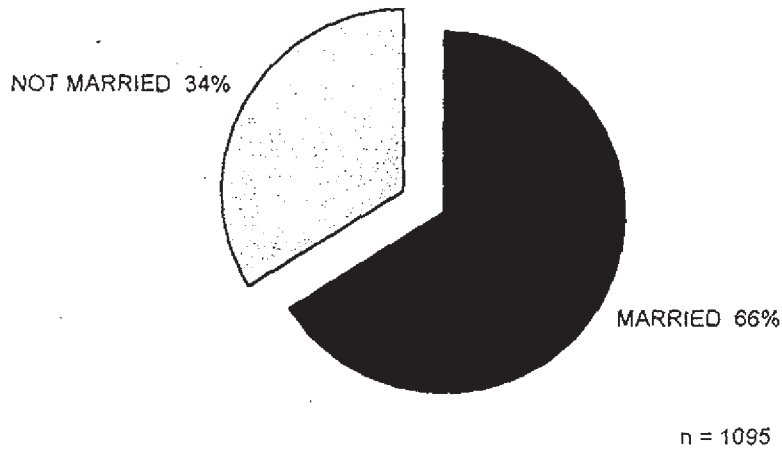
Education and Marital Status

The average trip planner at the White River entrance had completed more than 16 years of formal education. Figure 2.6 shows that more than a third of the sample had graduate or professional training and only 13 percent had no post-secondary training. About two-thirds of trip planners at the White River entrance were married (see Figure 2.7).



II. Visitor Profile

FIGURE 2.7: Entrance Q-25
MARITAL STATUS OF RESPONDENTS



Trip planners at the White River entrance were more highly educated than were general visitors to MORA (as measured by the 1990 MORA General Visitor Survey). Although both samples were highly educated, more White River trip planners had post-secondary training (87% versus 78%) and more had earned college degrees (65% versus 50%).³

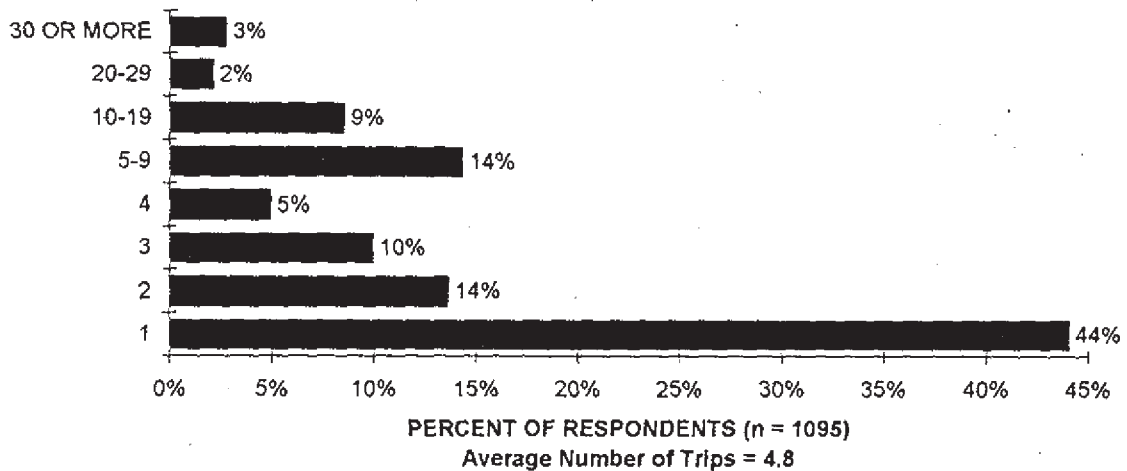
³ Further analysis of the difference in education showed that it does not arise because trip planners are more likely to be male than are general MORA visitors.

II. Visitor Profile

Number of Visits to MORA

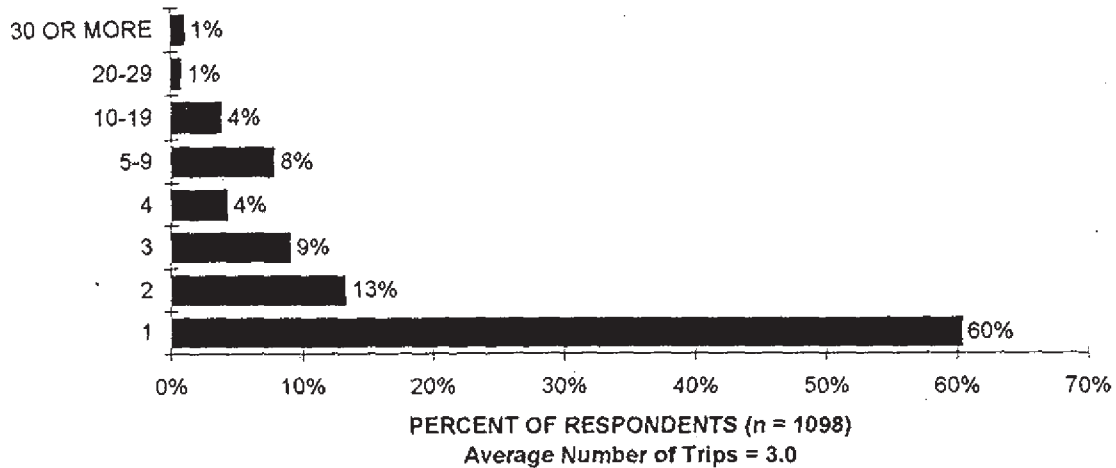
Figure 2.8 shows that almost half of White River trip planners reported that this was their first visit to MORA in the last three years. On average, respondents had visited MORA an average of 4.8 times in that period. About 60 percent of trip planners at the White River entrance had not visited the White River/Sunrise area of the park in the last three years (see Figure 2.9) and the average number of visits to the area was 3.0.

**FIGURE 2.8: Entrance Q-8
NUMBER OF TRIPS MADE TO MORA IN THE LAST THREE YEARS**



II. Visitor Profile

FIGURE 2.9: Entrance Q-9
NUMBER OF TRIPS MADE TO WHITE RIVER/SUNRISE AREA
IN THE LAST THREE YEARS



It is difficult to compare the repeat visitation of White River trip planners to general MORA visitors because the relevant question in the two surveys were asked in slightly different ways. At White River, 44 percent of trip planners reported that they had not visited MORA *in the last three years*, whereas 40 percent of the general MORA visitor sample reported that they had *never before* visited the park. Given the differing formats, the number of first time visitors in both samples appears to be similar, but there are probably more first time visitors among the White River trip planners. The finding that among repeat visitors the general MORA visitors reported more visits in the last three years (8.2) than did the White River trip planners (7.8) is consistent with the conclusion that there are slightly more repeat visitors in the general visitor sample than in the White River sample of trip planners.

A subset of trip planners who may be of particular interest to MORA managers are those who most often visit MORA. Trip planners who visited 20 or

II. Visitor Profile

more times in the last three years made up slightly less than 5% of respondents.

However, they account for 34% of the total trips to MORA in the last three years that were reported by all trip planners. The average number of trips to MORA in the last three years fell from 4.8 for all trip planners to 3.3 when calculated for the 95% of trip planners who had visited fewer than 20 times. Clearly, policies or information that affect this small group of MORA visitors will have a disproportionately large effect on conditions in the Park.

III. TRIP CHARACTERISTICS

A wide range of questions in the WRVS asked trip planners about their trip to the White River/Sunrise area of MORA. This section reports the data that were collected by these questions. It is organized in the chronological order of most trips, moving from trip planning to a description of the amount of time visitors spent in the White River/Sunrise area.

III. Trip Characteristics

TABLE 3.1: TABLE OF FIGURES FOR SECTION III

FIGURE 3.1:	TIME WHEN DECISION TO VISIT MORA WAS MADE	55
FIGURE 3.2:	TIME WHEN DECISION TO VISIT THE WHITE RIVER/ SUNRISE AREA WAS MADE	55
FIGURE 3.3:	WANTED TO VISIT A PARTICULAR DESTINATION IN MORA AT BEGINNING OF TRIP.....	57
FIGURE 3.4:	INITIAL DESIRED DESTINATION IN MORA.....	57
FIGURE 3.5:	CONSIDERED THE POSSIBILITY OF A LARGE NUMBER OF OTHER VISITORS WHEN DECIDING TO VISIT THE WHITE RIVER/SUNRISE AREA	59
FIGURE 3.6:	EFFECT OF CONSIDERING POTENTIAL FOR A LARGE NUMBER OF OTHER VISITORS ON DECISION TO VISIT THE WHITE RIVER/SUNRISE AREA.....	59
FIGURE 3.7:	ATTEMPTED TO SPECIFICALLY SEEK OUT INFORMATION ABOUT THE WHITE RIVER/SUNRISE AREA.....	61
FIGURE 3.8:	SOURCES OF INFORMATION.....	61
FIGURE 3.9:	TYPES OF INFORMATION DESIRED.....	62
FIGURE 3.10:	AMOUNT OF INFORMATION FOUND TO AID IN PLANNING TRIP	62
FIGURE 3.11:	KNOWLEDGE OF PHONE NUMBER FOR INFORMATION ABOUT RECREATION IN WESTERN WASHINGTON NATIONAL PARKS AND FORESTS BY DISTANCE OF RESPONDENT'S HOME FROM MORA.....	63
FIGURE 3.12:	PLANNED TO DRIVE UP TO SUNRISE AND PARK IN VISITORS' LOT.....	64
FIGURE 3.13:	PLAN TO VISIT ATTRACTIONS IN MORA AFTER LEAVING THE WHITE RIVER/SUNRISE AREA.....	65
FIGURE 3.14:	ATTRACTIONS WITHIN MORA PLANNING TO VISIT AFTER DEPARTING WHITE RIVER/SUNRISE AREA	65

III. Trip Characteristics

FIGURE 3.15: LOCATION OF PREVIOUS NIGHT'S LODGING..... 66

FIGURE 3.16: ROUTE USED TO GET TO THE WHITE RIVER/SUNRISE
AREA OF MORA..... 67

FIGURE 3.17: VISITED ATTRACTIONS IN MORA BEFORE ARRIVING AT
THE WHITE RIVER/SUNRISE AREA..... 68

FIGURE 3.18: ATTRACTIONS WITHIN MORA VISITED PRIOR TO
ARRIVING AT THE WHITE RIVER/SUNRISE AREA..... 69

FIGURE 3.19: PLANNED USE OF SPECIFIC DEVELOPED FACILITIES
IN THE WHITE RIVER/SUNRISE AREA..... 70

FIGURE 3.20: REPORTED USE OF SPECIFIC DEVELOPED FACILITIES
IN THE WHITE RIVER/SUNRISE AREA..... 71

FIGURE 3.21: UNPLANNED USE OF SPECIFIC DEVELOPED FACILITIES
IN THE WHITE RIVER/SUNRISE AREA..... 72

FIGURE 3.22: PLANNED VISITS NOT MADE TO SPECIFIC DEVELOPED
FACILITIES IN THE WHITE RIVER/SUNRISE AREA..... 75

FIGURE 3.23: HAD PLANS TO DAY HIKE..... 76

FIGURE 3.24: DAY HIKE DURING VISIT TO MORA..... 76

FIGURE 3.25: PLANNED VERSUS UNPLANNED DAY HIKES..... 77

FIGURE 3.26: PLANNED LOCATION/DESTINATION OF DAY HIKE..... 78

FIGURE 3.27: LOCATION OF DAY HIKE..... 79

FIGURE 3.28: PLANNED RECREATIONAL ACTIVITIES WHILE VISITING
THE WHITE RIVER/SUNRISE AREA..... 81

FIGURE 3.29: ACTIVITIES ENGAGED IN DURING VISIT TO THE WHITE
RIVER/SUNRISE AREA..... 83

FIGURE 3.30: UNPLANNED PARTICIPATION IN RECREATIONAL
ACTIVITIES WHILE VISITING THE WHITE RIVER/
SUNRISE AREA..... 85

FIGURE 3.31: PLANNED ACTIVITIES NOT DONE WHILE VISITING THE
WHITE RIVER/SUNRISE AREA..... 87

III. Trip Characteristics

FIGURE 3.32: UNABLE TO PARTICIPATE IN PLANNED ACTIVITIES..... 88

FIGURE 3.33: PLANNED ACTIVITY IN WHICH UNABLE TO PARTICIPATE.. 89

FIGURE 3.34: REASON UNABLE TO PARICIPATE IN PLANNED
ACTIVITY 89

FIGURE 3.35: MOST IMPORTANT ACTIVITY FOR ENJOYMENT OF THE
WHITE RIVER/SUNRISE AREA 91

FIGURE 3.36: NUMBER OF HOURS SPENT IN THE WHITE RIVER/
SUNRISE AREA..... 92

III. Trip Characteristics

Planning the Trip

When respondents decided to visit. Figure 3.1 shows that trip planners varied widely in the amount of time that had passed since they had first decided to visit MORA. About 30 percent of trip planners reported that they had decided to visit more than a month before their trip (an unsurprising number given that Figure 2.5 shows that 28 percent of respondents were more than 500 miles from home), but more than half had decided to visit only in the last week. The decision of whether to enter MORA at the White River entrance was usually more recent – Figure 3.2 shows that only 16 percent of trip planners had decided to visit the White River/Sunrise area a month before their trip, that almost three-quarters had made the decision in the last week, and that 17 percent had decided to enter at White River only after reaching the vicinity of MORA.

Further analyses of these data might be conducted to determine the characteristics of respondents who plan their trips far in advance versus those whose decisions are made more on a spur-of-the-moment. Such descriptions might help managers know where and when they might best provide information aimed at altering the characteristics of visitors' planned trips.

III. Trip Characteristics

FIGURE 3.1: Entrance Q-10
TIME WHEN DECISION TO VISIT MORA WAS MADE

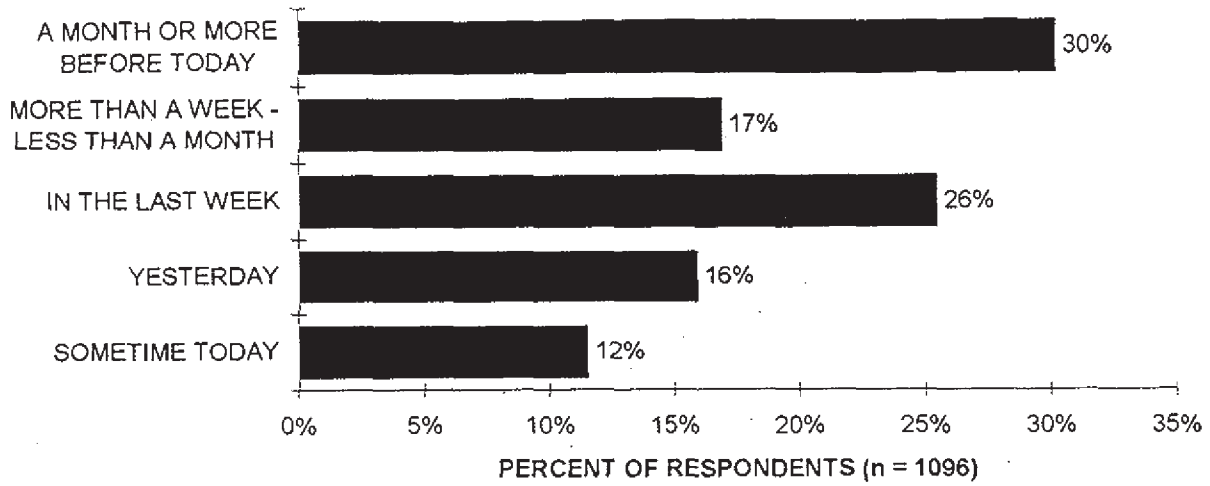
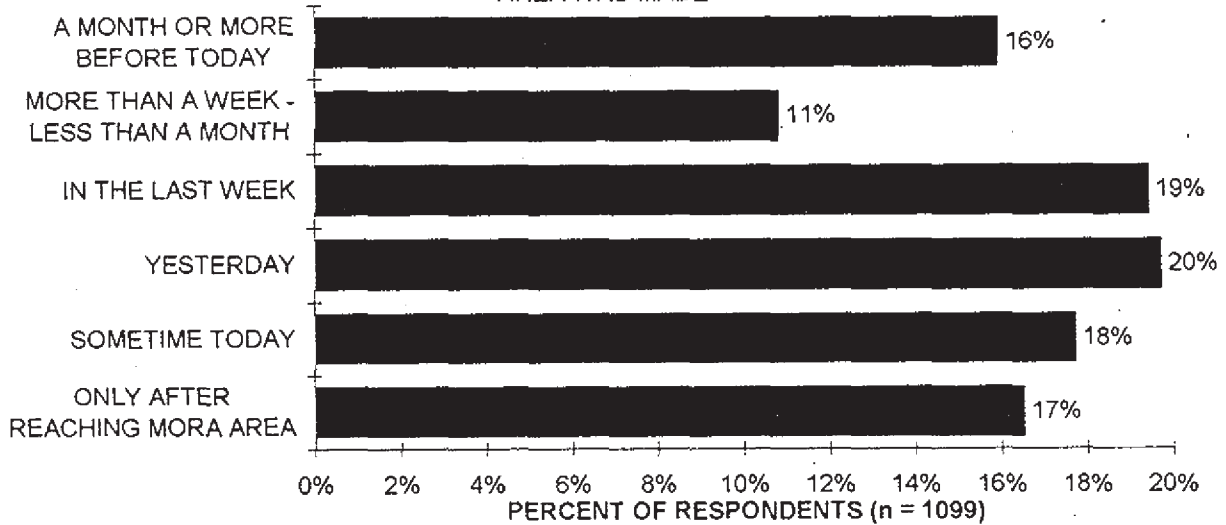


FIGURE 3.2: Entrance Q-11
TIME WHEN DECISION TO VISIT THE WHITE RIVER/SUNRISE AREA WAS MADE



III. Trip Characteristics

Planned destination. About 60 percent of trip planners reported that they had planned to visit a particular part of MORA when starting their trip (see Figure 3.3). Of those with destinations, Figure 3.4 shows that more than half reported a general destination accessed via the White River entrance (e.g., Sunrise) and a further 15 percent reported specific destinations in the White River/Sunrise area.

About a quarter of trip planners who had initial destinations reported that those destinations were outside the White River/Sunrise area. We can see in Figure 3.4 that about half of these respondents (13% of trip planners who had destinations) wished to visit Paradise. Apparently, the White River/Sunrise area is a secondary destination for a considerable number of respondents. Trip planners with initial destinations outside the White River/Sunrise area are no more likely than other respondents to say that driving to view scenery was their most important activity (28% in both groups), but they were less likely to have planned day-hikes in the White River/Sunrise area (46% of respondents with initial destinations outside area vs. 60% of all other respondents). They were also more likely to live more than 500 miles from MORA (39% vs. 27%), more likely to have planned their trip a month or more ahead of time (43% vs. 29%), and more likely to reach the White River entrance via Stevens Canyon road (40% vs. 10%).

III. Trip Characteristics

FIGURE 3.3: Entrance Q-14
WANTED TO VISIT A PARTICULAR DESTINATION
IN MORA AT BEGINNING OF TRIP

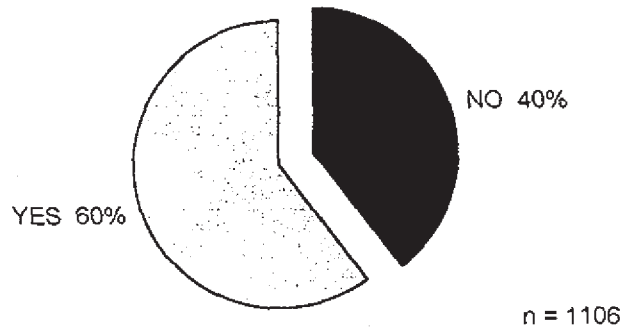
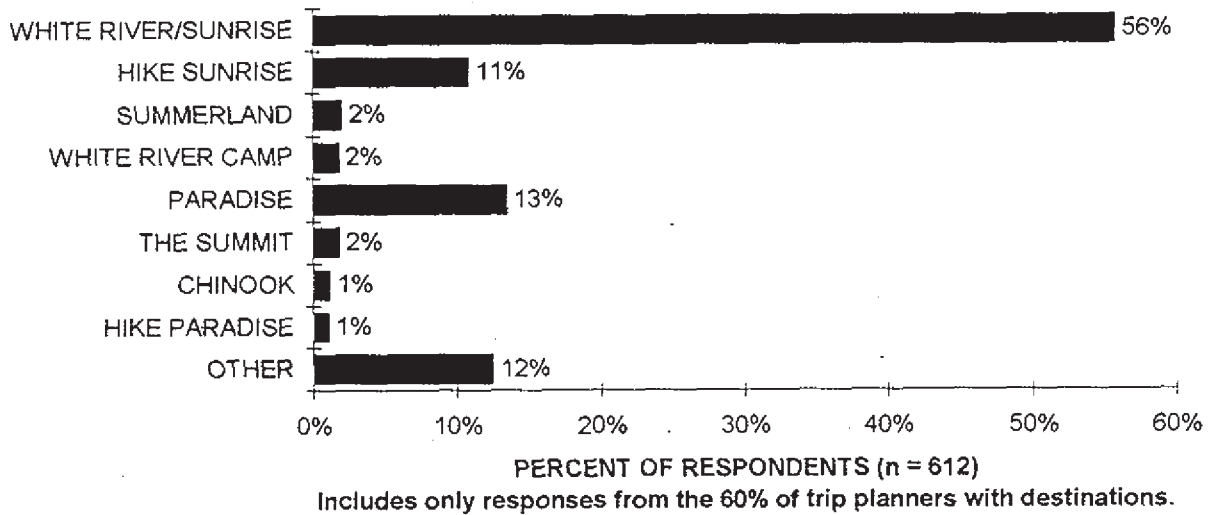


FIGURE 3.4: Entrance Q-14
INITIAL DESIRED DESTINATION IN MORA



III. Trip Characteristics

Whether respondents considered the number of other visitors. Figure 3.5 shows that a little more than half the trip planners reported that when making the decision to visit White River/Sunrise they considered the possibility that there would be a large number of other visitors in the area. However, when asked how that consideration affected their decision to visit, about 60 percent of respondents who considered the number of others said that it had no effect on their plans (see Figure 3.6). Together, these figures show that about 21 percent of all respondents (40% of those who considered others at all) altered their plans due to the expected presence of other visitors. The most common alteration was to visit on a different day of the week (17% of trip planners who considered other visitors), presumably visiting on a weekday rather than a weekend.

Respondents who altered their plans due to the expected presence of other visitors were more likely to be highly experienced repeat visitors to MORA (32% had visited seven or more times in the last three years vs. 14% of other respondents), and were less likely to live 500 or more miles from MORA (17% vs. 31%) than were other respondents.

III. Trip Characteristics

FIGURE 3.5: Entrance Q-19
CONSIDERED THE POSSIBILITY OF A LARGE NUMBER
OF OTHER VISITORS WHEN DECIDING TO VISIT
THE WHITE RIVER/SUNRISE AREA

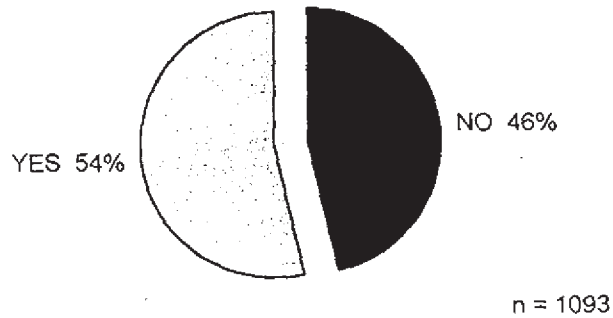
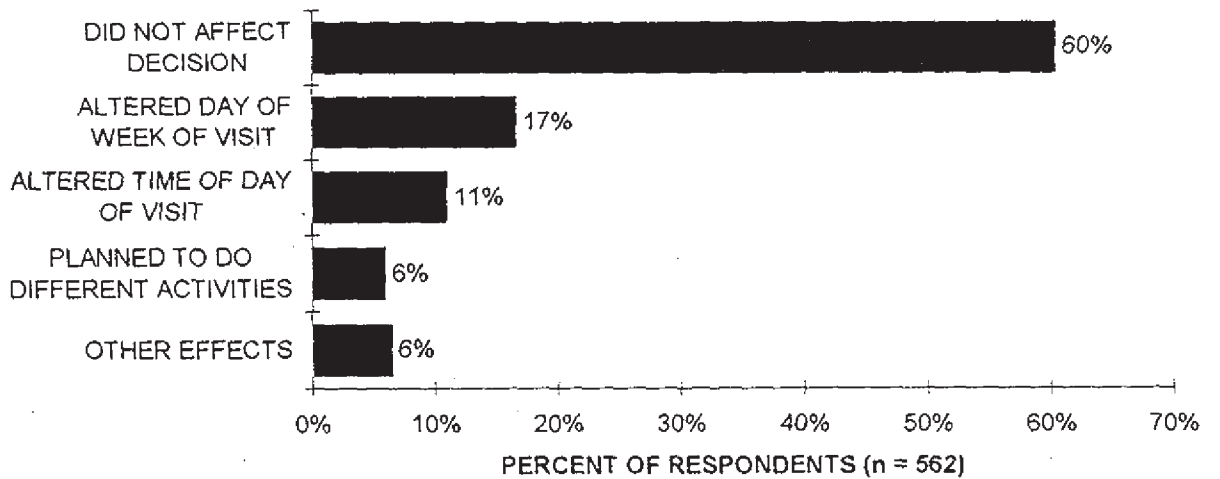


FIGURE 3.6: Entrance Q-19
EFFECT OF CONSIDERING POTENTIAL FOR A LARGE NUMBER OF OTHER
VISITORS ON DECISION TO VISIT WHITE RIVER/SUNRISE AREA



Includes only responses from 54% of respondents who considered other visitors.

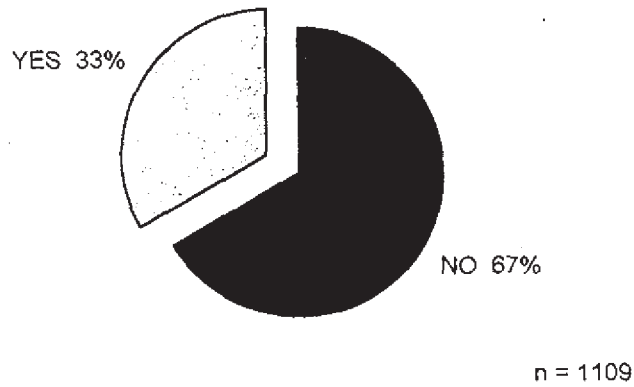
III. Trip Characteristics

Information sought prior to visit. Most trip planners (67%) did not seek information about the White River/Sunrise area before their visit (see Figure 3.7). Of those who did seek information, Figure 3.8 shows that guidebooks were the most common sources used (65% of trip planners seeking information) and Figure 3.9 shows that hiking information was the type of information most often sought (46% of trip planners seeking information). About 16 percent of the trip planners who attempted to seek information about White River/Sunrise prior to their visit reported that they found less information than they wanted (see Figure 3.10). However, this represents only about 5 percent of all respondents. On average, 18 percent of trip planners were aware of the Seattle telephone number for information about recreation in Western Washington National Parks and National Forests. However, knowledge of the number was much more common among respondents who lived less than 500 miles from MORA than among those who had traveled greater distances to visit (see Figure 3.11).

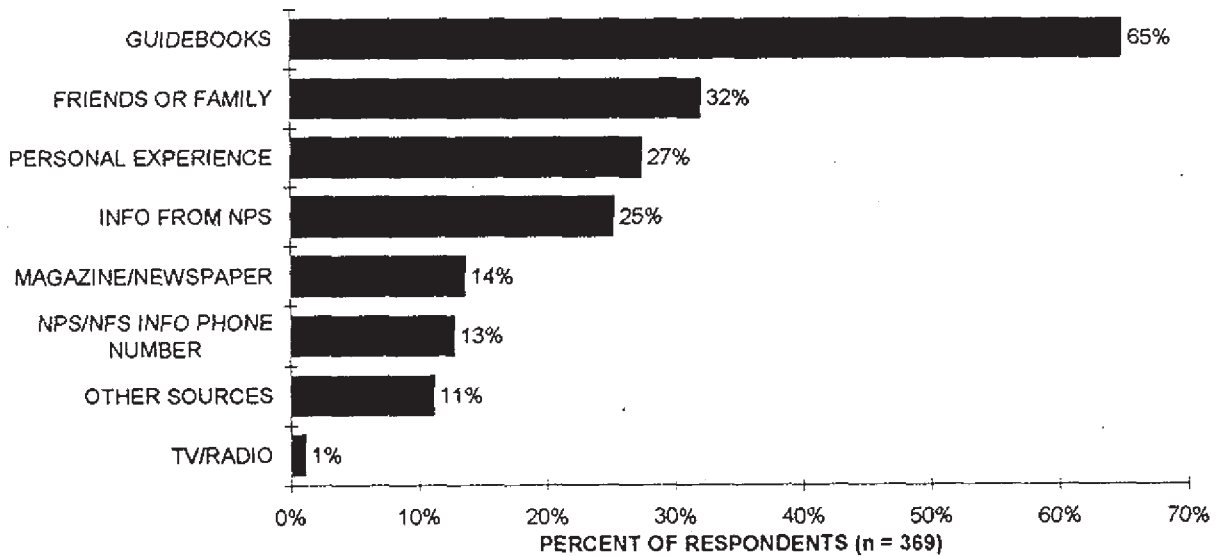
Further analyses of the sources of information used by trip planners could help managers determine how effectively information could be distributed to groups of visitors that are of particular concern and could suggest sources that might best be selected to convey the information.

III. Trip Characteristics

**FIGURE 3.7: Entrance Q-20
ATTEMPTED TO SPECIFICALLY SEEK OUT INFORMATION ABOUT THE WHITE
RIVER/SUNRISE AREA**



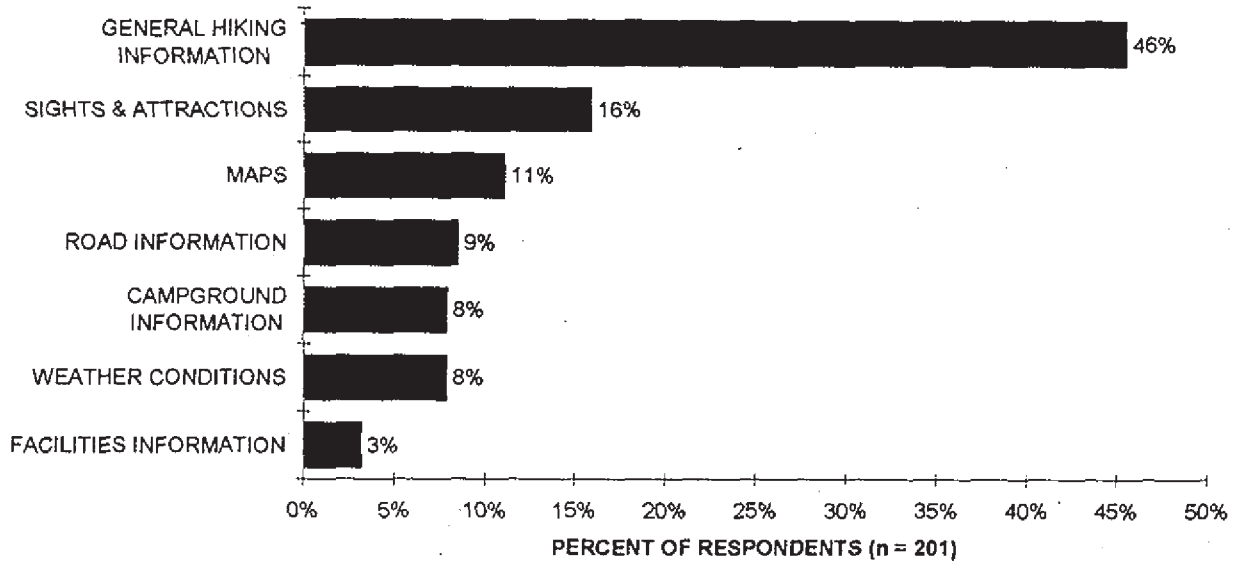
**FIGURE 3.8: Entrance Q-20
SOURCES OF INFORMATION**



Includes only responses from the 33% of respondents who sought information.
Percentages sum to more than 100 because respondents could use multiple sources.

