

Surveys of Visitors to Ross Lake National Recreation Area:
State Route 20 Corridor User Survey and Ross Lake User Survey

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Technical Report NPS/PWR/PNWCESU - 2007/03
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Preface

Research conducted in the summer of 2005 at Ross Lake National Recreation Area is presented in this report. The Protected Area Research Unit at the University of Washington administered the research project. It was proposed by North Cascades National Park Complex and funded by the Skagit Environmental Endowment Commission and the Pacific Northwest Cooperative Ecosystems Studies Unit. The general purpose of the research was to collect visitor information beneficial to the park planning efforts and focused on two user groups: State Route 20 corridor users and Ross Lake users.

The first section of this report describes the methods and results from the State Route 20 Corridor User Survey. The contact sheet and mail questionnaires used in this study are included in Appendix A. The second section describes the methods and results for the Ross Lake User Survey. The contact sheet and mail questionnaires used in this study are included in Appendix C. The questions used in both surveys are also included in the body of the report. However, readers may benefit by reviewing the survey materials in order to familiarize themselves with the survey items and the format in which they were presented. It is anticipated that this report will be used primarily as a reference document and therefore, depending on each readers' 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 E, "How to use this report."

A third section, Recommendations for the Future, offers suggestions for future research for the park as a whole.

The detailed information for each survey or data-collection effort should prove useful to managers in many ways, including some that will only become evident in the future.

A SURVEY OF STATE ROUTE 20 CORRIDOR USERS

Corridor User Survey Highlights

Visitor Profile

The sample of visitors that completed the Ross Lake National Recreation Area (ROLA) Corridor User Survey, which included no one younger than 18, consisted of 54% males. The average age of visitors was 48. The ages of most visitors (77%) were distributed evenly between age 30 and 64. Incidental visitors were significantly older (50 years) than intentional visitors (46 years). Visitors were predominantly white (94%) and well-educated (average education level was equivalent to college degree and 34% had completed post-graduate work). Asian was the second highest race represented among visitors (3.7%), and only 2% of visitors indicated being of Hispanic or Latino ethnicity. The racial make-up of intentional and incidental visitors did not differ, although incidental visitors had significantly lower educational levels than visitors for whom ROLA was one of several destinations (15.7 vs. 16.5 years, respectively).

Most parties were families (68%) and were not part of a larger group (95%). Visitors most commonly traveled in groups of two (51%), three (12%) or four (15%). Twenty-nine percent of parties included children under age 18. Parties for whom ROLA was a primary destination were more likely to include children under age 18 (45.2%) than parties for whom ROLA was one of several reasons or not a reason for their trip (24.5% and 22.2%).

Although visitors to ROLA traveled from all over the world, visitors were most commonly residents of WA (62%) followed by Other U.S. states (30%). Visitors for whom ROLA was one of several destinations were less likely to be from WA (47%) and more likely to be from Other U.S. states (42%).

The number of trips to ROLA in the last three years (including the trip they were contacted) varied from 1 to over 20 trips ($M = 2.6$ trips), however for 63% of visitors this trip was their first to ROLA.

Trip Characteristics

The primacy of visiting Ross Lake NRA as a reason for the trip differed for visitors. For 41% of visitors visiting ROLA was not a reason for their trip although they did stop at ROLA (i.e., these visitors were incidental visitors). For 26% of visitors ROLA was the primary reason for their trip and for 33% visiting ROLA was one of several reasons for their trip.

Most visitors came by auto (65%). Motorcyclists made up 8% of incidental visitors and 6% of visitors for whom ROLA was one of several destinations. No visitors for whom ROLA was a primary destination came by motorcycle.

Visitors were most likely to drive West to East through the park (48%) followed by driving a loop that starts/ends to the west of the park (29%) and driving East to West through the park (19%). Visitors for whom ROLA was the primary reason for their trip were more likely to have driven a loop pattern starting to the west of the park (70%) whereas the other two groups were more evenly distributed among driving through the park (in either direction) or driving a loop starting to the west.

State Route 20 Corridor User Survey Highlights

Visitors were more likely to be day (61%) than overnight visitors (39%). Incidental visitors were the least likely to stay overnight (16%) and visitors for whom ROLA was the primary destination were the most likely (68%). Almost two-thirds (63%) of all visitors who stayed overnight, spent 1 or 2 nights and 92% of overnight visitors spent between 1 and 4 nights. Of visitors who did not stay overnight, visitors for whom ROLA was the primary destination stayed 4 hours while incidental visitors stayed 2.4 hours. The average for all visitors was 3.0 hours.

Incidental visitors engaged in fewer activities than did other visitors. The most common activities engaged in by incidental visitors and visitors for whom ROLA was one of several reasons for their trip were viewing lakes (81.7% and 82.6%), taking photos (67.2% and 86.8%), and driving around viewing scenery (66.7% and 80.9%). Visitors for whom ROLA was the primary reason for their trip most frequently engaged in taking walks/hikes (80.6%), viewing lakes (79.0%), and viewing wildflowers/vegetation (75.8%).

When asked to specify the activity that was most important to their enjoyment of the park, visitors gave a diverse array of responses, and these varied for the three groups. The 3 most important activities for intentional visitors were camping overnight in car/drive-in campground, taking walks/day-hiking, and driving around viewing scenery. The 3 most important reasons for incidental visitors were driving around viewing scenery, viewing lakes, and taking walks/hikes.

Incidental visitors reported stopping at fewer locations and they were more likely to stop at overlooks and less likely to stop at many of the other sites than intentional visitors.

Intentional visitors were more likely to take walks than incidental visitors (72% and 63% vs. 35%). However, for people who took walks the number and length of the longest walk did not differ.

Overall trip experience was rated as perfect by 10% of visitors, excellent by 46% of visitors, and very good by 31% of visitors. Less than 2% of visitors rated their overall experience as fair or poor. Visitors for whom ROLA was a primary reason for their trip had higher overall trip satisfaction than visitors for whom ROLA was one of several reasons or incidental visitors.

Facilities and Programs

Incidental visitors were half as likely as intentional visitors to seek information about ROLA prior to their trip (23% vs. 58% and 54%). The top three sources from which information was sought were 1) National Park Service park internet/website, 2) travel guide/tour books, and 3) National Park Service maps/brochures.

Overall visitors for whom ROLA was a primary destination had the highest knowledge levels of ROLA facilities and programs. Of the various facilities and programs, people were most likely to know of North Cascades Visitor Center (83%) followed by Seattle City Light information center in Newhalem (53%). Knowledge of many of the remaining sites was relatively low with 7 facilities/programs having fewer than 20% of visitors knowing about them.

Awareness level of Environmental Education programs at North Cascades Institute were highest for visitors for whom ROLA was a primary reason (47%) and they expressed greater interest in participating in these programs than other visitors. Overall interest in these programs was low with 52% of visitors reporting not at all interested and 24% reporting being slightly interested.

Visitors were asked about interest and participation in four types of ranger programs. Visitors were most likely to have informal contact with rangers (25%) followed by participating in evening campground activities (15%), daytime programs (4%), and guided walks (3%). Visitors for whom ROLA was a primary reason for their trip were most likely to participate in all four

types of ranger programs (participation ranged from 7.6% to 38.3%) followed by visitors for whom ROLA was one of several reasons for their trip (participation ranged from 2.0% to 26.5%).

Interest in participating in the four types of ranger programs was lowest for incidental visitors with average ratings equivalent to “slightly interested”. Intentional visitors’ average ratings were closer to “moderately interested”.

For all visitors, the facilities/programs with the highest visitation rates were 1) North Cascades Visitor Center (62%), restrooms at Diablo Overlook (37%), Gorge Overlook Trail (24%), and Newhalem area trails (23%). Although these same locations were the most frequently visited for all three groups, incidental visitors were less likely to visit facilities and programs than intentional visitors. For example, North Cascades Visitor Center was the most visited site for all three groups, however 47% of incidental visitors stopped at North Cascades Visitor Center compared to 72% of intentional visitors.

Average satisfaction ratings for the different facilities and programs were approximately halfway between moderately satisfied (scale rating = 3) and very satisfied (scale rating = 4). Incidental visitors reported lower satisfaction with North Cascades Visitors Center (M = 3.5) than intentional visitors (M = 3.8).

Trip Motivations

Twelve of the fifteen trip motivations differed by destination type. Consistent with the nature of their trips, incidental visitors overall rated more trip motivations lower in importance than either of the intentional visitor groups.

“Viewing scenery” was the trip motivation receiving the highest average importance ratings for each group and was rated even as “very important” by incidental visitors. “Being close to nature” received the second highest average importance rating, although the ratings ranged from moderately to very important for incidental visitors to slightly more than very important for visitors for whom ROLA was the primary reason for their trip.

“Getting away from the usual demands of life” and “experience tranquility” were both very important trip motivations for both groups of intentional visitors.

“Develop skills and abilities” and “talk to new and varied people” were the two trip motivations with the lowest average importance ratings for each group.

I. INTRODUCTION AND METHOD

Ross Lake National Recreation Area (NRA) is part of North Cascades National Park Service Complex.¹ Ross Lake NRA contains a portion of State Route 20 (a.k.a. North Cascades Highway), the primary East-West road through the complex. For many visitors, driving the North Cascades Highway, with or without stops at interpretive or scenic waysides, is the extent of their trip to “North Cascades National Park.” Consistent with park visitation guidelines, people who drive along State Route 20 and make at least one stop within the park boundaries were considered a visitor for this project.

Ross Lake NRA also contains Ross, Diablo, and Gorge Lakes. These lakes are the result of hydroelectric dams and are the primary lakes in the NRA. Ross Lake extends from the highway corridor to the Canadian border. Having no road connection, Ross Lake is relatively inaccessible and thus, is managed to “retain its character as the only large wild lake in the region, offering excellent opportunities for canoeing, kayaking, and fishing” (GMP, 1988). Although most land is designated wilderness, a small strip of land immediately surrounding the lake and the lake itself are not (see map). For some visitors trails leading from the lake serve as entry points to the wilderness.

Development of a recreation management plan for the Ross Lake National Recreation Area that amends the 1988 General Management Plan (GMP) began in early 2006. Information about visitors and their use of and experiences in the recreation area are integral to an effective planning process. Since the 1988 GMP, changes in park infrastructure (e.g., new visitor center, Environmental Learning Center) and visitor activities (e.g., increased rock climbing and kayaking/canoeing, less fishing) have occurred that need to be addressed in the recreation plan. Given the limited information about visitors to NOCA generally and to Ross Lake NRA specifically, a survey of Ross Lake NRA visitors was warranted. The research was proposed by North Cascades National Park Service Complex management and was funded by Skagit Environmental Endowment Commission (SEEC) and the PNW CESU.

Visitors to Ross Lake NRA fall into two primary groups: Corridor visitors and lake visitors. Corridor visitors were people who primarily drive along State Route 20 and make at least one stop within the park boundaries. Lake visitors are people who visit the lakes. It was possible that some lake visitors may also stop along the corridor. Because the types of experiences differ substantially for these two groups, a survey was developed for each group. These surveys will be referred to as the Corridor User Survey and the Lake User Survey and are reported on in separate sections.

- A Survey of State Route 20 Corridor Users
- A Survey of Ross Lake Users

Following these sections is a third section, Recommendations for the Future, that includes recommendations associated with administering research and recommendations for the content of future research.

¹ North Cascades National Park Service Complex is comprised of Ross Lake National Recreation Area, Lake Chelan National Recreation Area, and North Cascades National Park.

Corridor User Survey

The primary objectives of the Corridor User Survey was 1) to obtain general visitor and trip information of this relatively large group of Ross Lake NRA visitors, and 2) to gather information related to facilities and programs introduced since the 1988 GMP including awareness, use, and satisfaction. Information obtained from this survey is useful for management planning in a variety of ways including 1) knowing who your current visitors are and what activities they engage in, 2) determining the degree new facilities are used and park users' satisfaction with them, and 3) identifying other potential users of different park offerings.

Survey design and development

The survey procedures were developed based on discussions with park managers and staff and included two primary components: 1) An on-site questionnaire and 2) a mail questionnaire. The on-site questionnaire collected general demographic and party data, and contact information for follow-up mailings. The mail questionnaire included questions about trip planning, trip motivations, and trip experiences including activities and satisfaction with various park offerings. (See Appendix A for questionnaires).

In addition to the survey component, a secondary component involved the counting of vehicles (parties) entering the following corridor sites: Diablo Overlook, the North Cascades Visitor Center, and Gorge Overlook. These counts were made on days when survey workers were making contacts for the survey component of the project and consisted of tallying the number of vehicles that entered the site every half hour.

Sampling and contact procedures

The sampling plan provided for a random sample of vehicles² (parties) to be contacted. For questions related to the party (e.g., party size, locations visited during trip), the results represent the population of parties with members over the age of 17 who stopped at the six specified sites along the Hwy 20 corridor between June 24, 2005 and September 4, 2005. For questions related to the individual (e.g., age, number of prior visits, attitudes toward management policies), the results represent the population of visitors over the age of 17 selected to represent their party that stopped at the six specified sites along the Hwy 20 corridor between June 24, 2005 and September 4, 2005.

The six sampling locations were selected to provide a wide range of corridor users and are expected to capture visitors who only pulled into the Diablo Overlook as they drive through to those who camped overnight or day hiked from our selected locations (see Table 1.1 for locations). The sample sizes for each location were based on visitation data provided by park staff for each location. These data did not adjust for people who visited more than one location (e.g., the Diablo Overlook and the Visitor Center). Because Diablo Overlook and Newhalem Creek Campground/Visitor Center had significantly higher visitation rates, sample sizes for these locations were reduced while increasing sample sizes for areas with lower visitation rates. North Colonial Campground experienced considerable damage during the 2003 floods and was closed throughout the 2005 field season.

² "Vehicles" is used to include non-commercial trucks, cars, RVs, motorcycles, buses, and bicycles.

I. Introduction and Method

The sampling schedule sampled more weekdays than weekend days however, more visitors were sampled during weekend days than weekdays as visitor count data collected during the first 10 days of data collection indicated a ratio of 1.52 weekend visitors for every weekday visitor at Diablo Overlook (the location with the most count data collected). Table 1.1 summarizes the number of visitors and days sampled by contact location. It should be noted that the low number of weekend days sampled at Goodell Creek Campground ($n = 4$) results in lower reliability of the data to represent the intended group. Additionally Table 1.1 shows the ratio of weekend to weekday visitors sampled and the ratio based on vehicle count data for the entire sampling season for North Cascades Visitor Center and Diablo Overlook that had sufficient observations to provide reliable estimates.

Table 1.1. Summary of Days and People Sampled by Location

	Number of People Sampled			Number of Days Sampled			Ratio of weekend to weekday	
	Wkday	Wkend	Total	Wkday	Wkend	Total	Sample	Vehicle Count
Visitor Center	84	98	182	12	9	21	1.56	1.20
Diablo Overlook	112	148	260	13	12	25	1.43	1.84
Gorge Overlook	19	30	49	6	7	13	1.35	0.75
Colonial Creek Campground	36	33	69	7	7	14	.92	na
Newhalem Campground	51	32	83	13	7	20	1.17	na
Goodell Campground	10	9	19	6	4	10	1.35	na
na – This information was not available for these groups.								

This sampling plan had the potential to result in a biased sample because people were not representatively sampled across contact point, day of week, or party size. First, if people contacted at different locations differed in their responses then aggregating across contact point would not accurately represent the population because the proportion of people contacted at each site was not reflective of the actual proportion of the population visiting each site. Statistical analyses were performed to examine whether respondents contacted at the different locations differed on each research finding in this report. Whenever significant effects of contact point were observed, they are reported. When contact point is not discussed, readers can assume that analyses found no significant effect of residence.

Second, the proportion of people contacted on weekdays and weekends did not reflect the actual proportion of weekend to weekday visitors (see Table 1.1). As respondents contacted on different days of the week (weekend versus weekday) may also differ in their responses, statistical analyses were performed examining the effect of day of week (weekend vs. weekday) for each research finding. Statistically significant differences were observed in 20 of the 136 tests. Given the large number of tests performed, these differences may be due to chance alone. In fact, these

effects were not significant when the Bonferroni correction³ for multiple comparisons was used. Should these effects be reliable (real), the error in estimating these variables should be small. Data obtained in the vehicle count component of the project provided the best estimate of the ratio of weekend to weekday vehicles and was used to weight the data to reflect this ratio. A comparison of these weighted data with the unweighted data revealed only minimal differences that would not alter conclusions. Thus, there was no evidence that day of week contacted biased our sample, and the data presented were not weighted for day of week contacted.

Third, selecting one person from each vehicle (i.e., party) results in a representative sample of parties for questions related to the party (e.g., type of party, length of stay, etc.), but a sample that over-represents small parties for questions related to the individual (e.g., age, overall trip satisfaction, etc.). If people from small parties differ from people from large parties, then data from questions related to the individual will be biased. Statistical analyses were performed examining the effect of party size for each research finding related to individuals. Statistically significant differences were observed in 18 of the 83 tests. Given the large number of tests performed, these differences may be due to chance alone. In fact, only six of these effects were significant when the Bonferroni correction⁴ for multiple comparisons was used. The findings for these variables are reported in the body of the report when the particular question is discussed. When party size is not discussed, the reader should assume there was no effect of party size.

Survey administration

During the survey periods, survey workers contacted visitors at specified access sites along SR 20 during randomly selected blocks of time. Cars entering each access site after n -minutes had passed were stopped and one party member asked to participate in the survey. An easy procedure that generally does not introduce bias into the sample selection process is to select the party member in the car who has had the most recent birthday. The person with the most recent birthday was asked specifically to complete the on-site and mail questionnaires. Refusals were recorded and less than 10% of people refused to participate. When a visitor refused, the next car was stopped and the party member with the most recent birthday was asked to participate. The on-site questionnaire took approximately 2 minutes to complete. Respondents completed the on-site questionnaire and returned it to the survey worker. Respondents were then given the mail questionnaire and return envelope to complete at the end of their trip.

Administration of mailings

Protected Area Social Research Unit personnel in Seattle, WA administered mailings. The names of visitors agreeing to participate were received electronically within one week and added to the database that served as the basis for administering the mailings. All people who provided a name and address on the on-site questionnaire were mailed a thank you/reminder letter about one week after they received the questionnaire. Non-respondents received a second reminder letter and an additional copy of the questionnaire about 14 days after the first reminder. For those who did not respond to the second reminder, a third letter and yet another copy of the questionnaire were sent

³ The Bonferroni correction for multiple comparisons corrects for the increased likelihood of obtaining a significant result when many related comparisons are made. The per comparison significance level is obtained by taking .05 divided by the number of comparisons.

⁴ The Bonferroni correction for multiple comparisons corrects for the increased likelihood of obtaining a significant result when many related comparisons are made. The per comparison significance level is obtained by taking .05 divided by the number of comparisons.

I. Introduction and Method

about 14 days after the second reminder. Of the 666 questionnaires mailed, 9 were returned due to incorrect or out-of-date addresses. The final response rate was 73.2 percent, with 481 out of 657 questionnaires completed and entered in the data file.

Peak versus shoulder season visitors

Originally, people who visit on weekends before and after the peak season (shoulder season) would be contacted. However, budget constraints resulted in visitors being contacted only on the weekend prior to the peak season. A total of 85 visitors were contacted during the shoulder season weekend prior to the peak season and allowed a comparison of shoulder season with peak season visitors. Statistical analyses were performed examining whether shoulder season visitors and peak season visitors differed on each research finding. Statistically significant differences were observed in 8 of the 136 tests. Given the large number of tests performed, these differences may be due to chance alone. In fact, these effects were not significant when the Bonferroni correction⁵ for multiple comparisons was used. Thus, there was no evidence that shoulder season visitors differed from peak season visitors. It should be noted that the single weekend sample represents a very limited sample of shoulder season visitors. A sample representing more of the shoulder season may reveal differences between peak and shoulder season visitors.

Sub-group analyses

Conversation with park management resulted in the identification of analyses comparing different sub-groups of park visitors to be performed. These analyses included a comparison of: 1) local and non-local park visitors, 2) intentional and incidental park visitors, and 3) visitors who sought information and those who did not. The findings of these analyses are presented after the general findings. However, the general findings will note where significant differences were observed and refer the reader to the appropriate section(s).

Statistical considerations

Readers not familiar with statistical analyses of survey data are encouraged to refer to Appendix E, "How to Use this Report". *Consistent with convention, statistical significance was set at the .05 level for analyses included in this report.* Statistical tests with *p*-values equal to or less than .05 are interpreted as indicating effects that are reliable or real (observed effects have a 5 percent or less probability of being due to chance alone). Although the analyses highlight statistically significant effects, they do not reveal whether effects have important practical implications. Some effects that fall just short of the .05 significance level may have large practical implications while other effects with high statistical significance may have no practical implications. Thus, it is important to consider both the statistical significance and the practical implications of these data.

⁵ The Bonferroni correction for multiple comparisons corrects for the increased likelihood of obtaining a significant result when many related comparisons are made. The per comparison significance level is obtained by taking .05 divided by the number of comparisons.

Limitations

The Ross Lake NRA Corridor User Survey has several general limitations that should be kept in mind when 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 Ross Lake NRA visitors who were contacted along SR 20 at the specified sites. 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 limitations that revolve around the issue of non-response (i.e., possible bias in the sample due to differences between the visitors who completed the questionnaires and those who didn't). Potential limitations associated with non-response are discussed below.

Non-response

It is mathematically possible that the people who completed both the on-site questionnaire and the mail questionnaire differed sufficiently from the people who only completed the on-site questionnaire so that the sample data do not accurately represent the population⁶. A variety of data from the on-site questionnaire provided an opportunity for the use of statistical tests to identify differences between respondents and non-respondents to the mail questionnaire. Specifically, possible differences were assessed using Chi-square tests for independence that determined whether response rates were independent of a particular visitor characteristic (using a .05 significance level). The visitor characteristics that were used in assessing possible non-response bias were party size, any children under the age of 18 in the party, type of personal group, type of larger group (if personal group was part of one), mode of transportation, direction heading into stop, direction heading when leaving stop, type of destination, gender, age, and location of residence.

For the visitor characteristics listed above, statistically significant differences in response rates were found only for age, $t(653) = -4.59, p < .001$. Respondents who returned the mail questionnaire were significantly older than respondents who did not return the mail questionnaire (50.0 vs. 43.5 years). Because it was possible that people's experiences and knowledge of Ross Lake NRA differed based on age, the impact of visitors' age was examined for each research finding in this report. Whenever significant effects of age were observed, they are reported. When age is not discussed, readers can assume that analyses found no significant effect of residence. In further analyses, these variables for which significant effects of age were observed were weighted to reflect the distribution of age in the on-site questionnaire.

Accuracy of the sample

The sampling plan provides for a random sample of vehicles⁷ (parties) to be contacted. One person from each party was selected to participate. For questions related to the party (e.g., party size, locations visited during trip), the respondent universe will be parties with members over the

⁶ No data were collected on those persons who refused to participate in any part of the study (i.e., the contact interview and the mail questionnaire) and thus, non-response analyses were not possible.

⁷ "Vehicles" is used to include non-commercial trucks, cars, RVs, motorcycles, and bicycles.