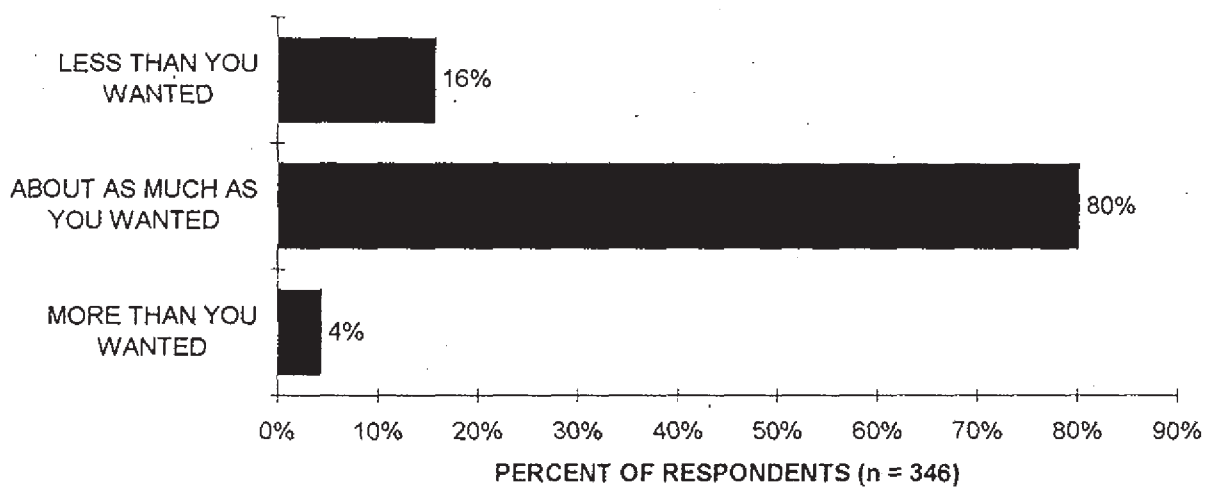
III. Trip Characteristics

FIGURE 3.9: Entrance Q-20
TYPE OF INFORMATION DESIRED



Includes only responses from the 33% of respondents who sought information.
45% of eligible respondents did not answer this open-ended question.

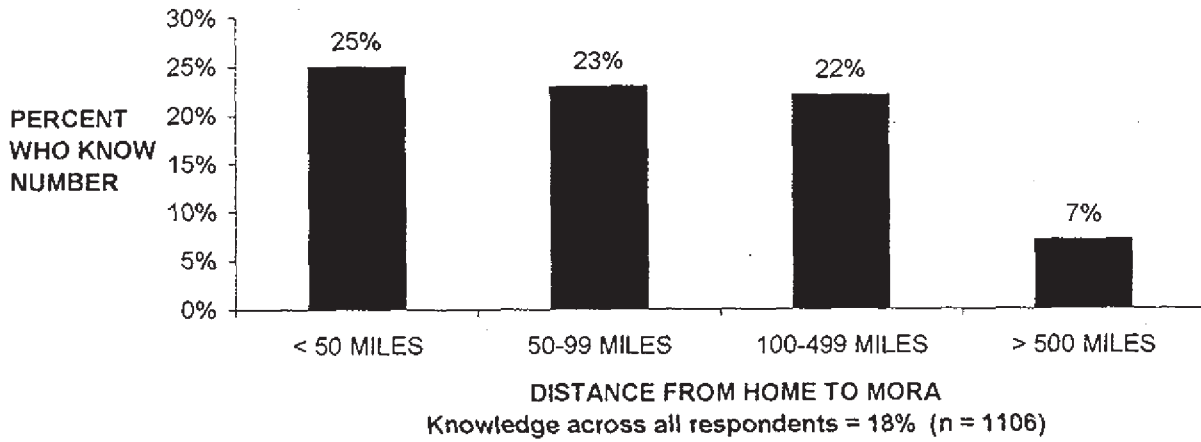
FIGURE 3.10: Entrance Q-20
AMOUNT OF INFORMATION FOUND TO AID IN PLANNING TRIP



Includes only responses from the 33% of respondents who sought information.

III. Trip Characteristics

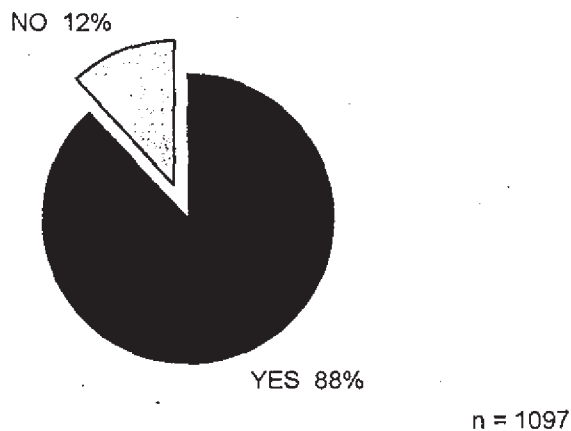
FIGURE 3.11: Entrance Q-21
KNOWLEDGE OF PHONE NUMBER FOR INFORMATION ABOUT RECREATION
IN WESTERN WA NATIONAL PARKS AND FORESTS
BY DISTANCE OF RESPONDENT'S HOME FROM MORA



III. Trip Characteristics

Planning to Park at Sunrise. Figure 3.12 shows that almost 90 percent of trip planners at the White River entrance planned to drive to the end of the road and park at Sunrise. This is consistent with the fact that the majority of development and visitor attractions in the area are concentrated at Sunrise.

FIGURE 3.12: Entrance Q-II
PLANNED TO DRIVE UP TO SUNRISE AND PARK IN VISITORS' LOT



Other planned stops in MORA. Figure 3.13 shows that about one-third of trip planners at the White River entrance planned to visit other areas of MORA after leaving the White River/Sunrise area. Paradise is by far the most common area mentioned as the other planned destination (65% of those planning to stop; see Figure 3.14).¹

¹ The areas of MORA that respondents had visited before reaching the White River/Sunrise area are discussed later in this section.

III. Trip Characteristics

FIGURE 3.13: Entrance Q-13
PLAN TO VISIT ATTRACTIONS IN MORA AFTER LEAVING THE
WHITE RIVER/SUNRISE AREA

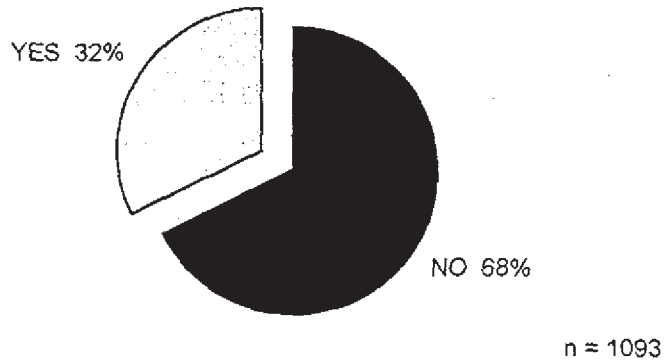
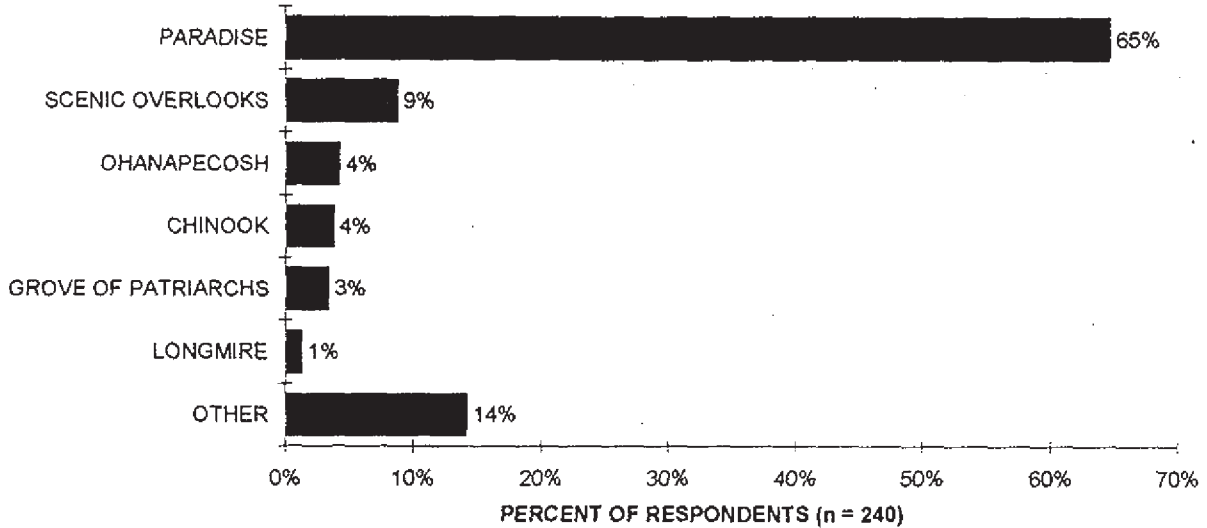


FIGURE 3.14: Entrance Q-14
ATTRACTIONS WITHIN MORA PLANNING TO VISIT AFTER
DEPARTING WHITE RIVER/SUNRISE AREA



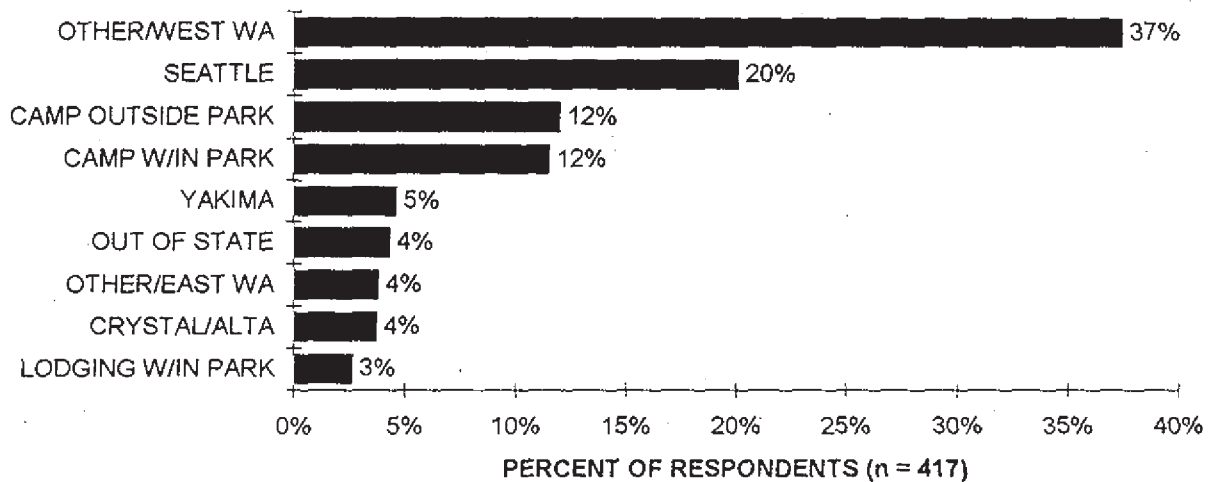
Includes only responses from the 32% of respondents who plan to stop elsewhere.
32% of eligible respondents did not answer this open-ended question.

III. Trip Characteristics

Getting to the White River Entrance

Previous night's lodging. About 43 percent of trip planners began the trip that brought them to the White River entrance one or more days before arriving. Figure 3.15 shows where those respondents stayed the night before arriving. Most lodging was scattered over Western Washington with Seattle being the most common specific location reported (20%). About 15 percent of trip planners who were not at home the previous night had stayed inside MORA (12% camping and 3% in other lodging).

FIGURE 3.15: Entrance Q-3
LOCATION OF PREVIOUS NIGHT'S LODGING

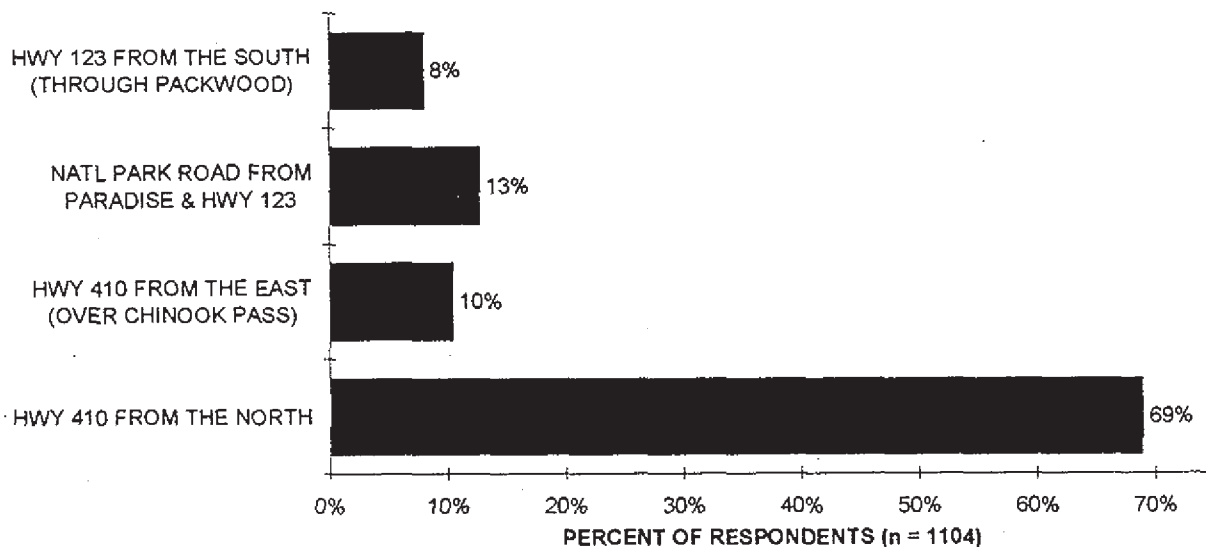


Includes only responses from the 43% of respondents who did not stay at home.

III. Trip Characteristics

Route taken. The majority of trip planners had reached the White River entrance via Highway 410 from the North, with between 8 and 13 percent arriving via each of the other three possible routes (see Figure 3.16). This pattern of travel suggests that most respondents were from the Puget Sound area of Western Washington and that any form of roadside information intended to affect visitation in the White River/Sunrise area would be most effective if placed along Highway 410.

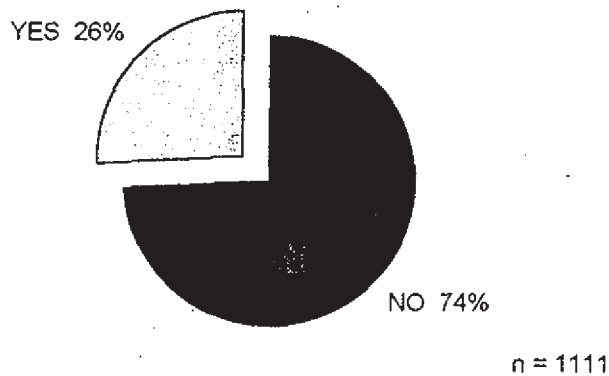
FIGURE 3.16: Entrance Q-5
ROUTE USED TO GET TO WHITE RIVER/SUNRISE AREA OF MORA



III. Trip Characteristics

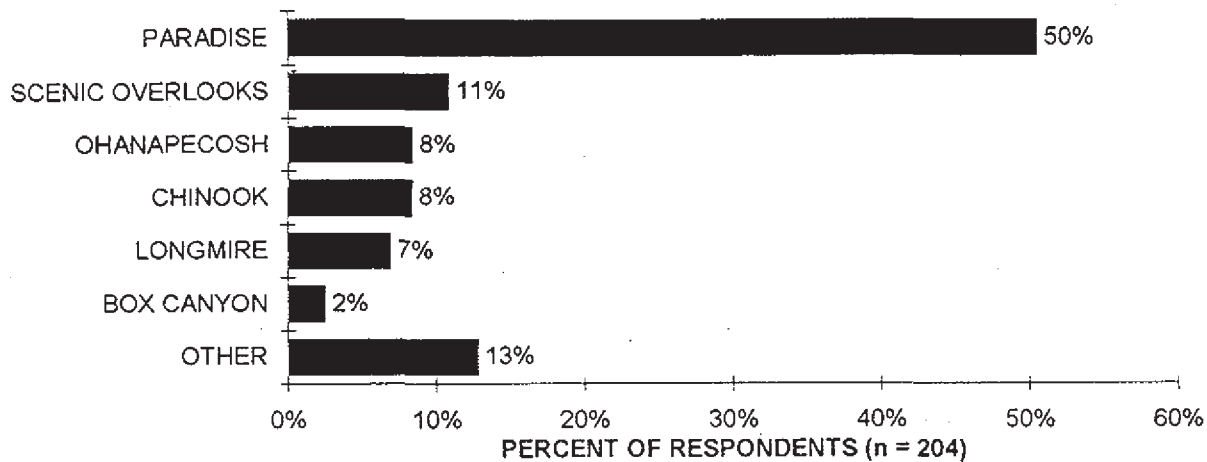
Other areas of MORA visited before White River/Sunrise. About one-fourth of trip planners had visited other areas of MORA before arriving at the White River entrance (see Figure 3.17). Paradise was by far the most common previously visited attraction, being visited by 50 percent of trip planners who had already stopped in MORA (see Figure 3.18). However, in terms of all parties visiting the White River/Sunrise area, only 10 percent had previously stopped at Paradise. Thus, information available at Paradise that was intended to alter visitation in the White River/Sunrise area would probably have little effect.

FIGURE 3.17: Entrance Q-12
VISITED ATTRACTIONS IN MORA BEFORE ARRIVING AT
WHITE RIVER/SUNRISE AREA



III. Trip Characteristics

FIGURE 3.18: Entrance Q-12
ATTRACTIONS WITHIN MORA VISITED PRIOR TO ARRIVING AT
WHITE RIVER/SUNRISE AREA

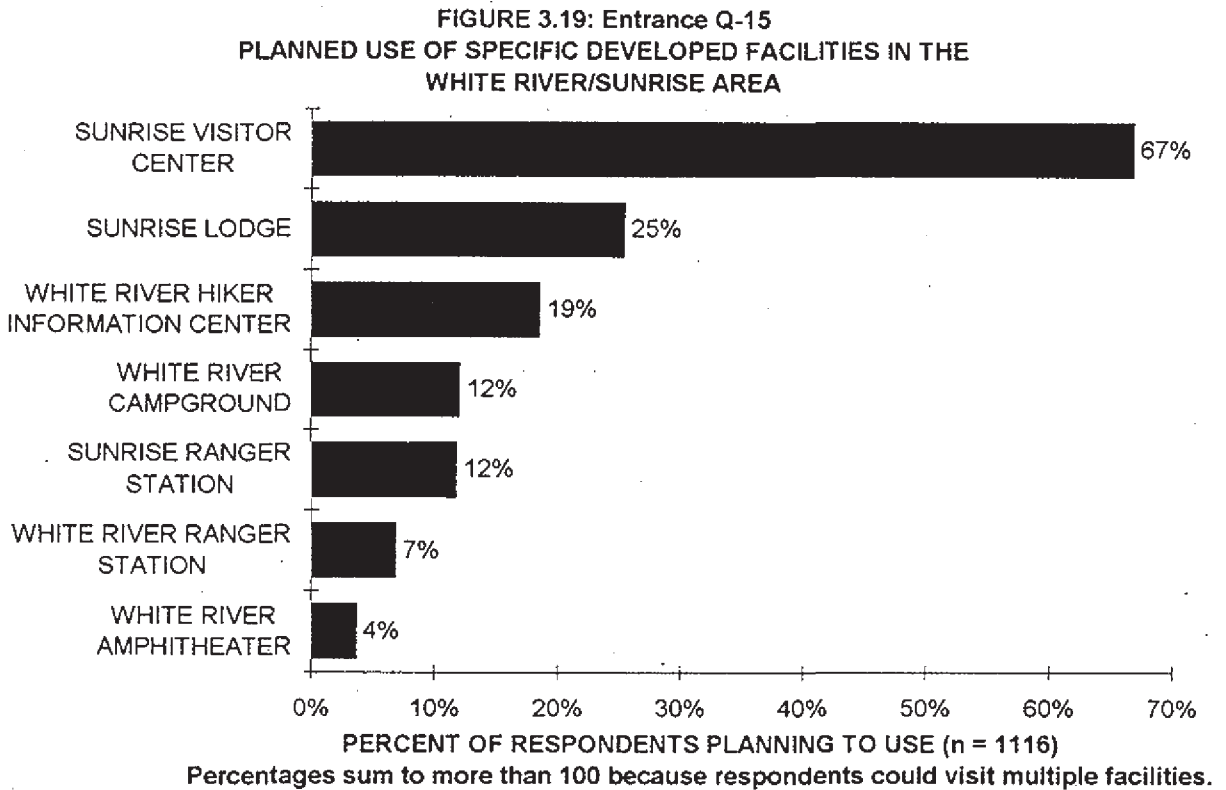


Includes only responses from the 26% of respondents who stopped elsewhere.
29% of eligible respondents did not answer this open-ended question.

III. Trip Characteristics

Use of Facilities: Planned and Actual

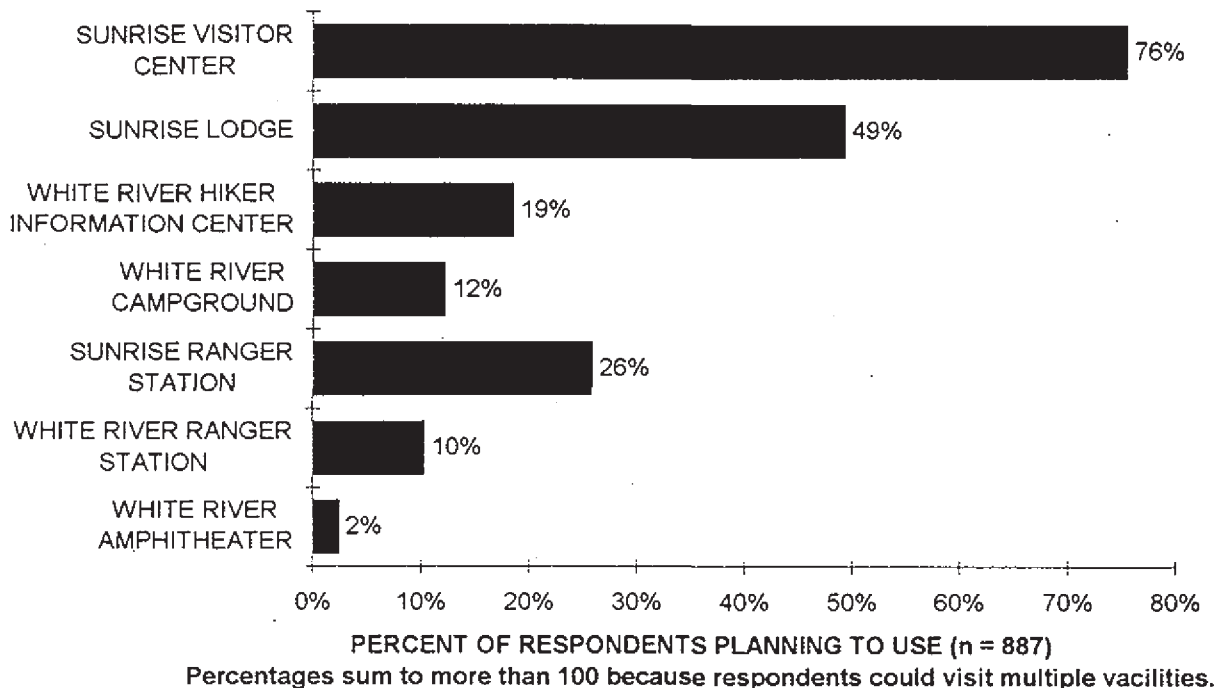
Figure 3.19 shows that about two-thirds of respondents planned to visit the Sunrise Visitor Center when contacted at the White River entrance. Anticipated use of other facilities was much lower with only 25 percent of trip planners anticipating a visit to Sunrise Lodge.



Actual use of facilities was generally higher than planned use. Figure 3.20 shows that about three-quarters of trip planners reported visiting the Sunrise Visitor Center and about half visited the Sunrise Lodge. The discrepancy between planned and actual use is discussed below.

III. Trip Characteristics

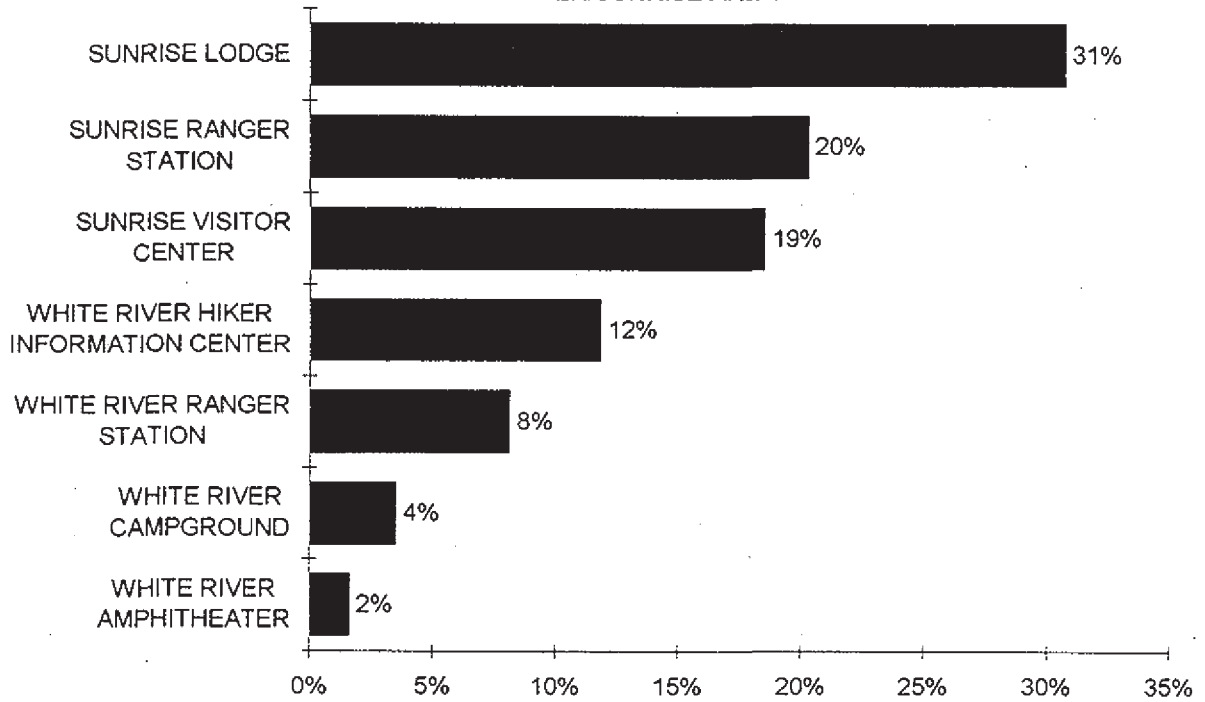
FIGURE 3.20: Mail Q-2
REPORTED USE OF SPECIFIC DEVELOPED FACILITIES IN THE
WHITE RIVER/SUNRISE AREA



Although comparisons between the planned and actual use of the facilities (Figures 3.19 and 3.20) are interesting, they do not describe all possible shifts in visitor activities. Even when the percentage of respondents who plan to use a facility is identical to the percentage who report using that facility, considerable shifts may be occurring – the number of visitors making unplanned visits may simply balance the number of planned visits that were not made. In order to assess such shifts, the planned and actual use of facilities was compared for each respondent. Figure 3.21 shows the percentage of respondents who made unplanned visits to each of the developed facilities. Most unplanned visits were made to facilities at Sunrise with almost one-third of respondents making unplanned visits to the Sunrise Lodge.

III. Trip Characteristics

FIGURE 3.21: Entrance Q-15, Mail Q-2
UNPLANNED USE OF SPECIFIC DEVELOPED FACILITIES IN THE
WHITE RIVER/SUNRISE AREA



PERCENT OF RESPONDENTS MAKING UNPLANNED USE (n = 885)
Percentages do not sum to 100 because respondents could make multiple unplanned stops.

III. Trip Characteristics

Two different explanations may each account for some of the unplanned uses of the facilities. First, responses to the question concerning planned uses are consistent with the idea that many parties in the White River/Sunrise area have recreational experiences that are relatively unconstrained and unplanned. They may make plans to visit Sunrise, but be undecided about visiting the Lodge. Thus, they may be relatively likely to use the Lodge facilities, but may honestly respond that they do not plan to stop. In other words, having no plans to stop at the Lodge is not the same as having plans to not stop at the Lodge.

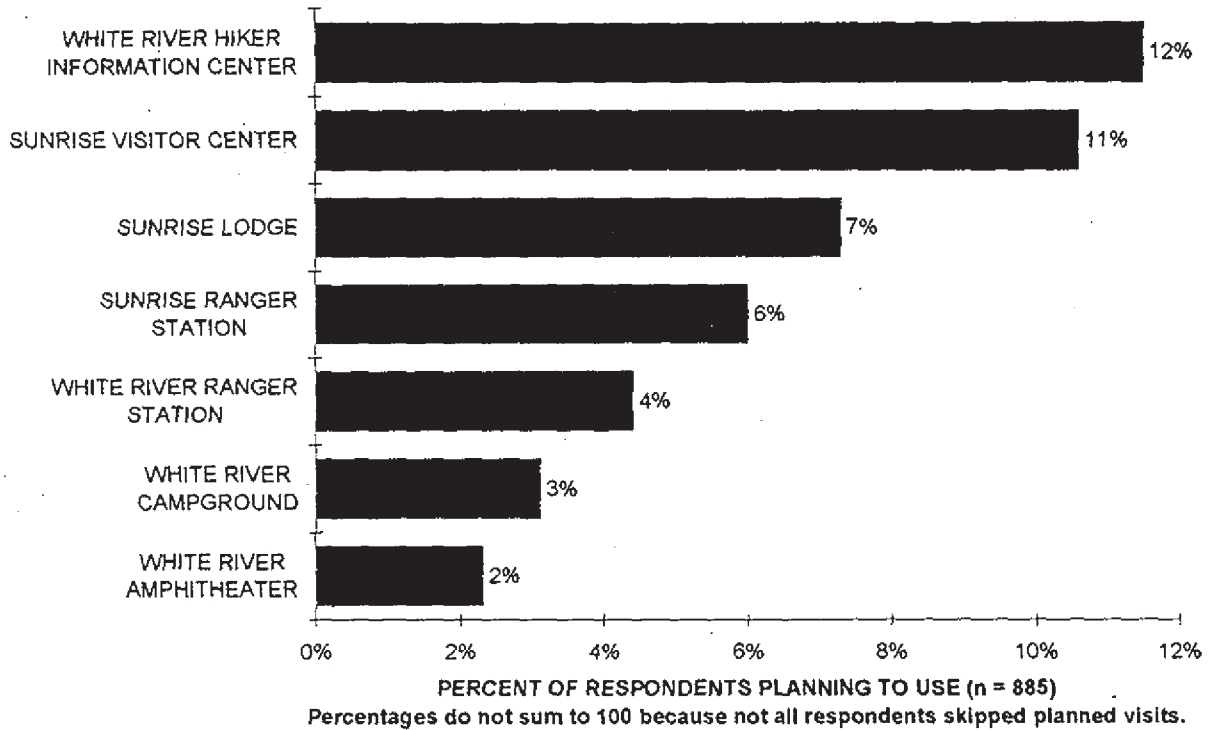
Second, many of these visits may reflect trip planners' lack of knowledge about the facilities at Sunrise. Based only on the names of the facilities (and possibly on experience at Paradise) a first-time visitor to Sunrise who wished to visit a gift shop or restaurant might assume that they would be found in the Visitor Center. Thus, they might plan to visit only the Visitor Center and to skip the Lodge. Once they reached Sunrise, they would find that their plans to visit the restaurant or gift shop would require an unplanned visit to the Lodge. Data showing that 66 percent of trip planners making unplanned visits to the Lodge were first time visitors to the White River/Sunrise area (vs. 54% of all other respondents) support this explanation.

III. Trip Characteristics

It was also possible to determine the percentage of respondents who planned to visit each facility but did not do so. Figure 3.22 shows that relatively few planned visits were skipped by respondents. The most commonly skipped facilities, the White River Hiker Information Center and Sunrise Visitor Center, were skipped by 12 and 11 percent of respondents. Some of these visits may have been skipped by respondents who found that they could get hiking information at the White River entrance gate. Stopping parties at the entrance gate so they could fill out the entrance questionnaire may have inadvertently increased this effect.

III. Trip Characteristics

FIGURE 3.22: Entrance Q-15, Mail Q-2
PLANNED VISITS NOT MADE TO SPECIFIC DEVELOPED FACILITIES IN
THE WHITE RIVER/SUNRISE AREA

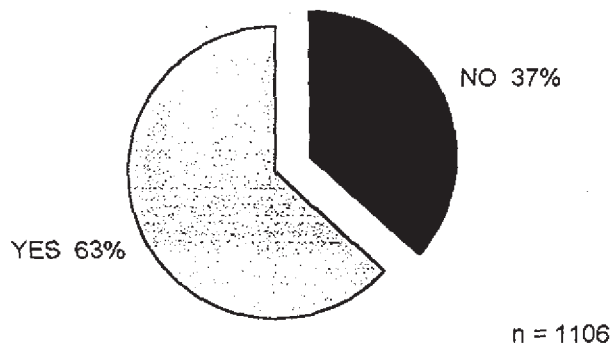


III. Trip Characteristics

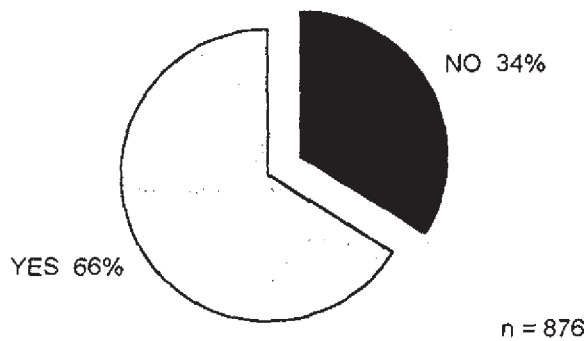
Day Hiking: Planned and Actual

Figure 3.23 shows that 63 percent of respondents planned to go day hiking during their visit to MORA. This is very close to the 66 percent of respondents who reported that they went day hiking (see Figure 3.24).

**FIGURE 3.23: Entrance Q-16
HAD PLANS TO DAY HIKE**



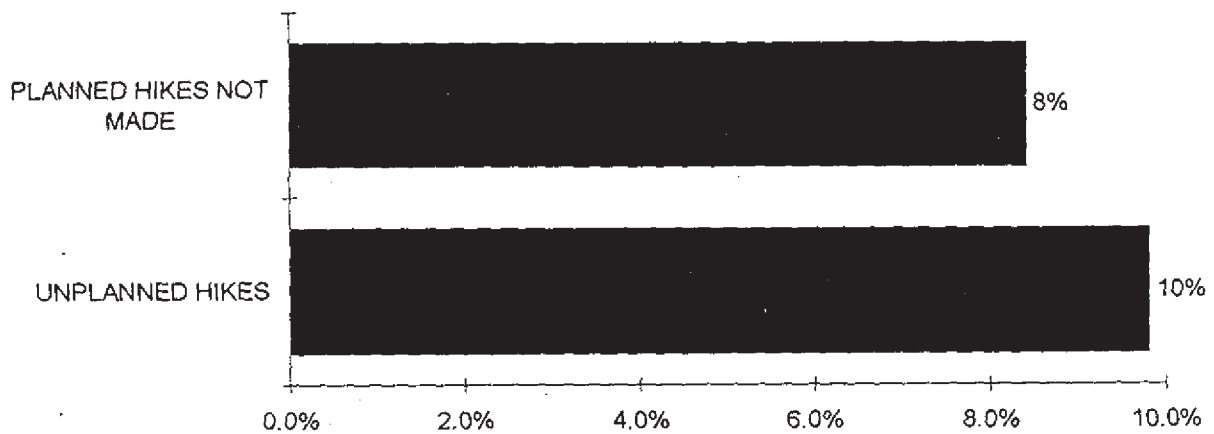
**FIGURE 3.24: Mail Q-3
DAY HIKE DURING VISIT TO MORA**



III. Trip Characteristics

Despite the similarity in the percentages of respondents planning and taking hikes, there are still some visitors who make unplanned hikes and some who plan to hike but do not do so. Figure 3.25 shows that the percentages of such visitors are relatively small and quite similar, with the slightly greater percentage of unplanned hikes accounting for the small increase in hikes reported over hikes planned (see Figures 3.23 and 3.24).

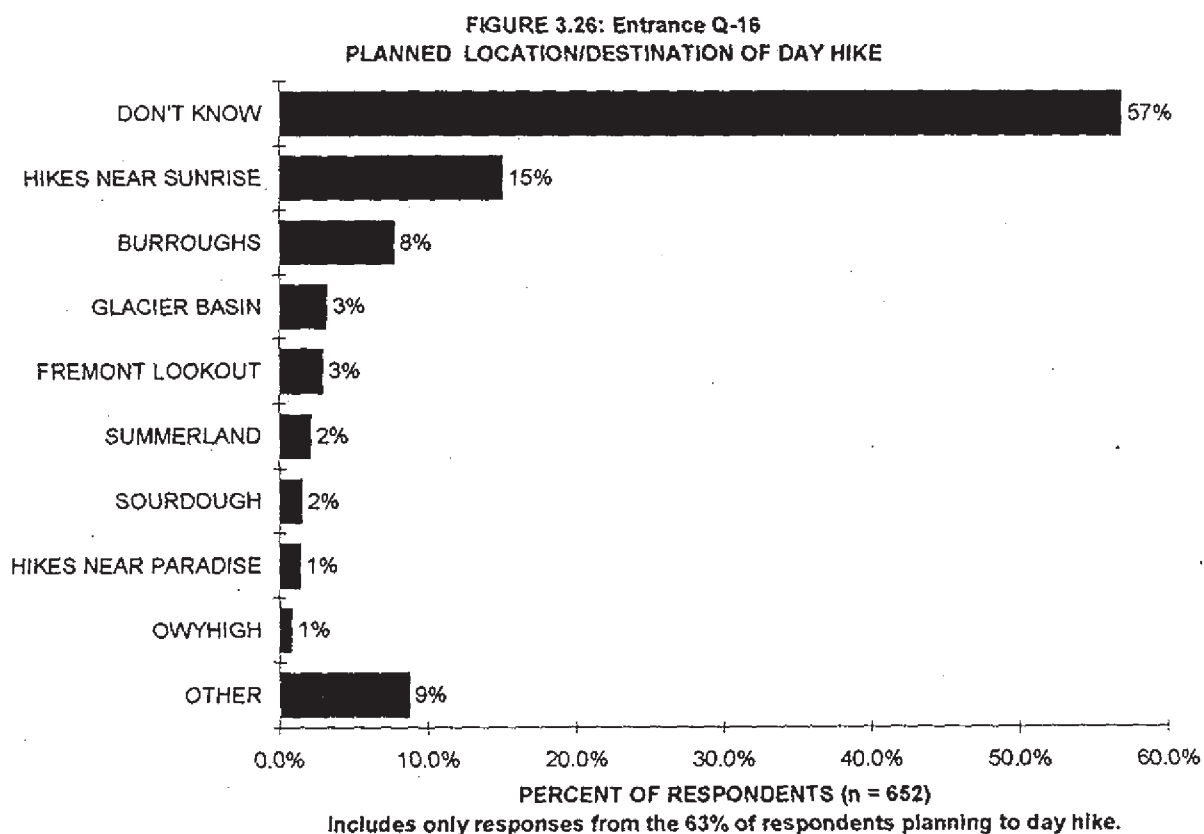
FIGURE 3.25: Entrance Q-16, Mail Q-3
PLANNED VERSUS UNPLANNED DAY HIKES



Percentages do not sum to 100 because only a subset of respondents are represented.

III. Trip Characteristics

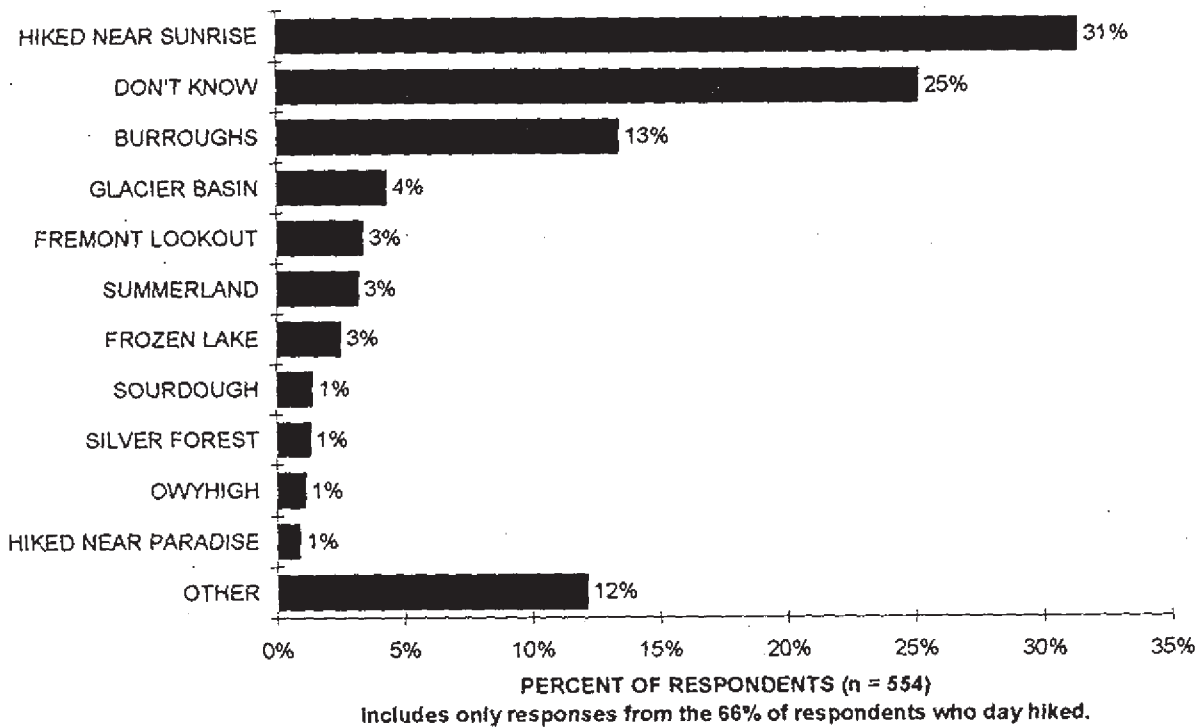
Hike locations. The majority of respondents who planned to hike had not chosen a specific hike or hiking destination (see Figure 3.26). Even among those who specified a location the most common response was the general Sunrise vicinity. This lack of specific hiking destinations represents an opportunity for MORA to manage visitor distribution so as to maximize visitor enjoyment and minimize resource damage.



III. Trip Characteristics

After returning from their visit one-fourth of trip planners did not know where they had gone day-hiking (see Figure 3.27). These respondents probably walked only a short distance from their vehicles, but their prevalence suggests that many visitors are not highly invested in experiencing particular hikes. Comparing the planned hiking destinations (Figure 3.26) to the reported hike locations (Figure 3.27) suggests that many of the trip planners who had no specific hiking destination took hikes in the Sunrise vicinity.

FIGURE 3.27: Mail Q-3
LOCATION OF DAY HIKE



III. Trip Characteristics

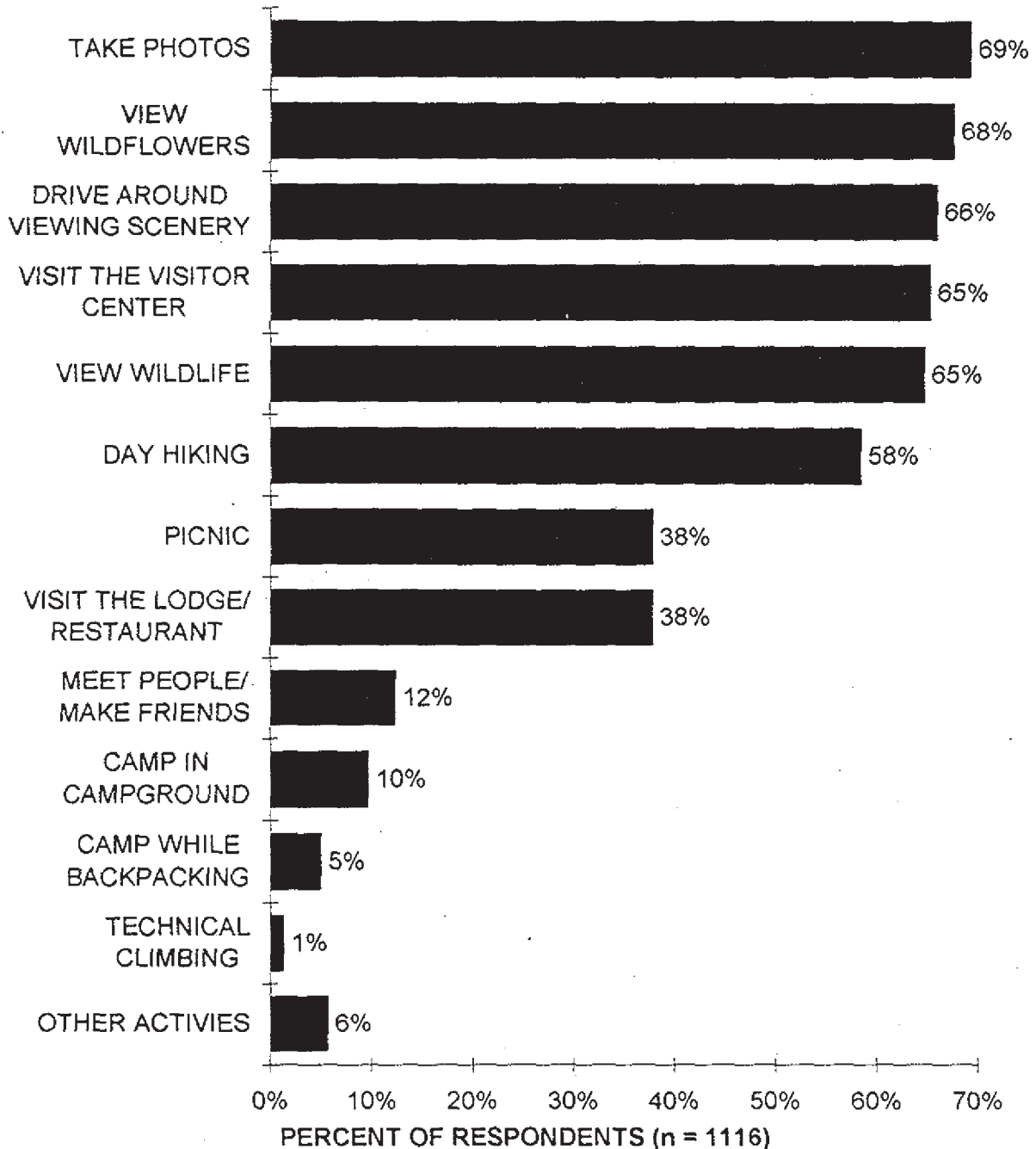
Recreational Activities: Planned and Actual

During their visit to the White River/Sunrise area, respondents' most frequently planned recreation activity was taking photographs (69%). Other activities planned by more than half of all trip planners included viewing wildflowers (68%), driving to view scenery (66%), visiting the visitor center (65%), viewing wildlife (65%), and day hiking (58%)² (see Figure 3.28).

² Respondents were asked about day hiking in two slightly different ways. Question 16 (see Figure 3.23) asked if they planned to do any hiking on this trip to MORA and Question 17 (see Figure 3.28) asked if while they were in the White River/Sunrise area they planned to go day hiking. The different percentages may result from these distinct wordings.

III. Trip Characteristics

FIGURE 3.28: Entrance Q-17
PLANNED RECREATIONAL ACTIVITIES WHILE VISITING THE
WHITE RIVER/SUNRISE AREA



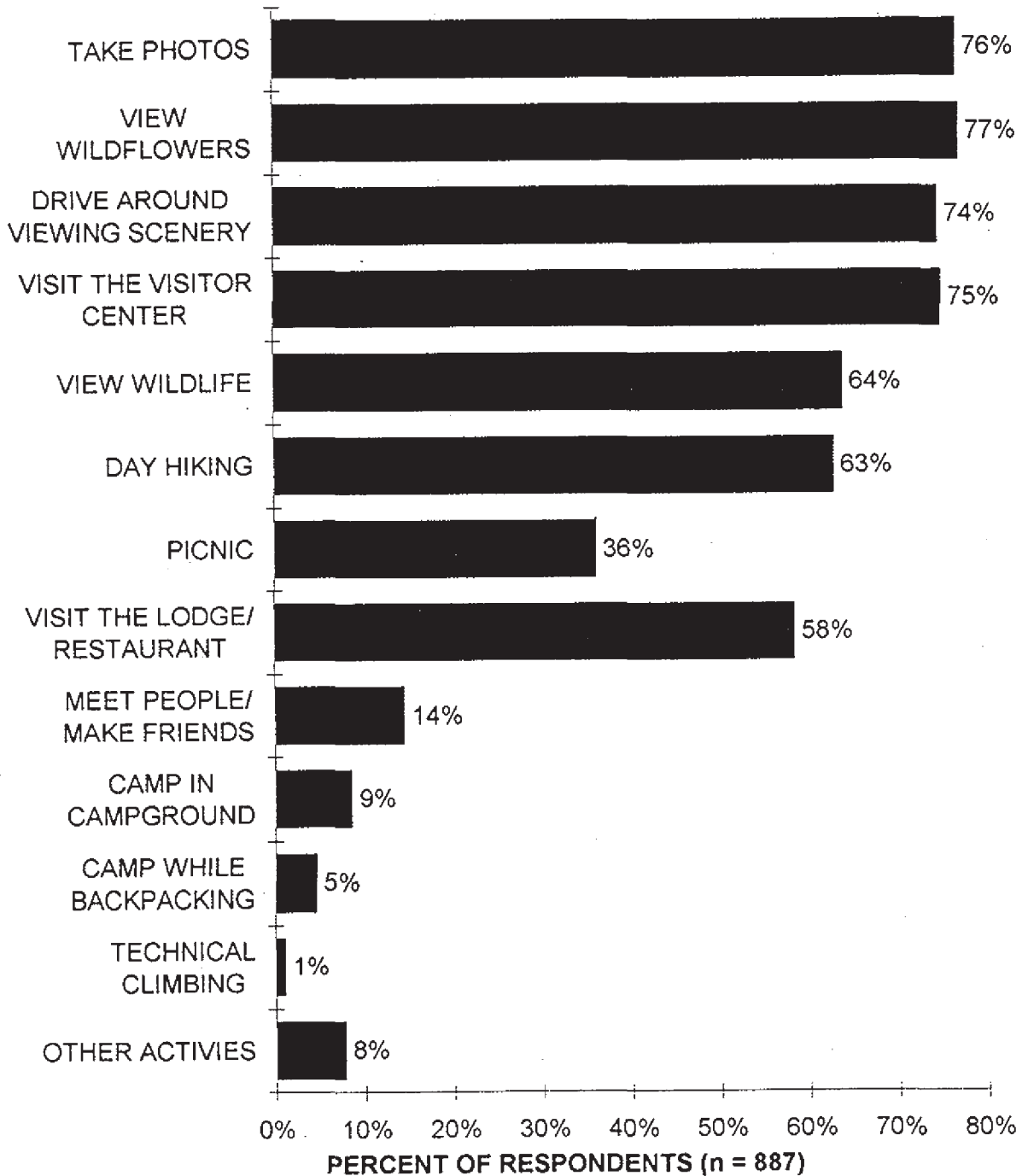
Percentages sum to more than 100 because respondents could plan multiple activities.

III. Trip Characteristics

Actual participation in recreational activities was generally higher than planned participation. Figure 3.29 shows that about three-quarters of trip planners reported taking photos and viewing wildflowers. The largest change between planned and actual activities was that 38 percent of respondents planned to visit the lodge/restaurant but 58 percent reported such visits. This change is virtually identical to the one that was noted earlier when discussing the use of developed facilities (see Figures 3.20 and 3.21)

III. Trip Characteristics

FIGURE 3.29: Mail Q-4
ACTIVITIES ENGAGED IN DURING VISIT TO THE
WHITE RIVER/SUNRISE AREA



Percentages sum to more than 100 because respondents could plan multiple activities.

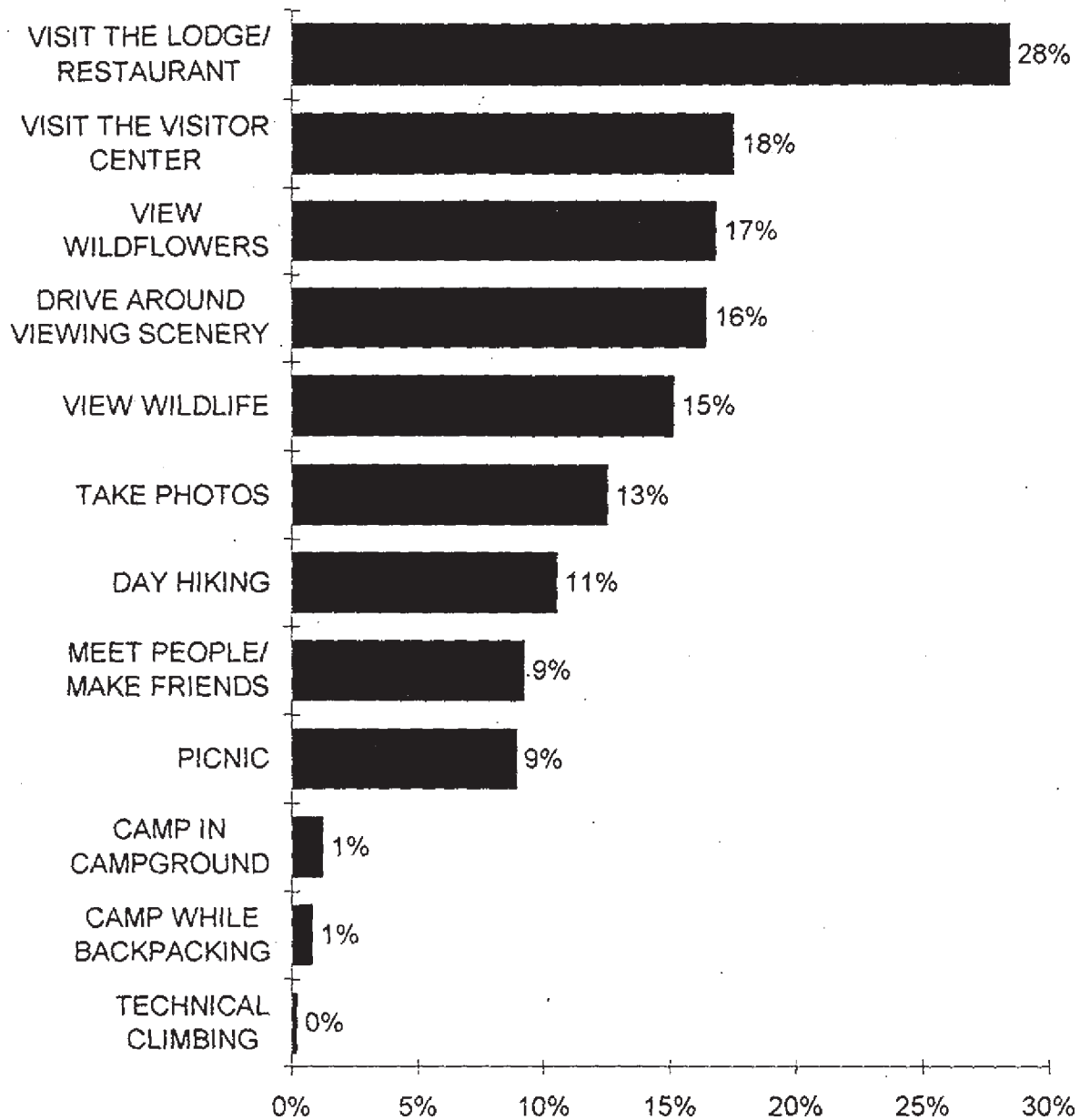
III. Trip Characteristics

As in the previous comparisons of planned and actual responses, we also determined the percentage of respondents who had unplanned participation in each activity and the percentage who had planned to participate but did not do so. Figure 3.30 shows the percentage of respondents who reported unplanned participation in each of the recreational activities. Most unplanned visits were made to facilities at Sunrise with almost one-third of respondents making unplanned visits to the Sunrise Lodge.

As in the earlier discussion of facility use, much of the unplanned activity reported in Figure 3.30 can be accounted for by noting that when trip planners said they had no plans to visit the lodge or to view wildlife, it did not necessarily mean that they planned not to do those activities. Some of the unplanned visits to the Lodge and Visitor Center also probably result from unfamiliarity with the facilities at Sunrise.

III. Trip Characteristics

**FIGURE 3.30: Entrance Q-17, Mail Q-4
UNPLANNED PARTICIPATION IN RECREATIONAL ACTIVITIES
WHILE VISITING THE WHITE RIVER/SUNRISE AREA**



PERCENT OF RESPONDENTS (n = 885)

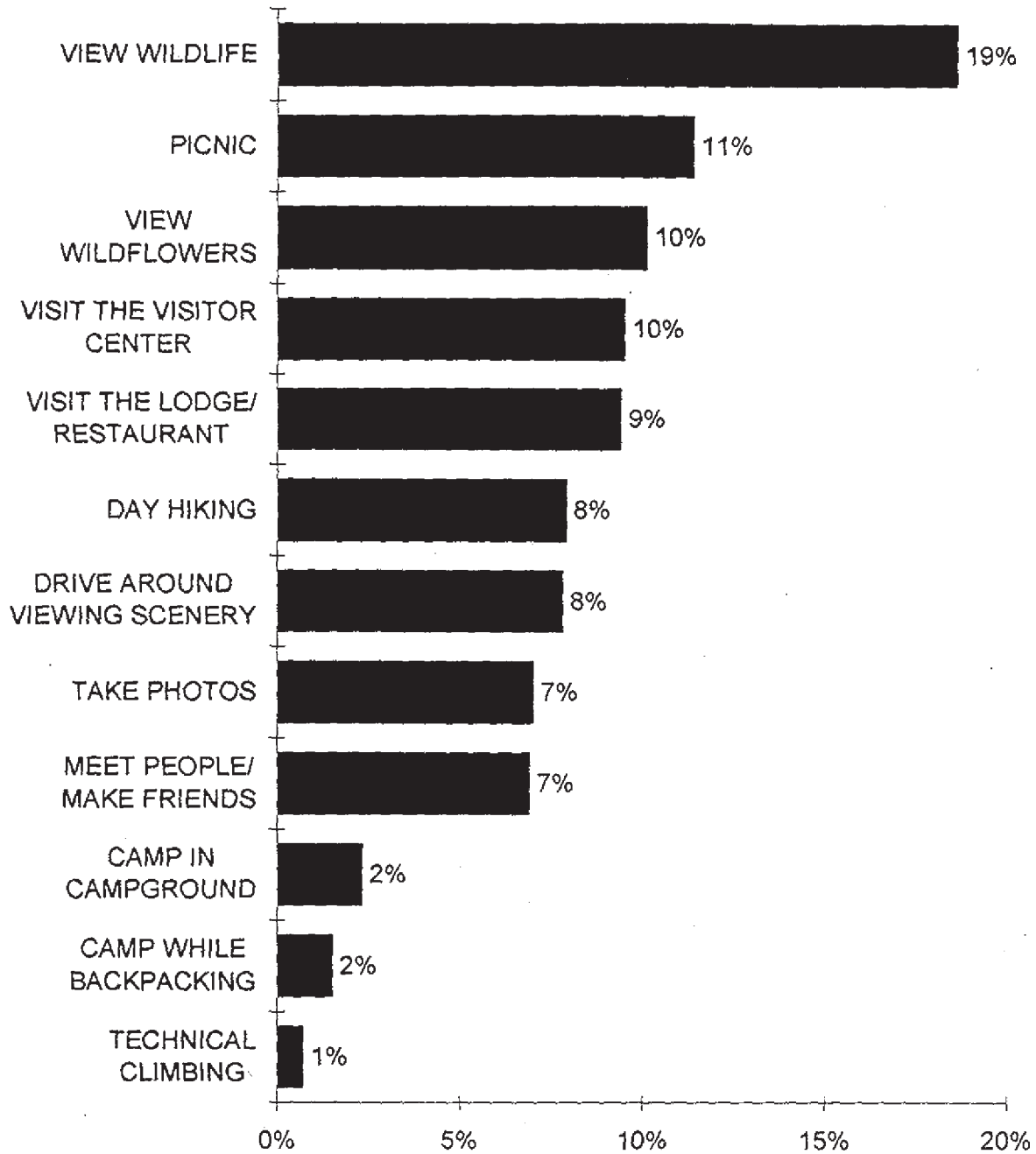
Percentages do not sum to 100 because respondents could participate in multiple unplanned activities.

III. Trip Characteristics

It was also possible to determine the percentage of respondents who planned to participate in each activity but did not do so. Figure 3.31 shows that viewing wildlife was the planned activity in which respondents most often failed to participate. The well-known fact that wildlife rarely cooperate with visitors' plans probably accounts for much of this effect.

III. Trip Characteristics

FIGURE 3.31: Entrance Q-17, Mail Q-4
PLANNED ACTIVITIES NOT DONE WHILE VISITING THE
WHITE RIVER/SUNRISE AREA

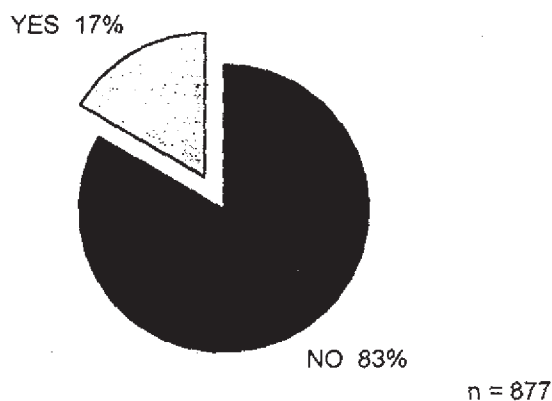


PERCENT OF RESPONDENTS NOT PARTICIPATING (n = 885)
Percentages do not sum to 100 because not all respondents skipped planned activities.