I. Introduction and Method

age of 17 who stop along the Hwy 20 corridor. For questions related to the individual (e.g., age, number of prior visits, attitudes toward management policies), the respondent universe will be persons over the age of 17 selected to represent their party that stopped along the Hwy 20 corridor.

Although questions in the survey reflected these two different universes, the number of people responding to each was the same. Thus, assuming a random sample and questions of the yes/no type in which the true occurrences of these values in the population are 50%/50%, the data from the larger sample from the contact sheet (i.e., 666 respondents) can be generalized to each of the two universes with a 95 percent assurance that the obtained or observed percentages to any item will vary no more than $\pm 3.8\%$. For questions from the contact sheet, assuming a random sample and questions of the yes/no type in which the true occurrences of these values in the population are 50%/50%, the data from the smaller sample from the mail survey (i.e., 481 respondents) can be generalized to the population of people selected to represent their party that use the corridor with a 95 percent assurance that the obtained or observed percentages to any item will vary no more than $\pm 4.5\%$.

Subject to the limitations stated previously, the authors generally believe that the data are representative of recreational visitors aged 18 or older to Ross Lake NRA who visited during the time of the survey. This confidence is based on the large sample size, the small differences in response rates for different types of visitors, and the fact that deviations from the sampling plan were relatively minor.

Conventions followed in this report

As mentioned previously, an on-site questionnaire and a mail questionnaire were used to collect the data presented in this report. These questionnaires are included in this report (see Appendix A), and it is recommended that they be reviewed before reading the body of this report. In the body of this report, each question is presented as it appeared on the questionnaire, and corresponding graphs, tables, or analyses follow it. The specific survey instrument 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.

When a chart reports data for a subset of respondents (*c.f. Figure 2.21: Number of People under Age 18 in Party*), a note describes the sub-sample included in the chart.

As noted above, the sample may be biased because the proportion of people contacted at different locations did not reflect actual visitation rates. We looked for differences in survey responses for visitors contacted at different sites. When significant effects of contact location were found, they are reported. When contact point is not discussed, readers can assume that analyses found no significant effects of this variable. When contact point differences exist, they are always reported because the overall sample data may misrepresent the individual groups of visitors.

Similarly, because of the likelihood of non-response bias due to differing response rates among respondents based on age, we looked for differences due to respondents' age. When significant effects of respondents' age were found, they are reported. When age is not discussed, readers can assume that analyses found no significant effects of this variable. When age differences exist, they are always reported because the overall sample data may misrepresent the individual groups of visitors.

Missing data for up to 10 percent of respondents to a particular question are generally not considered likely to alter the interpretation of that question. Throughout this report, few questions had more than 10 percent missing data. Exceptions are noted in the text and charts.

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

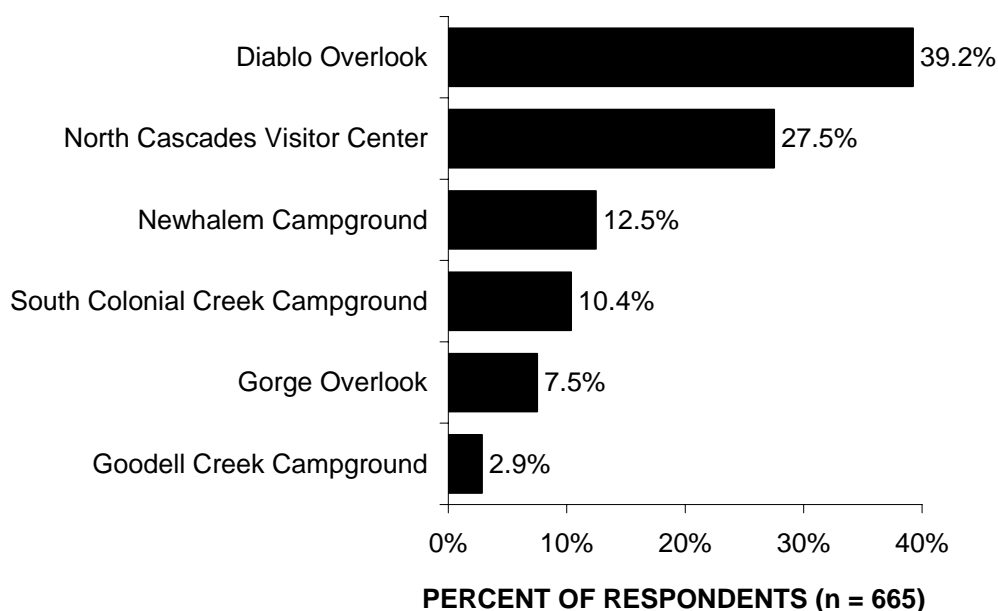
II. VISITOR PROFILE

Visitors participating in the Ross Lake NRA State Route 20 Corridor User Mail Survey were asked a series of demographic questions. Responses to these questions are used here to characterize or give a profile of, these corridor visitors.

Location Contacted and Destination Type

Respondents were contacted at six sites in Ross Lake National Recreation Area (NRS) along SR 20 and the sampling plan did not allow for a sample that represented the relative use of each area. If people or their activity varies by the sites they visit (i.e., contact point), then aggregating the responses across contact point may misrepresent the overall population of visitors. Analyses were conducted to determine if responses varied by contact point. When significant differences were observed, they are reported. An absence of a discussion of contact point should be interpreted as indicating no significant effects were found. Because the sampling plan did not reflect actual visitation proportions across the six sites, Figure 2.1 does not represent the true relative use of these areas.

**Figure 2.1. ROLA Corridor Survey
Contact Point**



Visitors also differed in the type of destination ROLA was for their trip. For some visitors ROLA was the primary reason for their trip and for other visitors ROLA was one of several reasons for their trip. Both of these groups are considered intentional visitors. There was a third group of visitors who stopped in ROLA and these were people for whom ROLA was not a reason for their trip. These visitors were considered incidental visitors and they arose from people who use SR 20, which traverses the park to cross over the Cascades Mountains. Because people with different reasons for visiting the park may differ in their planning, use, and experience of the park, analyses were done examining whether responses to the survey questions varied by type of destination (primary reason, one of several, or not a reason). Whenever significant effects of type

of destination were observed, they are reported. When type of destination is not discussed, readers can assume that analyses found no significant effect of residence.

The likelihood of visitors with different types of destinations being contacted varied by contact location, $\chi^2 (n = 641, 8) = 121.16, p < .001$ (excludes Gorge Overlook to eliminate expected frequencies less than 5). As can be seen in Table 2.1, the more central visiting ROLA was to their trip, the more likely they were to be contacted at campgrounds and less likely to be contacted at Diablo Overlook. The likelihood of being contacted at a campground decreased from 50.8% for visitors for whom ROLA was a primary reason to 27.7% for those for whom ROLA was one of several reasons and then down to 8.9% for visitors for whom ROLA was not a reason.

Table 2.1 Distribution by contact location for each type of destination.

Contact location	Type of Destination		
	Primary reason n = 169	One of several n = 220	Not a reason n = 271
North Cascades Visitor Center	26.0%	29.1%	26.6%
Diablo Overlook	16.0%	35.9%	56.5%
Gorge Overlook	7.1%	7.3%	8.1%
Newhalem Campground	26.6%	12.3%	4.1%
South Colonial Creek Campground	19.5%	13.6%	2.2%
Goodell Creek Campground	4.7%	1.8%	2.6%

Because contact location and type of destination co-varied, it was possible that some differences observed for contact point reflect differences due to the type of destination ROLA was for visitors. When possible, analyses to sort out these differences were performed and reported.

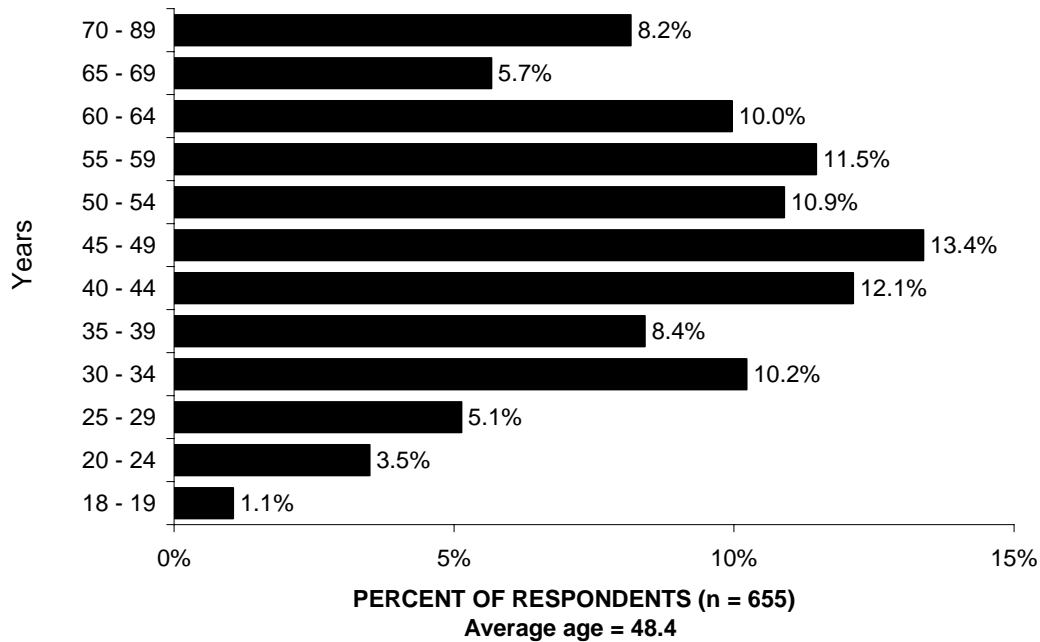
Age of respondents

Contact sheet

11. What year were you born? 19 ____

II. Visitor Profile

**Figure 2.2. ROLA Corridor Survey, Contact Sheet Q-11
Age of All Visitors Over Age 17***



*Data were weighted to reflect actual distribution of visitors across contact point.

Analyses examining the effects of type of destination and contact point on age found that although age differed by each of these variables, the effect of type of destination did not differ by contact point (i.e., the interaction between these two variables was not significant).

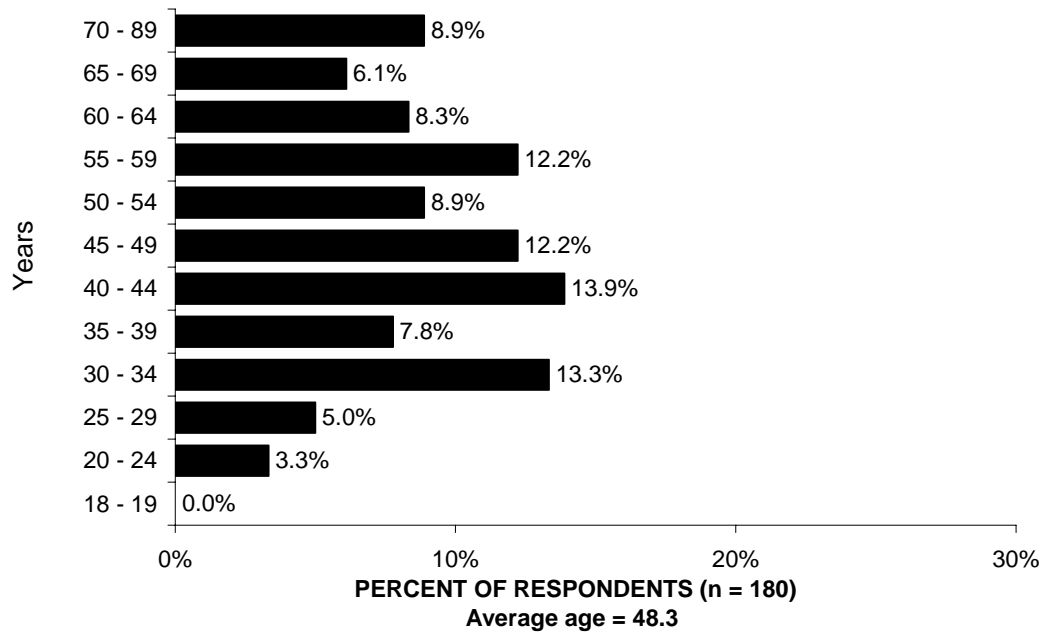
Analyses revealed that age of all visitors over age 17 differed by type of destination, $F(2, 632) = 7.06$, $p = .001$. Visitors for whom ROLA was a primary or one of several destinations were significantly younger than incidental visitors (see Table 2.2).

Table 2.2 Age of visitors for each type of destination.

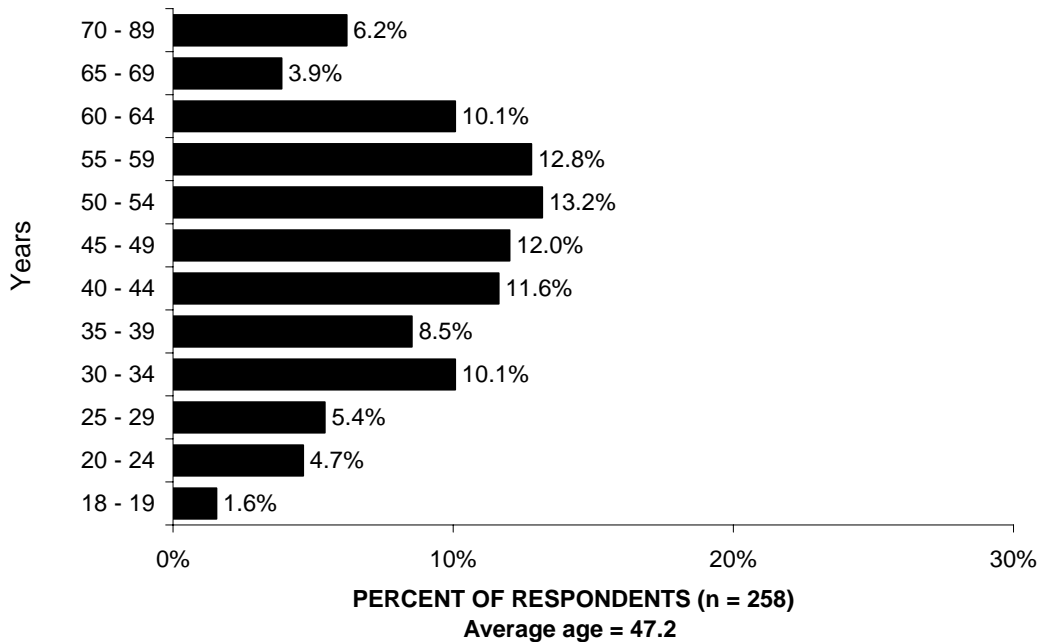
	Type of Destination		
	Primary reason	One of several	Not a reason
Age (average in years)	45.7	46.8	49.8

Analyses revealed that age of all visitors over age 17 differed by contact point, $F(5, 632) = 3.69$, $p = .003$ (see Figures 2.3 – 2.8). Post Hoc Tukey Tests revealed that visitors contacted at Newhalem campground ($M = 52.6$) were significantly older than visitors contacted at Diablo Overlook ($M = 47.2$), S. Colonial Campground ($M = 45.4$) and Goodell Creek Campground ($M = 41.4$). No other differences between contact points were found.

**Figure 2.3. ROLA Corridor Survey, Contact Sheet Q-11
Age of Visitors Over Age 17 Contacted at North Cascades
Visitor Center**

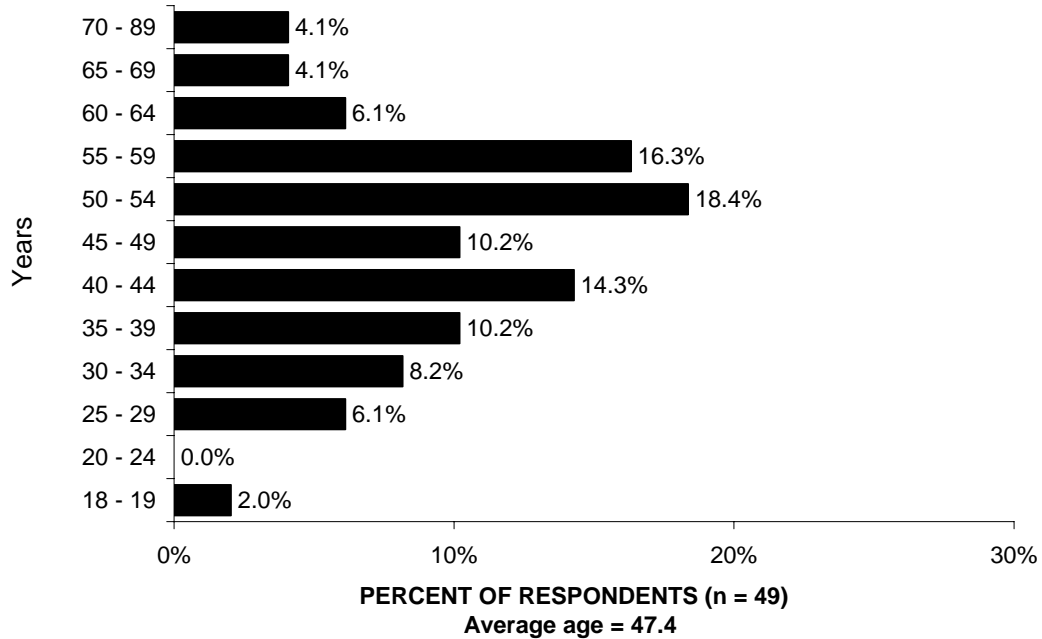


**Figure 2.4. ROLA Corridor Survey, Contact Sheet Q-11
Age of Visitors Over Age 17 Contacted at Diablo Overlook**

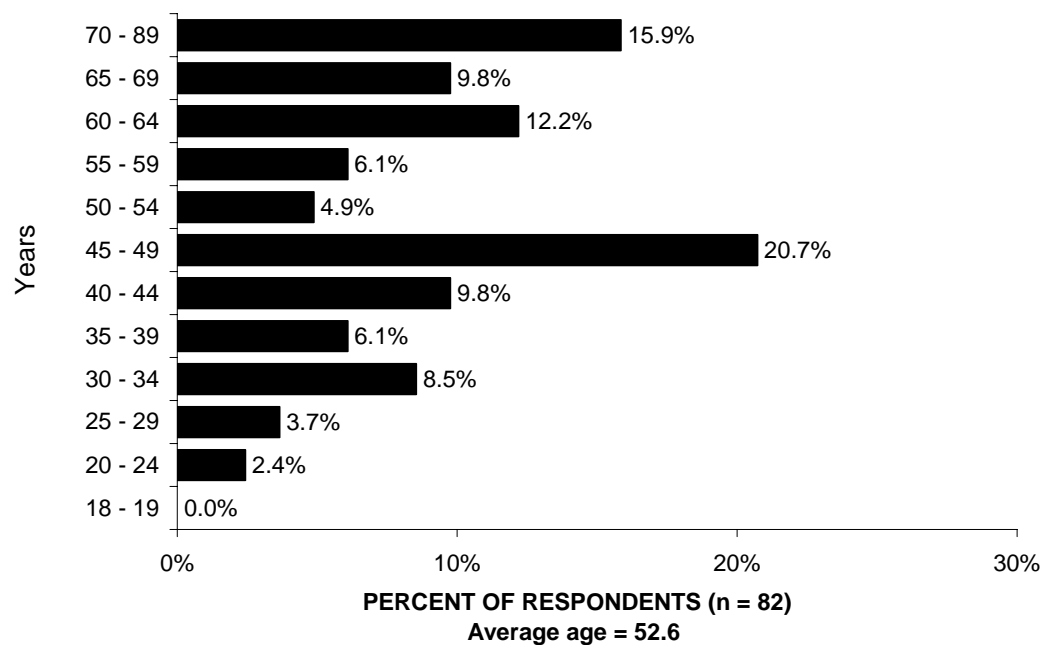


II. Visitor Profile

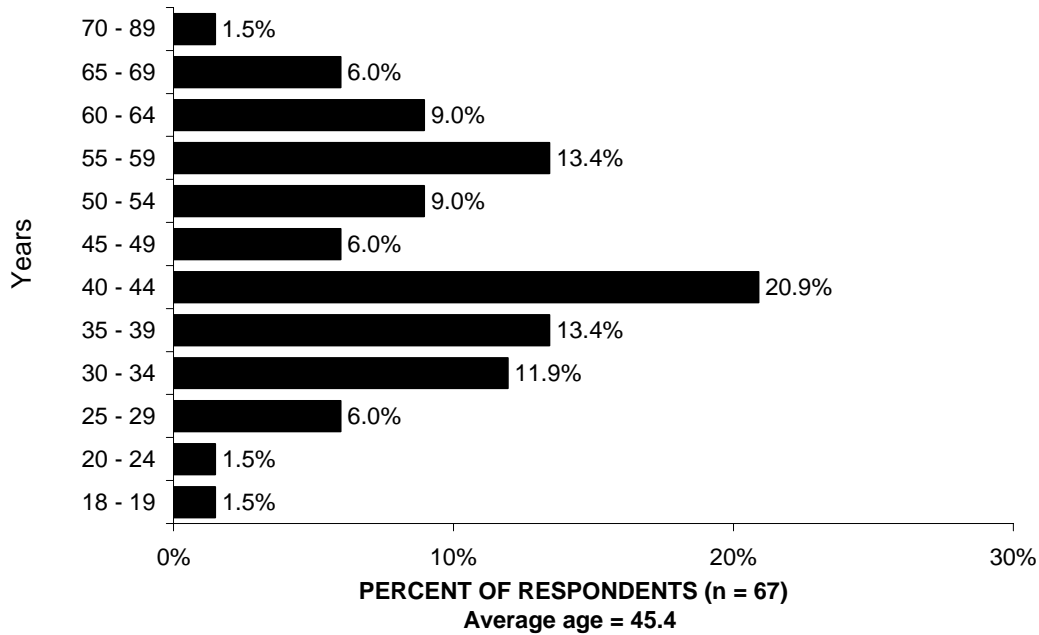
**Figure 2.5. ROLA Corridor Survey, Contact Sheet Q-11
Age of Visitors Over Age 17 Contacted at Gorge Overlook**



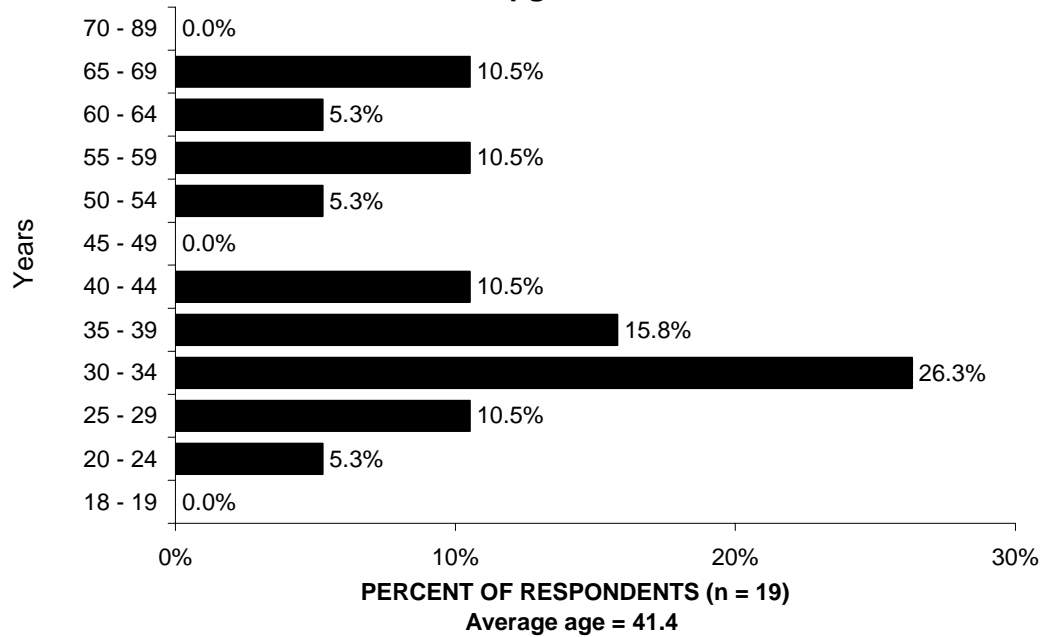
**Figure 2.6. ROLA Corridor Survey, Contact Sheet Q-11
Age of Visitors Over Age 17 Contacted at Newhalem
Campground**



**Figure 2.7. ROLA Corridor Survey, Contact Sheet Q-11
Age of Visitors Over Age 17 Contacted at S. Colonial Creek
Campground**



**Figure 2.8. ROLA Corridor Survey, Contact Sheet Q-11
Age of Visitors Over Age 17 Contacted at Goodell Creek
Campground**



II. Visitor Profile

Sex

Contact sheet Q10 and Mail questionnaire Q14

Are you: ☐ FEMALE ☐ MALE

Visitors were asked their gender on the contact sheet and on the mail questionnaire. As can be seen in Figure 2.9, 53.5% of visitors who completed the contact sheet were male whereas 47.9% of visitors who completed the mail questionnaire were male. This difference resulted from fewer men responding to the mail survey than women, although non-response analyses indicated that men and women did not differ significantly in their response rates. Another source of this difference is from women completing the mail survey for a male who was contacted (e.g., wives completing the surveys for husbands).

**Figure 2.9: ROLA Corridor Survey, Contact Sheet Q-10
Gender of Visitors Over Age 17**

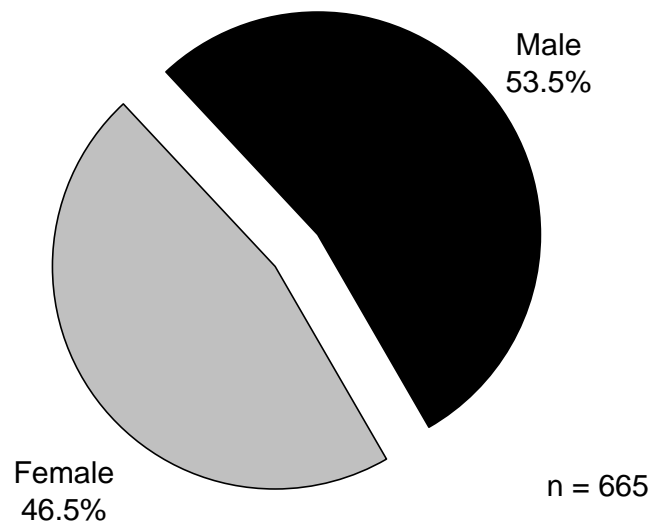
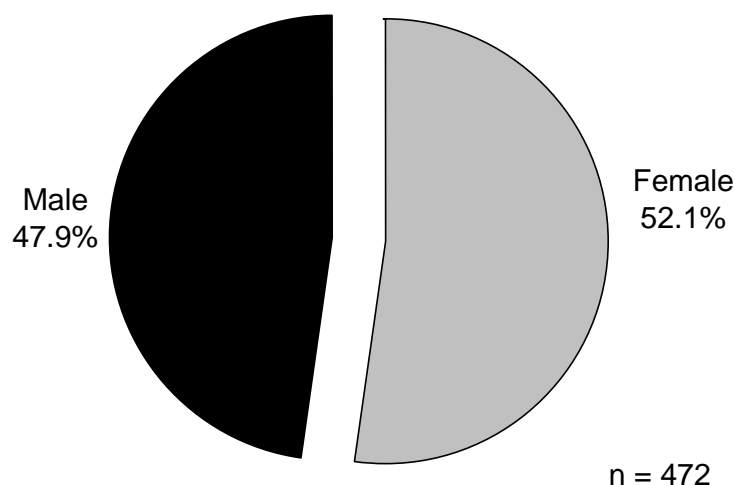


Figure 2.10: ROLA Corridor Survey, Q-14
Gender of Mail Survey Respondents Over Age 17



Residence

Contact sheet

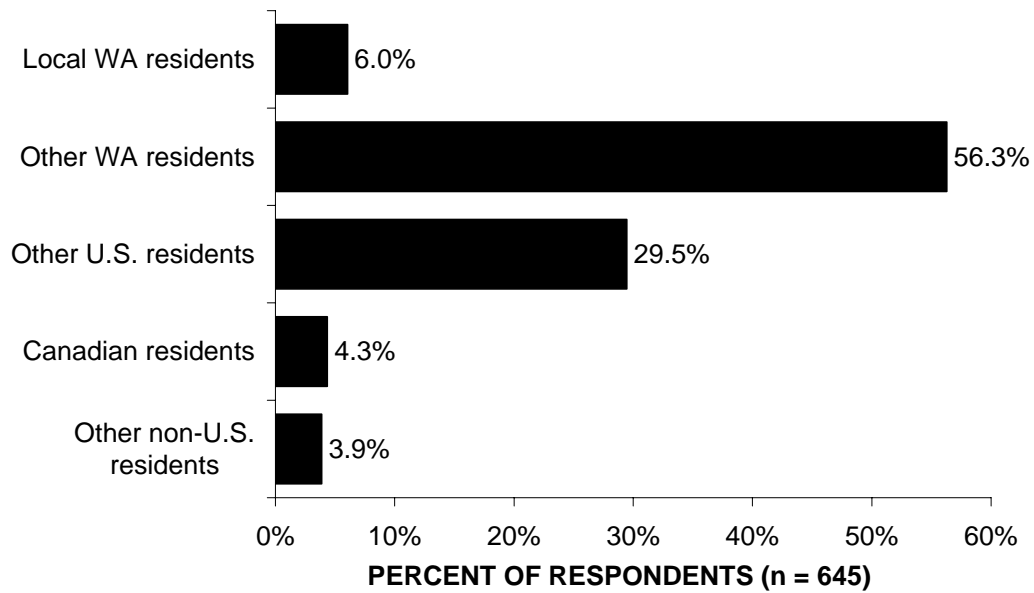
12. What is your home Zip or Postal Code? *(If you live outside of the United States, please write the name of your country.)*

Respondents' home zip code was used to classify them as local Washington residents, other Washington residents, other U.S. residents, Canadian residents, and other non-U.S. residents. Local Washington residents were defined through discussion with park staff and included the following areas: Sedro Woolley, Mt Vernon, Rockport, Marblemount, Darrington, Concrete, Burlington, Winthrop, Twisp, and Methow.

Two additional sets of analyses were conducted using residence information. First, park visitors who live locally were compared with U.S. census data to examine whether local park visitors are representative of the local population. Second, local park users, regional WA visitors, and all other visitors were compared for each variable to determine how, if at all, these groups differ in their use and experience of the park. These results are presented in Section VI. Local Visitors (see page 153).

II. Visitor Profile

**Figure 2.11. ROLA Corridor Survey, Contact Sheet Q-12
Residence of Visitors Over Age 17**



Residence of visitors differed by type of destination, $\chi^2 (n = 640, 8) = 44.92, p < .001$. Although the vast majority (89.5% to 94.5%) of visitors of each destination type were U.S. residents, visitors for whom ROLA was one of several destinations were less likely to be WA residents (47.4% vs. 78.3% and 63.8%) and more likely to be from other U.S. states (42.1% vs. 16.9% and 27.5%) than the other visitor groups (see Table 2.3). Visitors for whom ROLA was a primary destination were the least likely to be Canadian of the three groups (1.8% vs. 4.3% and 6.0%) and had the overall lowest percentage of foreign visitors (4.8% vs. 10.5% and 8.6%).

Table 2.3. Residence by Type of Destination ROLA was for Trip

Residence	Type of Destination ROLA was for trip		
	Primary reason	One of several	Not a reason
WA resident	78.3%	47.4%	63.8%
Other U.S. resident	16.9%	42.1%	27.5%
Canadian resident	1.8%	4.3%	6.0%
Other non-U.S. resident	3.0%	6.2%	2.6%

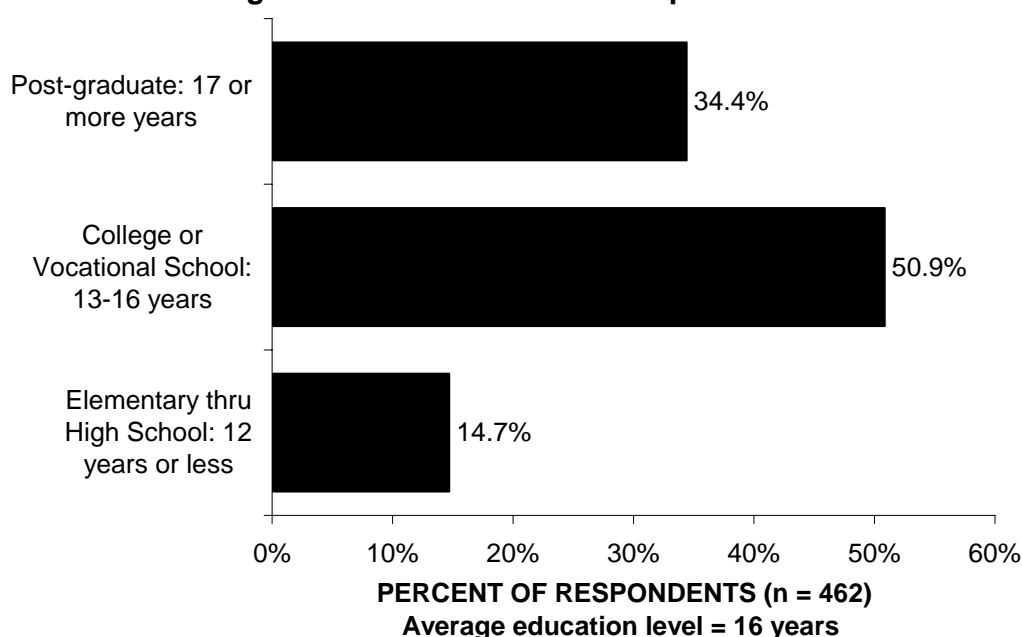
Education

Mail questionnaire

16. 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)

**Figure 2.12. ROLA Corridor Survey, Q-16
Highest Educational Level Completed**



Education level of visitors differed by type of destination, $F(2, 452) = 3.33, p = .037$ (see Table 2.4). Incidental visitors had the lowest education level ($M = 15.7$), although it was only significantly lower than visitors for whom ROLA was one of several reasons for their trip ($M = 16.5$). The education level of visitors for whom ROLA was the primary reason for their trip ($M = 16.1$) did not differ from either group.

Table 2.4 Education level for each type of destination.

	Type of Destination		
	Primary reason	One of several	Not a reason
Highest education level completed (average number of years)	16.1	16.5	15.7

II. Visitor Profile

Ethnicity and Race

Mail questionnaire

17. Are you Hispanic or Latino?

YES – Hispanic or Latino

NO – Not Hispanic or Latino

18. What is your race? (Check one or more races to indicate what you consider yourself to be)

American Indian or Alaska Native

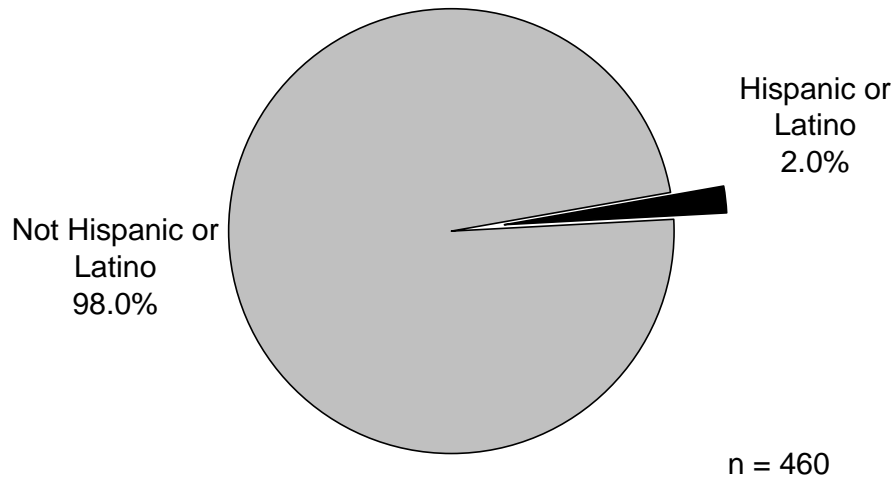
Asian

Black or African American

Native Hawaiian or other Pacific Islander

White

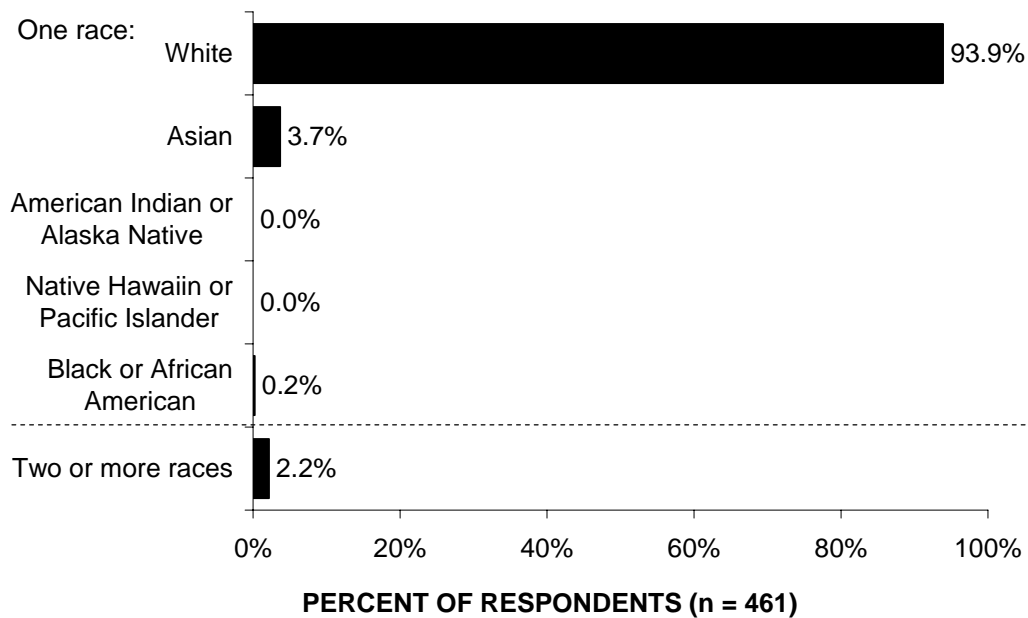
Figure 2.13: ROLA Corridor Survey, Q-17
Percent of Respondents Who Are Hispanic or Latino



In Q18, respondents were able to indicate more than one race. Figure 2.14 shows that only 2.2% of respondents indicated more than one race. The vast majority (93.9%) of respondents checked white as the single descriptor of their race.

Analyses with party size found that people who checked Asian had larger parties than people who did not check Asian ($M = 5.05$ vs. $M = 2.96$), $F(1, 457) = 13.48$, $p < .001$. Analyses with party size also found that people who did not check White had larger parties than people who checked White ($M = 5.11$ vs. $M = 2.97$), $F(1, 457) = 13.50$, $p < .001$. These findings are due to all of the people who checked Asian ($n = 18$) being Asian only (did not check White) and there being no other non-Whites. Thus, the two analyses are reflecting the same research finding.

Figure 2.14. ROLA Corridor Survey, Q-18
Race of Mail Survey Respondents



Number of trips in the past three years

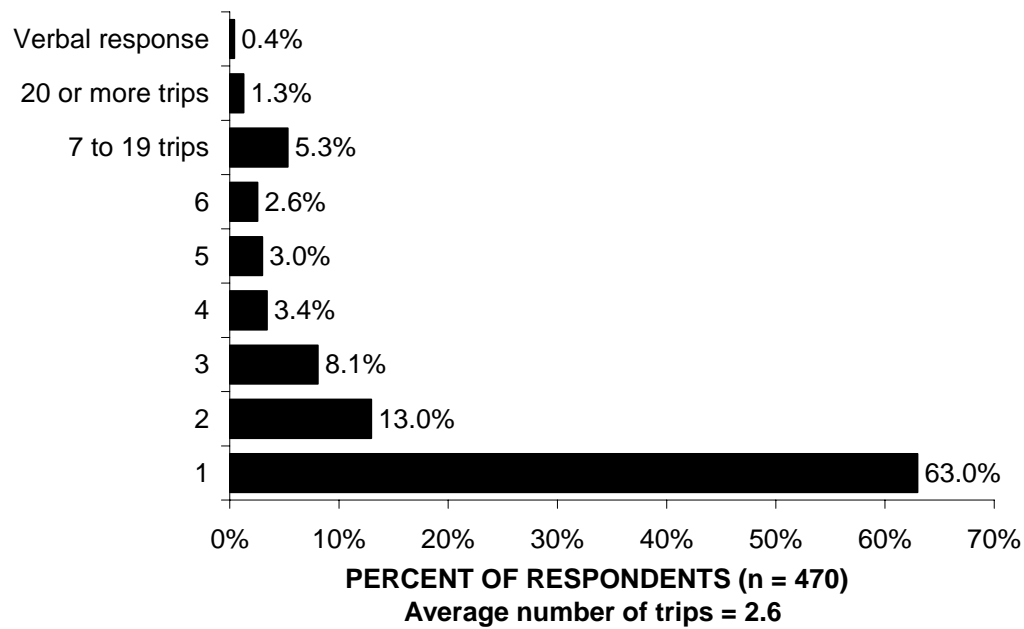
- INCLUDING THE TRIP DURING WHICH YOU WERE CONTACTED**, how many trips have you made to Ross Lake NRA in the last three years? *Recall that a trip is one in which you stopped at one or more sites, facilities, or trails within the recreation area.*

NUMBER OF TRIPS IN LAST 3 YEARS _____

Some respondents included a verbal response such as “a few” or “many” rather than a numeric value. These verbal responses were coded as such and included in the chart.

II. Visitor Profile

Figure 2.15. ROLA Corridor Survey, Q-1
Number of Trips to Ross Lake NRA in Last Three Years



Party Size

Contact Sheet

1. How many people are in your party today?

_____ Number of people

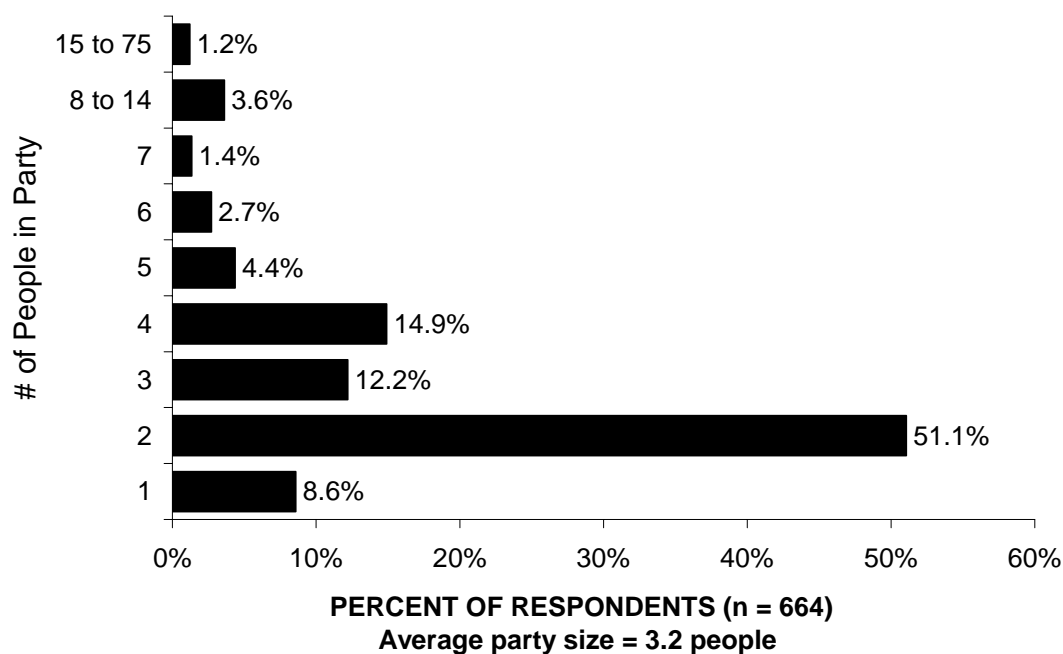
As seen in Figure 2.16, the average party size for all visitors was 3.2 people and 51.1% of parties had two people in them.

Party size differed significantly by destination type, $F(2, 656) = 4.76, p = .009$ (see Table 2.5). Parties of incidental visitors were significantly smaller ($M = 2.7$) than parties for whom ROLA was a primary destination ($M = 3.9$) or one of several destinations ($M = 3.7$).

Table 2.5 Party size for each type of destination.