III. Trip Characteristics

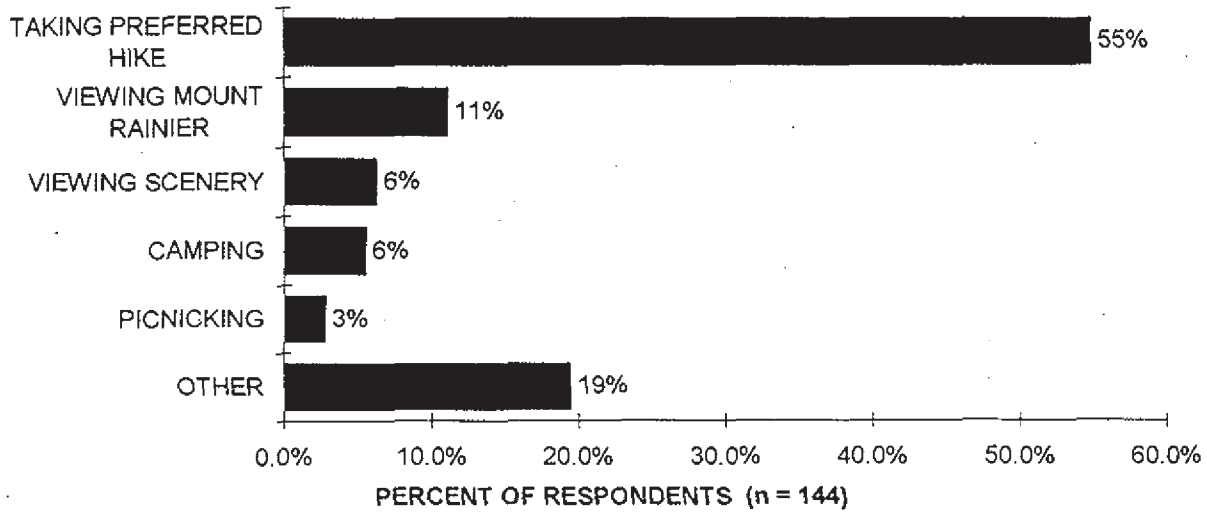
The discrepancy between plans and participation in various activities was also the subject of a specific question in the mail survey. About 17 percent of trip planners reported that there were activities in which they had planned to participate but were unable to do so (see Figure 3.32). The activities in which respondents were unable to participate are shown in Figure 3.33, with taking a preferred hike being by far the most common activity listed. Figure 3.34 shows that bad weather was the most common reason why respondents were unable to participate in planned activities. Factors over which MORA managers could exert some control (crowds and parking) were listed by only 14 percent of those who reported that they were unable to do planned activities. This 14 percent represented only about 2 percent of all trip planners.

FIGURE 3.32: Mail Q-6
UNABLE TO PARTICIPATE IN PLANNED ACTIVITIES



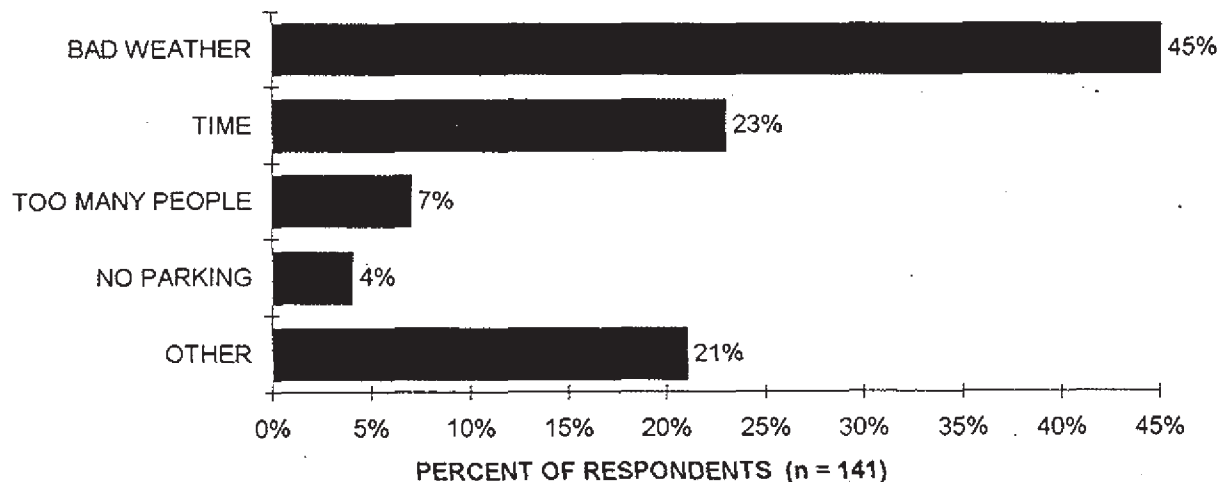
III. Trip Characteristics

FIGURE 3.33: Mail Q-6
PLANNED ACTIVITY IN WHICH UNABLE TO PARTICIPATE



Includes only responses from the 17% of respondents reporting they were unable to participate.

FIGURE 3.34: Mail Q-6
REASON UNABLE TO PARTICIPATE IN PLANNED ACTIVITY



Includes only responses from the 17% of respondents reporting they were unable to participate.

Taking a preferred hike was the activity most commonly listed in Question 6 as one in which respondents were unable to participate (79/144 respondents; see Figure 3.33).

However, in an earlier analysis, day hiking was found to be only the sixth most common

III. Trip Characteristics

activity in which respondents planned to participate but then failed to do so (see Figure 3.31). Some of this apparent discrepancy is due to the different ways in which the data are presented. The number of respondents who underlie the data shown in Figure 3.31 (i.e., those who reported in the entrance survey that they planned to hike and then reported on the mail survey that they did not hike) was 71, a figure very similar to the 79 respondents who reported in Question 6 that they were unable to take their preferred hike. Nonetheless, it is interesting that in Question 6 few respondents reported failures to view wildlife or have picnics; activities that were most commonly planned but not enacted (see Figure 3.31). Perhaps these activities are not as memorable or central to the planned trip as day hiking and thus respondents do not recall them as readily when asked (in the post-trip mail questionnaire) to recall activities in which they were unable to participate. It was also possible that they were able to participate in these activities, but simply chose not to do so.

Importance of recreational activities. Figure 3.35 shows that in the entrance and mail questionnaires, day hiking was most commonly selected as the activity most important to respondents' enjoyment of the White River/Sunrise area (38% entrance, 45% mail).³ Driving to view scenery was also selected quite often (28% entrance and mail).⁴

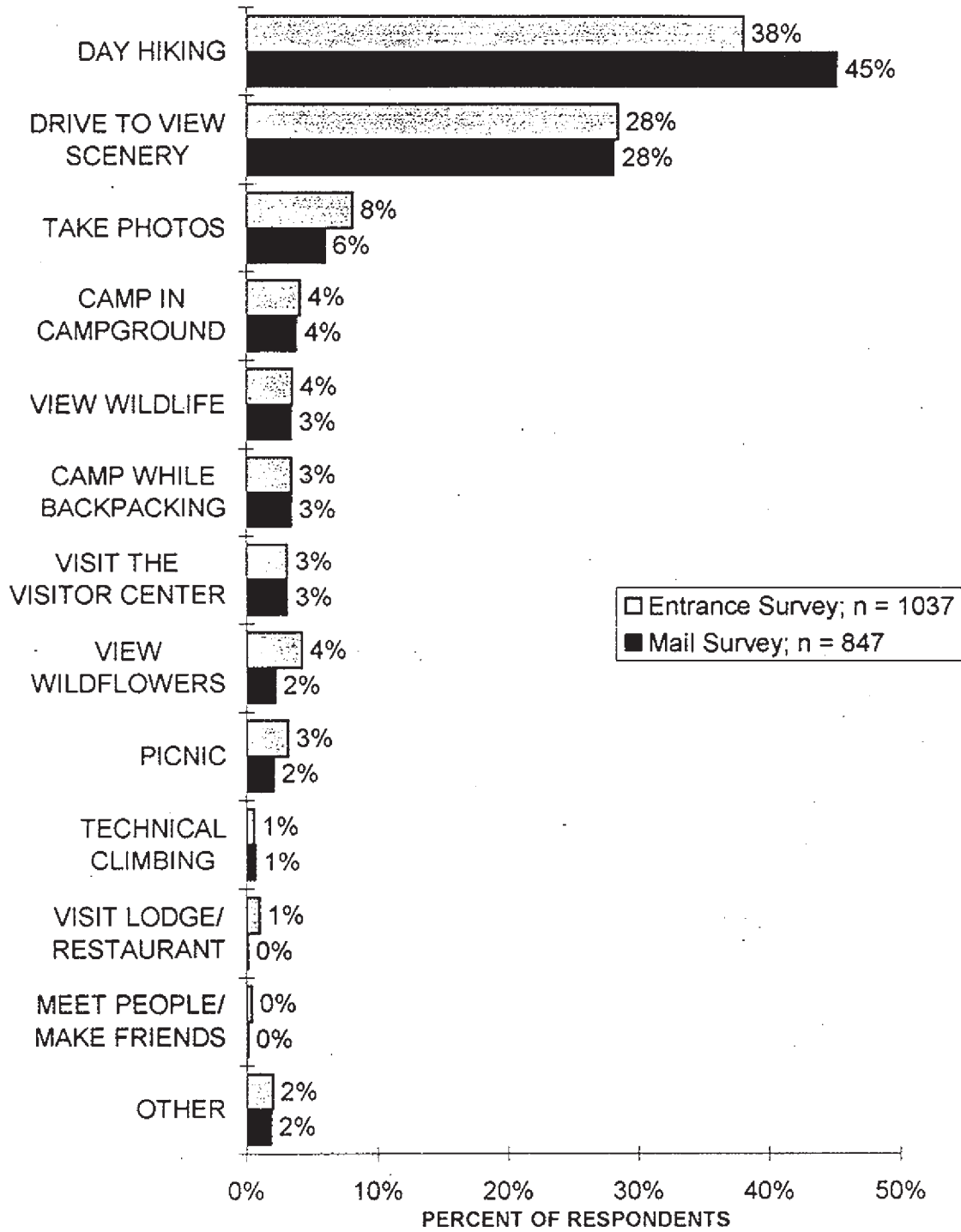
Further analyses of the importance ratings could yield profiles of visitors who value similar activities. Such market segmentation analyses could help managers target their information and assess impacts due to changes in management policy.

³ It is unclear why the day hiking was more commonly chosen as the most important activity in the mail vs. entrance questionnaire. Analysis did not support the hypothesis that it was a result of nonresponse bias. Further analysis of the data from respondents who changed their importance selection might help explain the finding.

⁴ Respondents were also asked to indicate their second-most important activity. The frequency distribution of these responses was very similar to that of most important activities.

III. Trip Characteristics

**FIGURE 3.35: Entrance Q-18, Mail Q-5
MOST IMPORTANT ACTIVITY FOR ENJOYMENT OF THE
WHITE RIVER/SUNRISE AREA**

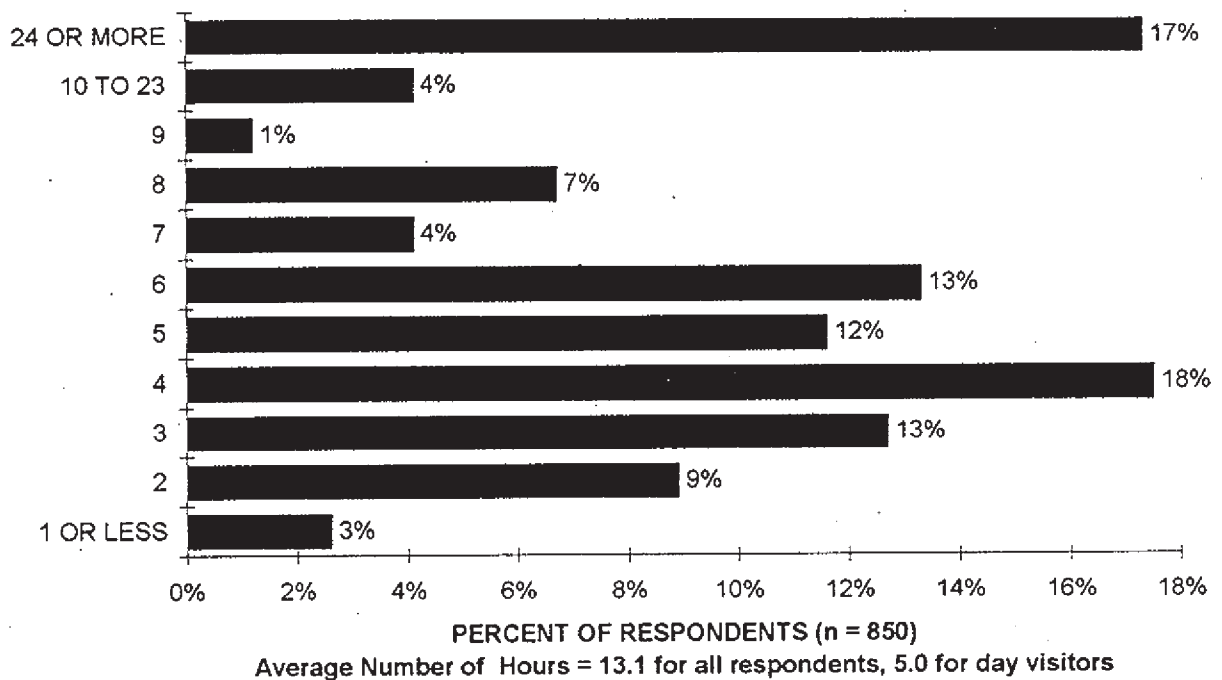


III. Trip Characteristics

Time in the White River/Sunrise Area

The average amount of time spent in the White River/Sunrise area for all trip planners was about 13 hours. Day visitors stayed an average of five hours. The amount of time spent by day visitors was fairly evenly distributed around four hours (see Figure 3.36). Among trip planners who stayed overnight, most stayed one or two days (36% and 37% of overnight visitors, respectively; 6% and 6% of all respondents).

FIGURE 3.36: Mail Q-1
NUMBER OF HOURS SPENT IN WHITE RIVER/SUNRISE AREA



IV. TRIP MOTIVATION

The first question in the oral interview that concluded the entrance survey of trip planners was simply, "Why did you choose to visit this area of Mount Rainier National Park today?" It was hoped that in the oral format, respondents would be more inclined to give complete and revealing responses than they would be likely to write in an open-ended questionnaire item. However, the eagerness of respondents to continue their trip and the practical demands placed on the survey workers limited the elaboration of the responses in the vast majority of cases. Accordingly, the answers to this question were grouped into relatively simple categories and tallied.

The mail questionnaire also addressed trip motivation by including a series of questions asking respondents to rate the importance of 12 reasons for visiting the White River/Sunrise area. The 12 reasons were selected from 31 recreation experience preference (REP) items used in the 1990 survey of general visitors to MORA. In the statistical analysis of the 1990 data it was found that the 31 REP items fell into six general groups (see Appendix E for a discussion of the REP scales and their background, and Appendix F for the analysis of the 1990 data). These six groups included:

- 1) escape/rest/introspection
- 2) achievement/risk taking/creativity
- 3) nature/learning/scenery
- 4) new people/telling others
- 5) family
- 6) friends

Because of the limited time and questionnaire space in the WRVS we selected only the two items that were most highly related to each of the six general

IV. Trip Motivation

groups for inclusion in the mail questionnaire.

TABLE 4.1: TABLE OF FIGURES FOR SECTION IV

FIGURE 4.1: REASONS FOR VISITING THE WHITE RIVER/SUNRISE AREA	97
FIGURE 4.2: IMPORTANCE OF ESCAPE-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE AREA	99
FIGURE 4.3: IMPORTANCE OF NATURE/LEARNING-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE	100
FIGURE 4.4: IMPORTANCE OF FAMILY-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE	101
FIGURE 4.5: IMPORTANCE OF FRIEND-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE	101
FIGURE 4.6: IMPORTANCE OF CHALLENGE-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE	102
FIGURE 4.7: IMPORTANCE OF STRANGER-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE	103
FIGURE 4.8: OPPORTUNITY TO SATISFY ESCAPE-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE	104
FIGURE 4.9: OPPORTUNITY TO SATISFY NATURE/LEARNING-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE	105
FIGURE 4.10: OPPORTUNITY TO SATISFY FAMILY-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE.....	105
FIGURE 4.11: OPPORTUNITY TO SATISFY FRIEND-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE.....	106
FIGURE 4.12: OPPORTUNITY TO SATISFY CHALLENGE-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE	106
FIGURE 4.13: OPPORTUNITY TO SATISFY STRANGER-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE	107
FIGURE 4.14: IMPORTANCE VS OPPORTUNITY TO SATISFY VARIOUS REASONS FOR VISITING THE WHITE RIVER/SUNRISE AREA	109

IV. Trip Motivation

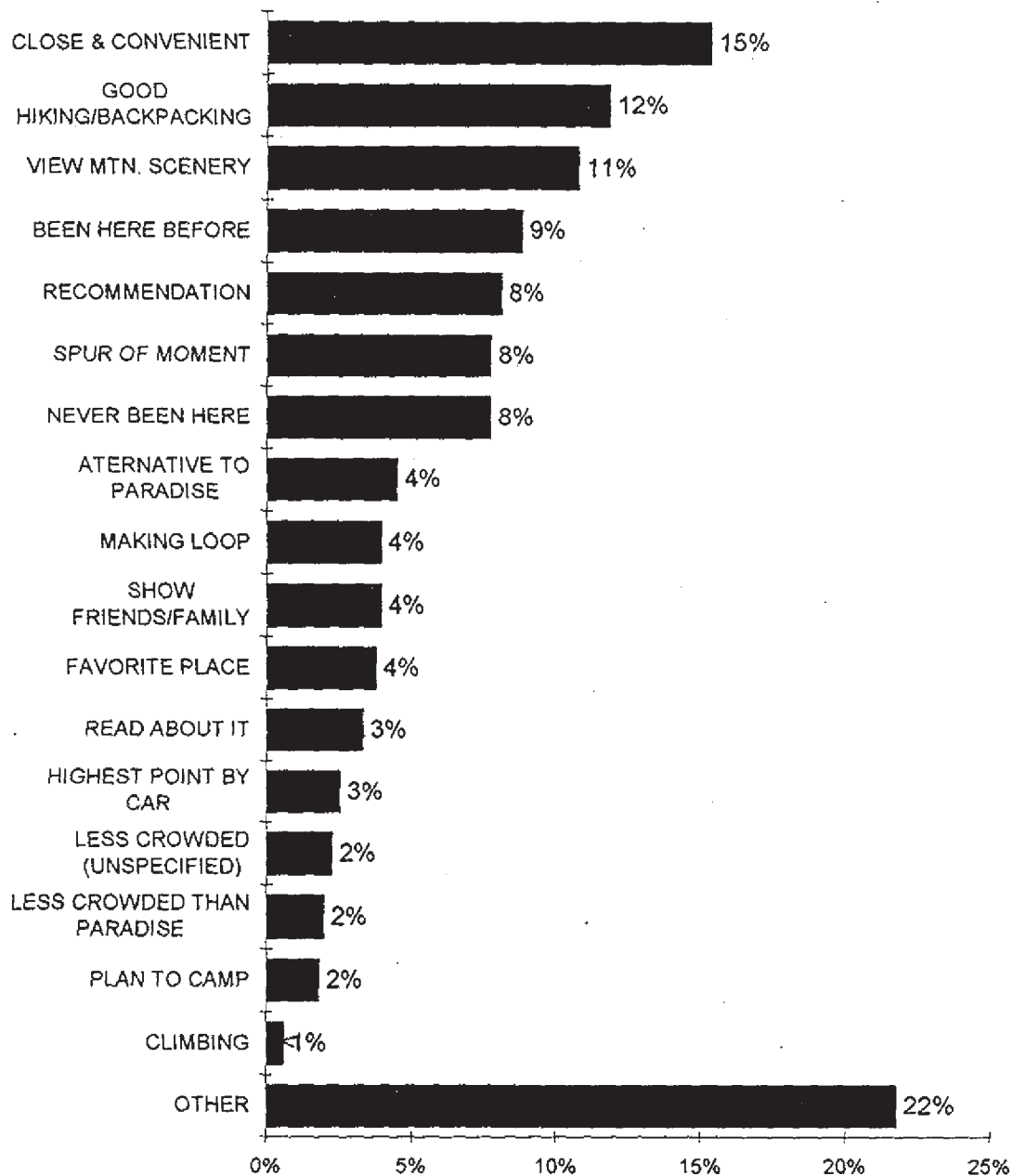
Why Respondents Chose to Visit the White River/Sunrise Area

Figure 4.1 shows the most commonly reported reasons why trip planners entered MORA at the White River entrance. Clearly, there was little consensus among respondents. The most common reason (that the White River entrance was close and convenient) was reported by only 15 percent of trip planners. It is notable that crowding related reasons were reported by four percent of trip planners, suggesting that the White River/Sunrise area is a desired alternate destination for some visitors and that visitation in the area could be affected by changes in management action in other areas.

In answering this question, most trip planners seemed to focus on practical reasons for their visit, rather than on the psychological or aesthetic motivations that are measured by the REP items used in the mail questionnaire. The responses to those REP items make it clear that many trip planners held such motivations, but this question failed to elicit them. This failure may have resulted because the interviewers did not phrase the question correctly and/or did not follow up respondents' initial responses with more specific inquiries. In addition, trip planners may have felt that certain motivations were simply assumed by both visitors and survey workers. Why have national parks, if not to provide a place for visitors to experience tranquility, experience new things, or learn about nature? Perhaps trip planners rarely mentioned such reasons because they were so obvious.

IV. Trip Motivation

**FIGURE 4.1: Entrance Q-1
REASONS FOR VISITING THE WHITE RIVER/SUNRISE AREA**



PERCENT OF RESPONDENTS (n = 1116)
Percentages sum to more than 100 because respondents could have multiple reasons.

IV. Trip Motivation

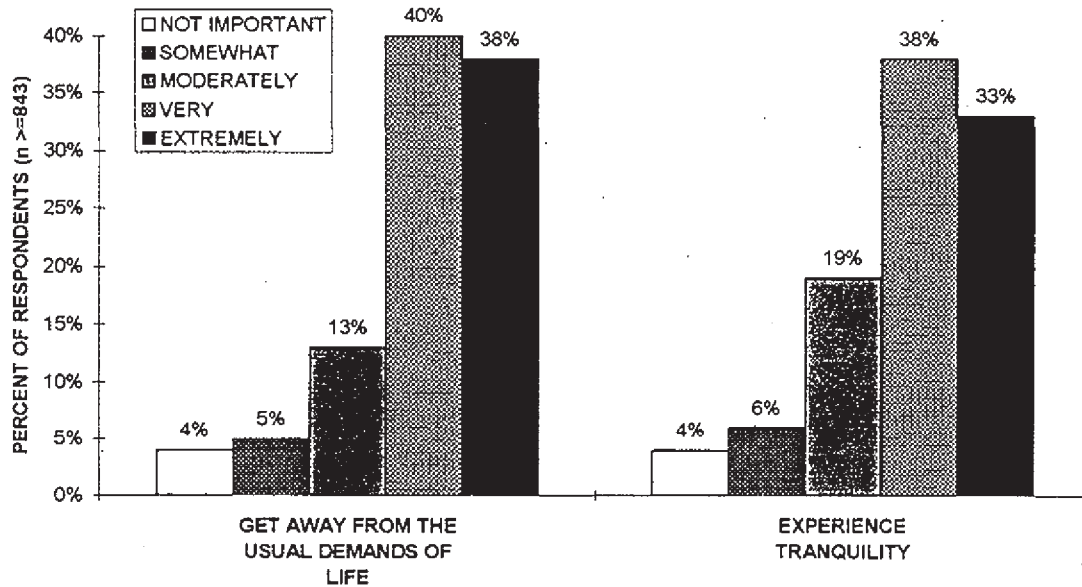
Recreation Experience Preferences

Importance of reasons for visit. In the introduction to this section we described how 12 reasons for visiting the White River/Sunrise area were selected from the 31 REP items used in the 1990 survey of general visitors to MORA. The rated importance of each of the twelve reasons is shown in Figures 4.2 through 4.7 below. In all these figures, the importance ratings of the two reasons in each group were very similar, supporting the classification of the twelve reasons into six groups. For the purposes of convenience, each of these groups will be referred to by short labels introduced in the discussions below. However, it is important to notice the specific reasons that are included in each group.

IV. Trip Motivation

In Figure 4.2 we see that *getting away from the usual demands of life* was slightly more important to trip planners than *experiencing tranquility*. However, these escape-related reasons received higher average ratings than any of the other reasons for visiting White River/Sunrise.

FIGURE 4.2: Mail Q-7.7 & 7.11
IMPORTANCE OF ESCAPE-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE



It was also very important for trip planners to *experience new and different things* and to *learn more about nature*. The importance ratings of these nature/learning-related reasons for visiting White River/Sunrise showed very similar patterns of high importance ratings (see Figure 4.3).

IV. Trip Motivation

FIGURE 4.3: Mail Q-7.5 & 7.6
IMPORTANCE OF NATURE/LEARNING-RELATED REASONS FOR VISITING
WHITE RIVER/SUNRISE

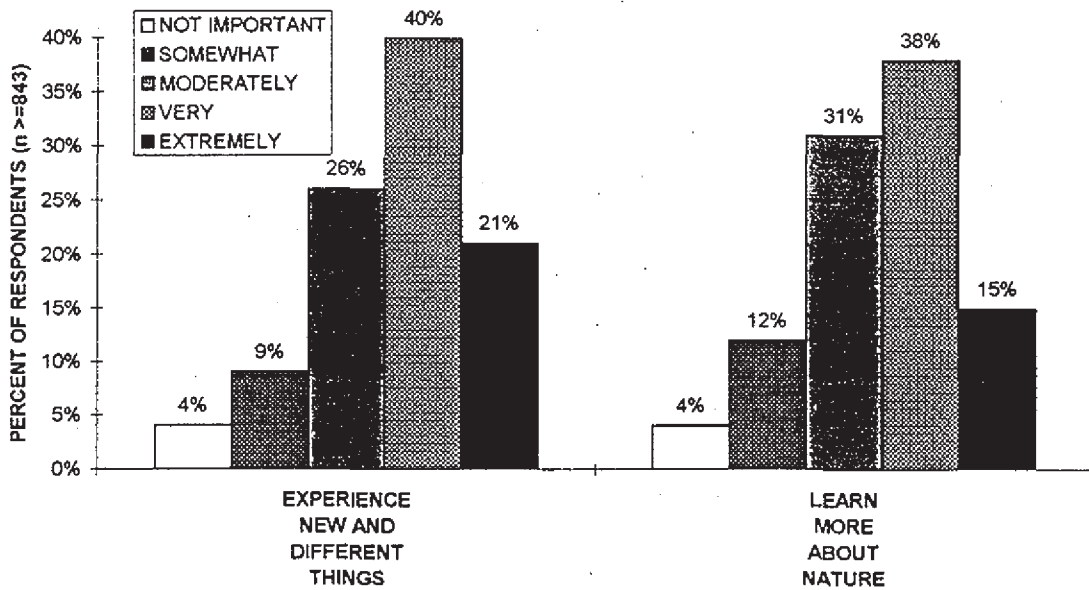


Figure 4.4 shows that the importance ratings of *doing something with family and bringing your family closer together* fell into bimodal (two-peaked) patterns. This pattern of importance for the family-related reasons for visiting is similar to that found in the importance ratings of the friend-related reasons shown in Figure 4.5. These patterns suggest that respondents visiting with their families rated the friend-related reasons as unimportant and that respondents visiting with friends showed the complementary pattern of response. This differentiation between friend and family groups was also observed in the market segmentation analysis that was conducted with the 1990 REP data (see Appendix F).

IV. Trip Motivation

FIGURE 4.4: Mail Q-7.2 & 7.4
IMPORTANCE OF FAMILY-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE

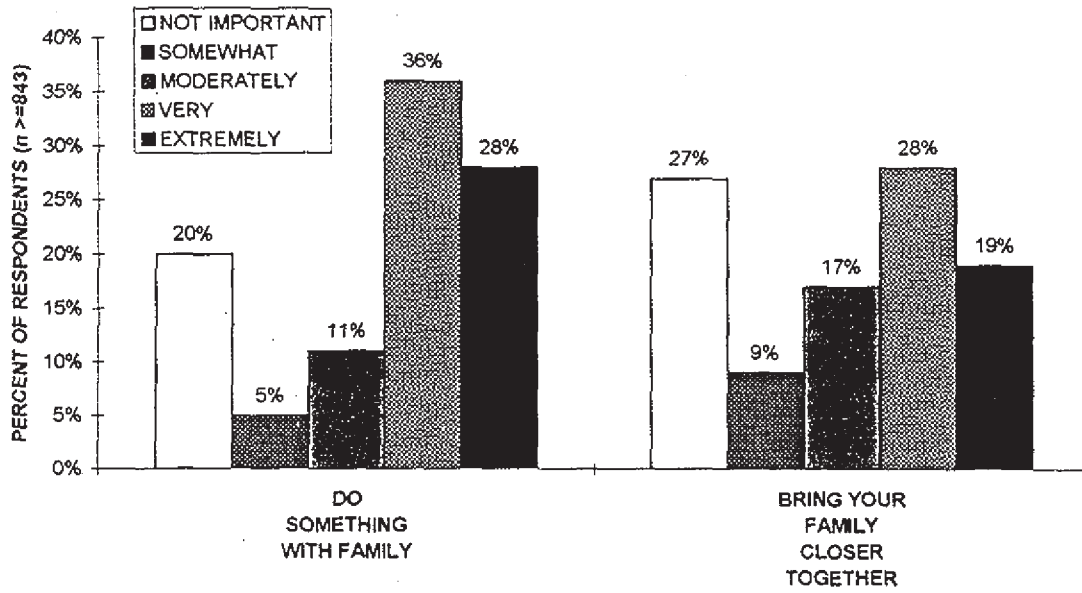
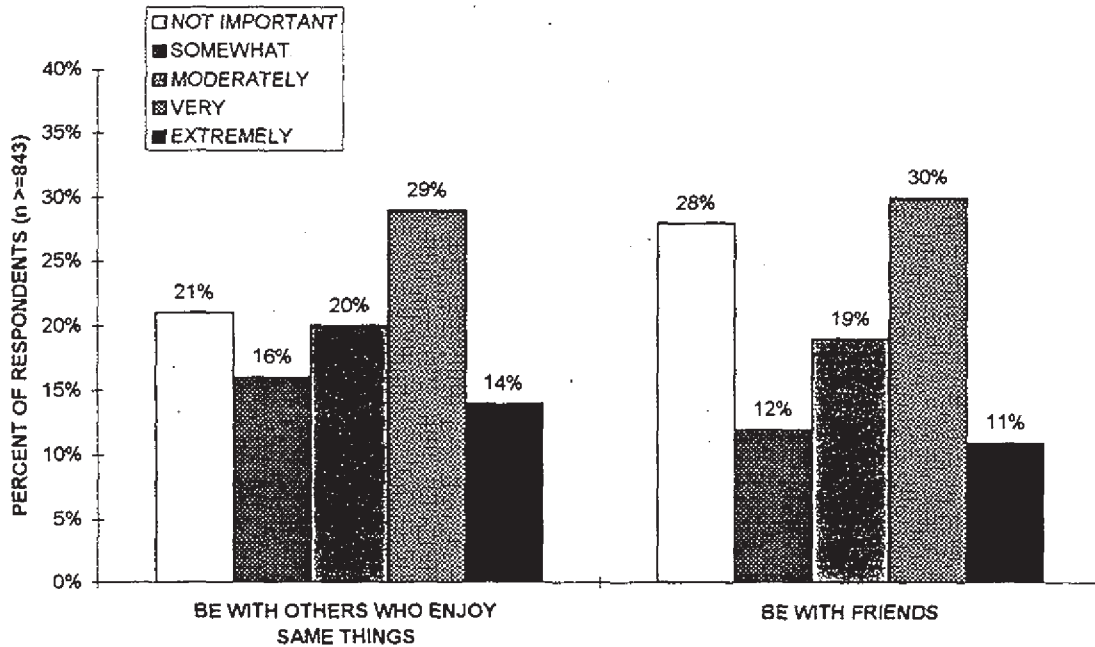


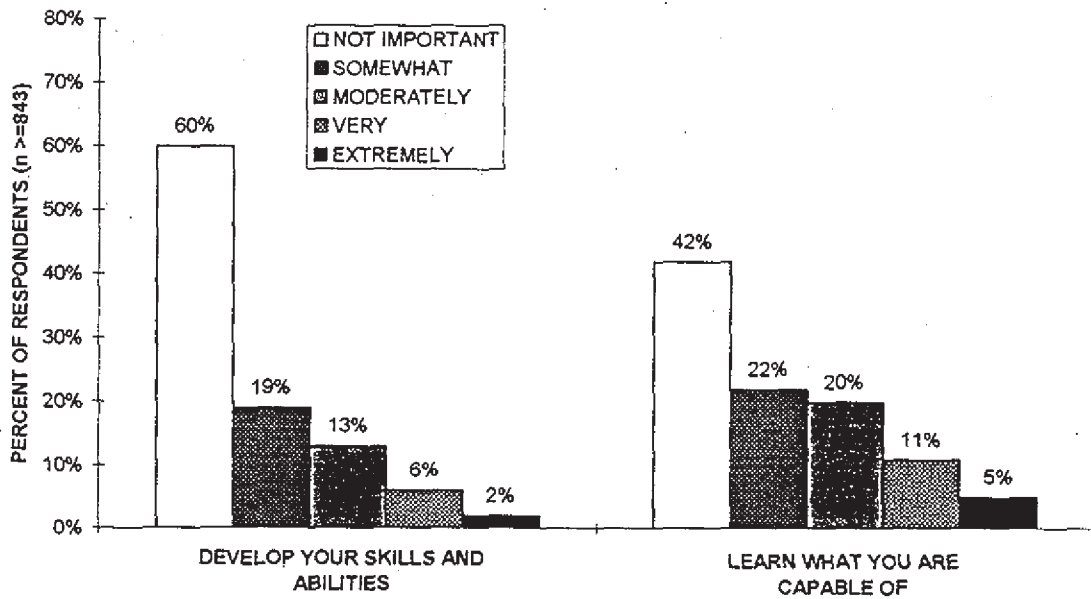
FIGURE 4.5: Mail Q-7.8 & 7.10
IMPORTANCE OF FRIEND-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE



IV. Trip Motivation

Most trip planners felt it was not important to *develop your skills and abilities* and *learning what you are capable of* was rated as only slightly more important. Apparently, most respondents did not visit the White River/Sunrise area for such challenge-related reasons.

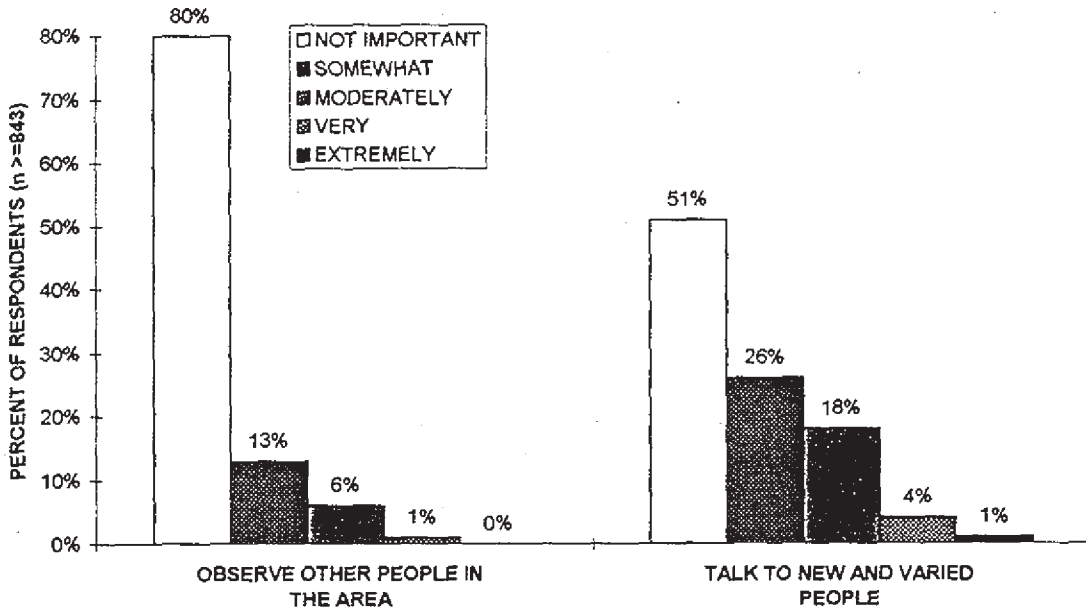
FIGURE 4.6: Mail Q-7.1 & 7.12
IMPORTANCE OF CHALLENGE-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE



IV. Trip Motivation

The least important of the twelve reasons for visiting was to *observe other people in the area*, and more than half of respondents felt that *talking to new and varied people* was not an important reason for their trip.

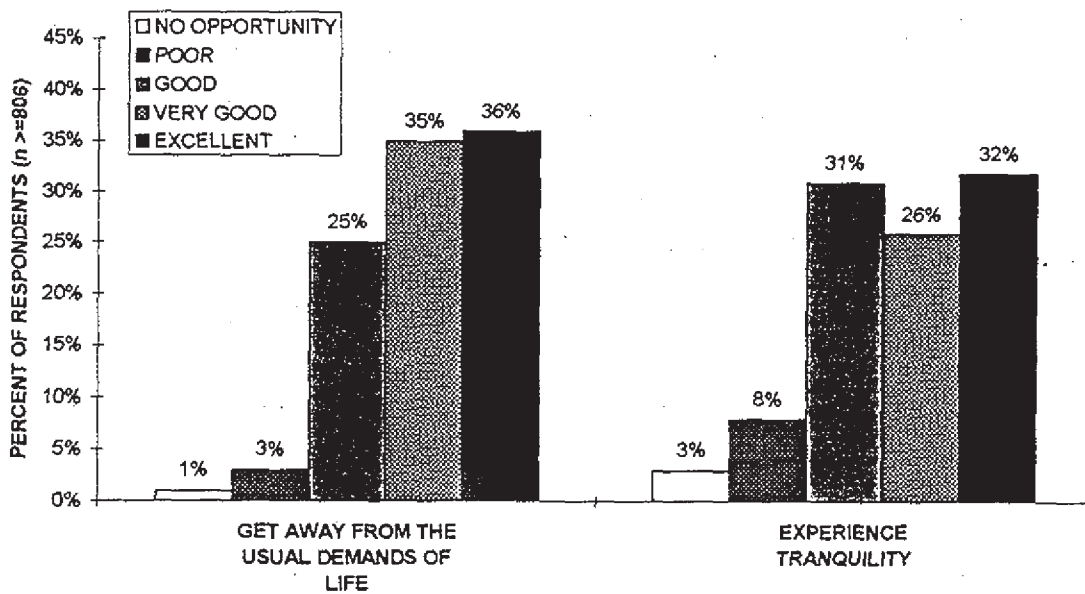
FIGURE 4.7: Mail Q-7.3 & 7.9
IMPORTANCE OF STRANGER-RELATED REASONS FOR VISITING WHITE RIVER/SUNRISE



IV. Trip Motivation

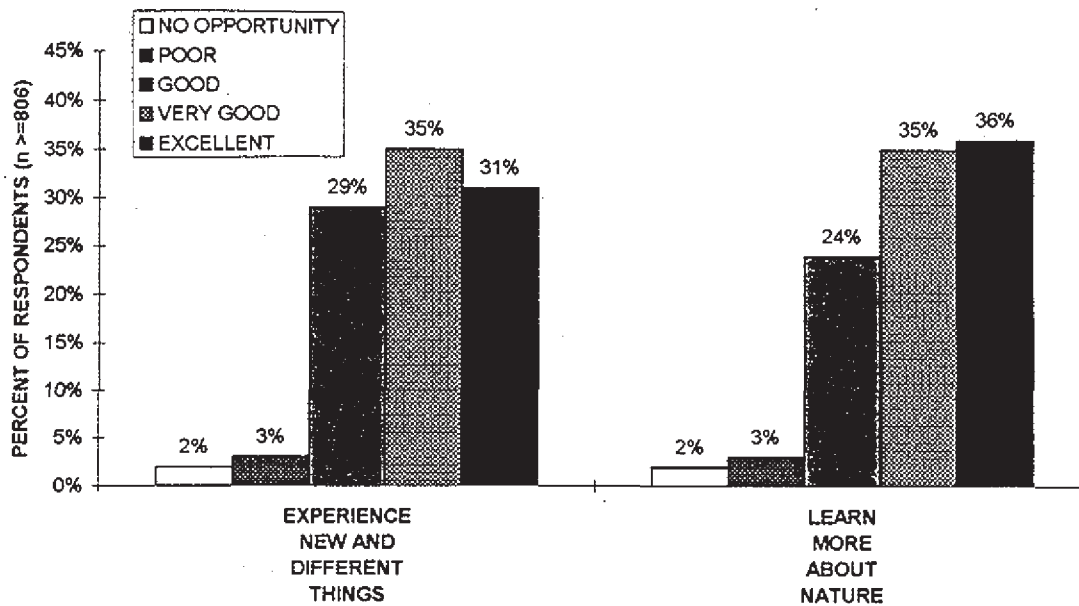
Opportunity to satisfy reasons for visit. After rating the importance of the 12 reasons for visiting, trip planners were also asked to rate how much opportunity the White River/Sunrise area provided to satisfy each reason. Figures 4.8 to 4.13 show the opportunity ratings given to each of the 12 reasons for visiting. Trip planners rarely reported that there was no opportunity to satisfy any of the reasons and the average ratings for all 12 reasons fell between the *good opportunity* and *very good opportunity* ratings.

FIGURE 4.8: Mail Q-8.7 & 8.11
OPPORTUNITY TO SATISFY ESCAPE-RELATED
REASONS FOR VISITING WHITE RIVER/SUNRISE

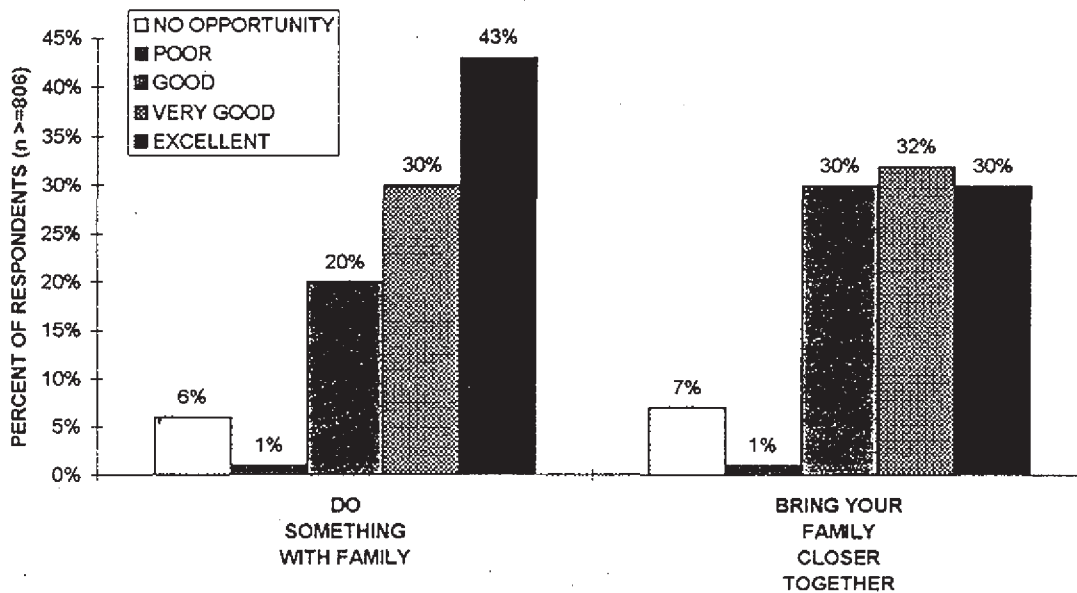


IV. Trip Motivation

**FIGURE 4.9: Mail Q-8.5 & 8.6
OPPORTUNITY TO SATISFY NATURE/LEARNING-RELATED
REASONS FOR VISITING WHITE RIVER/SUNRISE**



**FIGURE 4.10: Mail Q-8.2 & 8.4
OPPORTUNITY TO SATISFY FAMILY-RELATED
REASONS FOR VISITING WHITE RIVER/SUNRISE**



IV. Trip Motivation

FIGURE 4.11: Mail Q-8.8 & 8.10
OPPORTUNITY TO SATISFY FRIEND-RELATED
REASONS FOR VISITING WHITE RIVER/SUNRISE

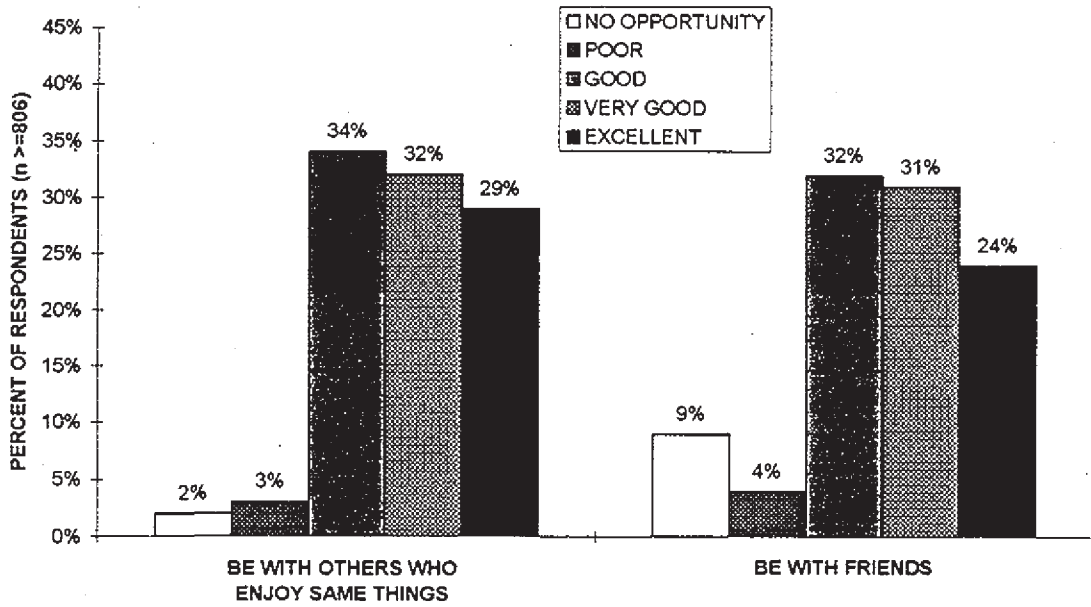
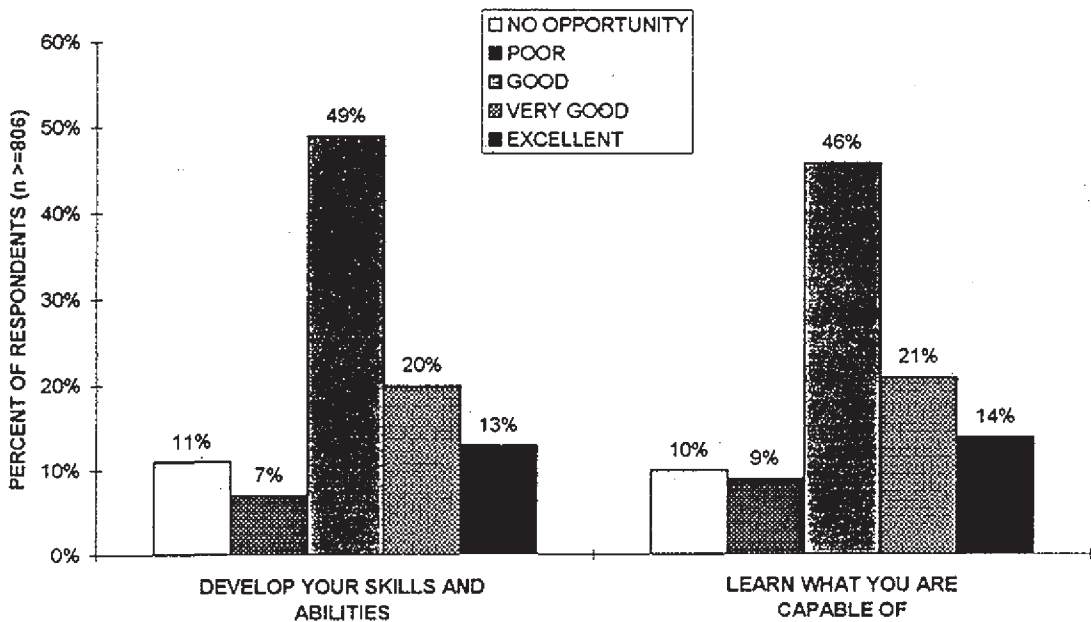
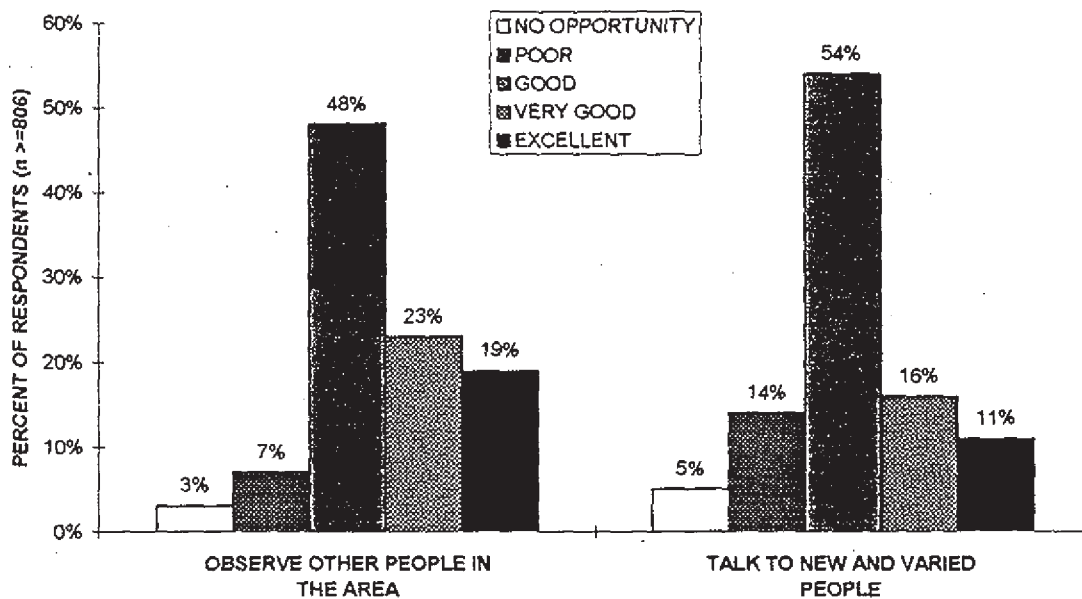


FIGURE 4.12: Mail Q-8.1 & 8.12
OPPORTUNITY TO SATISFY CHALLENGE-RELATED
REASONS FOR VISITING WHITE RIVER/SUNRISE



IV. Trip Motivation

FIGURE 4.13: Mail Q-8.3 & 8.9
OPPORTUNITY TO SATISFY STRANGER-RELATED
REASONS FOR VISITING WHITE RIVER/SUNRISE



IV. Trip Motivation

Importance versus opportunity. One useful way of summarizing some of the managerial implications of the importance and opportunity ratings of the various reasons for visiting is to simultaneously consider both sets of ratings. Figure 4.14 allows such a consideration by showing the average importance and opportunity ratings for the six grouped reasons (the ratings for the two reasons in each group were averaged to simplify presentation).

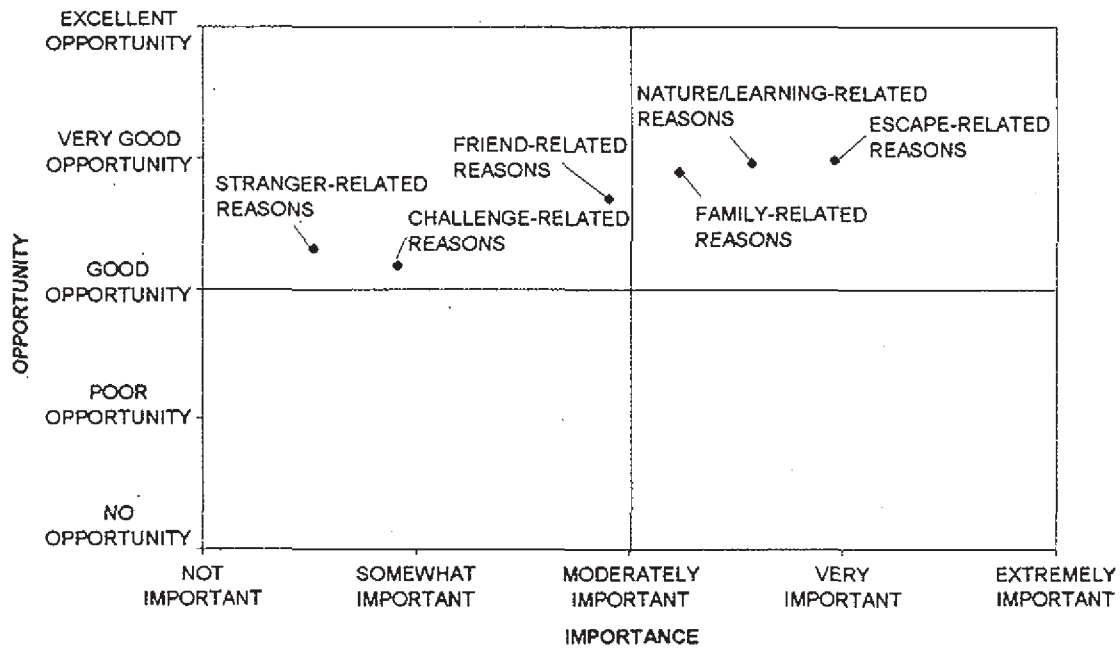
The importance of the six reasons ranged quite widely, with the average rating of the stranger-related reasons falling between *not important* and *somewhat important*, and the escape-related reasons falling at the *very important* level. The opportunity to satisfy those reasons fell in a much smaller range, from *good opportunity* to *very good opportunity*. Considered together, these ratings suggest that changes in management policy to address the measured dimension of the White River/Sunrise experience were perceived as unnecessary by trip planners. Such action would have been supported by a pattern of data in which respondents indicated that there was little opportunity to satisfy an important reason for visiting (i.e., if one of the data points had fallen in the lower-right quadrant of Figure 4.14). The fact that respondents reported good opportunity to satisfy relatively unimportant reasons for visiting could be seen as a management problem, but only if current management effort is being expended to provide those opportunities.

Future analysis of the importance and opportunity ratings of specific user groups (possibly identified by market segmentation analysis) might yield results

IV. Trip Motivation

considerably different than those reported in Figure 4.14. Without conducting such analyses it is unknown whether some groups of trip planners believe there is little opportunity to satisfy some reasons for visiting the White River/Sunrise area that are very important to them.

FIGURE 4.14: Mail Q-7 & 8
 IMPORTANCE by OPPORTUNITY TO SATISFY VARIOUS REASONS FOR VISITING THE WHITE RIVER/SUNRISE AREA



IV. Trip Motivation

V. TRIP EXPERIENCES AND EVALUATION

The WRVS asked trip planners a variety of questions concerning the conditions that they experienced during their trip to the White River/Sunrise area. This section reports the conditions they described and their evaluations of those conditions.

V. Trip Experiences and Evaluation

TABLE 5.1: TABLE OF FIGURES FOR SECTION V

FIGURE 5.1: NUMBER OF VISITORS SEEN VS NUMBER EXPECTED 114

FIGURE 5.2: NUMBER OF VISITORS SEEN VS NUMBER PREFERRED... 115

FIGURE 5.3: OTHER VISITORS DETRACTED FROM ENJOYMENT OF
THE WHITE RIVER/SUNRISE AREA..... 116

FIGURE 5.4: HOW VISITORS DETRACTED FROM ENJOYMENT OF
THE WHITE RIVER/SUNRISE AREA..... 117

FIGURE 5.5: SAW EVIDENCE THAT OTHER VISITORS HAD DAMAGED
THE WHITE RIVER/SUNRISE AREA..... 118

FIGURE 5.6: TYPE OF DAMAGE OBSERVED 119

FIGURE 5.7: WHERE DAMAGE WAS OBSERVED 120

FIGURE 5.8: DEGREE DAMAGE DETRACTED FROM ENJOYMENT OF
THE WHITE RIVER/SUNRISE AREA..... 121

FIGURE 5.9: SAW EVIDENCE THAT NPS WAS TRYING TO LIMIT
VISITOR-CAUSED DAMAGE 122

FIGURE 5.10: NPS EFFORTS TO LIMIT VISITOR-CAUSED DAMAGE 123

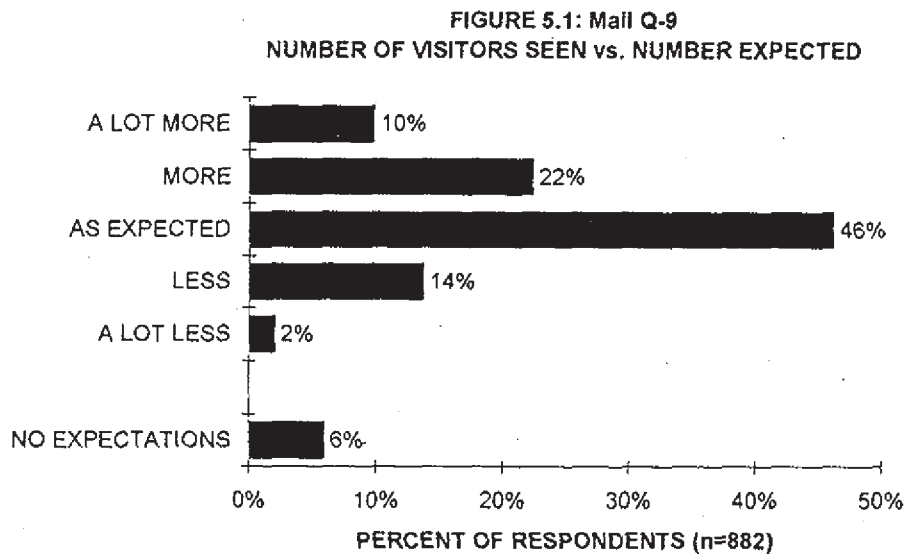
FIGURE 5.11: AREA WHERE NPS EFFORTS TO LIMIT VISITOR-CAUSED
DAMAGE OBSERVED..... 124

FIGURE 5.12: DEGREE NPS EFFORTS TO LIMIT DAMAGE DETRACTED
FROM ENJOYMENT OF THE WHITE RIVER/SUNRISE
AREA 125

FIGURE 5.13: OVERALL RATING OF TRIP TO THE WHITE RIVER/
SUNRISE AREA 126

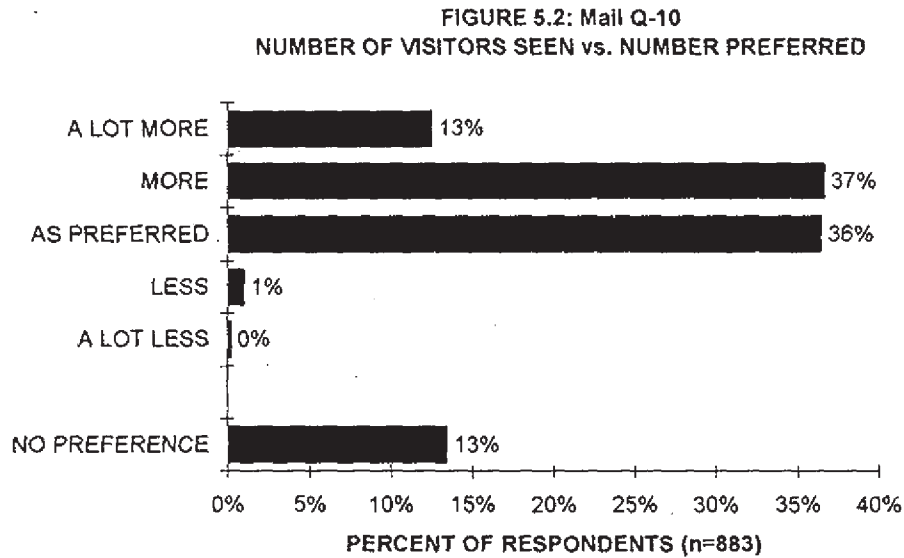
Density of Visitors

Expectations. Figure 5.1 shows that when visiting the White River/Sunrise area, almost half of the trip planners saw the number of other visitors that they expected. About one-third of respondents saw more visitors than expected and 16 percent saw fewer than expected.



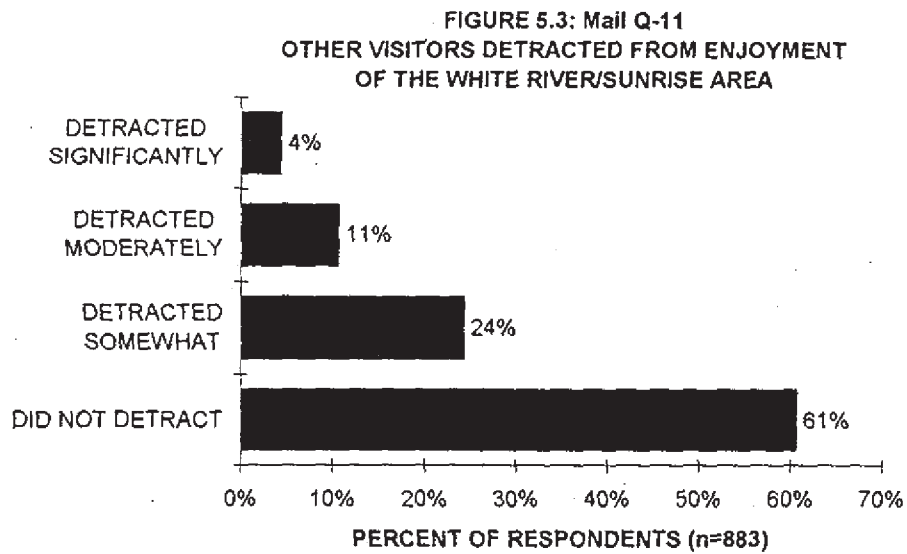
V. Trip Experiences and Evaluation

Preferences. About half of the respondents saw more visitors than they preferred while visiting the White River/Sunrise area. About one-third saw the number they preferred and 13 percent had no preference (see Figure 5.2).



Impacts of Other Visitors

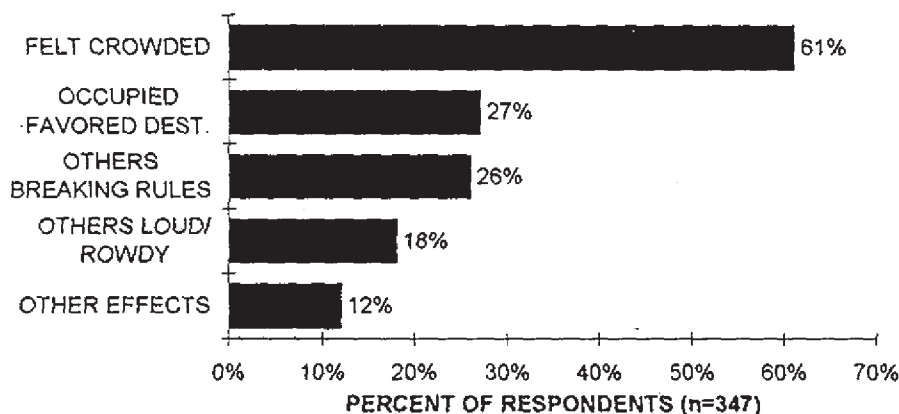
Detraction from enjoyment. Figure 5.3 shows that most respondents felt other visitors did not detract from their enjoyment of the White River/Sunrise area. Of those who were bothered, most felt that the presence of others detracted somewhat from their experience.