	Type of Destination		
	Primary reason	One of several	Not a reason
Party size (average number of people)	3.9	3.7	2.7

**Figure 2.16. ROLA Corridor Survey, Contact Sheet Q-1
Party Size**



Party Type

Contact Sheet

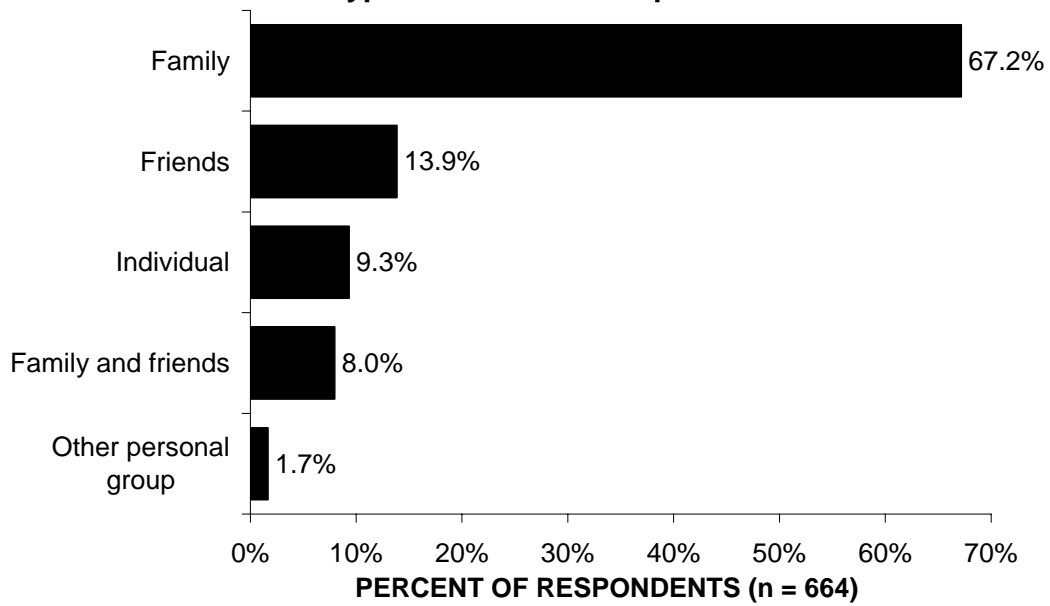
3. Please check the makeup of your personal group:

- ☐ Individual
- ☐ Family
- ☐ Friends
- ☐ Family and friends
- ☐ Other _____
(please specify)

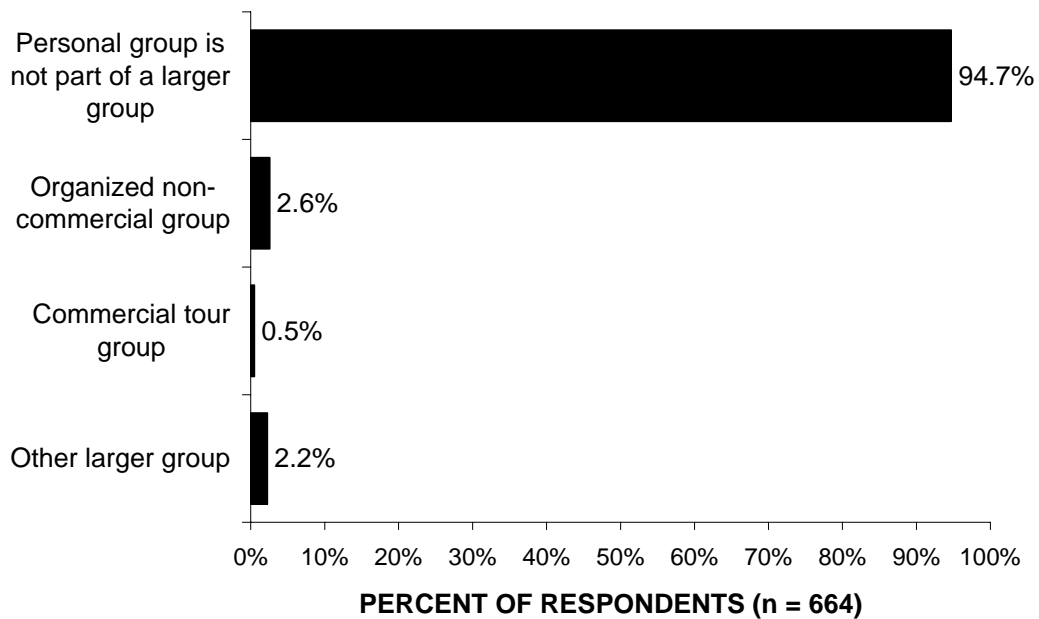
3a. If your personal group is part of a larger group, please circle the makeup of the larger group:

- ☐ Personal group is not part of a larger group
- ☐ Commercial tour group
- ☐ Organized non-commercial group _____
(please specify)
- ☐ Other _____
(please specify)

**Figure 2.17. ROLA Corridor Survey, Contact Sheet Q-3
Type of Personal Group**



**Figure 2.18. ROLA Corridor Survey, Contact Sheet Q-3a
Type of Larger Group**



Party members under the age of 18

Contact sheet

2. Are there any people in your party today under the age of 18?

☐ NO

☐ YES



2.1 How many people are under 18? _____

Overall, 28.7% of parties included people under age 18. Having party members under age 18 differed by destination type, χ^2 (n = 658, 2) = 29.73, $p < .001$ (see Table 2.6). Parties for whom ROLA was a primary destination were more likely to have members under age 18 (45.2%) than parties for whom ROLA was one of several reasons for their trip (24.5%) or not a reason for their trip (22.2%).

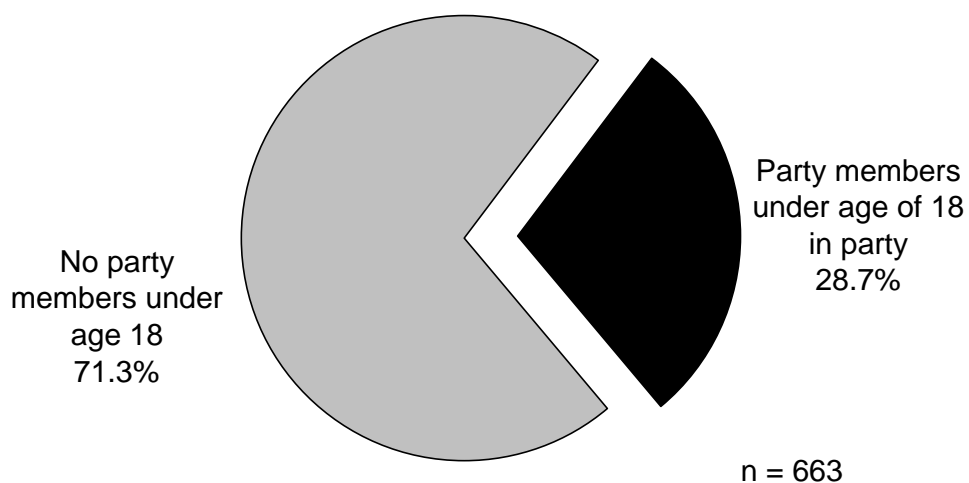
Table 2.6 Percent of parties with members under age 18 for each type of destination.

	Type of Destination		
	Primary reason	One of several	Not a reason
Parties with members under age 18	45.2%	24.5%	22.2%

The likelihood of a party having people under 18 varied by contact point, χ^2 (n = 663, 5) = 17.59, $p = .004$. As can be seen in Figure 2.20, visitors contacted at the campgrounds were more likely to have people under age 18 in their party (range from 39.1% to 47.4%) than visitors contacted at the overlooks or at North Cascades Visitor Center (range from 22.6% to 27.3%). This pattern is consistent with more visitors for whom ROLA was a primary destination being contacted at campgrounds and more visitors for whom ROLA was not a reason for their trip being contacted at the overlooks or North Cascades Visitor Center. Thus, the contact point difference most likely reflects differences due to visitors with different types of destinations.

Although the likelihood of having people under age 18 in the party varied by contact point and type of destination, the number of people under age 18 in the party did not differ by either variable. The average number of people under age 18 in a party was 2.3 and as seen in Figure 2.21, parties with people under age 18 were most likely to have 1 (36.7%) or 2 (32.4%).

**Figure 2.19: ROLA Corridor Survey, Contact Sheet Q-2
Percent of Parties with People Under Age 18**



**Figure 2.20. ROLA Corridor Survey, Contact Sheet Q-2.1
Percent of Parties with People Under Age 18 in Party by
Contact Point**

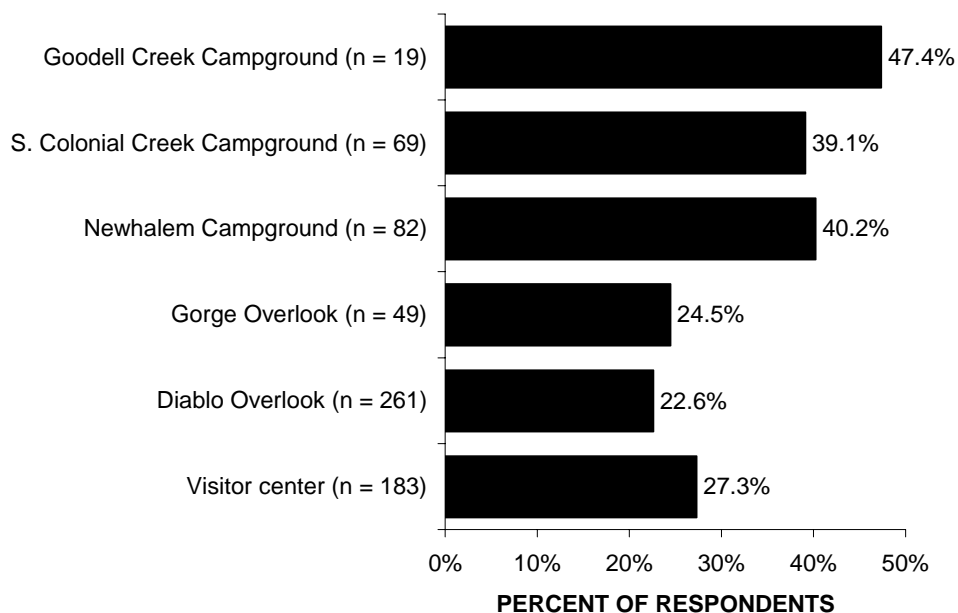
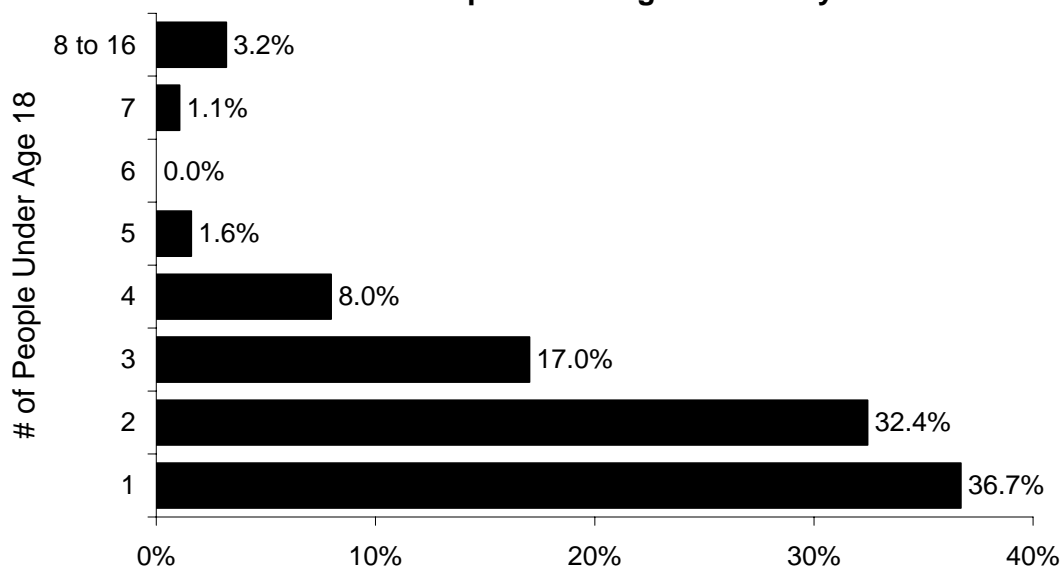


Figure 2.21. ROLA Corridor Survey, Contact Sheet Q-2.1
Number of People Under Age 18 in Party



Average number of people under age 18 = 2.3

Includes only the 28.7% of respondents in parties with people under age 18

III. TRIP CHARACTERISTICS

Visitors participating in the Ross Lake NRA State Route 20 Corridor User Mail Survey were asked a variety of questions about their trip and the activities they engaged in. This section reports the data collected with these questions.

Transportation Mode

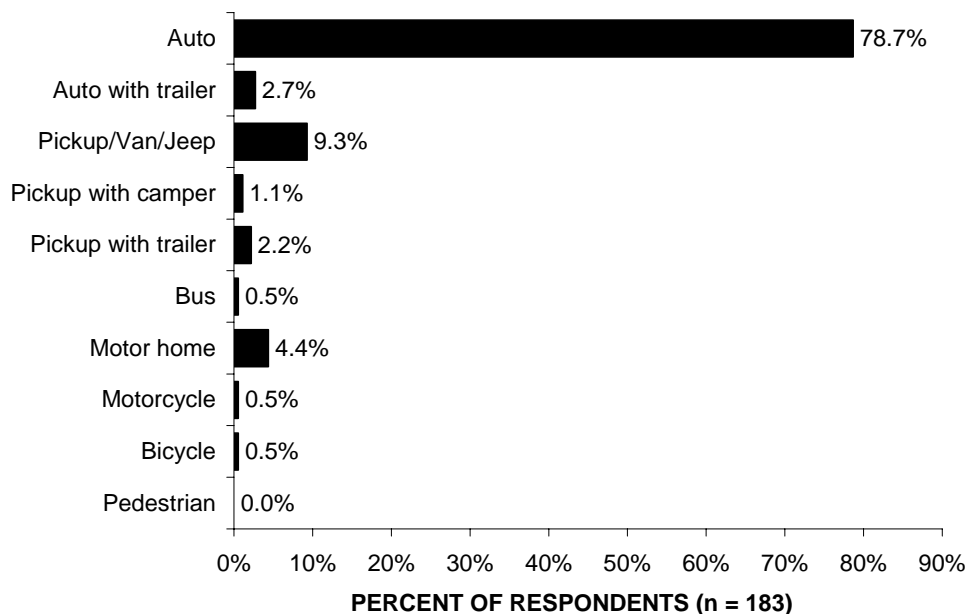
Contact Sheet

4. Please check your mode of transportation:

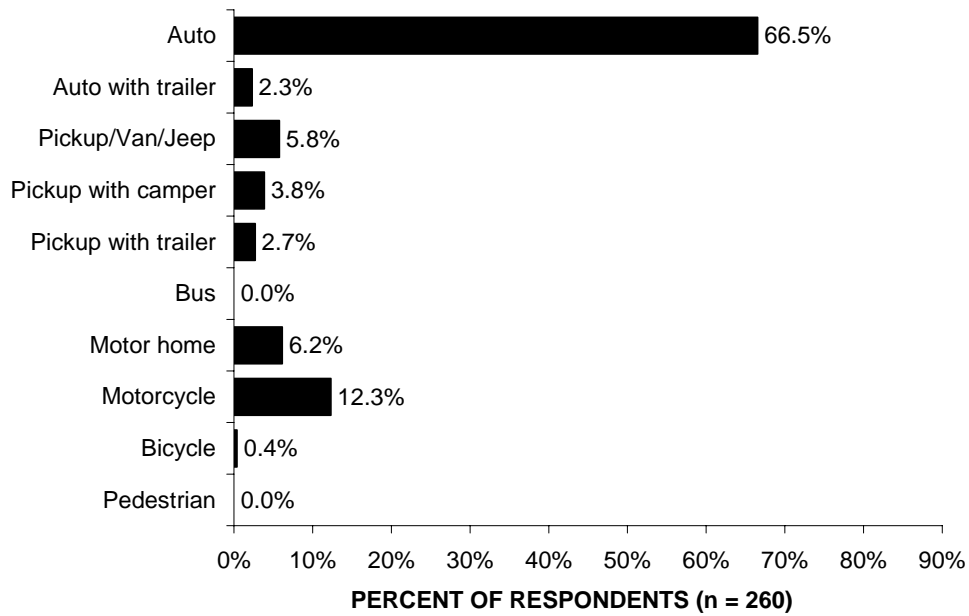
- | | |
|---|-------------------------------------|
| <input type="checkbox"/> AUTO | <input type="checkbox"/> BUS |
| <input type="checkbox"/> AUTO W/TRAILER | <input type="checkbox"/> MOTOR HOME |
| <input type="checkbox"/> PICKUP/VAN/JEEP | <input type="checkbox"/> MOTORCYCLE |
| <input type="checkbox"/> PICKUP W/CAMPER | <input type="checkbox"/> BICYCLE |
| <input type="checkbox"/> PICKUP W/TRAILER | <input type="checkbox"/> PEDESTRIAN |

The transportation mode visitors used varied by contact point, $\chi^2 (n = 595, 6) = 69.99, p < .001$ (excludes Gorge Overlook and S. Colonial Creek Campground and compares auto, pickup/van/jeep and all others to eliminate expected frequencies less than 5). As can be seen in Figures 3.1 – 3.6 visitors contacted at Newhalem campground were least likely to come in an auto (36.1% versus 52.6% to 84.0%) and most likely to come in a motor home (18.1% vs. 4.0% to 10.5%). Motorcyclists were most likely to be contacted at Diablo Overlook (12.3% vs. 0.0% to 5.3%).

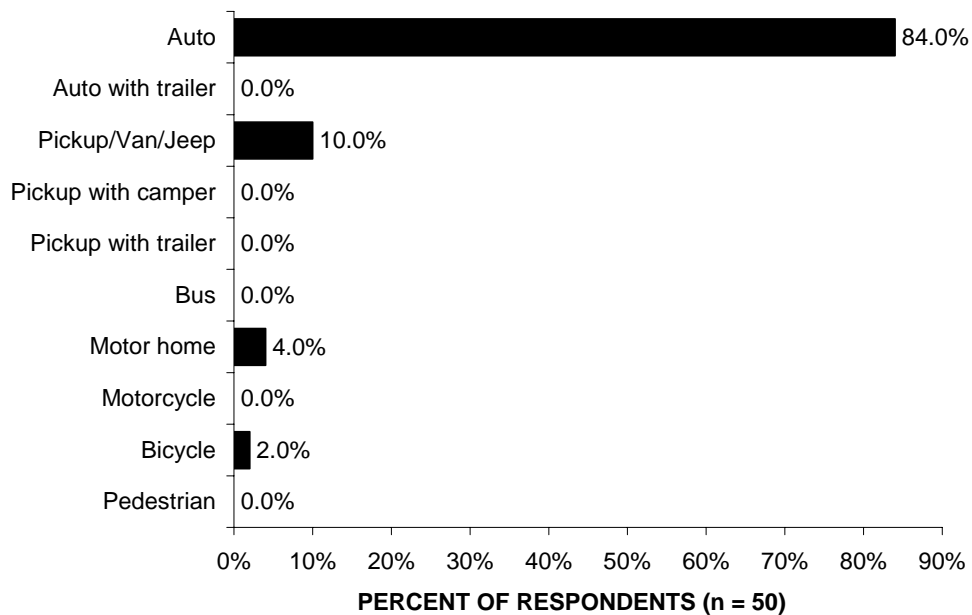
**Figure 3.1. ROLA Corridor Survey, Contact Sheet Q-4
North Cascades Visitor Center Respondents' Mode of
Transportation**



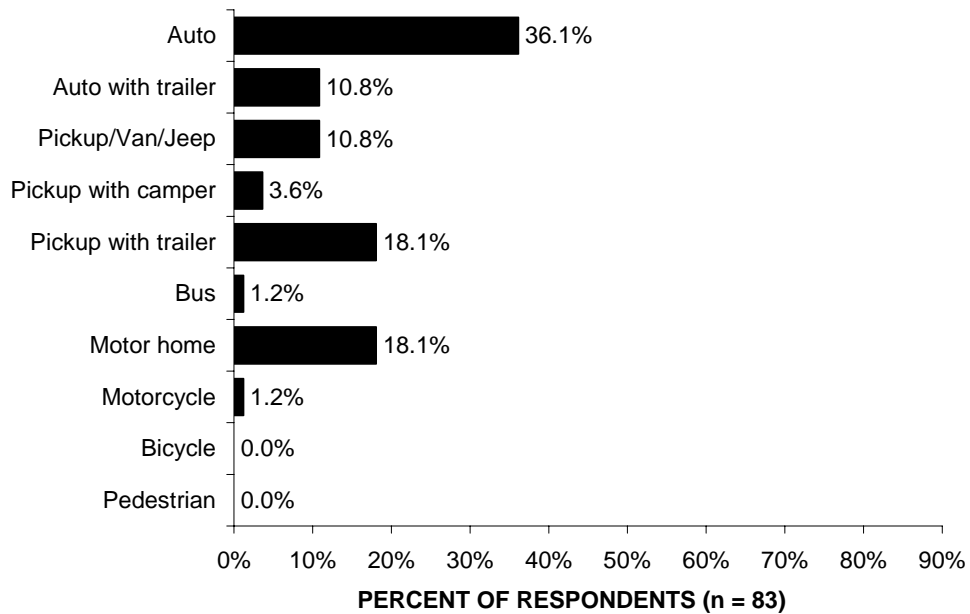
**Figure 3.2. ROLA Corridor Survey, Contact Sheet Q-4
Diablo Overlook Respondents' Mode of Transportation**



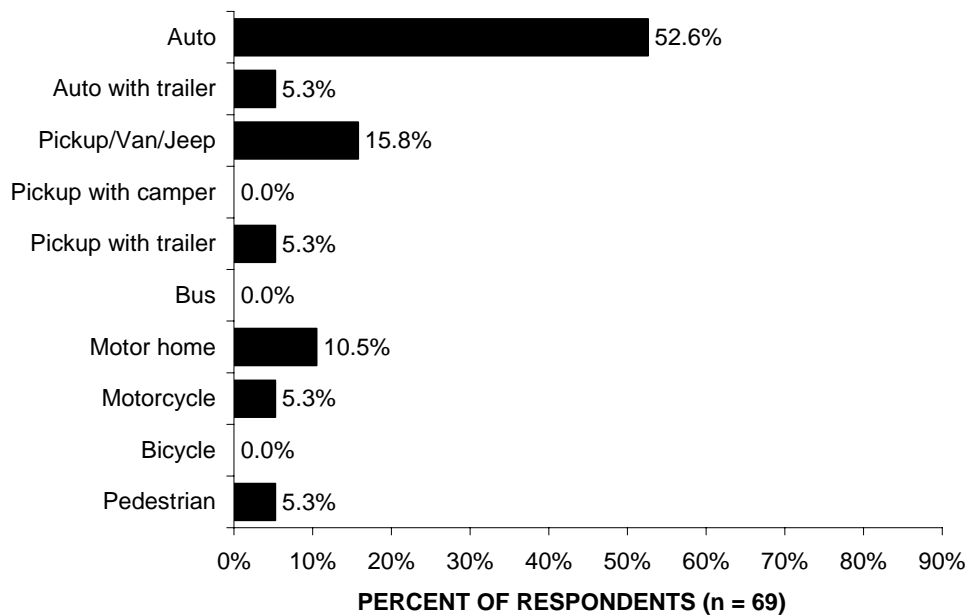
**Figure 3.3. ROLA Corridor Survey, Contact Sheet Q-4
Gorge Overlook Respondents' Mode of Transportation**



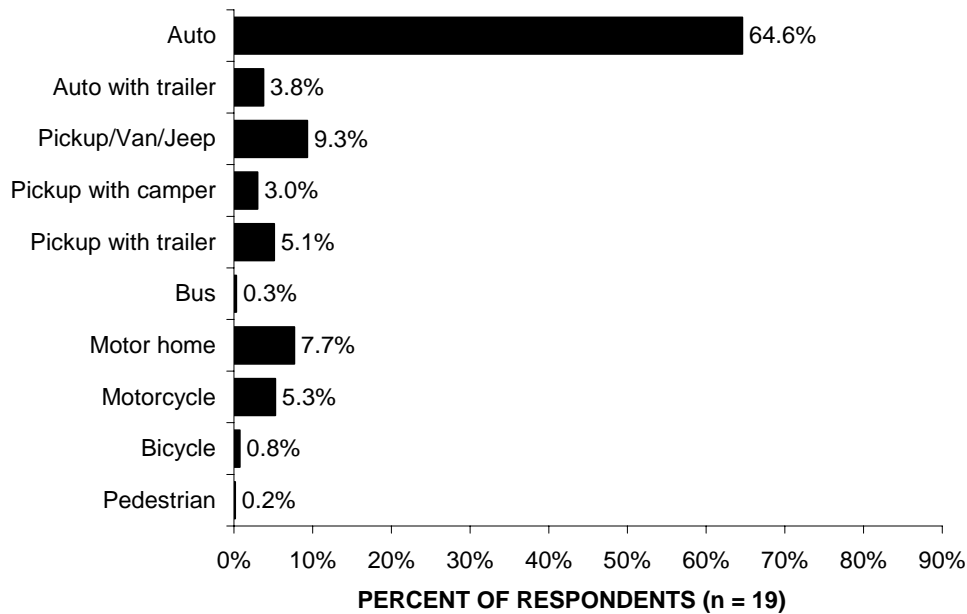
**Figure 3.4. ROLA Corridor Survey, Contact Sheet Q-4
Newhalem Campground Respondents' Mode of
Transportation**