V. Trip Experiences and Evaluation

How others detracted. Of the respondents affected by other visitors, more than half reported that other visitors detracted from their enjoyment of the White River/Sunrise area by causing the area to feel crowded (see Figure 5.4). Thus, about 24 percent of all trip planners reported that crowding due to other visitors detracted from their enjoyment. About a quarter of respondents affected by other visitors (i.e., about 10 percent of all trip planners) reported that the failure of other visitors to follow rules and the presence of other visitors at favored destinations detracted from their enjoyment.

FIGURE 5.4: Mail Q-11
HOW VISITORS DETRACTED FROM ENJOYMENT
OF THE WHITE RIVER/SUNRISE AREA

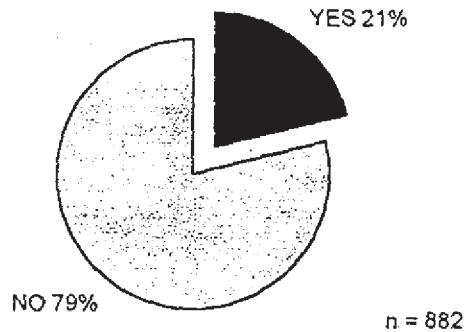


Includes responses from only the 39% of respondents affected by others.
Percentages sum to more than 100% because multiple effects could be reported.

Unacceptable Visitor-caused Damage

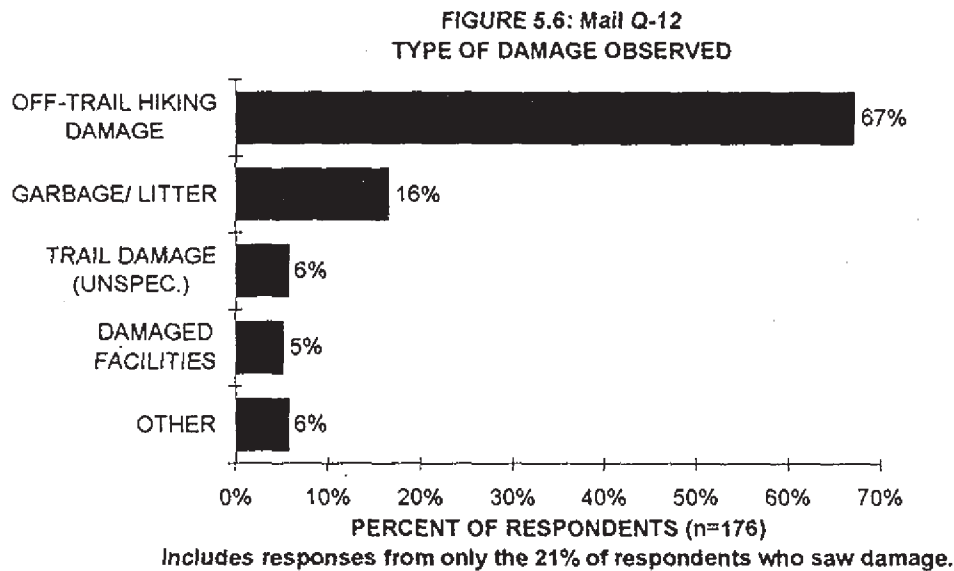
Was damage observed? Figure 5.5 shows that about one-fifth of trip planners reported observing evidence that other visitors had unacceptably damaged the White River/Sunrise area.

FIGURE 5.5: Mail Q-12
SAW EVIDENCE THAT OTHER VISITORS HAD DAMAGED
THE WHITE RIVER/SUNRISE AREA



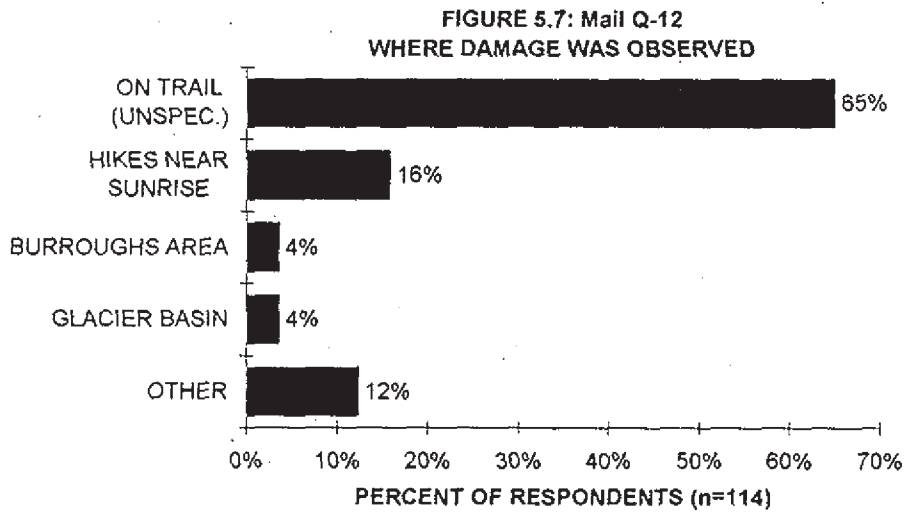
V. Trip Experiences and Evaluation

Types of damage. Most types of the damage observed by trip planners was associated with off-trail hiking (see Figure 5.6). However, unacceptable damage related to off-trail hiking was only observed by 14 percent of all respondents. The presence of garbage or litter was the second most common form of unacceptable damage, being reported by only 16 percent of respondents who saw damage, or about 3 percent of all trip planners.



V. Trip Experiences and Evaluation

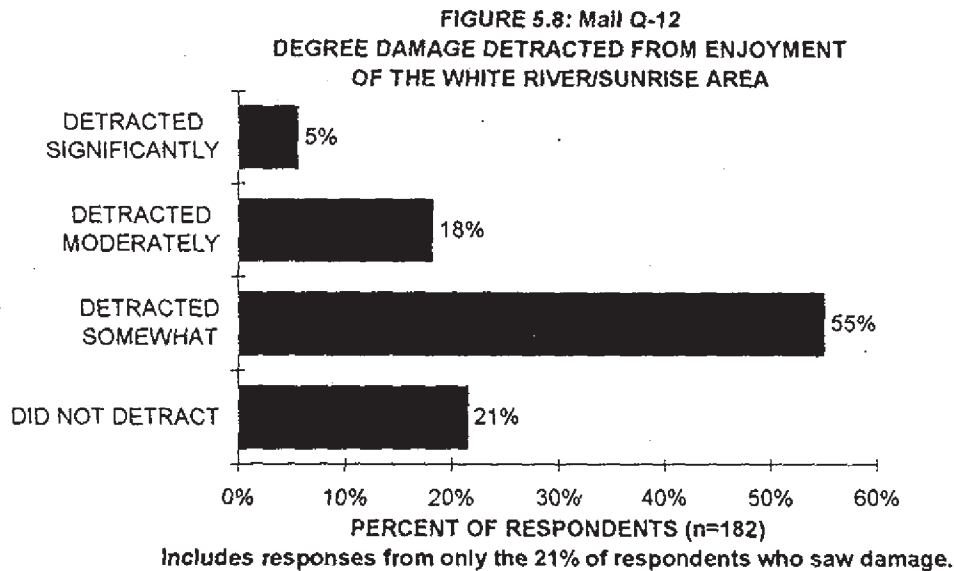
Where damage was observed. Respondents generally failed to specify the specific areas in which they observed damage (see Figure 5.7), usually stating only that it was observed along trails.



Includes responses from only the 21% of respondents who saw damage.
38% of eligible respondents failed to answer this open-ended question.

V. Trip Experiences and Evaluation

Degree to which damage detracted from experience. Almost 80 percent of respondents who saw damage reported that it detracted from their enjoyment of the White River Sunrise area (see Figure 5.8), and most of those reported that it detracted somewhat from their experience. In terms of all trip planners, these figures indicate that about 17 percent of respondents both saw evidence that visitors had damaged the White River/Sunrise area and indicated that such damage detracted from their enjoyment of the area. The management implications of this finding might be made clearer by future analyses to determine if impacted visitors are more common among sub-groups of trip planners such as repeat visitors or day hikers.

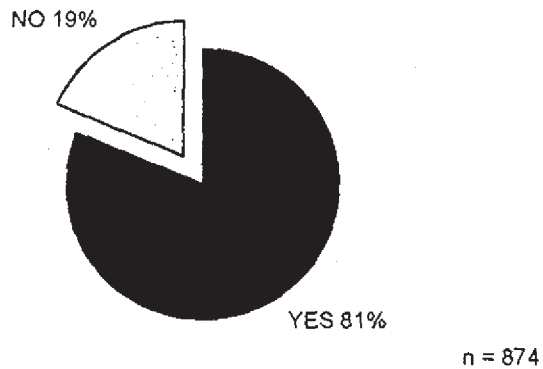


V. Trip Experiences and Evaluation

Efforts by the National Park Service to Limit Visitor-caused Damage

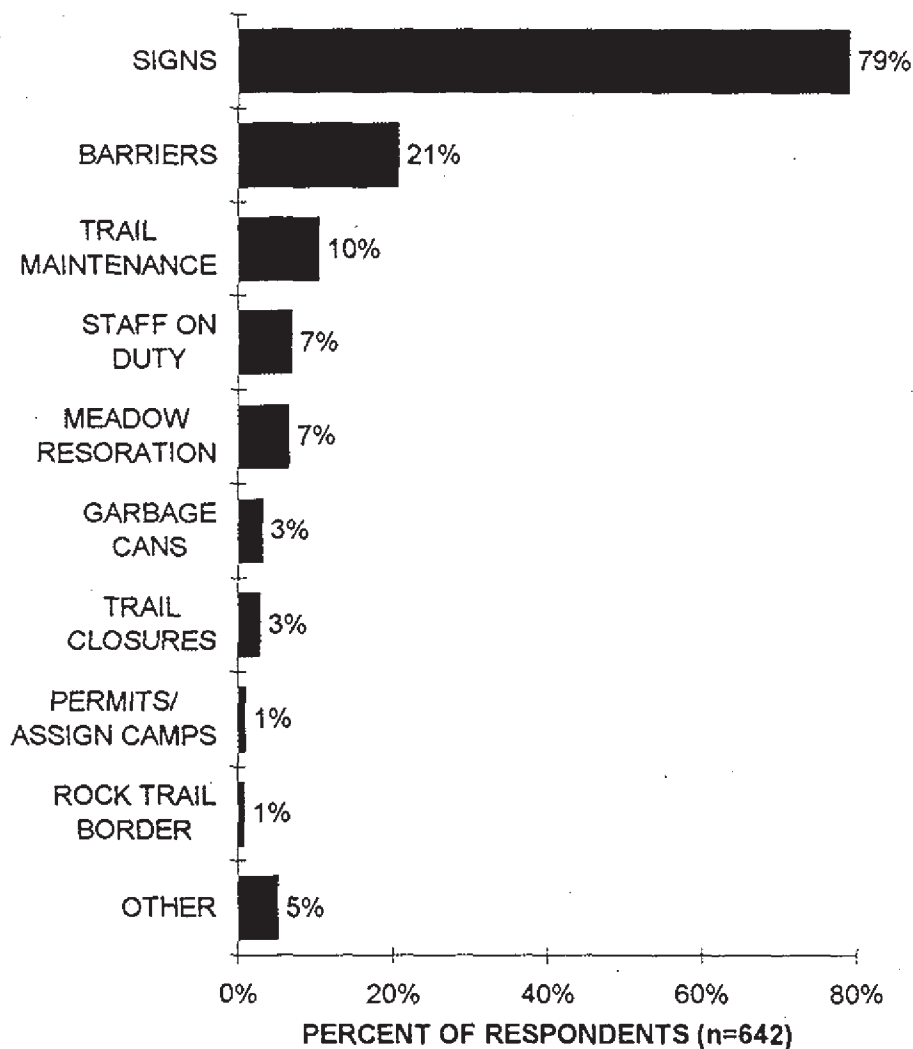
Were efforts observed? Figure 5.9 shows that about 80 percent of trip planners reported that they saw evidence that the National Park Service at MORA was trying to limit damage caused by visitors.

**FIGURE 5.9: Mail Q-13
SAW EVIDENCE THAT NPS WAS TRYING TO LIMIT
VISITOR-CAUSED DAMAGE**



Types of effort observed. Signs were by far the most commonly observed evidence of NPS efforts to prevent damage. Figure 5.10 shows that almost 80 percent of respondents who saw NPS efforts reported seeing signs. Thus, 64 percent of all trip planners recalled seeing regulatory signs designed to limit visitor-caused damage.

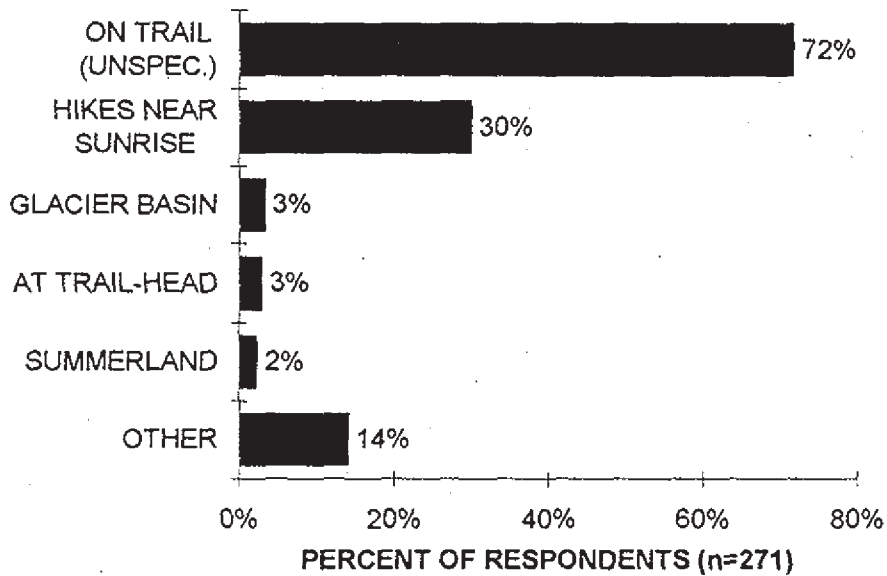
FIGURE 5.10: Mail Q-13
NPS EFFORTS TO LIMIT VISITOR-CAUSED DAMAGE



Includes responses from only the 81% of respondents who saw efforts.
Percentages sum to more than 100% because multiple efforts could be seen.

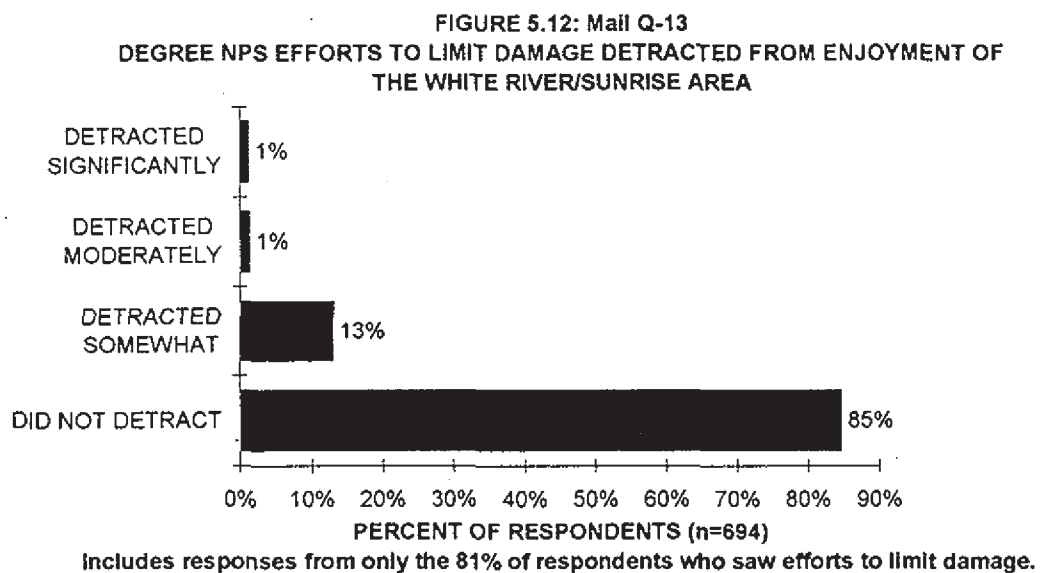
Where efforts were observed. Respondents generally failed to specify the specific areas in which they observed efforts to limit visitor-caused damage (see Figure 5.11), usually stating only that they were observed along trails.

**FIGURE 5.11: Mail Q-13
AREA WHERE NPS EFFORTS TO LIMIT VISITOR-CAUSED DAMAGE
OBSERVED**



Includes responses from only the 81% of respondents who saw efforts.
Percentages sum to more than 100% because multiple efforts could be seen.
62% of eligible respondents failed to answer this open-ended question.

Degree to which NPS efforts detracted from experience. NPS efforts to prevent visitor-caused damage had little negative impact on respondents' enjoyment of the White River/Sunrise area. Figure 5.12 shows that 85 percent of respondents who saw the efforts said that they did not detract from their experience.



In terms of all trip planners, the data in Figure 5.12 mean that about 12 percent of respondents reported that NPS efforts to limit visitor-caused damage detracted from their enjoyment of the area. This number is not dramatically smaller than the 17 percent of trip planners who reported that visitor-caused damage detracted from their enjoyment. Although it can not be assumed that respondents who reported a negative impact from NPS control efforts feel that those efforts should be discontinued, a 1995 survey of visitors to trails at Paradise and Sunrise (the GMP Sensitive Resource Survey) found that between 5 and 36 percent

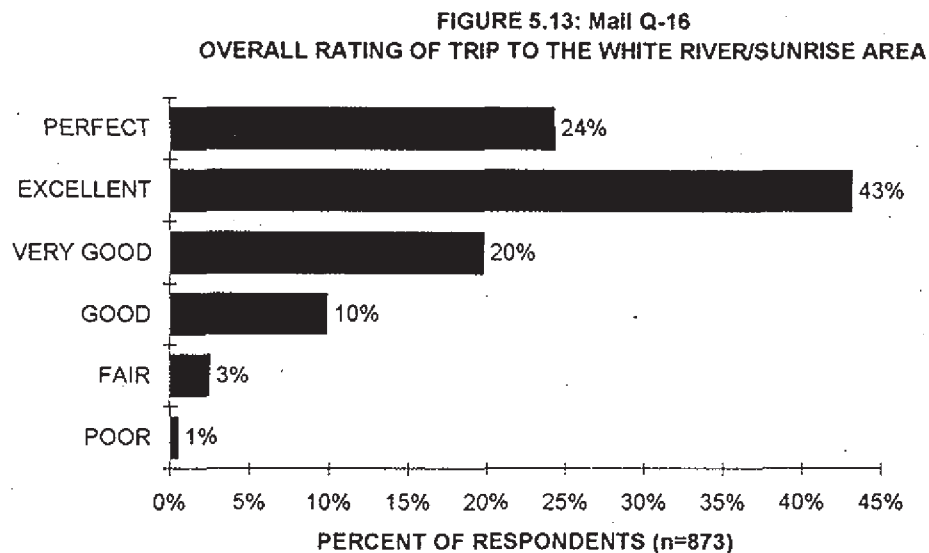
V. Trip Experiences and Evaluation

(depending on sign wording) felt that signs were inappropriate for use in MORA.

The number of trip planners who felt signs detracted from their enjoyment is roughly consistent with those findings. Further research is necessary to determine the relative impacts of visitor-caused damage and NPS efforts to deter it. Such research could be very useful in guiding NPS policy concerning damage control issues.

Overall Trip Satisfaction

Figure 5.13 shows that most trip planners were very satisfied with their visits to the White River/Sunrise area. Only four percent rated their trip as less than *good*, and almost one-quarter rated their trip as *perfect*.



VI. REACTIONS TO MANAGEMENT SCENARIOS CONCERNING PARKING AT SUNRISE

The survey worker asked the last five questions in the entrance survey in a short face-to-face interview. Two of those questions described scenarios in which management provided visitors with information concerning parking conditions at Sunrise. Trip planners who intended to drive up to Sunrise and park in the area (88% of all respondents, see Figure 3.12) were asked to describe how they would react to the scenarios. These questions were one of the major reasons why the WRVS included both an entrance and exit survey and were the primary motivation for including an interview component. It was expected that verbal interview techniques used at a location where the described scenarios would actually take place would provide more reflective and valid responses than would written questionnaires filled out weeks after the trip¹.

¹ Problems associated with recall are well known. For example, survey respondents are often inaccurate in recalling even simple information such as the number of times they engaged in recreation activities (See Chase and Harada, *Response error in self-reported recreation participation*. *Journal of Leisure Research* 16(4)).

VI. Reactions to Parking Scenarios

TABLE 6.1: TABLE OF FIGURES FOR SECTION IV

FIGURE 6.1: RESPONSE TO A HYPOTHETICAL ELECTRONIC SIGN
THAT SAYS SUNRISE VISITOR LOT IS FULL.....130

FIGURE 6.2: ALTERNATIVE DESTINATIONS IF NOTIFIED BY SIGN
THAT LOT AT SUNRISE WAS FULL131

FIGURE 6.3: RESPONSE TO HYPOTHETICAL NOTIFICATION BY GATE
ATTENDANT THAT SUNRISE VISITOR LOT IS FULL.....133

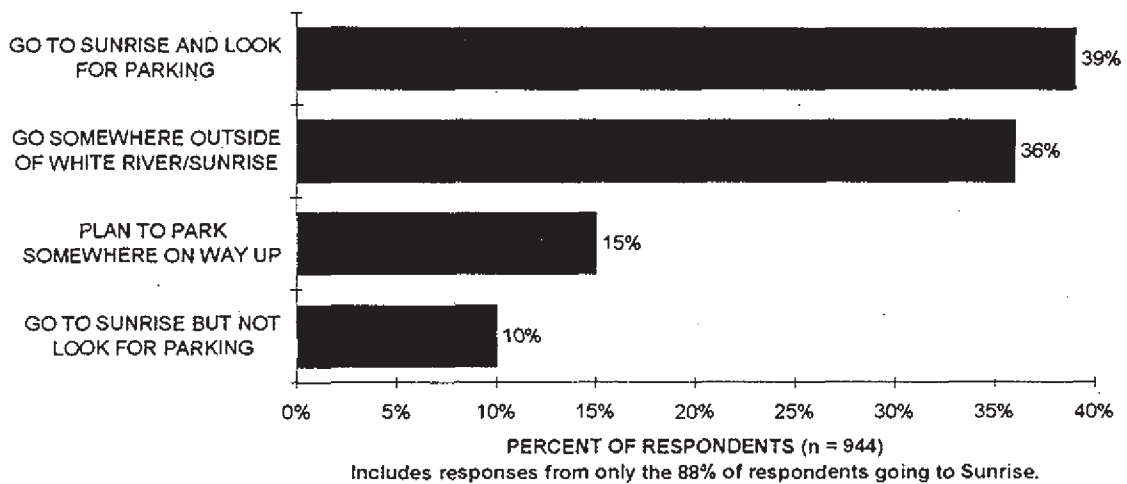
FIGURE 6.4: ALTERNATIVE DESTINATIONS IF NOTIFIED BY GATE
ATTENDANT THAT LOT AT SUNRISE WAS FULL.....134

VI. Reactions to Parking Scenarios

Learning that Sunrise Parking Lot is Full

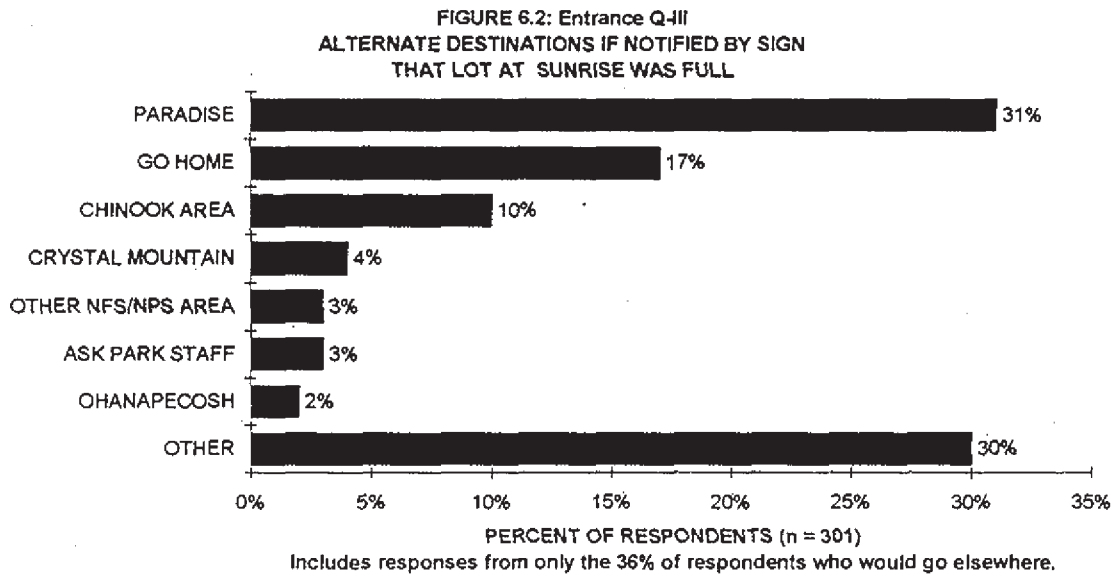
Information given by electronic road sign. In the first scenario of the entrance interview trip planners were asked, "Imagine that when you were about 1/2 hour away from this entrance to the White River/Sunrise area an electronic road sign notified you that the Sunrise parking lot was full. If that happened what would you do?" Figure 6.1 shows that almost 40 percent of trip planners would continue to Sunrise and look for parking. This represents a substantial drop from the 88 percent of all trip planners who said they planned to park at Sunrise. However, if the lot was actually full and overflow parking was not permitted, it is not clear that such a reduction in use would be sufficient to eliminate parking lot congestion. Management may need to take action more dramatic than the provision of information if parking at Sunrise is to be reduced to the design capacity of the lot and current overflow parking problems are to be alleviated.

FIGURE 6.1: Entrance Q-II
RESPONSE TO A HYPOTHETICAL ELECTRONIC SIGN THAT SAYS
SUNRISE VISITOR LOT IS FULL



VI. Reactions to Parking Scenarios

Alternate destinations with roadside information. Of the trip planners going to Sunrise, 36 percent said they would go elsewhere if notified via electronic sign that the Sunrise parking lot was full (see Figure 6.1). When asked about alternate destinations, their responses varied widely (see Figure 6.2). The most common alternate destination was Paradise -- an attraction with parking problems equal to or greater than those at Sunrise. Of the 31 percent of trip planners who said they would go to Paradise, 67 percent had not previously planned to make a stop there. Thus, the roadside sign (as described in the survey) would be expected to add about 7.5 percent of all parties planning to visit Sunrise to the number planning to park at Paradise. On sunny summer weekends, this would constitute approximately 111 vehicles (based on estimates from *Describing and Estimating the System of Visitor Distribution in Mount Rainier National Park: 1995 Visitor Distribution Survey*).



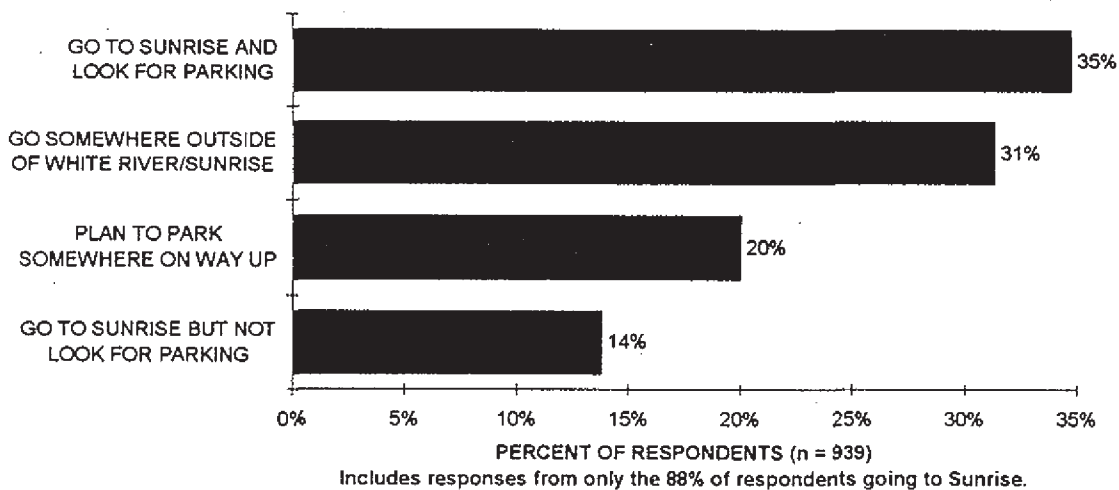
VI. Reactions to Parking Scenarios

The responses to the hypothetical roadside sign also suggest that it would lead 17 percent of the the trip planners going to Sunrise to return to their homes. Parties who would go home were not significantly different from other parties on three of four tested characteristics (whether they had already stopped at MORA attractions, distance from their home to MORA, and number of prior visits to MORA), but were much less likely to have reached the White River entrance gate via Highway 410 from the North than were other trip planners (41% vs. 70%, respectively).

VI. Reactions to Parking Scenarios

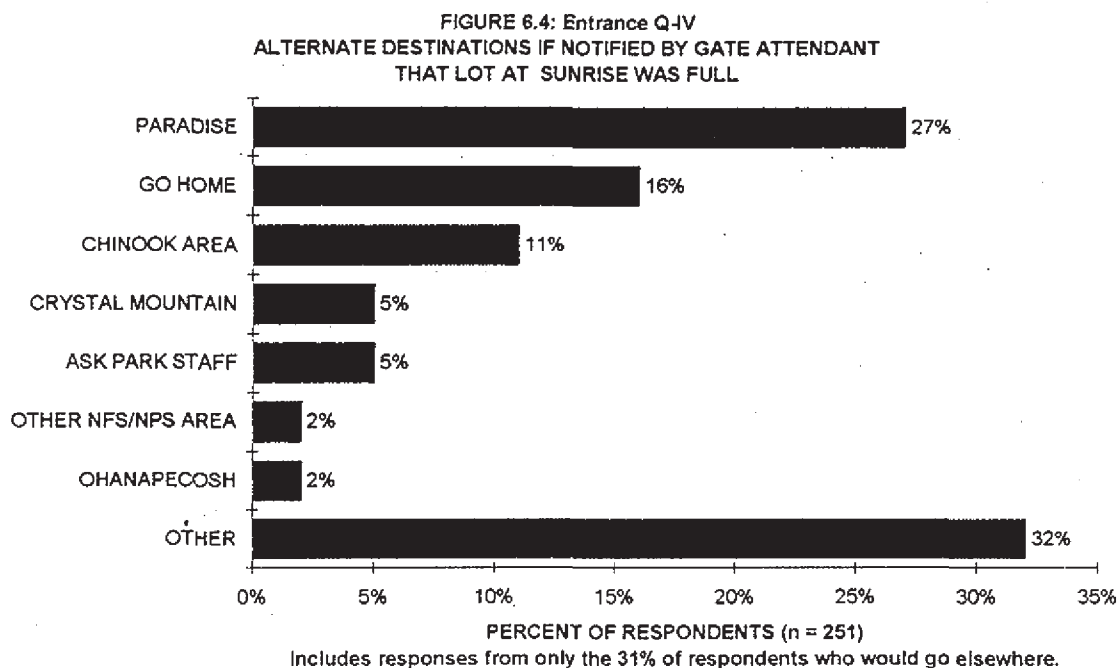
Information given by entrance gate attendant. In the second scenario of the entrance interview trip planners were asked, "Imagine that when you entered the White River /Sunrise area the park attendant told you that the Sunrise parking lot was full. If that happened what would you do?" Figure 6.3 shows that decisions made at this point would be very similar to those made at the electronic sign. About 35 percent of trip planners would continue to Sunrise and look for parking. Again, this represents a substantial drop from the 88 percent of all trip planners who said they planned to park at Sunrise. However, if combined with a reduction in parking availability to the lot's design capacity, it is not clear that such information would eliminate parking congestion problems.