**Figure 3.5. ROLA Corridor Survey, Contact Sheet Q-4
S. Colonial Creek Campground Respondents' Mode of
Transportation**



**Figure 3.6. ROLA Corridor Survey, Contact Sheet Q-4
Goodell Creek Campground Respondents' Mode of
Transportation**



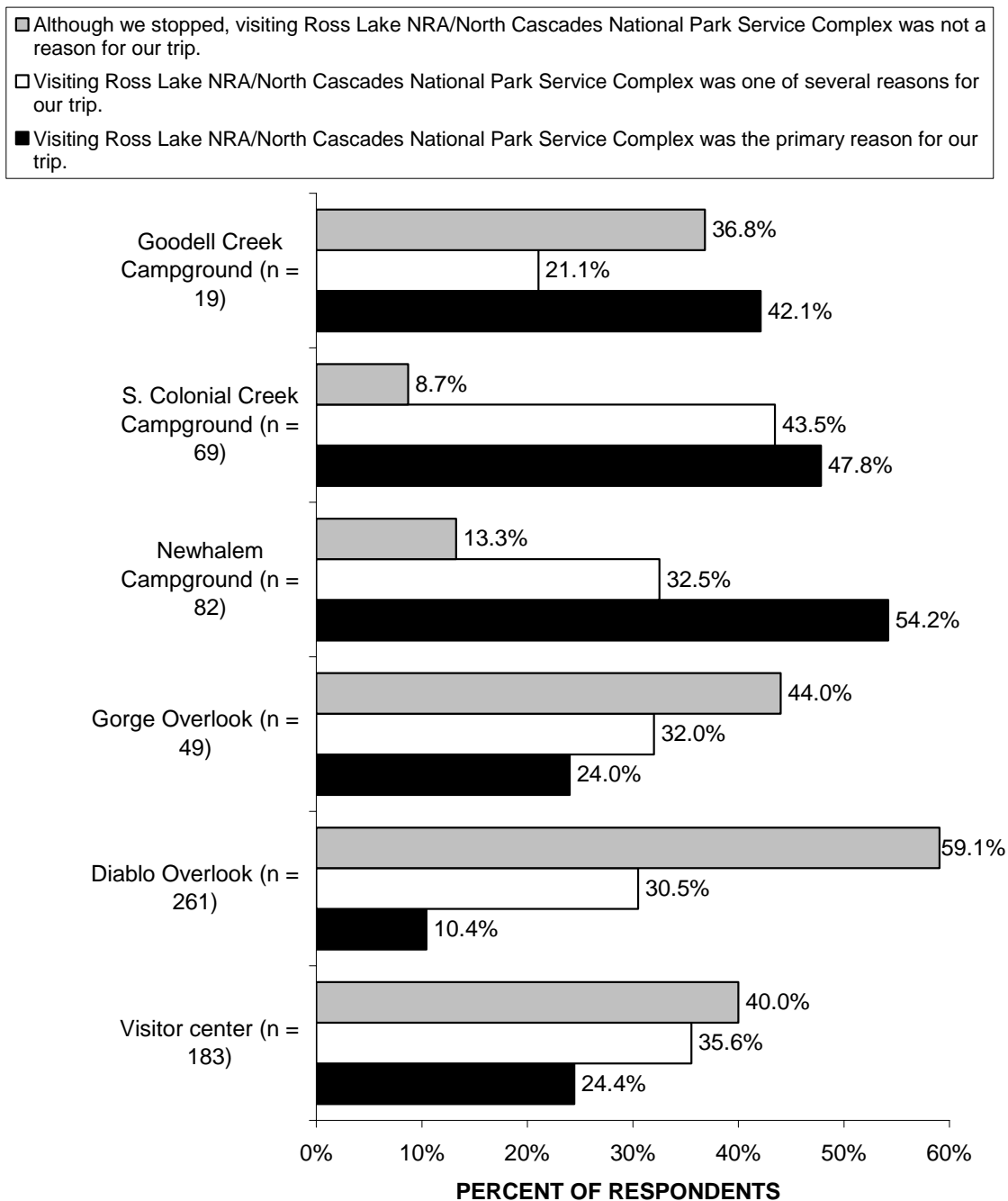
Type of destination

Contact Sheet

- 9. In terms of destinations on your overall trip itinerary (from the time you left home until you returned home), which of the descriptions below best fits your party during this visit?(Circle one number)**
- ☐ Visiting Ross Lake NRA/North Cascades National Park Service Complex was the primary reason for our trip.
 - ☐ Visiting Ross Lake NRA/North Cascades National Park Service Complex was one of several reasons for our trip.
 - ☐ Although we stopped, visiting Ross Lake NRA/North Cascades National Park Service Complex was not a reason for our trip.

The type of destination Ross Lake NRA was for visitors varied by contact point, $\chi^2 (n = 641, 8) = 121.16, p < .001$ (excludes Goodell Creek Campground visitors to eliminate expected frequencies less than 5). As can be seen in Figure 3.7, visitors contacted at the overlooks, visitor center, and Goodell Creek campground were more likely to be incidental visitors (ones for whom ROLA was not a reason for their trip) whereas Ross Lake NRA was more likely to be the primary reason for their trip for visitors contacted at Newhalem Campground and S. Colonial Creek Campground. (Table 2.1 presents these same data as a percentage of each type of destination).

Figure 3.7. ROLA Corridor Survey, Contact Sheet Q-4
Type of Destination by Contact Point



Driving pattern of visitors

Contact Sheet

5. Where did you start today's trip?

- ☐ East of this stop
☐ West of this stop

6. Where will you end today's trip?

- ☐ East of this stop
☐ West of this stop

Combining the data from these two questions allowed us to determine people's driving patterns through the national recreation area. Specifically, people were identified who drove from west to east, drove east to west, drove a roundtrip starting west of the NRA, drove a roundtrip starting east of the NRA.

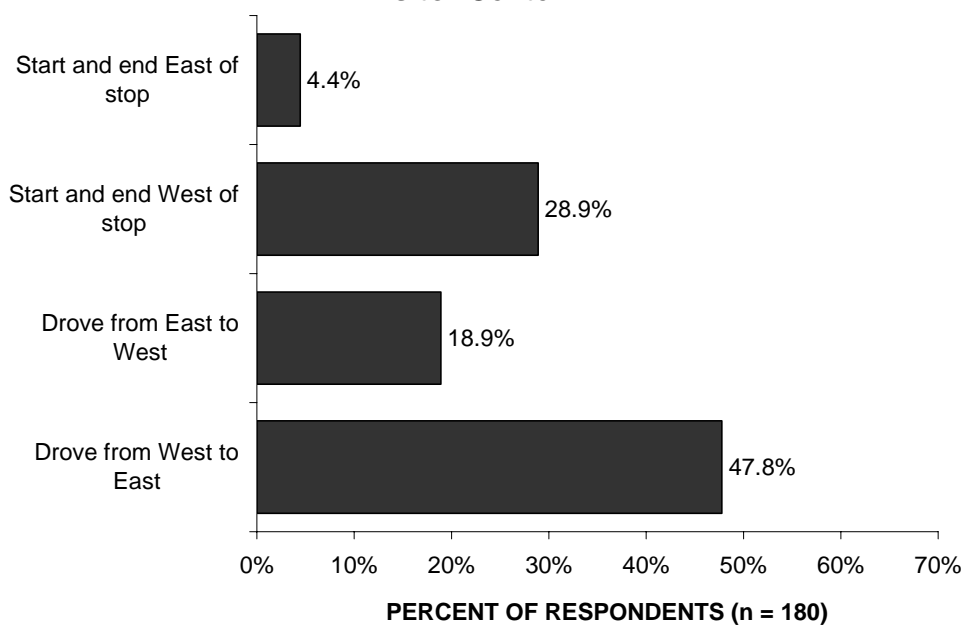
Driving pattern varied by destination type, $\chi^2 (n = 632, 6) = 171.41, p < .001$ (see Table 3.1). Visitors for whom ROLA was a primary reason for their trip were more likely to have driven a loop pattern starting to the west of the park (69.5%). Driving patterns of the other two groups were spread more evenly among driving through the park in either direction or driving a loop starting to the west of the park. For all groups, driving a loop starting to the east of the park was least common.

Table 3.1 Driving pattern for each destination type

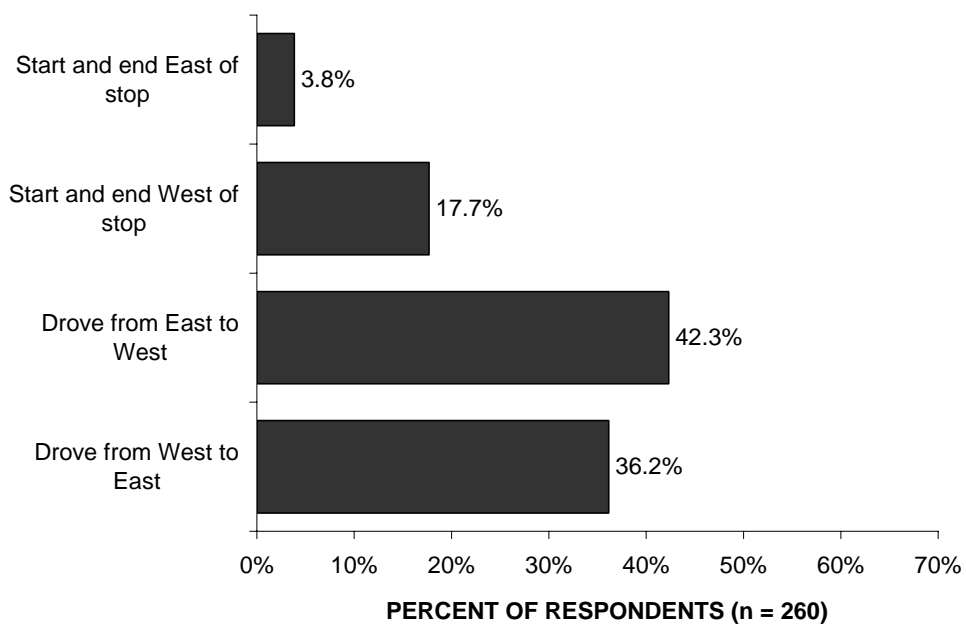
Driving pattern	Type of destination		
	Primary reason	One of several	Not a reason
Drove west to east	18.8%	41.5%	43.6%
Drove east to west	5.8%	30.2%	40.6%
Loop starting to the west	69.5%	24.1%	12.0%
Loop starting to the east	5.8%	4.2%	3.8%

Analyses indicated that driving patterns varied by contact point, $\chi^2 (n = 593, 8) = 97.03, p < .001$ (excludes Goodell Creek Campground visitors and people driving roundtrip from the east to eliminate expected frequencies less than 5). As can be seen in Figures 3.8 – 3.13, visitors contacted at the campground were more likely to have started and ended West of the park whereas visitors contacted at the overlooks or at North Cascades Visitor Center were more likely to have driven through the NRA (either West to East or East to West). This pattern of results was consistent with the following findings: 1) more visitors for whom ROLA was a primary destination were contacted at campgrounds and drove a loop starting to the west, and 2) more visitors for whom ROLA was one of several reasons or not a reason for their trip were contacted at Diablo Overlook and North Cascades Visitor Center and were more likely to drive through the park. Thus, contact point differences for driving pattern most likely reflect differences due type of destination ROLA was for visitors.

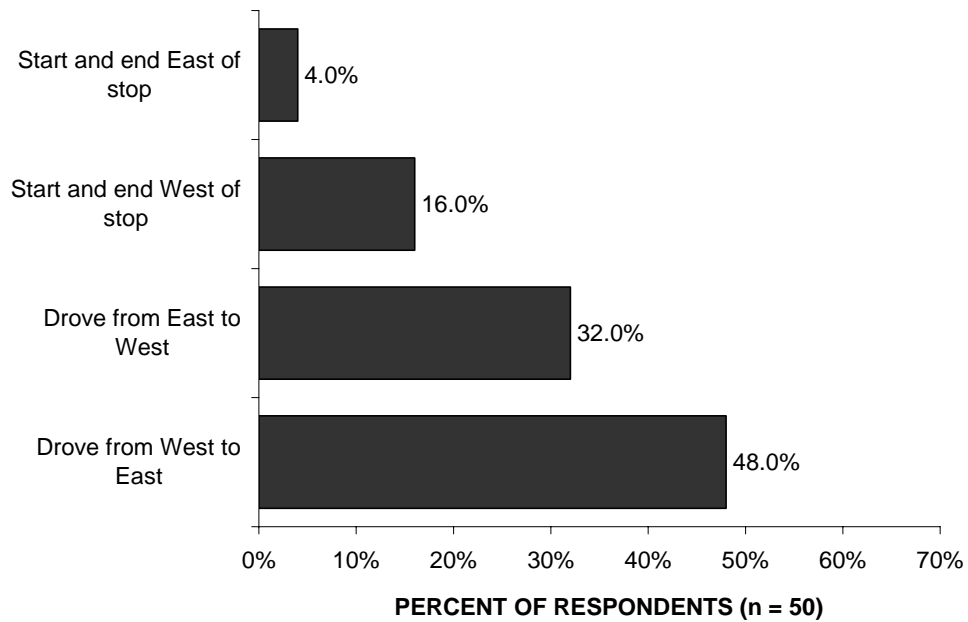
**Figure 3.8. ROLA Corridor Survey, Contact Sheet Q-5 & Q-6
Driving Patterns for Visitors Contacted at North Cascades
Visitor Center**



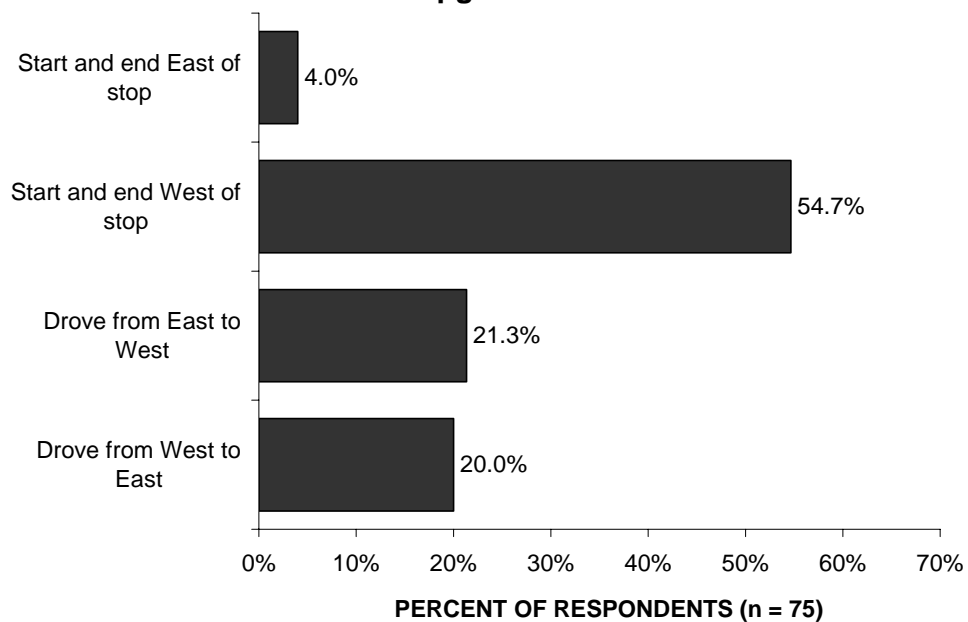
**Figure 3.9. ROLA Corridor Survey, Contact Sheet Q-5 & Q-6
Driving Patterns for Visitors Contacted at Diablo Overlook**



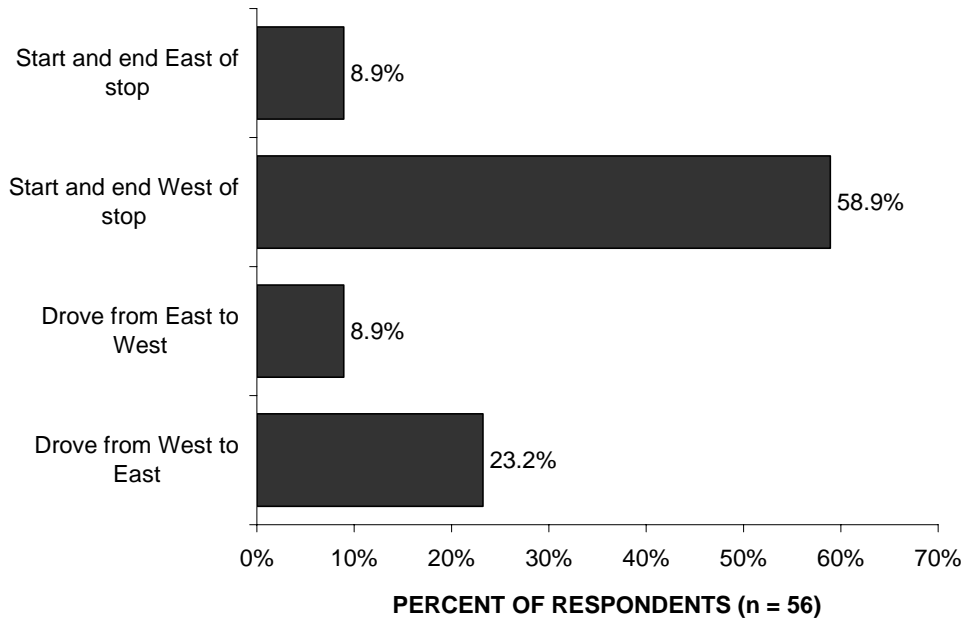
**Figure 3.10. ROLA Corridor Survey, Contact Sheet Q-5 & Q-6
Driving Patterns for Visitors Contacted at Gorge Overlook**



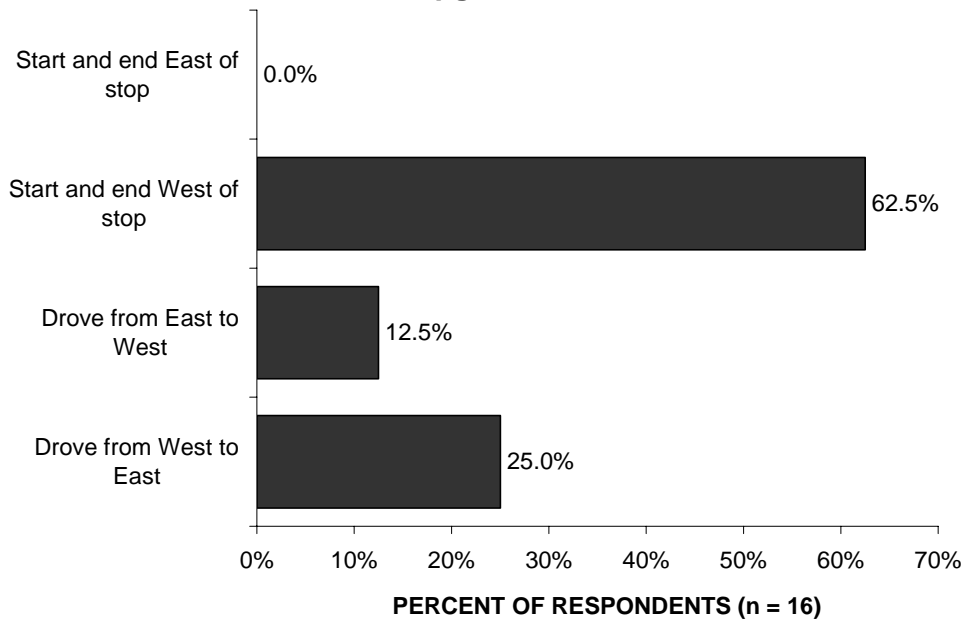
**Figure 3.11. ROLA Corridor Survey, Contact Sheet Q-5 & Q-6
Driving Patterns for Visitors Contacted at Newhalem Campground**



**Figure 3.12. ROLA Corridor Survey, Contact Sheet Q-5 & Q-6
Driving Patterns for Visitors Contacted at S. Colonial Creek
Campground**



**Figure 3.13. ROLA Corridor Survey, Contact Sheet Q-5 & Q-6
Driving Patterns for Visitors Contacted at Goodell Creek
Campground**



Length of stay

Mail questionnaire

3. On the trip during which you were contacted, did you stay overnight in the recreation area?

YES → How many nights did you spend? _____

NO → How many hours did you spend? _____

Don't remember

The likelihood of staying overnight in the park varied by the type of destination ROLA was for visitors, $\chi^2 (n = 463, 2) = 85.66, p < .001$ (see Table 3.2). The more central a reason visiting ROLA was to their trip the greater likelihood visitors stayed overnight in the park. Visitors for whom ROLA was a primary destination were most likely to stay overnight (68.3%) whereas incidental visitors were least likely to stay overnight (16.1%). Regardless of ROLA as a reason for their trip, visitors who stayed overnight at ROLA did not differ in the number of nights they stayed. However, the length of stay of visitors who did not stay overnight depended on destination type. Again, visitors for whom ROLA was more central a reason for their trip stayed longer with visitors for whom ROLA was a primary reason staying 4.1 hours and incidental visitors staying 2.4 hours.