FIGURE 6.3: Entrance Q-IV
RESPONSE TO HYPOTHETICAL NOTIFICATION BY GATE ATTENDANT THAT SUNRISE VISITOR LOT IS FULL



VI. Reactions to Parking Scenarios

Alternate destinations with entrance gate information. Of the trip planners going to Sunrise, 31 percent said they would go elsewhere if notified by the gate attendant that the Sunrise parking lot was full (see Figure 6.3). When asked about alternate destinations, their responses were very similar to those they considered at the electronic sign (see Figure 6.4). Again, the most common alternate destination was Paradise -- an attraction with parking problems equal to or greater than those at Sunrise. Of the 31 percent of trip planners who said they would go to Paradise, 60 percent had not previously planned to make a stop there. Thus, information provided by the gate attendant (as described in the survey) would be expected to reduce demand for parking at Sunrise by more than half, but would also add about 5 percent of all parties planning to visit Sunrise to the number planning to park at Paradise (approximately 74 vehicles).



VI. Reactions to Parking Scenarios

The responses to the hypothetical roadside sign also suggest that it would lead 16 percent of the the trip planners going to Sunrise to return to their homes. Parties who would go home were not significantly different from other parties on two of four tested characteristics (distance from their home to MORA, and number of prior visits to MORA), but were more likely to have already stopped at MORA attractions than were other trip planners (40% vs. 25%, respectively) and were much less likely to have reached the White River entrance gate via Highway 410 from the North (42% vs. 70%).

VI. Reactions to Parking Scenarios

APPENDIX A: ENTRANCE QUESTIONNAIRE

ENTRANCE QUESTIONNAIRE FOR TRIP PLANNER

You are now entering what we will be calling the White River/Sunrise area of Mt. Rainier National Park. Most of the questions in this questionnaire ask specifically about this area but others ask about Mt. Rainier National Park in general. Please be sure to read each question carefully before answering it.

1. From here, approximately what is the distance to your home? *(Circle one number.)*

- 1 Less than 50 miles from Mt. Rainier National Park
- 2 Between 50 and 100 miles
- 3 Between 100 and 500 miles
- 4 More than 500 miles

2. When did you leave your home to begin this trip?

DATE _____ *(MO/DAY/YR.)*

3. If you left your home prior to today, where did you stay last night?

4. What time did you leave your home or other lodging to come here today?

TIME _____ AM / PM

5. What route did you use to come to the White River/Sunrise area?

- 1 Highway 410 from the North
- 2 Highway 410 from the East (Over Chinook pass)
- 3 The National Park road from Paradise and Highway 123 from the South
- 4 Highway 123 from the South (Through Packwood)

For Official Use Only

Party # _____

Date ___ / ___ / ___

Time _____ am / pm

6. When will you return to your home from this trip? *(If you are going to other places besides Mt. Rainier National Park, please indicate the date you will return to your residence at the end of the trip.)*

DATE _____ (MO/DAY/YR.)

7. When will you leave the White River/Sunrise area.

DATE _____ TIME _____ AM / PM

8. **Including this trip**, how many trips have you made to Mt. Rainier National Park in the last three years?

NUMBER OF TRIPS _____

9. **Including this trip**, how many trips have you made to **the White River/Sunrise area** in the last three years?

NUMBER OF TRIPS _____

10. How long ago did you decide to visit Mt. Rainier National Park? *(Circle one number.)*

- 1 SOMETIME TODAY
- 2 YESTERDAY
- 3 IN THE LAST WEEK
- 4 MORE THAN A WEEK AGO BUT LESS THAN A MONTH
- 5 A MONTH OR MORE BEFORE TODAY

11. How long ago did you decide to visit **the White River/Sunrise area**? *(Circle one number.)*

- 1 ONLY AFTER REACHING THE VICINITY OF MT. RAINIER NATIONAL PARK
- 2 SOMETIME TODAY
- 3 YESTERDAY
- 4 IN THE LAST WEEK
- 5 MORE THAN A WEEK AGO BUT LESS THAN A MONTH
- 6 A MONTH OR MORE BEFORE TODAY

12. On this trip, have you already stopped to visit attractions in Mt. Rainier National Park outside the White River/Sunrise area? *(Circle one number.)*

- 1 NO
- 2 YES - Where did you stop?

13. On this trip, afteris trip, after you leave the White River/Sunrise area, do you plan to stop and visit othe attractions in Mt. Rainier National Park? *(Circle one number.)*

- 1 NO
- 2 YES - Where do you plan to stop?

14. When starting this trip, did you want to visit a particular part of Mt. Rainier National Park? *(Circle one number.)*

- 1 NO
- 2 YES - Where did you want to visit?

15. On this trip, do you plan to use any of these developed facilities in the White River/Sunrise area? *(Circle as many numbers as apply.)*

Facility

- | | |
|---|---------------------------|
| 1. White River Campground | 5. Sunrise Ranger Station |
| 2. White River Amphitheater | 6. Sunrise Lodge |
| 3. White River Ranger Station | 7. Sunrise Visitor Center |
| 4. White River Hiker Information Center | |

16. Do you plan to do any day hiking? *(Circle one number.)*

- 1 NO
- 2 YES - Where will you hike? *(Write "don't know" if you are unsure where you will hike.)*

17. While you are in the White River/Sunrise area, do you plan to
(Circle as many numbers as apply.)

- 1 ... camp overnight while backpacking
- 2 ... camp overnight in a campground
- 3 ... go technical climbing using special equipment
- 4 ... go day hiking
- 5 ... drive around viewing scenery from road and turnouts
- 6 ... view wildflowers
- 7 ... view wildlife
- 8 ... take photographs
- 9 ... visit the lodge/restaurant
- 10 ... visit the visitor center
- 11 ... picnic
- 12 ... meet people and make new friends
- 13 ... do any other activities not described (Please specify below.)

18. If you circled two or more of the activities above, which of those activities are most important to your enjoyment of the White River/Sunrise area? (Enter the appropriate number in each of the blanks.)

_____ MOST IMPORTANT ACTIVITY
_____ SECOND MOST IMPORTANT ACTIVITY

19. In your decision to visit the White River/Sunrise area of the park did you take into consideration the possibility that there would be a large number of visitors in this area? (Circle one number.)

- 1 NO
- 2 YES - How did the number of visitors you expected effect your decision to visit the White River/Sunrise area? (Circle as many numbers as apply.)

- 1 Number of visitors did not affect decision.
- 2 Came at a different time of day than would otherwise.
- 3 Came on a different day of the week.
- 4 Plan to do different activities.
- 5 Other effects not described (Please specify below.)

20. Prior to your trip, did you make any attempts to specifically seek out information about the White River/Sunrise area?

- 1 NO
- 2 YES - Where did you try to get information? *(Circle as many numbers as apply.)*

- 1. Guidebooks
 - 2. Friends or family
 - 3. The National Park Service/National Forest Service information telephone number in Seattle (220-7450)
 - 4. Magazine or newspaper articles
 - 5. Personal experience
 - 6. Television/radio
 - 7. Information from the National Park Service
 - 8. Other sources
-

What type of information did you want?

Was the amount of information you found to help plan your trip to the White River/Sunrise area: *(Circle one number.)*

- 1 MORE THAN YOU WANTED
- 2 ABOUT AS MUCH AS YOU WANTED
- 3 LESS THAN YOU WANTED

21. Did you know that there is a telephone number in Seattle for general information about recreation in Western Washington National Parks and National Forests? *(Circle one number below. The telephone number is 220-7450.)*

- 1 NO
- 2 YES

The last set of questions ask you to describe yourself and your group.

22. Are you? *(Circle one number.)*

- 1 FEMALE
- 2 MALE

23. What year were you born?

19 _____

24. Are you: *(Circle one number.)*

- 1 A CITIZEN OF THE U.S.A. ----> What is your home Zip Code? _____
- 2 A CITIZEN OF _____
(Please specify)

25. Are you married? *(Circle one number.)*

- 1 YES
- 2 NO

26. What is the highest level of formal schooling you have completed? *(Circle the appropriate number.)*

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24+
(Elementary thru High School) (College/Vocational) (Graduate/Professional)

27. How many people are there in your group today?

_____ PEOPLE

28. Are there any children under age 16 in your group today? *(Circle one number.)*

- 1 NO
- 2 YES - What are the ages of the children under age 16 in your group:

"THANK YOU" for your contribution to this project. Please contact the survey worker now.

Ask verbally after survey

I. Why did you choose to visit the White River/Sunrise area? (Please specify)

II. Are you planning to drive up to Sunrise and park in the visitor lot today?

- 1 NO -----> Go To Q-V.
- 2 YES

III. Imagine that when you were about 1/2 hour away from this entrance to the White River/Sunrise area an electronic road sign notified you that the Sunrise parking lot was full. If that happened what would you do? (*Circle option(s) fitting reply. Probe for alternate destination.*)

- 1 GO TO SUNRISE ANYWAY AND LOOK FOR PARKING
- 2 PLAN TO PARK SOMEWHERE ELSE ON THE WAY UP TO SUNRISE
- 3 GO TO SUNRISE AND LEAVE WITHOUT LOOKING FOR PARKING
- 4 GO SOMEPLACE ELSE OUTSIDE THE WHITE RIVER/SUNRISE AREA
Where would you go?

IV. Imagine that when you entered the White River/Sunrise area the park attendant told you that the Sunrise parking lot was full. If that happened what would you do? (*Circle option(s) fitting reply. Probe for alternate destination.*)

- 1 GO TO SUNRISE ANYWAY AND LOOK FOR PARKING
- 2 PLAN TO PARK SOMEWHERE ELSE ON THE WAY UP TO SUNRISE
- 3 GO TO SUNRISE AND LEAVE WITHOUT LOOKING FOR PARKING
- 4 GO SOMEPLACE ELSE OUTSIDE THE WHITE RIVER/SUNRISE AREA
Where would you go?

V. We would like to send you a brief questionnaire that asks about your satisfaction with this trip to the White River/Sunrise area. Would you please provide the following information so we can send you that questionnaire?

1) Name _____

Mailing Address _____
(Number and Street)

(City, State/Country, Zip Code)

End interview

APPENDIX B: MAIL QUESTIONNAIRE

OMB Approval 10024-0145

**1993 Mount Rainier National Park
White River Visitor Survey**

Version 1

Cooperative Park Studies Unit
College of Forest Resources AR-10
University of Washington
Seattle, Washington 98195

On a recent trip to Mount Rainier National Park you participated in an on-site survey and also agreed to participate in a mail questionnaire to follow up on some of your observations. Thank you for your cooperation. This is the questionnaire that concludes our survey.

First we would like to ask you some questions about your trip to the White River/Sunrise area of Mount Rainier National Park. When we refer to the White River/Sunrise area we specifically mean the area of Mount Rainier National Park accessed by the White River entrance (that is, the entrance at which you were first contacted for this survey). Remember, **all questions pertain to the trip on which you were contacted for this survey.**

1. On the trip on which you were contacted, how long were you inside the White River/Sunrise area?
(Please specify the number of days and/or hours. If you did not stay overnight in the area write "0" for the number of "DAYS".)

_____ DAYS _____ HOURS

2. On this trip, did you use any of these developed facilities in the White River/Sunrise area?
(Circle as many numbers as apply.)

Facility

- | | | | |
|---|--------------------------------------|---|------------------------|
| 1 | White River Campground | 5 | Sunrise Ranger Station |
| 2 | White River Amphitheater | 6 | Sunrise Lodge |
| 3 | White River Ranger Station | 7 | Sunrise Visitor Center |
| 4 | White River Hiker Information Center | | |

3. Did you do any day hiking?
(Circle one number.)
- 1 NO
2 YES ->Where did you hike? *(Write "don't know" if you are unsure where you hiked.)*

4. While you were in the White River/Sunrise area, did you
(Circle as many numbers as apply.)

- 1 ... camp overnight while backpacking
- 2 ... camp overnight in a campground
- 3 ... go technical climbing using special equipment
- 4 ... go day hiking
- 5 ... drive around viewing scenery from road and turnouts
- 6 ... view wildflowers
- 7 ... view wildlife
- 8 ... take photographs
- 9 ... visit the lodge/restaurant
- 10. ... visit the visitor center
- 11. ... picnic
- 12. ... meet people and make new friends
- 13. ... do any other activities not described (Please specify below.)

5. If you circled two or more of the activities above, which of those activities was most important to your enjoyment of the White River/Sunrise area? (Enter the appropriate number in each of the blanks.)

_____ MOST IMPORTANT ACTIVITY
_____ SECOND MOST IMPORTANT ACTIVITY

6. Sometimes when people visit the White River/Sunrise area they find out that they aren't able to do some of the things they expected to do. On this trip were there any activities that you had planned to participate in but weren't able to do? (Circle one number.)

- 1 NO
- 2 YES ->What were these activities?

Why couldn't you do the activity(activities)?

7. Below are 12 reasons that people might visit recreation areas like the White River/Sunrise area. To the right of each is a scale of how important each reason was in motivating your visit.

On your trip to the White River/Sunrise area, how important was it for you to ...
(Circle one response for each reason.)

EXAMPLE:

1	EXPERIENCING SOLITUDE	not important	somewhat important	moderately important	very important	extremely important
---	-----------------------	------------------	-----------------------	-------------------------	-------------------	------------------------

For this person, experiencing solitude was a very important reason why they chose to visit.

1	DEVELOP YOUR SKILLS AND ABILITIES	not important	somewhat important	moderately important	very important	extremely important
2	DO SOMETHING WITH YOUR FAMILY	not important	somewhat important	moderately important	very important	extremely important
3	OBSERVE OTHER PEOPLE IN THE AREA	not important	somewhat important	moderately important	very important	extremely important
4	BRING YOUR FAMILY CLOSER TOGETHER	not important	somewhat important	moderately important	very important	extremely important
5	EXPERIENCE NEW AND DIFFERENT THINGS	not important	somewhat important	moderately important	very important	extremely important
6	LEARN MORE ABOUT NATURE	not important	somewhat important	moderately important	very important	extremely important
7	GET AWAY FROM THE USUAL DEMANDS OF LIFE	not important	somewhat important	moderately important	very important	extremely important
8	BE WITH OTHERS WHO ENJOY THE SAME THINGS YOU DO	not important	somewhat important	moderately important	very important	extremely important
9	TALK TO NEW AND VARIED PEOPLE	not important	somewhat important	moderately important	very important	extremely important
10	BE WITH FRIENDS	not important	somewhat important	moderately important	very important	extremely important
11	EXPERIENCE TRANQUILITY	not important	somewhat important	moderately important	very important	extremely important
12	LEARN WHAT YOU ARE CAPABLE OF	not important	somewhat important	moderately important	very important	extremely important

8. Below are the same 12 reasons that people might visit recreation areas, but this time the scale on the right concerns how much opportunity there was to satisfy that reason for visiting.

On your trip to the White River/Sunrise area, how much opportunity was there for you to ... (Circle one response for each reason.)

EXAMPLE:

1	EXPERIENCE SOLITUDE	no	poor	good	very good	excellent
		opportunity	opportunity	opportunity	opportunity	opportunity

This person felt that on their trip they had a poor opportunity to experience solitude.

1	DEVELOP YOUR SKILLS AND ABILITIES	no	poor	good	very good	excellent
		opportunity	opportunity	opportunity	opportunity	opportunity

2	DO SOMETHING WITH YOUR FAMILY	no	poor	good	very good	excellent
		opportunity	opportunity	opportunity	opportunity	opportunity

3	OBSERVE OTHER PEOPLE IN THE AREA	no	poor	good	very good	excellent
		opportunity	opportunity	opportunity	opportunity	opportunity

4	BRING YOUR FAMILY CLOSER TOGETHER	no	poor	good	very good	excellent
		opportunity	opportunity	opportunity	opportunity	opportunity

5	EXPERIENCE NEW AND DIFFERENT THINGS	no	poor	good	very good	excellent
		opportunity	opportunity	opportunity	opportunity	opportunity

6	LEARN MORE ABOUT NATURE	no	poor	good	very good	excellent
		opportunity	opportunity	opportunity	opportunity	opportunity

7	GET AWAY FROM THE USUAL DEMANDS OF LIFE	no	poor	good	very good	excellent
		opportunity	opportunity	opportunity	opportunity	opportunity

8	BE WITH OTHERS WHO ENJOY THE SAME THINGS YOU DO	no	poor	good	very good	excellent
		opportunity	opportunity	opportunity	opportunity	opportunity

9	TALK TO NEW AND VARIED PEOPLE	no	poor	good	very good	excellent
		opportunity	opportunity	opportunity	opportunity	opportunity

10	BE WITH FRIENDS	no	poor	good	very good	excellent
		opportunity	opportunity	opportunity	opportunity	opportunity

11	EXPERIENCE TRANQUILITY	no	poor	good	very good	excellent
		opportunity	opportunity	opportunity	opportunity	opportunity

12	LEARN WHAT YOU ARE CAPABLE OF	no	poor	good	very good	excellent
		opportunity	opportunity	opportunity	opportunity	opportunity

9. Before you entered the White River/Sunrise area you might have had expectations about the number of visitors you would see. Were there more visitors than you expected, fewer than you expected, or about the same number as you expected? (Circle one number.)

- 1 A LOT LESS THAN EXPECTED
- 2 LESS THAN EXPECTED
- 3 AS EXPECTED
- 4 MORE THAN EXPECTED
- 5 A LOT MORE THAN EXPECTED

- 6 NO EXPECTATIONS

10. Besides expectations, you might also have preferences about the number of visitors you would like to see while you were in the White River/Sunrise area. Were there more visitors than you preferred, fewer than you preferred, or about the same number as you preferred? (Circle one number.)

- 1 A LOT LESS THAN PREFERRED
- 2 LESS THAN PREFERRED
- 3 AS PREFERRED
- 4 MORE THAN PREFERRED
- 5 A LOT MORE THAN PREFERRED

- 6 NO PREFERENCE

11. In general, would you say that other visitors detracted from your enjoyment of the White River/Sunrise area? (Circle one number.)

- 1 No, did not detract from experience
 - 2 Yes, detracted | somewhat
 - 3 Yes, detracted | moderately
 - 4 Yes, detracted | significantly
- > How did the other visitors detract from your experience? (Circle all that apply.)

- 1 THE AREA FELT CROWDED
- 2 PEOPLE OCCUPIED PREFERRED DESTINATIONS
- 3 SOME VISITORS WERE EXCESSIVELY LOUD OR ROWDY
- 4 SOME VISITORS WERE BREAKING PARK RULES

- 5 OTHER _____

12. Did you see any evidence that other visitors had unacceptably damaged the places you visited in the White River/Sunrise area? *(Circle one number.)*

- 1 NO
- 2 YES ->What was the damage, and where did you see it?

Did the damage you saw detract from your enjoyment of the area?
(Circle one number.)

- 1 NO, DID NOT DETRACT FROM EXPERIENCE
- 2 YES, DETRACTED SOMEWHAT
- 3 YES, DETRACTED MODERATELY
- 4 YES, DETRACTED SIGNIFICANTLY

13. The National Park Service often tries to limit the damage caused by visitors by putting up signs, by having rangers remind visitors of the rules, by erecting barriers such as fences, or by other methods.

Did you see any evidence that the National Park Service at Mt. Rainier was trying to limit damage caused by visitors? *(Circle one number.)*

- 1 NO
- 2 YES ->What efforts to limit damage did you see, and where did you see them?

Did the attempts to limit damage caused by visitors detract from your enjoyment of the White River/Sunrise area? *(Circle one number.)*

- 1 DID NOT DETRACT FROM EXPERIENCE
- 2 DETRACTED SOMEWHAT
- 3 DETRACTED MODERATELY
- 4 DETRACTED SIGNIFICANTLY

14. Were there any other problems with your trip to the White River/Sunrise area?

15. Was there anything especially nice about your trip?

16. Overall, how would you rate your trip to the White River/Sunrise area? *(Circle one number.)*

- 1 POOR
- 2 FAIR, IT JUST DIDN'T WORK OUT VERY WELL
- 3 GOOD, BUT I WISH A FEW THINGS COULD HAVE BEEN DIFFERENT
- 4 VERY GOOD, BUT IT COULD HAVE BEEN EVEN BETTER
- 5 EXCELLENT, ONLY MINOR PROBLEMS
- 6 PERFECT

The last few questions ask that you describe yourself.

17. What year were you born?

19 ____

18. Are you a citizen of the U.S.A.?
(Circle one number.)

1 YES

2 NO

19. Are you married? (Circle one number.)

1 YES

2 NO

20. What is the highest level of formal schooling you have completed? (Probe for the highest year completed, if necessary.)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24+
(Elementary thru High School) (College/Vocational) (Graduate/Professional)

APPENDIX C: COMMENTS FROM THE MAIL QUESTIONNAIRE

A number of respondents to the mail questionnaire took the opportunity to write comments about their trip to MORA. These comments have been transcribed and are presented here. The comments have been classified into the following categories: compliments, criticism, suggestions, comments concerning the questionnaire, and miscellaneous comments.

Compliments

- * *I had the opportunity to show my sister and niece our beautiful Park in the great Northwest. My sister needed to be close to the rest-rooms, and the Ranger checked his locations and found us the perfect spot. It is nice to be able to enjoy nature without having to burden my husband with the worry of something happening to me. I felt secure seeing rangers riding through checking on things. Thanks for your care and concern in our thoughts. My husband doesn't enjoy camping like I do. It is so comforting to be a female and have this opportunity to enjoy the tranquillity of the great outdoors. We also enjoyed the church service and the scenery together.*
- * *Thanks for a wonderful day. I hope to come again soon and bring other members of my family.*
- * *I'm already planning to stay a few days next year around Mt. Rainier. It's one of the most beautiful places I've seen in my life!*
- * *Coming from a desert land, we thoroughly enjoy the parks in Washington. They are well kept, [with] lots of camping areas. We enjoy the signs along the road explaining about that particular scene or object you are looking at. Washington State can be very proud of its parks and recreation facilities. They show a lot of love and caring. It's a pleasure to tour the parks. We have a soft spot for the water, animals, trees, and especially the most majestic mountain we have ever seen. Thanks to all of you. Keep up the good work! It makes a difference and is greatly appreciated.*

- * *Keep up the good work. I only wish I could get here more often. My family totally loves Ohanapakosh (I hope I spelled that right). We love the campfire talks. I've traveled many miles on park trails and over in the Olympics. Both parks are super. Thank you for a very pleasant and relaxing area.*
- * *Thanks. We had a great time!*
- * *This park is a gem, a truly fabulous place that is fantastically maintained after having been blessed by God! Keep it as it is, always.*
- * *I will certainly visit Mt. Rainier again. We were all very delighted.*
- * *We have visited more than 20 national parks over the years. Top list: Mount Rainier, Olympic, Grand Teton, and Zion.*
- * *It is very nice place to visit. Not at all like Yellowstone. Everyone seemed to enjoy themselves. The wife and I raised 13 kids. We have 26 grandchildren and 6 great grandchildren. They all like Mt. Rainier.*

Criticism

- * *The picnic area at Sunrise was less desirable than Tipsoo Lake at Chinook Pass Summit. The bees were also bothersome.*

- * *I was tempted to say it was a problem that the first big parking lot had no sign saying the visitor center was still a mile or so ahead. Perhaps you can see it when weather is clear. I didn't intend to do any hiking (except specifically a short wildflower trail). I might have felt I wasted time by walking, whether the visitor center might be down the ridge trail out of sight. It was soon obvious that it couldn't be, as the trail wasn't wide or smooth enough. However, I can't complain, as that's where I found the wildlife (and a few wildflowers and valley view). Those returning from the wildflower trail I would have done originally, said it wasn't worthwhile (flowers not out yet).*

P.S. only walked 5 minutes down the trail. It was too isolated for one lady alone.

Suggestions

- * *Instead of T-shirts, it would be nice if the lodge sold rain gear, like wind breaking ponchos etc., with a Mt. Rainier logo.*
- * *The day we visited the Sunrise area was Tuesday, August 10. The weather was cool, damp and cloudy. I'm sure that had it been a weekend and sunny, there would have been many more people. So, while my response to this survey indicates that I was fairly pleased with our outing and the lack of other people, my response probably would have been very different had it been made for a weekend. Despite the huge parking area around Sunrise, the rangers indicated that it does fill up on weekends. Hard to believe! The trails must be crawling with hikers on those days. I'm not sure what the answer is. If a shuttle bus system was developed, a "parking lot" lower in the park would have to be constructed. Is that feasible? Even if the cars are removed, is there still a problem with too many people overusing the area? I've been to Denali National Park (1983) and the shuttle buses there worked very well. Another park near us in California, Yosemite, suffers from a lot of overuse in the valley. Limiting the number of visitors (as campgrounds, and even many backcountry campgrounds do) may provide a solution, but at the cost of having to pre-arrange an entire vacation, so that you know when you may be where. I enjoy the ability to be spontaneous, but recognize that is becoming more and more difficult. Plus, the visiting season for most parks is becoming longer and longer, transcending beyond the typical summer months. You have a difficult and complex problem to resolve. I wish you the best.*

P.S. The only suggestion I have to make is perhaps the restaurant could open a half hour earlier.

P.P.S. I thought the facilities, rest-rooms included, were clean. The Rangers and other employees were helpful and polite.

- * *I have concerns that the Sunrise Lodge will be torn down. I feel this decision will be detrimental to the area, and will destroy a part of history. Renovations, yes. Addition, if necessary, and keeping with the architecture, yes. We need to preserve the past, because we lose what can never be duplicated.*
- * *Please keep Sunrise open at all cost.*

- * *It would have been nice to have: 1) an up-to-date weather forecast at White River (e.g. posted), and 2) a climbing ranger available for questions on conditions at Sherman and Summit. I understood one would be there, but he/she wasn't there when we left at 8 a.m. I imagine most climbers come in early a.m. from White River, so having someone there around 6:30 or 7 a.m. would be helpful.*

- * *I'd like to see a shift in visitor center hours to favor later hours, i.e., open at noon and close at 8 p.m. Then we wouldn't be drawn to visit the center before hiking knowing we'd have the opportunity to visit after hiking, thereby having better daylight use while hiking when our daytime is limited. Please open Westside road; would like to hike Gobblers Knob, and Indian Henry.*

- * *1) This questionnaire seems to indicate that you are evaluating management practices based on what most visitors want. I feel that should not form the most significant influence on your decision-making. If people want to engage in social activities, there are already plenty of city, county, and state parks that cater to what users want in a park. I feel that a place with such outstanding natural beauty and significance as Mt. Rainier National Park should be preserved for ourselves, our children and grandchildren to remain wild and free, not managed for maximum social benefit or enjoyment to ourselves. There are all too few really wild places left, and they are vitally important.*

2) I understand it must be difficult to deal with crowds of visitors who have little or no understanding of how to treat nature or react to other people in a wild setting, and appreciate the need for some basic rules. I would like to say that it bothers me to be asked to comply with rules that I feel rangers are not following themselves. I feel that any rule you make and enforce should also be followed by all the people enforcing them. For example, we are asked not to leave the trail to limit erosion to fragile meadow areas. But behind the visitor's center, a gravel road extends back into these same meadows for miles, and can be seen cutting across a distant mountainside. While I was hiking I saw two rangers drive by in a truck! The purpose for such a road was totally unclear, and the area of meadow destroyed and turned into a road more than equaled any areas of erosion caused by careless hikers.

3) I am glad to have the chance to participate in this survey and hope that my contribution is of some help to you. If you would like more opinions, let me know!

- * *Thank You to Mt. Rainier rangers and staff. We frequently visit on day trips in the summer, and have always found the mountain, its caretakers, and visitors delightful. The only thing I can think of to suggest is that the east side could use a gas station. We traveled the last 45 minutes on a prayer.*

* Thank you for taking the time to do this survey. I do not know how to make the traffic situation better. I did plan on coming later in the day to avoid some of it. Also, I usually go during the week. More enforcement or warning signs to help educate people might help. It really takes people by surprise when I ask them to pick up their litter. Just in this day and age you start to worry about getting shot at though. I only hope my sons (6 years and 14 month old) will be able to enjoy the mountain as I have the past 16 years.

* My responses are honest but biased. Going to a national park on a holiday weekend is not very smart. My suggestion would be to raise the fees at the park. Gives NPS a better budget. Disneyland costs a lot more and doesn't compare!

* We would like the bathrooms to have automatic motion lights in the bathrooms like they do at Cougar Rock.

We wish that you would charge a \$5 fee to get into the park like you used to, and use the money for the park. We were only charged at the Nisqually entrance this summer. The cash registers always seemed to be broken. You could have made a great deal of money on Labor day weekend because the park was packed.

* Our family loves and enjoys Mt. Rainier. I have hiked on most of the trails in Mt. Rainier, and visit at least twice each year. Hope that there will be access to the trails on the Westside road at the Nisqually entrance. Rebuild the Westside road.

* I do a lot of backpacking & hiking in this state, and am much more sensitive to damage in the true wilderness areas. Mt. Rainier National Park is a place for everybody, and they are usually all there! The day my family went there was a reasonable crowd for a late summer weekend. I have seen it a lot worse, no parking etc. I am not one for restrictions, but crowds should be limited to road/parking capacity.

* The campground parking was overflowing with climbers' cars. Too many people on Glacier Basin Trail. When I climbed Rainier 20 years ago I was only aware of maybe two other parties on route the same time I was. It was a reasonable wilderness experience. This year there was a continuous line of climbers from the basin up Inter Glacier. We noticed several groups of people climbing who were not physically fit for the climb. The number of climbers should be limited. I would not want to climb with the crowds on the mountain today.

* My information on the park was old; it indicated camping at Sunrise. We went there first expecting to camp. When we couldn't camp, we did spend a little time there, but left early to secure a campsite at White River. We did not go back to Sunrise and spend the day as we first expected. The new maps are explicit, but we didn't look first. Maybe a sign at entrance - "no camping or lodging at Sunrise".

* I worked for the concessionaire (full-time management) in the Paradise area from 1974-1978. Overall, the concessionaire has done an excellent job from 1974 to the present. However, there is one area that concerns me. The main dining room at Paradise Inn used to be a place where the average person felt they could afford a good meal at a reasonable price. It has always had a warm charming atmosphere, and has been a special place to enjoy a good meal and spend time with family and friends. However, since 1978, the menu has gradually become more expensive, to the point where an average family does not feel they can afford to eat there. The menu selection has become a "gourmet" type, while prior to 1978 it was a family type menu with a couple of expensive steak items. I feel the Park Service would be doing park visitors a great service if it would work to ensure either a "family" type menu, or guarantee at least 2 or 3 good, moderately priced menu items. If you doubt my statements, conduct a survey next summer of restaurant patrons, and include questions on menu selection and price. People can go anytime to expensive gourmet restaurants in Seattle or other major U.S. cities. When they visit the National Park, and take their family or friends, people want good quality, affordable food. Unfortunately, they have come to expect pricey gourmet food in the dining room and write it off to "being in a National Park."