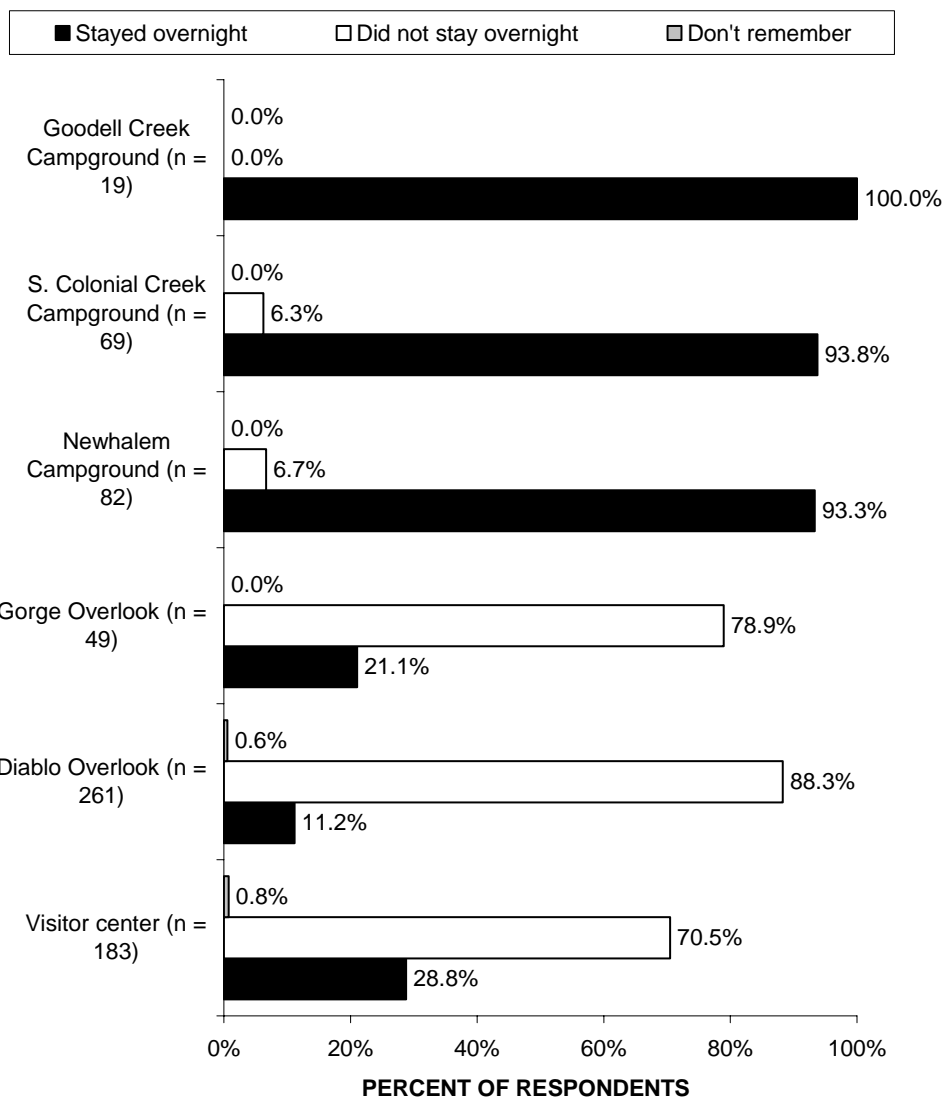
Table 3.2 Length of Stay Variables by Destination Type

Variable	Type of destination		
	Primary reason	One of several	Not a reason
Stayed overnight in ROLA	68.3%	42.3%	16.1%
Number of hours day visitors spent in ROLA (average)	4.1	3.6	2.4

Whether visitors stayed overnight in the park varied by contact point, $\chi^2 (n = 468, 5) = 224.68, p < .001$ (excludes don't remember responses to eliminate frequencies less than 5). As can be seen in Figure 3.14, almost all of the visitors contacted at the campgrounds stayed overnights whereas most visitors contacted at the overlooks or at the visitor center did not stay overnight. This pattern of results was consistent with the findings that more visitors for whom ROLA was a primary destination were contacted at campgrounds and stayed overnight in the park whereas more visitors for whom ROLA was one of several reasons or not a reason for their trip were contacted at Diablo Overlook and North Cascades Visitor Center and were less likely to stay overnight. Thus, contact point differences for staying overnight in the park most likely reflect differences due type of destination ROLA was for visitors.

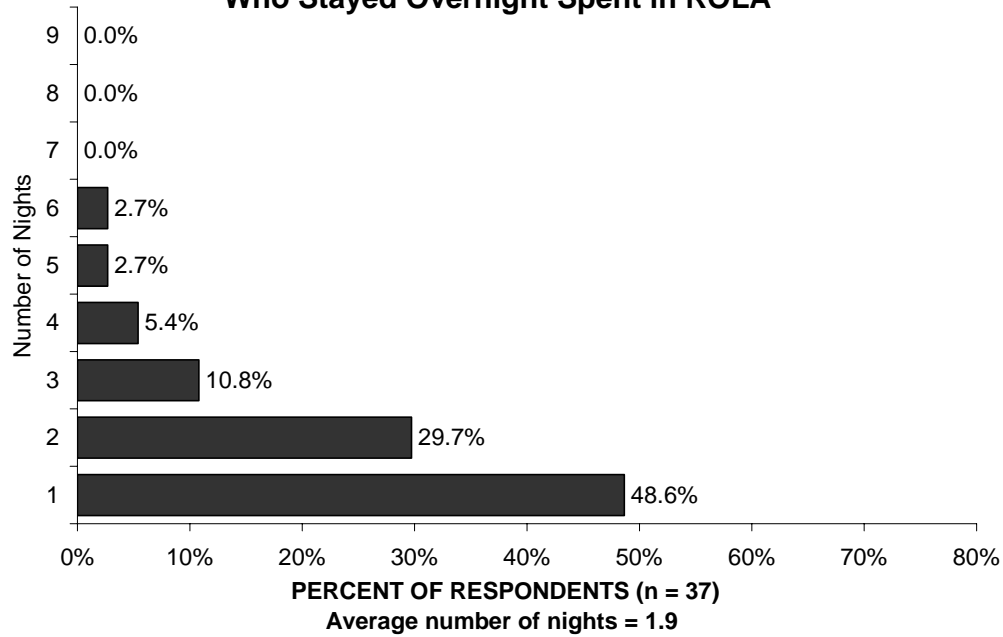
III. Trip Characteristics

**Figure 3.14. ROLA Corridor Survey, Mail Survey Q-3
Stayed Overnight in ROLA by Contact Point**



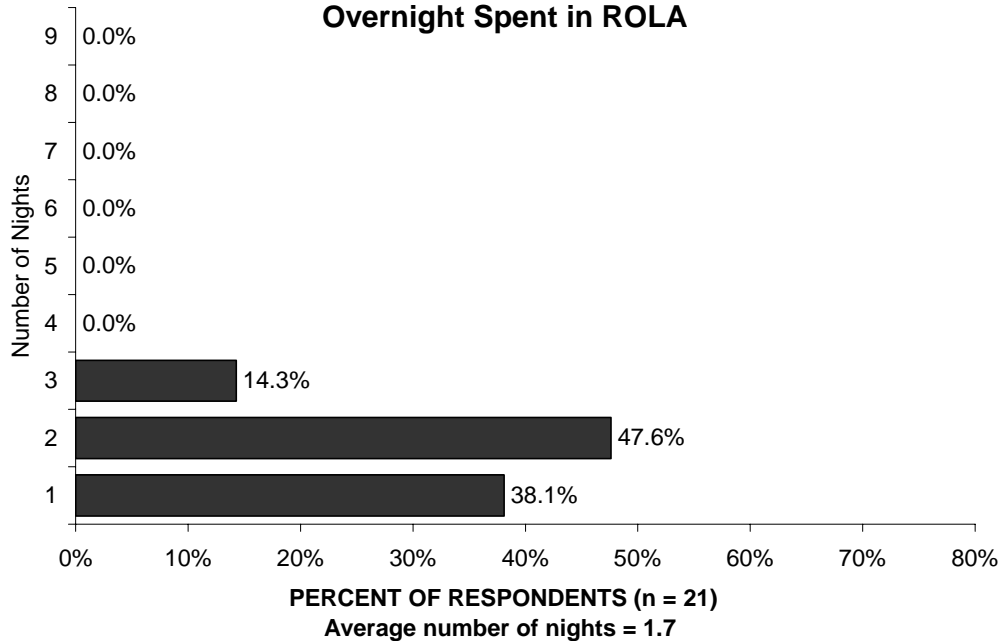
For those who stayed overnight, the number of nights they spent varied by contact point, $F(5, 169) = 4.77, p < .001$ (see Figures 3.15 – 3.20). Post hoc Tukey tests revealed that visitors contacted at Newhalem campground who stayed overnight spent significantly more nights than visitors contacted at either overlook or at the visitor center (3.1 vs. 1.9 to 1.7 nights). Visitors contacted at S. Colonial campground who stayed overnight spent more nights than visitors contacted at the North Cascades Visitor Center or at Diablo Overlook (2.7 vs. 1.9 or 1.7 nights), but the greater variability in nights stayed for visitors at Gorge Overlook resulted in a non-significant finding for this group. Figures 3.15 to 3.20 show the distributions for each contact point.

**Figure 3.15. ROLA Corridor Survey, Mail Survey Q-3
Number of Nights North Cascades Visitor Center Respondents
Who Stayed Overnight Spent in ROLA**



Data were weighted to reflect the contact sheet age distribution of respondents.

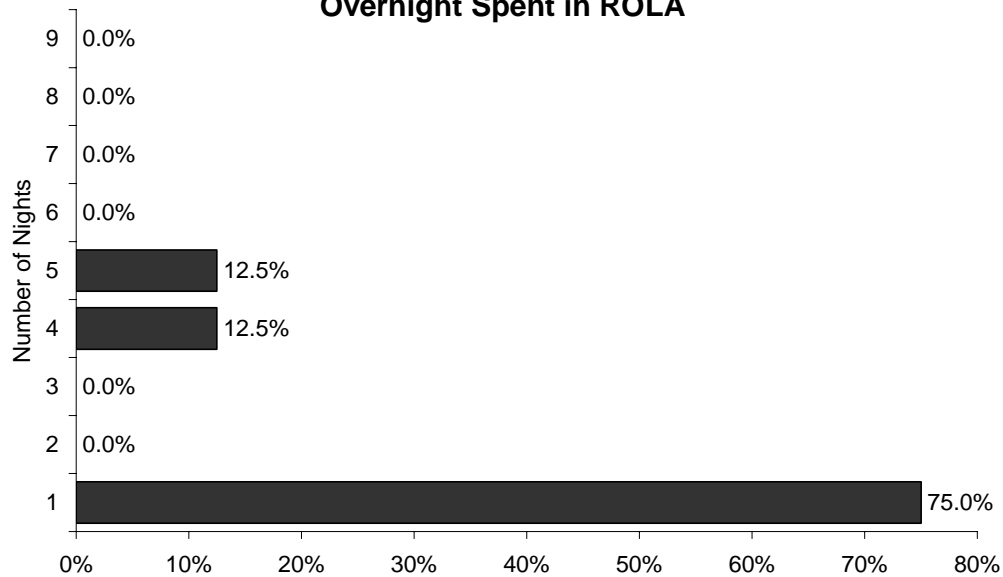
**Figure 3.16. ROLA Corridor Survey, Mail Survey Q-3
Number of Nights Diablo Overlook Respondents Who Stayed
Overnight Spent in ROLA**



Data were weighted to reflect the contact sheet age distribution of respondents.

III. Trip Characteristics

**Figure 3.17. ROLA Corridor Survey, Mail Survey Q-3
Number of Nights Gorge Overlook Respondents Who Stayed
Overnight Spent in ROLA**

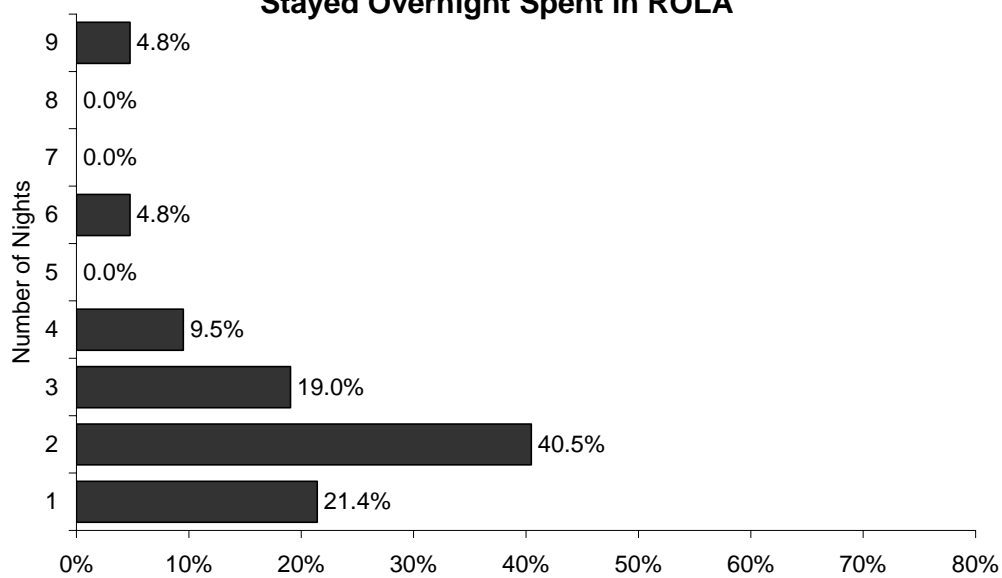


PERCENT OF RESPONDENTS (n = 8)

Average number of nights = 1.8

Data were weighted to reflect the contact sheet age distribution of respondents.

**Figure 3.18. ROLA Corridor Survey, Mail Survey Q-3
Number of Nights Newhalem Campground Respondents Who
Stayed Overnight Spent in ROLA**

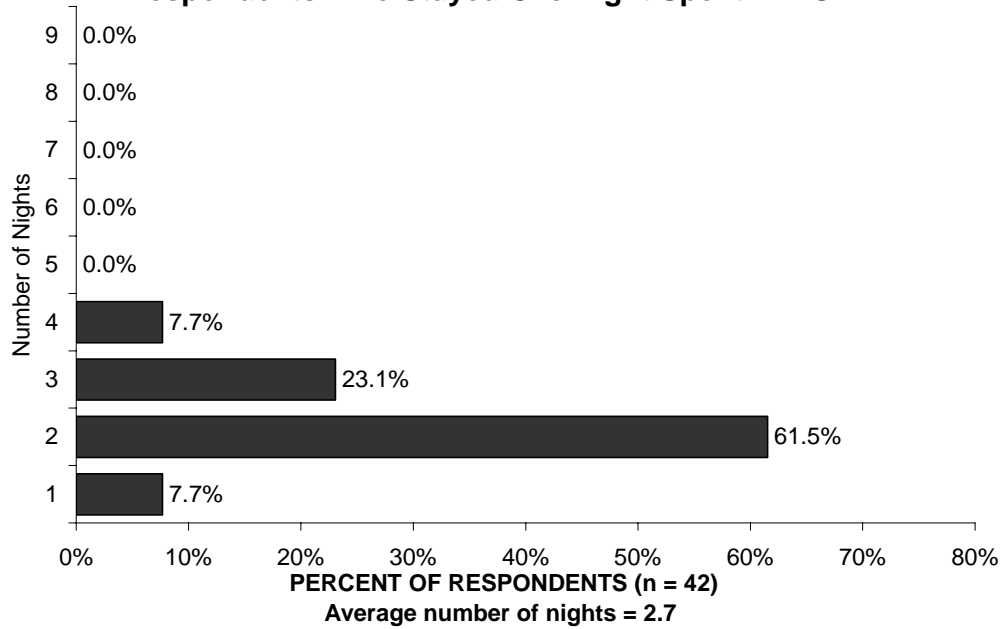


PERCENT OF RESPONDENTS (n = 54)

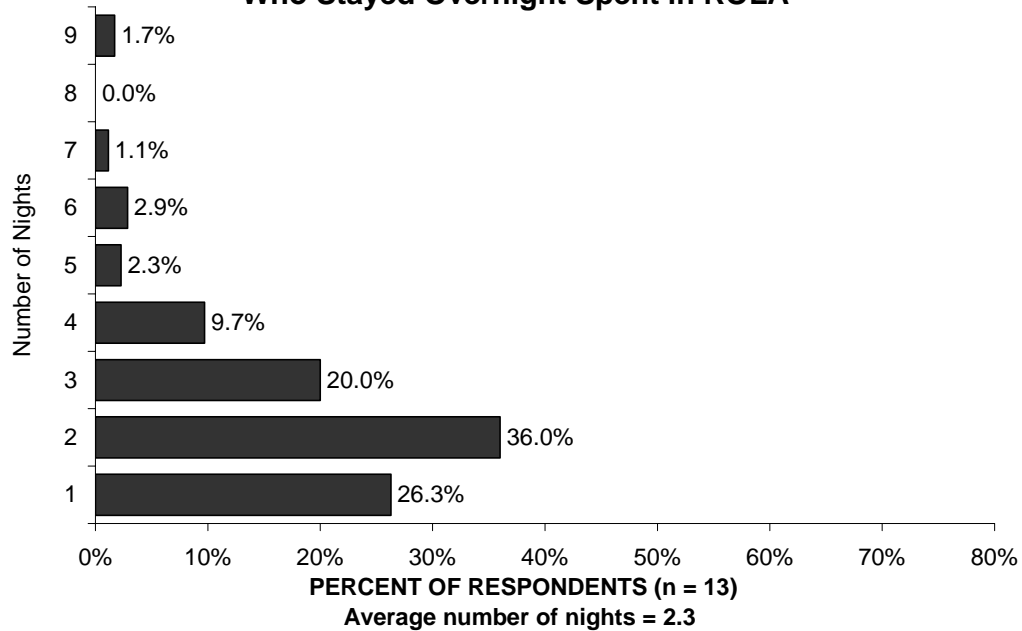
Average number of nights = 3.1

Data were weighted to reflect the contact sheet age distribution of respondents.

**Figure 3.19. ROLA Corridor Survey, Mail Survey Q-3
Number of Nights S. Colonial Creek Campground
Respondents Who Stayed Overnight Spent in ROLA**



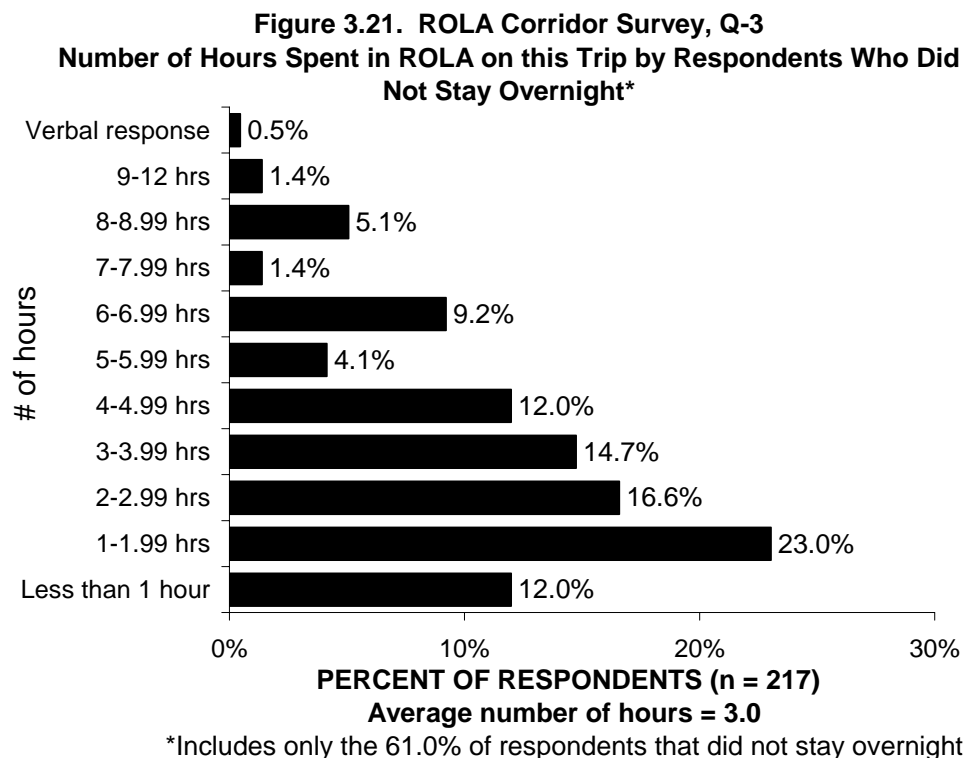
**Figure 3.20. ROLA Corridor Survey, Mail Survey Q-3
Number of Nights Goodell Creek Campground Respondents
Who Stayed Overnight Spent in ROLA**



III. Trip Characteristics

Separate analyses examining differences in the number of hours spent for destination type and contact point found significant differences for both variables. However, because destination type and contact point were related, additional analyses were done that allowed us to examine each variable's independent contribution and the interaction between the two variables. The results of this analysis revealed no significant effects of destination type, contact point, or the interaction.

Visitors who did not spend the night in ROLA were asked to indicate the number of hours they spent in ROLA during their trip. Some respondents replied with a verbal response such as “a few” or “most of the day.” These responses were categorized as verbal responses and included in the chart (see Figure 3.21).



General activities engaged in

Mail questionnaire

6. On the trip to Ross Lake NRA during which you were contacted for this survey, which of the following activities did you engage in? (*Circle as many numbers as apply.*)

- 1 Viewed wildlife
- 2 Viewed wildflowers/vegetation
- 3 Went bird-watching
- 4 Took photographs
- 5 Had a picnic
- 6 Went to visitor center
- 7 Viewed lakes
- 8 Drove around viewing scenery
- 9 Took walks or day-hiked
- 10 Backpacked
- 11 Camped overnight in backcountry away from lakeshore
- 12 Camped overnight at boat-in campsite
- 13 Camped overnight in car/drive-in campground
- 14 Rock or ice climbed using specialized equipment
- 15 Went kayaking or canoeing
- 16 Went motor-boating
- 17 Read educational displays and materials
- 18 Stayed at Ross Lake Resort
- 19 Went fishing
- 20 Went rafting
- 21 Went horseback riding
- 22 Visited historical sites
- 23 Attended a program led by a NPS interpretive ranger or volunteer
- 24 Other (*Please specify:* _____)

Answer this question for the trip during which you were contacted for this survey.

Analyses examining differences in engagement of each activity due to destination type found 14 activities with significant effects of destination type. Table 3.3 summarizes the activities engaged in by destination type. Visitors for whom ROLA was not a reason for their trip were less likely to engage in activities than visitors in the other two groups.

III. Trip Characteristics

Table 3.3 Activities engaged in during trip by destination type

Activities engaged in during trip	% Engaged in activity		
	Primary reason	One of several	Not a reason
Viewed wildlife	68.5	63.9	52.2
Viewed wildflowers/vegetation	75.8	74.2	60.8
Went bird-watching	12.9	18.7	7.0
Took photographs	78.0	86.8	67.2
Had a picnic	41.9	40.6	16.7
Went to visitor center	66.1	68.4	45.2
Viewed lakes	79.0	82.6	81.7
Drove around viewing scenery	75.6	80.9	66.7
Took walk/hikes	80.6	69.0	33.9
Backpacked	4.9	3.2	4.3
Camped overnight in backcountry away from lakeshore	4.0	2.6	2.7
Camped overnight at boat-in campsite	0.8	0.0	0.0
Camped overnight in car/drive-in campground	61.3	40.0	15.6
Rock or ice climbed using specialized equipment	1.6	0.6	0.5
Went kayaking or canoeing	5.6	3.9	1.1
Went motor-boating	8.1	0.0	0.5
Read educational displays and materials	72.6	68.4	52.7
Stayed at Ross Lake Resort	2.4	2.6	0.0
Went fishing	12.1	5.2	2.7
Went horseback riding	0.0	0.0	0.5
Visited historical sites	16.9	14.8	6.5
Attended a program led by a NPS interpreter ranger or volunteer	36.3	16.2	5.9
Other	11.2	11.0	20.3
Bold = Differed significantly by destination type.			

The likelihood of engaging in 15 of the 23 activities differed by contact point. Table 3.4 summarizes the percent of respondents at each contact point that engaged in each activity. Review of the table indicates that people who were contacted at the overlooks were less likely to engage in many of the activities than visitors contacted at the campgrounds or at North Cascade Visitor Center. This pattern is consistent with the results found for destination type and the finding indicating that people for whom ROLA was not a reason for their destination were more likely to be contacted at Diablo Overlook. Thus, contact point differences reflect the differences found for destination type.

Table 3.4 Activities engaged in during trip by contact location

Activities engaged in during trip	% Engaged in activity					
	North Cascades Visitor Center	Diablo Overlook	Gorge Overlook	Newhalem Camp-ground	S.Colonial Creek Camp-ground	Goodell Creek Camp-ground
Viewed wildlife	62.2	50.6	48.6	74.6	75.0	76.9
Viewed wildflowers/vegetation	74.1	61.1	59.5	83.1	70.8	69.2
Went bird-watching	17.8	8.9	2.7	20.3	10.4	7.7
Took photographs	75.6	76.1	75.7	78.0	77.1	61.5
Had a picnic	36.3	22.8	21.6	35.6	45.8	46.2
Went to visitor center	96.3	28.9	40.5	86.4	41.7	53.8
Viewed lakes	75.6	87.2	86.5	64.4	93.8	61.5
Drove around viewing scenery	77.8	73.3	67.6	72.9	62.5	76.9
Took walk/hikes	62.2	33.3	62.2	88.1	87.5	84.6
Backpacked	4.4	3.9	2.7	3.4	6.3	0.0
Camped overnight in backcountry away from lakeshore	1.5	4.4	5.4	1.7	2.1	0.0
Camped overnight at boat-in campsite	0.7	0.0	0.0	0.0	0.0	0.0
Camped overnight in car/drive-in campground	25.2	12.2	10.8	86.4	91.7	92.3
Rock or ice climbed using specialized equipment	1.5	0.6	2.7	0.0	0.0	0.0
Went kayaking or canoeing	1.5	0.6	0.0	6.8	16.7	0.0
Went motor-boating	1.5	0.6	0.0	1.7	14.6	0.0
Read educational displays and materials	70.4	50.6	56.8	74.6	77.1	61.5
Stayed at Ross Lake Resort	0.7	1.1	2.7	0.0	8.3	0.0
Went fishing	5.9	2.8	2.7	6.8	16.7	23.1
Went horseback riding	0.7	1.7	0.0	0.0	4.2	0.0
Visited historical sites	16.3	6.1	8.1	20.3	10.4	23.1
Attended a program led by a NPS interpreter ranger or volunteer	11.1	3.3	2.7	42.4	70.8	0.0
Other	14.1	17.8	13.5	5.1	14.6	23.1
Bold = Differed significantly by contact point.						

III. Trip Characteristics

Most and second most important activity

Mail questionnaire

6a. If you circled 2 or more of the 24 ways of experiencing the park listed above, which was most important to your enjoyment of the park? (*Enter the appropriate number in each of the blanks.*)

_____ **MOST IMPORTANT** factor contributing to your enjoyment of the park

_____ **SECOND MOST IMPORTANT** factor contributing to your enjoyment of the park

When asked to specify the activity that was most important to their enjoyment of the park, visitors gave a diverse array of responses, and these varied for the three destination types. The three most commonly listed most important activities for visitors for whom ROLA was an incidental destination were drove around viewing scenery (37%), viewed lakes (12%), and took walks/hikes (12%). Visitors for whom ROLA was an intended destination listed the same three activities as most important however the frequency differed for the two groups. For visitors for whom ROLA was a primary destination, the three most important activities were camped overnight in car/drive-in campground (36%), took walks or day-hiked (18%), and drove around viewing scenery (11%). For visitors for whom ROLA was one of several destinations, the three most important activities were drove around viewing scenery (32%), took walks or day-hiked (18%), and camped overnight in car/drive-in campground (13%).

The most important activity contributing to enjoyment of the park also varied across the different contact points. As can be seen in Table 3.5, the most frequent most important activity for campground visitors was camping overnight in car/drive-in campground whereas the most frequent most important activity for visitors contacted at Diablo Overlook and the Visitor Center was drove around viewing scenery. These findings are consistent with those found for destination type.

Table 3.5. Most important activity contributing to enjoyment of park by contact point.

Most Important Activity	Visitor center	Diablo Overlook	Gorge Overlook	Newhalem Campground	South Colonial Creek Campground	Goodell Creek Campground
Viewed wildlife	2.3%	3.7%	6.1%	3.6%	0.0%	7.7%
Viewed wildflowers/vegetation	6.2%	3.7%	9.1%	3.6%	2.1%	0.0%
Went bird-watching	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%
Took photographs	3.9%	6.7%	6.1%	3.6%	0.0%	0.0%
Had a picnic	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%
Went to visitor center	10.9%	1.8%	0.0%	0.0%	0.0%	0.0%
Viewed lakes	2.3%	19.0%	24.2%	1.8%	2.1%	0.0%
Drove around viewing scenery	34.9%	37.4%	21.2%	14.5%	12.8%	7.7%
Took walks or day-hiked	21.7%	9.8%	27.3%	26.6%	17.0%	23.1%
Backpacked	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Camped overnight in backcountry away from lakeshore	0.0%	1.2%	0.0%	1.8%	0.0%	0.0%
Camped overnight in car/drive-in campground	7.0%	4.9%	0.0%	40.0%	51.1%	46.2%
Rock or ice-climbed using special equipment	0.8%	0.6%	3.0%	0.0%	0.0%	0.0%
Went kayaking or canoeing	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%
Went motor-boating	0.0%	0.0%	0.0%	0.0%	6.4%	0.0%
Read educational displays and materials	2.3%	0.6%	0.0%	0.0%	0.0%	0.0%
Went fishing	0.8%	1.8%	3.0%	1.8%	4.3%	7.7%
Went horseback riding	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%
Visited historical sites	0.8%	0.0%	0.0%	1.8%	0.0%	0.0%
Attended a program led by a NPS interpretive ranger or volunteer	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Other	3.1%	4.9%	0.0%	1.8%	4.3%	7.7%
BOLD = Most frequent response						
<i>ITALIC</i> = 2 nd most frequent response						

III. Trip Characteristics

Table 3.6. Second most important factor contributing to enjoyment of park by contact point.

Second Most Important Factor	Visitor center	Diablo Overlook	Gorge Overlook	Newhalem Campground	South Colonial Creek Campground	Goodell Creek Campground
Viewed wildlife	7.8%	6.2%	0.0%	7.4%	4.4%	0.0%
Viewed wildflowers/vegetation	5.5%	5.6%	3.0%	7.4%	2.2%	7.7%
Went bird-watching	1.6%	1.2%	0.0%	0.0%	0.0%	0.0%
Took photographs	14.8%	20.5%	21.2%	7.4%	8.9%	0.0%
Had a picnic	2.3%	4.3%	3.0%	1.9%	0.0%	0.0%
Went to visitor center	7.8%	3.1%	3.0%	3.7%	0.0%	15.4%
Viewed lakes	10.9%	22.4%	15.2%	3.7%	4.4%	7.7%
Drove around viewing scenery	9.4%	14.3%	18.2%	7.4%	8.9%	7.7%
Took walks or day-hiked	21.1%	8.1%	18.2%	25.9%	26.7%	23.1%
Backpacked	0.0%	0.6%	0.0%	1.9%	0.0%	0.0%
Camped overnight in backcountry away from lakeshore	0.8%	1.9%	0.0%	0.0%	0.0%	0.0%
Camped overnight in car/drive-in campground	6.3%	1.2%	6.1%	18.5%	13.3%	30.8%
Rock or ice-climbed using special equipment	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Went kayaking or canoeing	0.0%	0.6%	0.0%	3.7%	4.4%	0.0%
Went motor-boating	0.0%	0.0%	0.0%	0.0%	6.7%	0.0%
Read educational displays and materials	5.5%	5.0%	9.1%	0.0%	0.0%	0.0%
Stayed at Ross Lake Resort	0.8%	0.0%	0.0%	0.0%	2.2%	0.0%
Went fishing	2.3%	1.2%	0.0%	1.9%	6.7%	7.7%
Went horseback riding	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Visited historical sites	0.8%	0.0%	3.0%	0.0%	0.0%	0.0%
Attended a program led by a NPS interpretive ranger or volunteer	0.0%	0.0%	0.0%	7.4%	8.9%	0.0%
Other	0.8%	3.7%	0.0%	1.9%	2.2%	0.0%
BOLD = Most frequent response						

Walk/hikes during trip

Mail questionnaire

10. Did you take one or more walks or hikes in Ross Lake NRA on the trip during which you were contacted for this survey?

NO -> **GO TO QUESTION 11**

YES

10a. How many walks or hikes did you take? _____

10b. **On your longest walk or hike:**

...where did you begin your walk or hike? _____
(Please be as specific as possible.)

...about how many miles did you walk? _____ miles
(Round trip. Use fractions for distances under 1 mile)

...about how long did the walk or hike take? _____ Hrs _____ Min
(Round trip.)

Taking walks or hikes during the trip varied by destination type, $\chi^2 (n = 468, 2) = 47.56, p < .001$. Visitors for whom ROLA was an incidental destination were significantly almost half as likely to take walks/hikes than visitors for whom ROLA was an intentional destination (see Table 3.7).

Table 3.7 Percent of visitors who took walks/hikes by destination type.

	Destination type		
	Primary reason	One of several	Not a reason
Took walks or hikes during trip	72.0%	62.8%	35.3%

The percentage of visitors that took walks or hikes during their trip also varied by contact point,. As can be seen in Figure 3.22, visitors contacted at Diablo Overlook were the least likely to take walks or hikes during their trip (27.8% vs. 57.8% to 85.4%). Visitors contacted at the campgrounds were the most likely to take a walk or hike. This pattern is consistent with that observed for destination type and the finding that incidental visitors were more likely to be contacted at Diablo Overlook and visitors for whom ROLA was a primary reason for their trip were more likely to be contacted at campgrounds.

Some visitors used words to describe the number of walks they took such as “a few” or “lots”. These responses were coded as “Verbal responses” and because of the small number of them, they were not included in further analyses. The average number of walks or hikes taken during their trip was 2.4 and did not vary by destination type or contact point. Over half of visitors took one (37.7%) or two (28.2%) walks/hikes during their trip. A small minority (5.6%) took 5 or more walks/hikes during their trip (see Figure 3.23).

Figure 3.22: ROLA Corridor Survey, Q-10
Took One or More Walks or Hikes in ROLA During Trip by
Contact Point

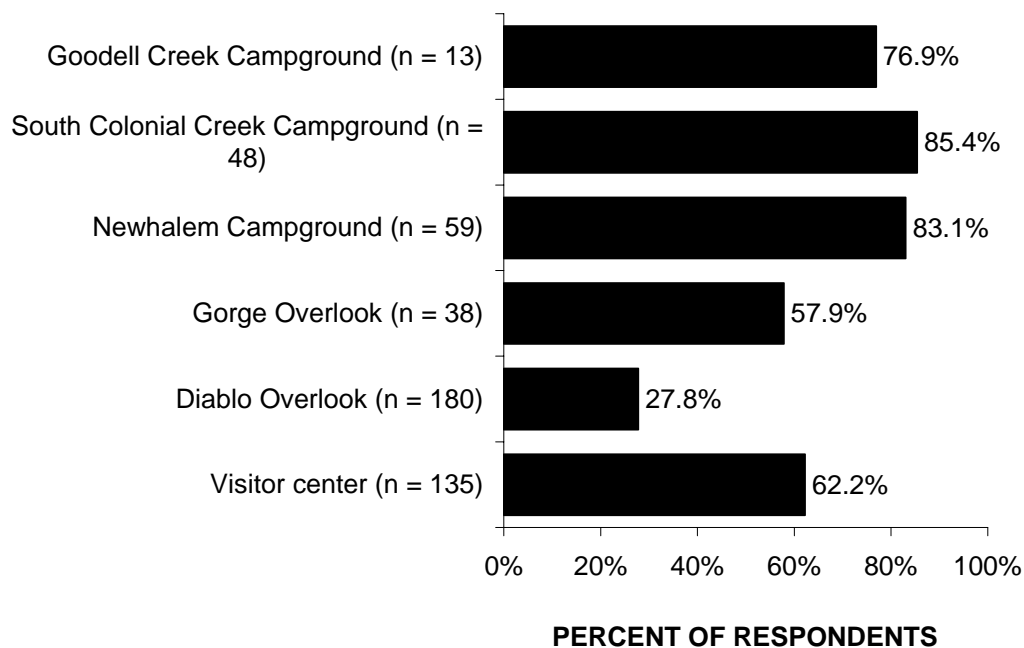
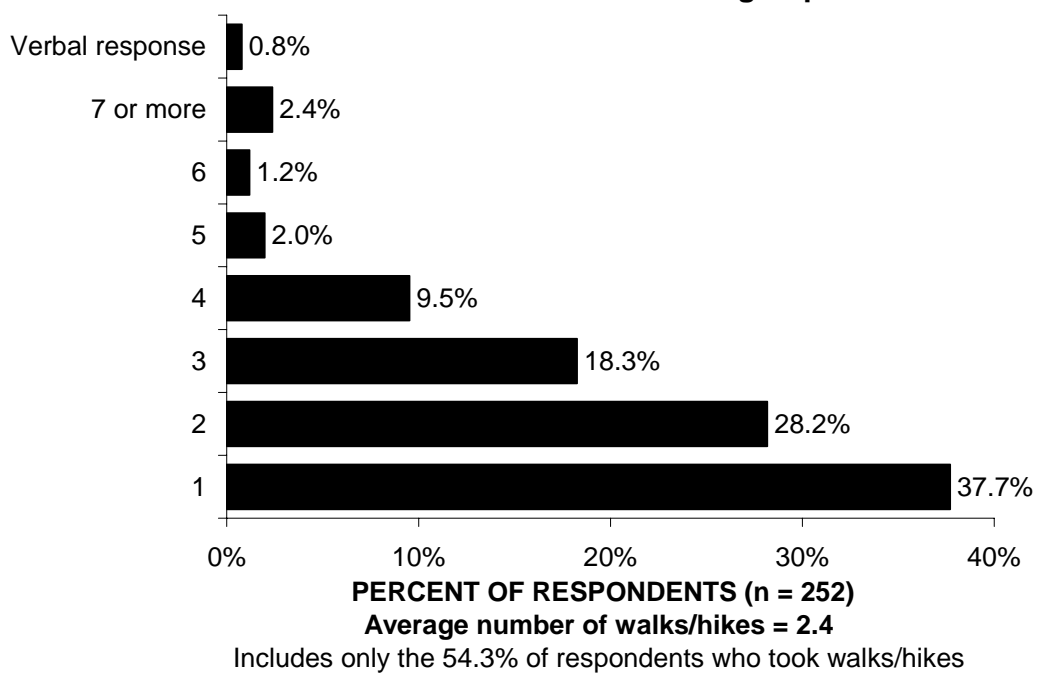


Figure 3.23. ROLA Corridor Survey, Q-10a
Number of Walks or Hikes Taken During Trip



Longest walks taken during the trip were begun at a number of locations throughout the park (see Table 3.8). The inclusion of locations outside of ROLA (i.e., Washington Pass, Rainy Pass) suggests that some visitors are not aware of the park boundaries.

Table 3.8. Starting location of longest walks/hikes taken during trip

Location	% of respondents
Newhalem area	14.2
Colonial Creek campground area	10.6
Gorge Overlook area	7.8
Thunder Knob Trail	6.4
Diablo lake/overlook area	6.0
Ross Dam Trail area	6.0
Campgrounds	5.5
Visitor center	5.0
North Cascades Visitor Center	4.6
Happy Creek Forest walk	3.7
River Loop Trail	3.7
Cascade Pass	3.2
Goodell Creek Campground	2.3
Pyramid Lake trail	2.3
Environmental Learning Center	1.8
Rainy Pass	1.8
Thunder Creek	1.8
Blue Lake	1.4
Happy Panther	1.4
Washington Pass	1.4
Thornton Lakes	0.9
Other location	8.3

Some visitors also provided verbal responses for number of miles walked and/or time spent hiking on longest walk. These responses were categorized as “Verbal responses” unless the wording indicated that the person did not remember (i.e., “Don’t remember”). Because these groups were a small percentage of respondents, they were included in the figures but excluded from additional analyses.

The average number of miles walked on visitors’ longest hike was 2.7 miles and 59.9% walked less than 3 miles during that hike (see Figure 3.24). On average, visitors spent 107 minutes on their longest hike with the most common length of times being 30-59 minutes (21.8%) and 120-179 minutes (17.1%; see Figure 3.25). Length of longest walk did not vary by destination type or contact point.

III. Trip Characteristics

Figure 3.24. ROLA Corridor Survey, Q-10b
Number of Miles Walked on Longest Hike During Trip

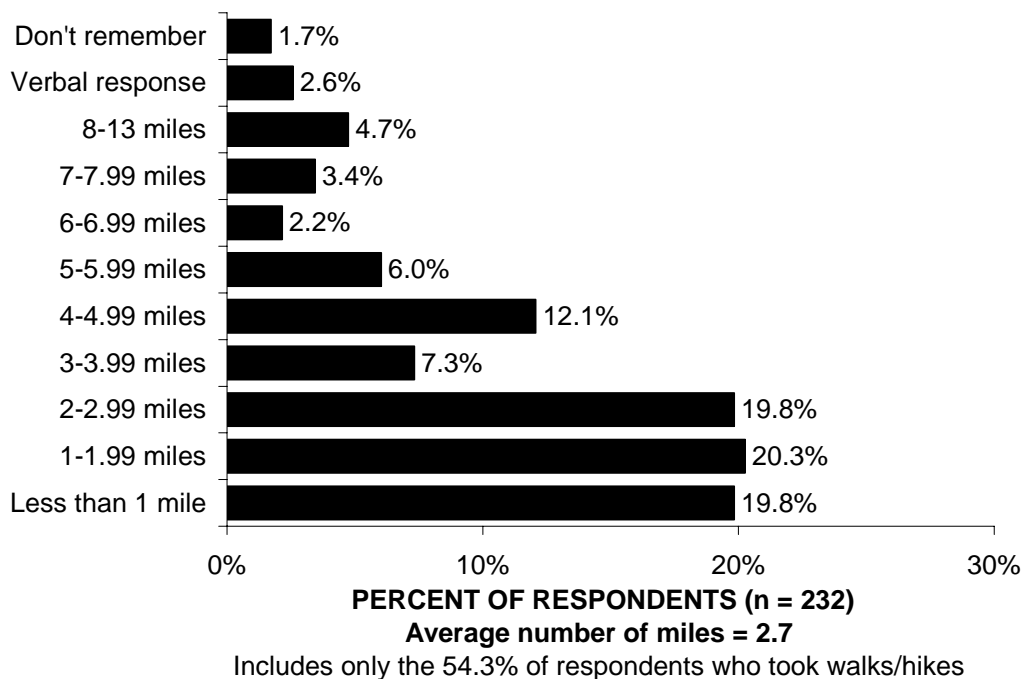
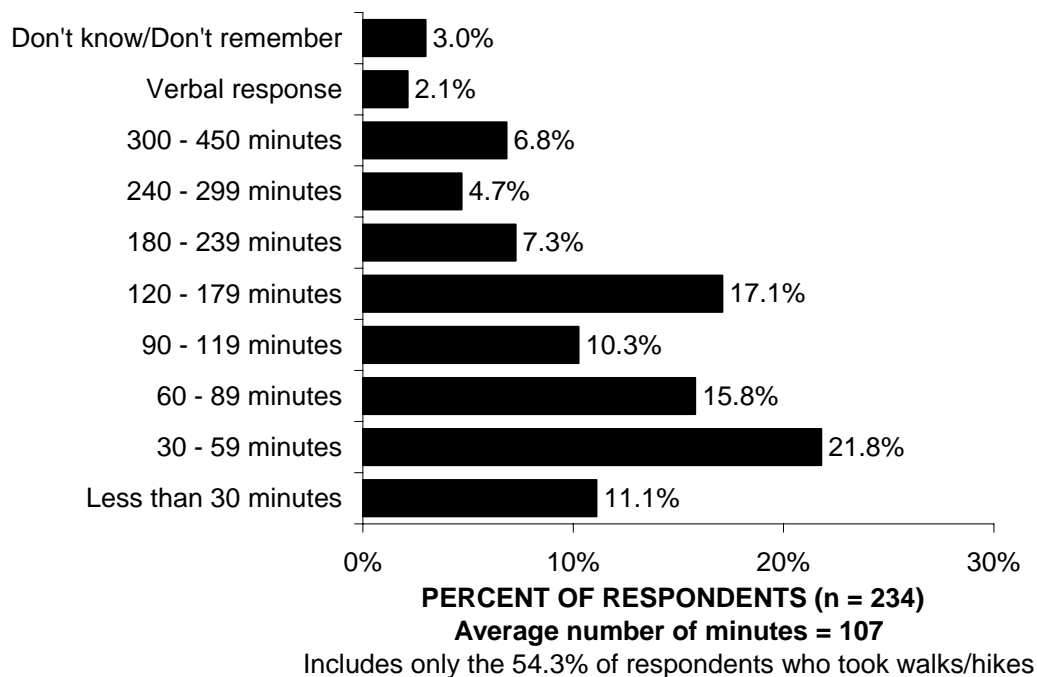


Figure 3.25. ROLA Corridor Survey, Q-10b
Number of Minutes Walked on Longest Hike During Trip



Places stopped along SR 20 corridor

Mail questionnaire

11a. The map on the next page shows the North Cascades Highway Corridor through Ross Lake NRA. Marked on this map are sites and facilities where you might have stopped and gotten out of your vehicle. Park management is interested in whether you stopped at these sites.

Please review the map, recalling the DAY during which you were contacted for this survey. **At the first site where you stopped, write the number "1" in that site's box. At the second site, write "2". Continue until you have written numbers in the boxes for all the places you visited that day at Ross Lake NRA.**

11b. During your trip, did you use this map?

NO -> GO TO QUESTION 11d.

YES

11c. Did the map affect where you stopped?

NO

YES

11d. During your trip, did you use a different map that showed park facilities and attractions?

NO

YES

Unlike some National Parks, Ross Lake NRA does not have gates where all visitors obtain a park map. Because the mail questionnaire was distributed during people's visit, it was possible that the map included in the questionnaire affected where people visited by informing them of the various sites along SR 20. As seen in Figure 3.26, 14.9% of visitors used the questionnaire map and 82.1% of them indicated it affected where they stopped (see Figure 3.27).

The use of the map included in the survey questionnaire varied by destination type, χ^2 ($n = 444$, 2) = 17.16, $p < .001$. Visitors for whom ROLA was a primary or one of several destinations were three or more times likely to use the map in the survey during their trip than visitors for whom ROLA was an incidental destination (Table 3.9).