Thanks for doing such a great job running Mt. Rainier National Park. The Park has been a special place for me since my first visit on May 1, 1974.

One other suggestion: a Park Service controlled shuttle for hikers beyond the first three miles of the West Side road would be an excellent modification to the West Side road problems. I know you need to limit use, but the trails are so beautiful off the West Side road. The Park experience could be greatly enhanced with limited access via a controlled shuttle.

Thanks for your consideration of my concerns.

* I would like to make some additional comments regarding a trip to the Paradise area three weeks after my visit to the Sunrise area. As I indicated earlier, my visit to the Sunrise area was made late in the day on a weekend for the sole reason of trying to avoid the crowds. As my trip to the Paradise area was made after Labor Day on a Saturday, the crowds were sufficient but not overbearing. Regarding that trip I would like to mention three things: 1) I observed five dogs. Three were in the parking lot area paths, and two were on the Panorama Point trail (both of these 2 dogs were on a leash and well behaved, but it seems that the rule of "no pets on trails" needs to be enforced a little closer); 2) a second observation, and perhaps more important than the first, is that there was a group of snowboarders on the trail as I went up and later as I came down. I am an avid skier and love adventure; however, I do not believe that Paradise, as its name implies (serenity, beauty, quietness, solitude), is the place for such activities. It would be "fun" to have concession stands and ski lifts at Paradise too, but I would abhor the thought of such items at one of the most beautiful spots on the face of the earth. Because snowboards fit into a similar category to me (not considering that they take up a 4-5 foot wide swath of the trail as the eager participants march to their destination), I fully believe that "Paradise" needs to be reserved for quiet contemplation, hiking, photography, observation of wildlife, serious climbing, and drinking in the incredible beauty of the place; and 3) It would be helpful to have distance signs marked in miles rather than kilometers (this is America, I think). For foreign visitors it would be fine to have kilometers in addition to miles on the signs, but not leave off the distance in miles. Thank you for this opportunity. I appreciate being able to participate in this survey. You are doing a fine job considering the balancing act you must perform in trying to preserve our wonderful heritage, and meet the needs of those seeking restoration and renewal in our beautiful park, and in nature in general. Paradise is such a unique, fragile, and wonderful heritage; there are few spots like it on the earth. I have traveled extensively and I can think of no more beautiful spot. We must be careful to preserve its beauty and unique characteristics. Thank you.

* Outhouses made of rock and natural looking materials would come in handy out on the trails.

* Dear Sirs: We enjoyed free admission to the park - thank you! We use the park during off season and off hours quite often. Frequently there is no charge to get into the park at these times - locals discount I would call it. Great deal, but are you losing revenue? We would like to have access to Sunrise during the months the gate is closed just beyond White River Campground (just before the road really starts to climb). Sunrise is a great backcountry ski jump-off spot and could serve winter outdoors people well with little or no environmental impact, and maybe generate revenue for park. Plowing roads is an issue. However, Sunrise is closer to Seattle than Paradise! Sunrise is really available during a short period of time in the summer. Hiking during late fall, and skiing/hiking during spring could be enjoyed by many. Given the limited access to high elevation jump-off spots in the state during winter months, another would be welcome!
Thank you

* In general, I was not disappointed with my enjoyment of Mt. Rainier itself, but with the visitors' center. I feel that more can be done to make the exhibits more informative or interesting, specifically more in-depth information about the type of wildlife found in the area, volcanic history of Mt. Rainier, history of Cascade Range, etc.

* Wish White River Campground could open sooner and close later.

Comments Concerning the Questionnaire

- * *We went to Sunrise on impulse, so some questions (especially 7 and 8) were not appropriate to us.*
- * *The study seems to be gathering fuel (back-up) for some change in policy around limiting visitors at Sunrise, or controlling use of area. It seems prejudicial; who wouldn't say that they want their wilderness experiences to be less "crowded?" Early and late season access to Sunrise is already limited to Park budget (staff). [As for] Control of road opening (I often hike to Sunrise from White River Campground in June) many years it is snow-free. I also found questions 7 and 8 not clear and slanted. The stated "experience" could be said about other natural areas as well as sporting events. I hope this survey is put in some better perspective.*
- * *This survey did not direct questions to the person who takes visitors, both young and old, relatives and friends, to see and share the beauty and majesty of Mt. Rainier (particularly Sunrise). These trips are of short duration and this person makes many trips to the area, and shares the experience, which is different each time.*
- * *Comments: I have interpreted the questionnaire to apply specifically and exclusively to the single afternoon I spent at Sunrise for the purpose of leaving a vehicle to be picked up by [my] sister eight days later, when we had completed hiking a portion of the Wonderland Trail. As such, the trip was purely functional, necessitated by the absence of shuttle service or other means of trailhead access. Had we not been willing to take our chances hitch hiking the 50+ miles back to Longmire, we would have been forced to bring two vehicles to the park and take up two parking spaces for the week.*

For items 7 and 8, I have used a circle to refer to this immediate trip to Sunrise, and a square to refer to my entire 12 day trip. In the future, you may wish to 1) make it much more explicit that your questionnaire refers ONLY to Sunrise/White River area on a given entry, 2) add similar options for the entire visit to Mt. Rainier National Park, and 3) add a category to item 7 for car shuttle and food caches for extended hikes.

The availability of ranger stations and parking facilities at several points along the Wonderland Trail offers a special opportunity for distance hikers, such as myself, who might not otherwise be able to deal with the logistics of distributing food caches and fuel before beginning the hike. This also alleviates the amount of driving within the park.

Due to the very brief nature of my afternoon at Sunrise, I did not see a great deal of overuse, crowds, and other problems associated with high visitation areas. Alas, the same cannot be said for Paradise and the meadows above it. Having finished my hike, I spent a day hiking around the trails above Paradise and was amazed at the destruction and people's inability to stay on marked paths. In light of seeing people feeding animals right in front of signs telling them not to, and walking over vegetation to get a better view, I suggest \$50.00 fines for the offenders.

Mt. Rainier National Park is one of the finest opportunities for a rewarding outdoor experience that I have seen in my many years of hiking. Park staff are quite knowledgeable and friendly, and contributed greatly to my enjoyment of the hike and the park.

May I suggest a survey, for hikers who get backcountry permits, about how their transportation options might be affected by shuttle service. Vehicle security also seems to be a major concern among backpackers as well now, and a guarded lot served by the shuttle would help in that category too.

If your survey has no place for comments, please pass them on to the park service personnel.

- * I don't know what the questionnaire is trying to accomplish. I'm not sure I would agree with the results of the survey based on it - it missed some important information.
- * For the time of the interview (and to fill this out) - I think it is poorly done for what you are trying to do !
- * I'm afraid that I had to mutilate your questionnaire somewhat, in order to comply with German mailing norms. Your international reply coupon was a welcome contribution to the cost, but dimensions are the leading factor in mailing from here, rather than weight.

A couple of things surprised me about the questionnaire (besides the fact that in questions 7 and 8 the example was incomplete!):

1. From an ecologically-aware institution, I would have expected recycled paper.
2. Again on ecological grounds, I would not have expected empty sheets of paper. I shall be using the spare sheets from mine for writing paper!
Please save the world's trees! And thank you for the wonderful park!

- * Thank you for your friendly reminder letter, and for your patience. I had forgotten all about this!

Miscellaneous Comments

- * *I like Sunrise and try to visit once a year. Not always successful.*
- * *This is just hearsay, but I heard the Chinook's used by the trail crew are causing significant environmental damage, e.g., concrete all over the forest floor, etc.*
- * *I regret that the weather was so poor as to statistically nullify my survey. Perhaps some of my reactions will have some validity.*
- * *Although we didn't have a problem this trip. On other visits to the park, we have encountered people who knowingly broke park rules by taking dogs on the trail (despite signs).*
- * *We do not understand why there are no animals around the area.*

Thank you.
- * *Thank You!*
- * *We will allow more than one day for Mt. Rainier our next trip.*
- * *We came to drive up to Sunrise, but didn't have enough money to get into the park. We did return on August 2, and enjoyed our trip to Sunrise very much. We plan to camp in that area next summer.*
- * *Kept home and child while husband went on for 7 years graduate [school] etc.. I was happy, fulfilled, and blessed!! Women are missing so much now by not being able to stay at home and enjoy it and family. There, that information was free; but wish I could shout it from the housetops or mountain tops!*
- * *To explain a little further, we were on a day trip to Mt. Rainier and spent most of the day hiking from Paradise. We were on our way out when the clouds lifted significantly and we thought it would be a good time to take some additional pictures. We would love to come back in the future to do some hiking from Sunrise. It has been truly magnificent for us "Gasterners" to experience your mountain! (Our pictures were great!)*

- * *We met a group of three young adults just returning from building a toilet facility up above Cloverleaf Lake, and enjoyed talking with them. They were volunteers. It reminded us of meeting a group of law students from Italy, Germany, and Czechoslovakia one summer while in Prague. They were volunteers building trails and doing other good works. It makes us grateful that so many young people are doing good all over the world. We hope our Federal government will see fit to fund our National Parks in order to have them in prime and pristine condition.*

- * *We were raised in the Tacoma area, and return home often. I guess we visit the mountain every 2-3 years. It has "worn well." We are always impressed with the job the NPS is doing. We have too much respect and awe of the treasure that the place is to be bothered by restrictions on walking areas, etc. We wondered if this survey will result in shuttle buses, if people will no longer be able to drive themselves to Sunrise. I would not like that very much, my husband does not mind that idea. Whatever; if it's for the good of the area, we would conform and not stop visiting the mountain!*

- * *I make as many as ten "day trips" up to Rainier a year. Most of these trips are by myself on a motorcycle, but we try to go as a family three or four times a year. Traffic has gotten so heavy on weekends that we go almost always during a weekday*

This particular visit was better than usual due in part to light traffic and excellent weather, and we saw more wildlife than usual. Thank you.

- * *Good Luck*

- * *There should be more money allotted for National Parks.*

APPENDIX D: HOW TO USE THIS REPORT

This section is a brief introduction to the basic statistical methods included in this report. It defines some key terms and illustrates the ways in which the statistical tables and graphs have been prepared.

The main tool used in statistics is data--those observations and measurements that are recorded in a study. As commonly used, the word "data" is plural. For example, all of the visitors' ages comprise data. A single unit of data -- for example, the age of a single visitor -- is a datum.

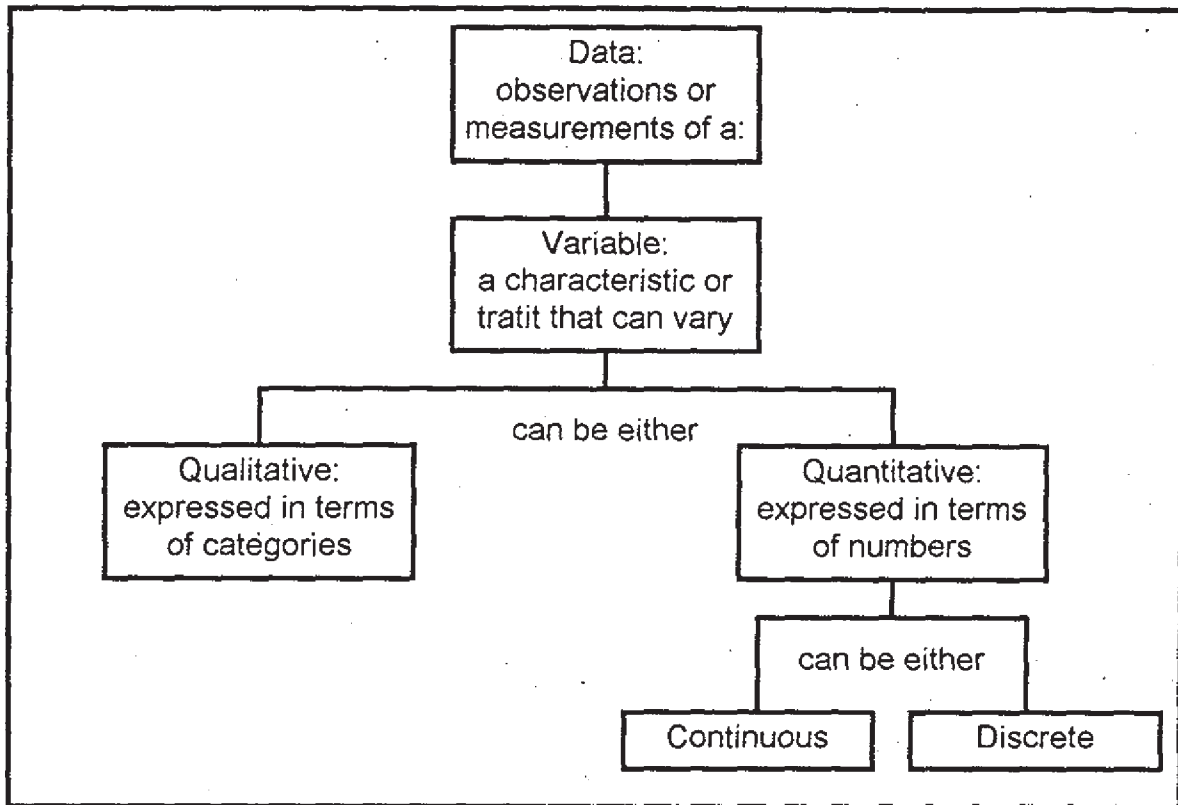
Data are collected about relevant variables. A variable is simply a characteristic or trait of interest that can vary. For example, the ages of visitors, their party characteristics, or their satisfaction with wildlife sightings at MORA can all be considered variables: Each of these traits or characteristics varies from person to person in the study sample.

Variables can be of two types: Qualitative variables are expressed in terms of categories, such as whether or not a visitor has been to the Visitor Center. Quantitative variables are expressed in terms of numbers, such as the size of a visitor party.

Discrete quantitative variables have distinct and separate units. There are no values possible between the units of a discrete variable. For example, the number of visitors in a single party consists only of whole numbers of people. One cannot talk about a party of 1 1/2 persons.

Figure D.1 illustrates these concepts.

FIGURE D.1. FLOW CHART OF STATISTICAL CONCEPTS AND TERMINOLOGY



Often data for more than one variable are collected. The data for the unit of analysis under consideration (an individual visitor, a single party, a specific park) are a case. Statistical analyses are done on groups of cases to form a dataset. The number of cases in a data set is usually referred to as "n." For example, if 1000 visitors answered a question, $n = 1000$.

In many instances, respondents do not answer all of the questions in a survey. They either inadvertently skip a question or are asked to skip question

because it does not apply to them. When a respondent does not answer a question that they should have answered, he/she is a "missing case" for that question. If the number of missing cases exceeds 10 percent of those who should have answered the question, a corresponding footnote or statement in the text will indicate this fact.

Data can be collected for all of the possible cases such as on every visitor to MORA. This is a census. Alternately, data can be collected for a sample of the total population. There are many ways to choose a sample. One common approach is a random probability sample, in which each individual has an equal chance of being included in the data set. In the strictest mathematical sense, the MRNP sample is not random due to the possibility of bias through non-response. However, the writer believes that the potential bias is so minimal that, for ordinary management purposes, the sample can be considered random and therefore, representative of the population of park visitors.

The data in this paper are reported as descriptive statistics. These statistics are used to summarize a large group of numbers and to describe general characteristics of the data set. For example, there might be a long list of each visitors' ages. Descriptive statistics can be used to quickly summarize this long list. The average (mean) age would be the total of all of the cases' ages divided by the number of cases. The modal age (mode) would be the most frequently reported age. The range would be the spread of ages from the youngest to the oldest.

Statistics can be presented in several formats. Tables simply organize the data into horizontal rows and vertical columns and sometime include brief explanations. Graphs or figures illustrate the data through a visual presentation. All of these formats are present in this report.

Appendix E: Recreation Experience Preference Scales

The Recreation Experience Preference (REP) scales were designed by Bev Driver and his associates with a program of research that began in the early 1970's. [See Driver (1976).] The REP items were designed to measure expected psychologically valued outcomes of recreation experiences that motivate recreation behavior.

This approach holds that people select and participate in recreation activities to realize certain psychological goals. It is derived from expectancy-valence theory in psychology. Tinsley (1986) elaborates:

According to this model, individuals engage in a given recreational activity at a given location because they have expectations of positively valued psychological outcomes. The model distinguishes two features of outcomes, individuals' expectancies that they will experience certain psychological benefits (e.g. increased self-esteem) while pursuing the recreational activities, and the value individuals place on these psychological benefits.

Driver and associates have developed a list of items designed to empirically measure potential motives. These items, the methodology used to create them, and various psychometric properties are described in selected documents sent separately to OMB [Driver (1977, 1983); Cooksey (date unknown); Tinsley et al. (1981)]. Respondents to REP scales are asked to rate the relative importance of several motives for choosing a designated activity. These items are clustered by a statistical technique into "domains" representing

categories of motivations. Table E.1 lists the domains measured by the current (1983) list of REP items. Those indicated with a * are included in this study.

Manning (1986) elaborates on the usefulness of the REP methodology.

Its potential usefulness for outdoor recreation managers is enhanced ... because of its direct focus on outdoor recreation activities and its standardization as a result of extensive empirical testing. The motivation scales have been developed and refined in dozens of empirical studies generating in excess of 20,000 usable questionnaires. Tests have generally confirmed both the reliability and validity of the motivational scales (Rosenthal et al. 1982).

Table E.2 lists several selected studies in the peer reviewed literature utilizing the REP scales. Several of these studies have used the REP scales to group similar visitors for the purpose of identifying "market segments." This use attests to the acceptance of these scales among researchers in the social psychology of leisure and outdoor recreation.

TABLE E.1. PSYCHOLOGICAL BENEFITS AND PSYCHOLOGICAL BENEFIT DOMAINS MEASURED BY THE RECREATION EXPERIENCE PREFERENCE (REP) SCALE

<u>Domain/Scales</u>	<u>Domain/Scales</u>
ACHIEVEMENT/STIMULATION *Reinforce Self-Image *Social Recognition *Skill Development *Competence Testing *Excitement Endurance *Telling Others	INTROSPECTION *Spiritual *Introspection
AUTONOMY/LEADERSHIP *Independence Autonomy *Control/Power	CREATIVITY *Creativity
RISK TAKING *Risk-Taking	NOSTALGIA *Nostalgia
EQUIPMENT *Equipment	PHYSICAL FITNESS *Exercise-Physical Fitness
FAMILY TOGETHERNESS *Family Togetherness	PHYSICAL REST *Physical Rest
SIMILAR PEOPLE *Being with Friends *Being with Similar People	ESCAPE PERSONAL-SOCIAL PRESSURES *Tension Release Slow Down Mentally *Escape Role Overloads Escape Daily Routine
NEW PEOPLE *Meeting New People *Observing Other People	ESCAPE PHYSICAL PRESSURES *Tranquillity *Privacy *Escape Crowds Escape Physical Pressures
LEARNING General Learning *Exploration Geography of Area *Learn About Nature	SECURITY Social Security
ENJOY NATURE *Scenery *General Nature Experience	ESCAPING FAMILY Escaping Family
TEMPERATURE Temperature	TEACHING-LEADING OTHERS Teaching-Sharing Skills Leading Others
	RISK REDUCTION Risk Moderation Risk Avoidance

* These scales are measured in the 1990 Mount Rainier Survey.

TABLE E.2. SELECTED STUDIES USING REP SCALES

- Brown, P.J. 1977. Information needs for river recreation planning and management. Pages 193-201 in: Proceedings: River Recreation Management and Research Symposium. USDA Forest Service General Technical Report NC-28.
- Brown, P.J. and G.E. Haas. 1980. Wilderness recreation experiences: The Rawah case. Journal of Leisure Research 12(3): 229-241.
- Ditton, R.B., A.J. Fedler, and A.R. Graefe. 1982. Assessing recreational satisfaction among diverse participant groups. Pages 134-139 in: Forest and River Recreation: Research Update. University of Minnesota Agriculture Experiment Station Miscellaneous Publication 18.
- Graefe, A.R., R. Ditton, J. Roggenbuck, and R. Schreyer. 1981. Notes on the stability of the factor structure of leisure meanings. Leisure Science 4(1): 51-65.
- Haas, G.E., B.L. Driver, and P.J. Brown. 1980b. A study of ski touring experiences in the White River National Forest. Pages 25-30 in: Proceedings of the North American Symposium on Dispersed Winter Recreation. Office of Special Programs, Education Series 2-3, University of Minnesota, St. Paul.
- Hautaluoma, J.E. and P.J. Brown. 1978. Attributes of the deer hunting experience: a cluster analytic study. Journal of Leisure Research 10(4): 271-287.
- Knopf, R.C. 1984. A Recreation Manager's Guide to Understanding River Use and Users. USDA Forest Service General Technical Report WO- 38.
- Knopf, R.C. and J.D. Barnes. 1980. Determinants of satisfaction with a tourist resource: a case study of visitors to Gettysburg National Military Park. Pages 217-233 in: Tourism Marketing and Management Issues. Washington D.C.: George Washington University.
- Manfredo, Michael J., B.L. Driver, and Perry J. Brown. 1983. A test of concepts inherent in experience based setting management for outdoor recreation areas. Journal of Leisure Sciences 15(3): 263-283.
- Viriden, Randy J. and Richard C. Knopf. 1989. Activities, experiences and environmental Settings: a case study of recreation opportunity spectrum relationships. Journal of Leisure Sciences 11(3): 159-176.

Yuan, Michael S. and Douglas McEwen. 1989. Test for campers' experience preference differences among ROS setting classes. Journal of Leisure Sciences 11(3): 177-186.

REFERENCES

Cooksey, Ray W. Date Unknown. Comparisons of Psychological Outcome Scales With Full Versus Core Item Representations for Core-Item Adequacy. Ft. Collins, CO: Rocky Mountain Forest Range Experiment Station (Mimeographed).

Crompton, John L. and Charles W. Lamb. 1986. Marketing Government and Social Services. New York: John Wiley and Sons.

Driver, B.L. 1977. Item Pool for Scales Designed to Quantify the Psychological Outcomes Desired and expected from Recreation Participation. Ft. Collins, CO: Rocky Mountain Forest Range Experiment Station (Mimeographed).

Driver, B.L. 1983. Item Pool for Scales Designed to Quantify the Psychological Outcomes Desired and Expected from Recreation Participation. Ft. Collins, CO: Rocky Mountain Forest Range Experiment Station (Mimeographed).

Driver, B.L. 1976. Toward a better understanding of the social benefits of outdoor recreation participation. Pages 163-189 in: Proceedings of the Southern States Recreation Research Applications Workshop. USDA Forest Service General Technical Report SE-9.

Manning, Robert E. 1986. Studies in Outdoor Recreation Search and Research for Satisfaction. Oregon State University Press; Corvallis, Oregon.

Norusis, Marija J. and SPSS Inc. 1990. SPSS Advanced Statistics User's Guide. Chicago: SPSS, Inc.

Nunnally, Jum C. 1978. Psychometric Theory. McGraw Hill Book Co.; New York

Rosenthal, D.H., D.A. Waldman, and B.L. Driver. 1982. Construct validity of instruments measuring recreationists' preferences. Leisure Sciences 5(2): 89-108

Tinsley, Howard E.A. 1984. The psychological benefits of leisure counseling (i.e. participation). Society and Leisure. 7:125-140.

Tinsley, Howard E.A., Richard A. Kass, and B.L. Driver. 1981. Reliability and concurrent validity of the recreation experience preference scale. Educational and Psychological Measurement 41.

APPENDIX F: Market Segmentation Analysis

Factor Analysis of REP Items

To reduce the 31 REP items to a few underlying dimensions of visit motivation, a factor analysis, using principal components method of extraction, was done. Factor analysis is a technique used to identify a small number of factors that can be used to represent sets of many interrelated variables, or items. The assumption is that the factors are the underlying dimensions that the items are measuring, and any correlation between items is a result of their sharing a common factor. In this case, it is assumed that the 31 REP items are observable variables that together measure some more global dimensions (factors, which we will call visit-benefit factors) of benefits sought in visiting MORA. (See Appendices of MORA 1990 Visitor Survey for further discussion of factor analysis and treatment of missing data.)

The factor analysis results are displayed in Table F.1. Factor loadings are a measure of the degree to which a variable is related to a factor. Numbers greater than 0.50 indicate strong relationships. Twenty-eight of the REP items loaded on all factors. Three items were eliminated because their loadings were less than 0.50. The first visit-benefit factor, labeled 1 - Escape/Rest/Introspection, is composed of the first 9 items in Table F.1. Five additional factors were derived: 2 - Achievement/Risk Taking/Creativity, 3 - Nature/Learning/ Scenery, 4 - New People/Telling Others, 5 - Family, and 6 - Friends.

Six visit-benefit factor scales were created by taking the mean of a each respondent's rating (ranging from 1 for not important to 5 for extremely important) of the items making up the six factors. The reliability of each scale (the degree to which each scale yields the same results over repeated uses) was calculated. Cronbach's alpha, a commonly used measure of reliability for which an alpha of .50 is considered the minimum acceptable level of reliability, was used. Factor one had an alpha of .89, factor two was .87. Alpha's of .75, .60, .83 and .68 were found for factors three through six, respectively. Each of these indicate good reliability.

TABLE F.1. PATTERN MATRIX OBTAINED FROM FACTOR ANALYSIS OF RECREATION EXPERIENCE PREFERENCE ITEMS

FACTOR 1: Escape/Rest/Introspection
 FACTOR 2: Achievement/Risk taking/Creativity
 FACTOR 3: Nature/Learning/Scenery
 FACTOR 4: New people/Telling others
 FACTOR 5: Family
 FACTOR 6: Friends

Item	Factor					
	1	2	3	4	5	6
	<u>Factor Loadings</u>					
Experiencing tranquillity	.77	.17	.25	.06	.03	.09
Getting away from demands of life	.70	.08	.13	.11	.07	.16
Experiencing elbow room	.69	.31	.21	.05	.00	.14
Releasing/reducing tension	.69	.23	-.02	.03	.07	.08
Experiencing solitude	.68	.28	.19	-.09	.02	-.03
Relaxing physically	.65	.02	.17	.21	.18	.05
Thinking about personal values	.60	.31	.11	.30	.10	.07
Being on your own	.59	.42	.11	.04	-.07	-.14
Growing and developing spiritually	.54	.30	.19	.20	.12	.12
Developing your skills and abilities	.15	.76	.11	.00	-.03	.09
Learning what you are capable of	.27	.76	.13	.22	.05	.08
Gaining self confidence	.29	.70	.17	.19	.07	.03
Taking risks	.16	.68	.02	.13	-.09	.11
Using your equipment	.12	.67	.01	.00	-.03	.05
Being in control of things that happen	.37	.56	.01	.28	.06	.03
Being creative	.33	.55	.16	.27	.12	.06
Experiencing new and different things	.09	.20	.74	.15	.13	.03
Learning about nature	.23	.21	.71	.17	.12	.02
Viewing the scenery	.22	-.11	.67	.08	-.04	.13
Being close to nature	.44	.12	.61	-.06	.16	.08
Observing other people	.08	.06	.01	.71	-.03	.03
Talking to new people	.16	.16	.16	.69	.00	.09
Telling others about the trip	.07	.14	.29	.60	.06	.19
Doing something with family	.07	-.06	.11	.01	.90	.02
Bringing family closer together	.23	.05	.12	.07	.87	.09
Being with friends	.12	.11	.08	.13	.01	.83
Being with others who enjoy the same things	.13	.15	.12	.16	.10	.78

Cluster Analysis and Formation of Market Segments

Next, a cluster analysis was performed to identify groups of park visitors with similar importance scores on the six visit-benefit factors. Cluster analysis is a statistical technique that searches for homogeneous groups of objects or cases based on selected characteristics. Agglomerative hierarchical cluster analysis was used. The first step in this type of cluster analysis involves finding the two most similar cases, based on their visit-benefit factor scores, and combining them into a cluster. Next, the third case is either added to the first cluster, or combined with another case to form a second cluster. At each successive step, a case is either added to an existing cluster or clusters are combined to form new, larger clusters. (See Appendices of MORA 1990 Visitor Survey for further discussion of cluster analysis.)

Cluster analysis of the park visitors based on the six visit-benefit factors resulted in four segments. (A fifth cluster containing only one case was also found. That case was eliminated from further analysis). These clusters can be thought of as groups of people who have relatively homogeneous motives for visiting the Park. "Motives" for visitation are equivalent to the psychological outcomes (benefits) that are measured by the REP items. The mean scores on each factor for the four segments are presented in Table F.2. They range from 1.15 to 4.35 out of possible range of 1 for not important to 5 for extremely important.

The scores are discussed in the following section, which profiles each segment based on benefits sought in visiting MORA and other selected characteristics.

TABLE F.2. CLUSTER ANALYSIS OF REP FACTORS: MEAN FACTOR SCORES AND NUMBER OF CASES FOR EACH SEGMENT

Items	Segment			
	1	2	3	4
	<u>Mean Factor Score</u>			
Escape/ rest/ introspection	3.36	1.71	2.63	3.94
Achievement/ risk taking/ creativity	2.34	1.15	1.57	3.11
Nature/ learning/ scenery	3.90	2.87	3.74	4.36
New people/ telling others	1.94	1.36	1.73	2.63
Family	1.28	1.35	3.65	4.12
Friends	3.17	2.09	2.75	4.19
Number of cases	196	248	972	160
Percent of total sample	12%	16%	62%	10%

Description of Market Segments

We see from the fact that 62% of the sample is in cluster three that a large proportion of visitors have similar outcomes they hope to achieve in the process of the MORA visit. This group of people most importantly visit Mt. Rainier to experience nature, to learn and to view scenery. They also seek to share these outcomes in a familial context. These people rate achievement, risk taking, and creativity very low in importance. Meeting new people and telling others about the experience at MORA also rate low. These visitors are most likely to be married and accompanied by children; 83% of the visitors accompanied by children are in cluster three.

Cluster one includes 12% of the visitor sample. These people cite nature/learning/viewing scenery as their most important motives in the decision to visit the Park, and in this regard, are very similar to those in cluster three. The people in cluster one, however, rate escape/rest/introspection as much more important than those in cluster three. They seek to share these experiential outcomes with friends; motives pertaining to family interaction rate very low with this group. These visitors are most likely to visit the park alone, the least likely to have children, the highest educated, and the most likely to be local residents. Almost all technical mountain climbers in the sample were either in cluster one or four.

Cluster two is comprised of 16% of the respondents. The most striking thing about these people is that compared to the other clusters, they don't rate

any outcome for visiting the park very high. The highest rated factor was nature/learning/scenery but even this was significantly lower than the other three clusters. All other psychological outcomes were rated relatively low. These visitors are most likely to be from outside the state of Washington, more likely to be over 60 and retired, more likely to be on their first visit, and on average stay in the park for a shorter period of time. Seventy-six percent of this group stay in the park less than six hours.

Cluster four (10% of the visitor sample) is the logical opposite of cluster two. These people on average rate each of the motive categories higher than their counterparts in other clusters. Apparently, these visitors have multiple objectives in visiting Mt. Rainier. The lowest motive category rating for this group is meeting new people and telling others about the experience but even this score is higher than that received by the other clusters. These people were least likely to be on their first visit, and less educated than the people from other clusters

In summary, we see that members of each cluster rate nature/learning/scenery higher than the other categories. This is a primary motivation for park visitation that runs across all four visitor groups. The groups are distinguished by: (1) the generally indifferent attitudes of those in cluster two; (2) the multiplicity of relatively high ratings across all of the motive categories by those in cluster four (compared to the other clusters in which one to three factors dominate the importance scores); (3) the low importance of family interaction

and the relatively high importance of escape/rest/introspection in cluster one and (4) the paired importance of nature/learning/scenery and family interaction to segment three respondents.



As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environment and cultural values of our national parks and historical places, and providing for enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interest of all our people. The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under US administration.