Table 3.9 Percent of visitors who used maps by destination type

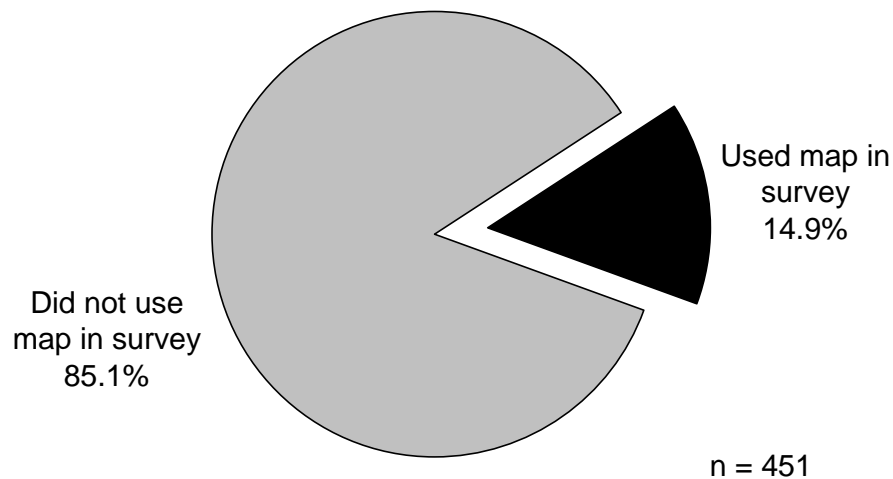
	Destination Type		
	Primary reason	One of several	Not a reason
Used survey map	22.3%	18.8%	6.3%
Used different map	46.5%	64.7%	29.2%

III. Trip Characteristics

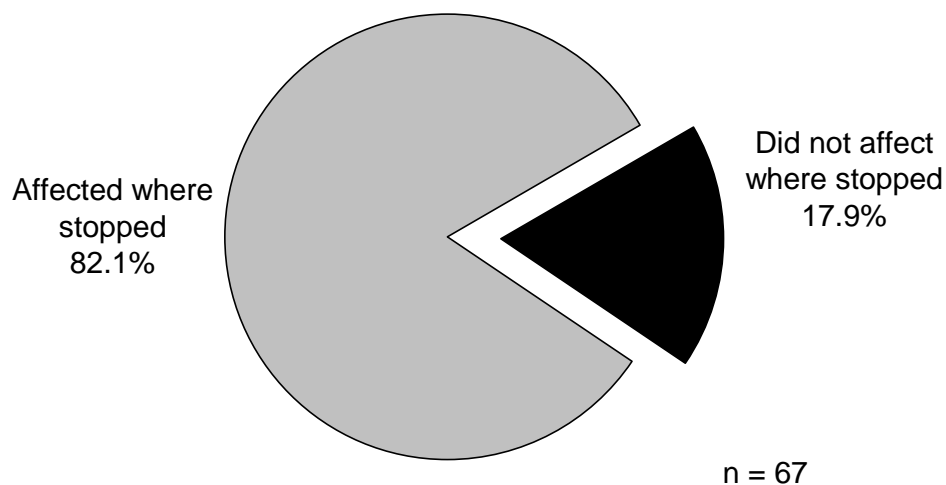
Visitors' use of a different map showing park facilities and attractions varied by destination type, χ^2 ($n = 414, 2$) = 38.00, $p < .010$ (see Table 3.9). Each group's likelihood of using a different map during their trip differed significantly from the other groups. Visitors for whom ROLA was one of several reasons were most likely to use a different map (64.7%) followed by visitors for whom ROLA was the primary reason (46.5%), and incidental visitors (29.2%).

The use of a different map also varied by contact point, χ^2 ($n = 419, 5$) = 15.19, $p < .010$ (see Figure 3.28). Visitors contacted at North Cascades Visitor Center were the most likely to use a different map (59.3%) whereas visitors contacted at Diablo Overlook were the least likely (35.8%). These findings reflect the availability of park maps at the visitor center and not at Diablo Overlook. They also are consistent with the finding that more incidental visitors were contacted at Diablo Overlook and these visitors were the least likely to use a different map (perhaps because they did not visit a location to acquire one).

**Figure 3.26: ROLA Corridor Survey, Q-11b
Used Map in Survey During Trip**

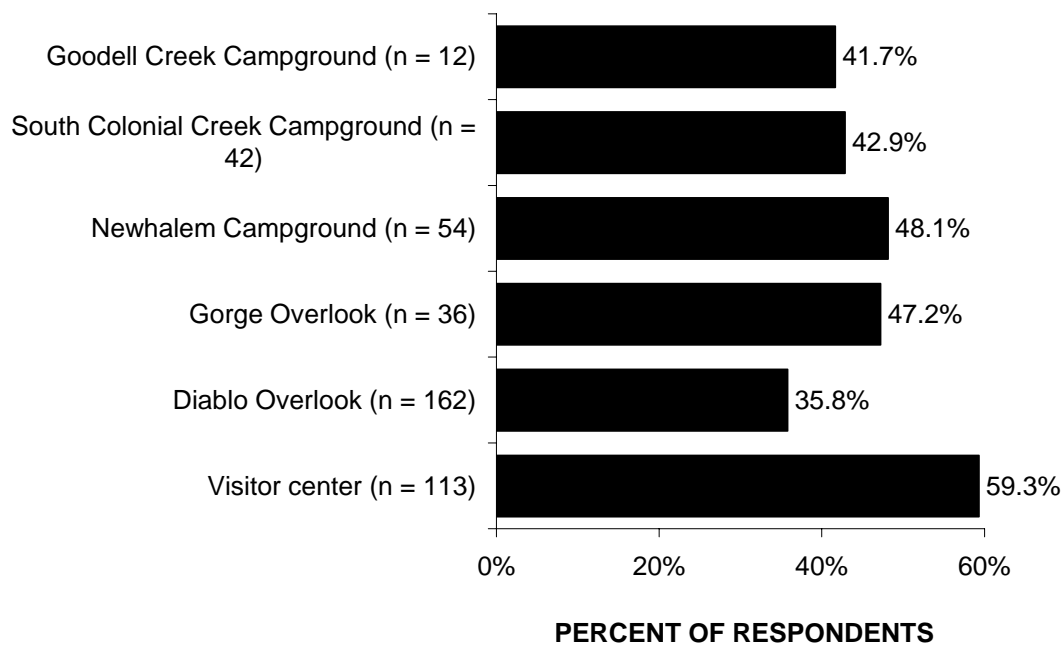


**Figure 3.27: ROLA Corridor Survey, Q-11c
Map Affected Where You Stopped***



*Includes only the 14.9% of respondents who used map during the trip.

**Figure 3.28: ROLA Corridor Survey, Q-11d
Used a Different Map During Trip by Contact Point**



III. Trip Characteristics

The map data were aggregated in several ways and are presented below. First, the percent of people that stopped at each location was computed to show relative visitation at the different sites. As can be seen in Figure 3.29, 58.4% of visitors stopped at North Cascades Visitor Center and 57.1% at Diablo Lake Overlook. The relatively low number of people stopping at Newhalem may reflect some visitors' confusion that Newhalem is the park visitor center and thus, indicated North Cascades Visitor Center for Newhalem. Table 3.10 summarizes the locations visited per the map for each destination type. Incidental visitors were more likely to stop at overlooks and less likely to stop at many of the other sites.

Table 3.10 Summary of location stopped in ROLA per map by destination type.

Locations stopped in ROLA per map	% Stopped		
	Primary reason	One of several	Not a reason
Goodell Creek Campground	9.5	13.5	6.9
Goodell Creek Group Campground	1.9	6.0	0.0
Gorge Overlook	29.5	51.9	30.6
Gorge campground/boat launch	5.7	9.0	4.9
Environmental Learning Center	11.4	12.8	11.1
Ross Lake Overlook	29.5	58.6	43.1
Happy-Panther Trail	1.9	0.8	2.1
Happy Creek Forest Walk	10.5	7.5	5.6
Diablo Lake Overlook	42.9	65.4	59.0
Thunder Knob Trail	18.1	8.3	8.3
Colonial Creek Campground	26.7	24.1	9.7
Pyramid Lake Trail	1.9	3.8	2.8
Rock Shelter Trail	11.4	9.0	1.4
Newhalem	32.4	27.8	9.0
Newhalem Creek Trail	17.1	7.5	1.4
Newhalem Creek Campground	28.6	23.3	9.0
North Cascades Visitor Center	69.5	68.4	41.0
River Loop Trail	21.9	22.6	4.9

The average number of stops people indicated on the map was 3.5 (see Figure 3.30). People who reported using the map in the survey stopped at significantly more locations ($M = 4.9$) than people who did not use the survey map ($M = 3.2$), $F(1, 347) = 32.70$, $p < .001$. Given that incidental visitors were the least likely to use the map in the survey, it was not surprising that the average number of stops indicated on the map also differed by type of destination, $F(2, 356) = 24.46$, $p < .001$. Post hoc tests revealed that incidental visitors made fewer stops than visitors for whom ROLA was a primary or one of several reasons (see Table 3.11).

Additional analyses indicated that people who said that using the survey map affected their trip stopped at more locations ($M = 5.2$) than those who said the map did not affect their trip ($M = 3.6$), although this result was only marginally significant $F(1, 59) = 3.94$, $p = .052$.

Of respondents who stopped at only one location, the most likely location to stop at was Diablo Lake Overlook (31.9%) followed by North Cascades Visitor Center (23.2%) and Gorge Overlook (13.0%).

Figure 3.29. ROLA Corridor Survey, Q-11a
Locations Stopped in ROLA per Map

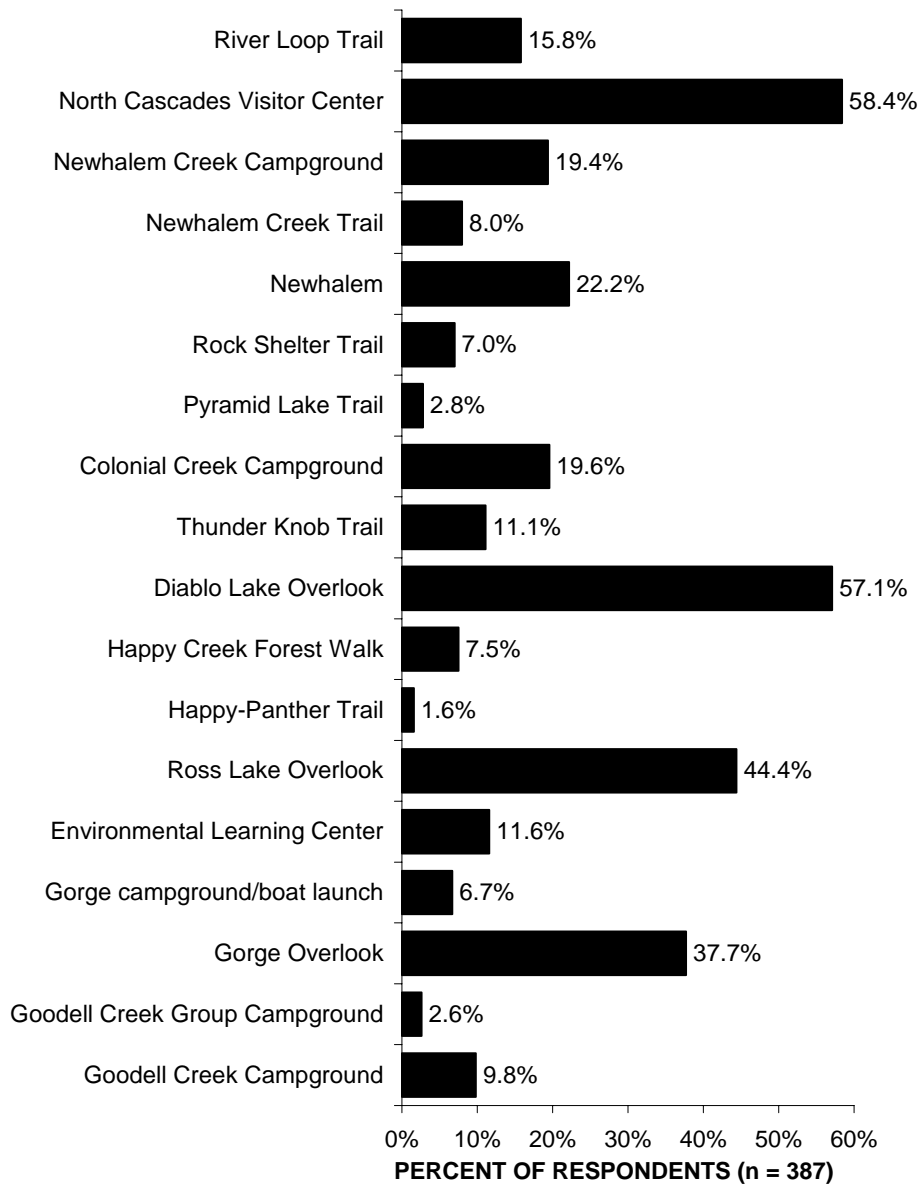
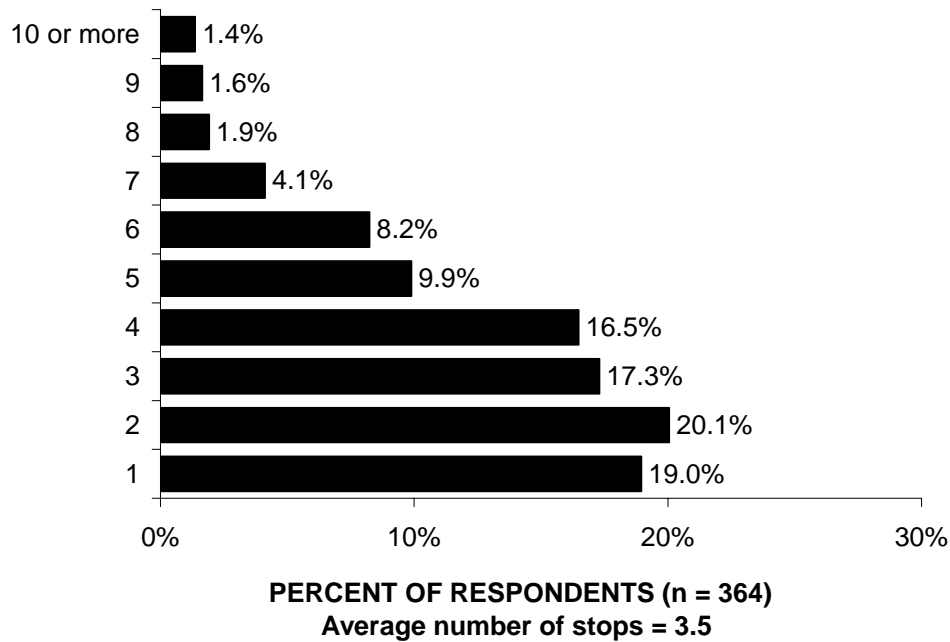


Table 3.11 Number of stops by destination type

	Destination Type		
	Primary reason	One of several	Not a reason
Number of locations stopped per map	3.7	4.3	2.5

**Figure 3.30. ROLA Corridor Survey, Q-11a
Number of Locations Visited per Map**



In addition to destination type, the locations people visit may be affected by the direction they enter the recreation area. Table 3.12 shows that this was the case. Visitors who drove a loop starting East of the park had the most stops of all groups ($M = 5.1$ vs. M s ranging from 3.2 to 3.6). As can be seen in Table 3.4, people who drove through the park were fairly comparable in the distribution of stops they made except that people driving East to West compared to those driving West to East were more likely to stop at Diablo Lake Overlook (72.3% vs. 60.1%) and less likely to stop at North Cascades Visitor Center (43.6% vs. 62.3%). People who drove a loop starting West of the park were the least likely to stop at Ross Lake Overlook perhaps reflecting that some visitors did not drive that far East into the recreation area. Overall, this group was the least likely to stop at any of the overlooks. In contrast, people who drove a loop starting East of the park had the highest percentage of people stopping at a number of locations including Newhalem (the westernmost location).

Table 3.12. Locations stopped by driving pattern

Location stopped	% of respondents who stopped			
	Drove from West to East	Drove from East to West	Start and end West of Stop	Start and end East of Stop
Goodell Creek Campground	9.4	6.9	10.9	0.0
Goodell Creek Group Campground	0.7	2.0	4.2	8.3
Gorge Overlook	44.2	40.6	31.1	41.7
Gorge campground/Boat launch	7.2	5.9	7.6	0.0
Environmental Learning Center	9.4	11.9	15.1	8.3
Ross Lake Overlook	52.2	53.5	29.4	58.3
Happy-Panther Trail	0.7	2.0	0.8	8.3
Happy Creek Forest Walk	8.7	4.0	9.2	8.3
Diablo Lake Overlook	60.1	72.3	44.5	66.7
Thunder Knob Trail	5.8	10.9	12.6	33.3
Colonial Creek Campground	12.3	17.8	20.2	58.3
Pyramid Lake Trail	2.9	2.0	3.4	8.3
Rock Shelter Trail	3.6	5.0	10.9	16.7
Newhalem	14.5	16.8	33.6	50.0
Newhalem Creek Trail	3.6	4.0	13.4	25.0
Newhalem Creek Campground	13.8	14.9	25.2	16.7
North Cascades Visitor Center	62.3	43.6	64.7	66.7
River Loop Trail	10.1	14.9	19.3	41.7

Overall trip satisfaction

Mail questionnaire

13. Overall, how would you rate your experience on this trip to Ross Lake National Recreation Area?
(Check one box.)

Poor
Fair
Good
Very good
Excellent
Perfect

As can be seen in Figure 3. 31, most visitors rated their trip as “very good” or higher. Overall trip satisfaction ratings differed significantly by destination type, $F(2, 461) = 6.29, p = .002$ (see Table 3.13). Visitors for whom ROLA was a primary destination had higher overall trip satisfaction ($M = 4.7$) than incidental visitors ($M = 4.4$). Visitors for whom ROLA was one of several destinations ($M = 4.5$) did not differ significantly from either of the other groups.

III. Trip Characteristics

**Figure 3.31. ROLA Corridor Survey, Q-13
Overall Experience on Trip to ROLA**

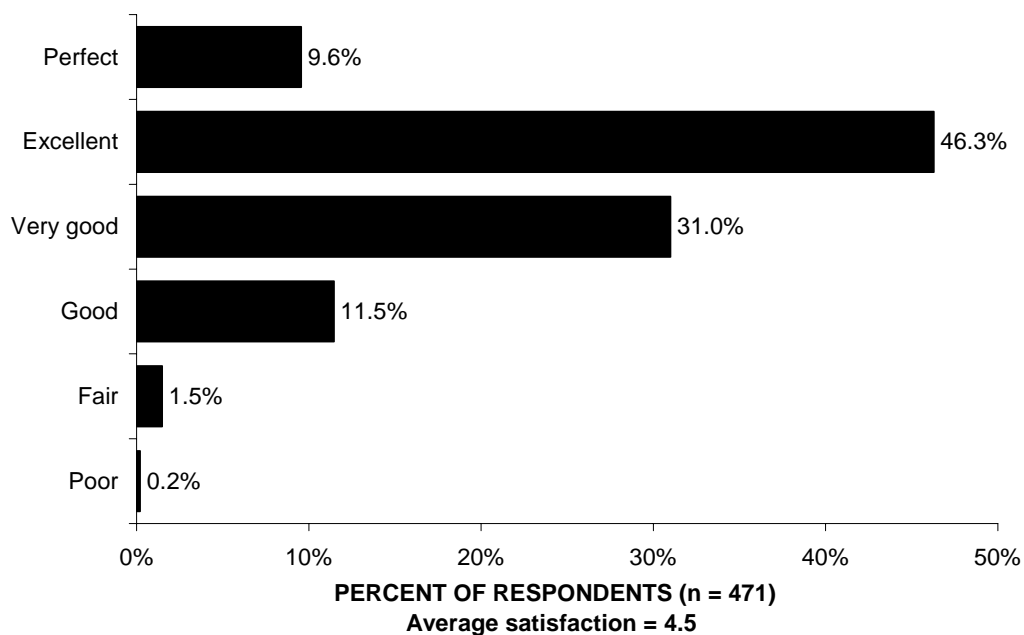


Table 3.13 Overall trip satisfaction by destination type

	Destination Type		
	Primary reason	One of several	Not a reason
Overall trip satisfaction	4.7	4.5	4.4
1 = Poor, 2 = Fair, 3 = Good, 4 = Very good, 5 = Excellent, 6 = Perfect			

IV. FACILITIES AND PROGRAMS

Visitors participating in the Ross Lake NRA State Route 20 Corridor User Mail Survey were asked a variety of questions about their trip and the activities they engaged in. This section reports the data collected with these questions.

Sought information prior to visit

Mail questionnaire

2. **PRIOR TO THE VISIT DURING WHICH YOU WERE CONTACTED**, did you and your group seek information about Ross Lake National Recreation Area and/or the attractions that are found within its boundaries? (*Check one number.*)

NO → **GO TO QUESTION 3**

YES

- 2a. From which sources did you and your group seek to obtain information? (*Check as many boxes as apply.*)

Friends or relatives

Travel guide/Tour book

Newspaper/Magazine

Phoned park for information

Requested information from park by mail

National Park Service (NPS) maps/Brochures

Non-NPS Maps/Brochures

Radio/Television

Hotel/Motel

Visitor contact station/Ranger Stations

NPS Park internet/web site (<http://www.nps.gov/rola/> or <http://www.nps.gov/noca/>)

Other internet/web sites

Other (*Please specify:* _____)

Sought information but don't remember where

Visitors for whom ROLA was not a reason for their trip were half as likely as other visitors to seek information about ROLA prior to their trip (see Table 4.1), $\chi^2 (n = 464, 2) = 49.17, p < .001$.

Table 4.1 Percent of visitors who sought information prior to trip by destination type

	Destination Type		
	Primary reason	One of several	Not a reason
Sought information prior to trip	58.2%	53.5%	23.5%

IV. Facilities and Programs

The likelihood of seeking information prior to their visit also varied by contact point, $\chi^2 (n = 469, 5) = 30.43, p < .001$. As can be seen in Figure 4.1, visitors contacted at campgrounds were more likely to seek information than visitors contacted at the overlooks. This finding was consistent with the findings that 1) more visitors for whom ROLA was a primary reason for their trip were contacted at campgrounds and they were more likely to seek information and 2) more incidental visitors being contacted at Diablo Overlook and they were less likely to seek information.

As can be seen in Figure 4.2, the top three sources were NPS park internet/web sites (45.2%), travel guides/tour book (44.2%), and National Park Service maps/brochures (41.7%). Of those who sought information, the use of travel guides/tour books varied by destination type, $\chi^2 (n = 199, 2) = 10.88, p = .004$. Visitors for whom ROLA was a primary destination were less likely to seek information from travel guides/tour books (28.2%) than those for whom ROLA was one of several destinations (51.8%) or incidental visitors (53.5%). The likelihood of using travel guides/tour books as a source of information varied by contact point, $\chi^2 (n = 191, 4) = 11.30, p < .023$ (excludes Goodell Creek Campground visitors to eliminate expected frequencies less than 5). Visitors contacted at S. Colonial Creek Campground were the least likely to use travel guide/tour books.

**Figure 4.1. ROLA Corridor Survey, Mail Survey Q-2
Sought Information by Contact Point**

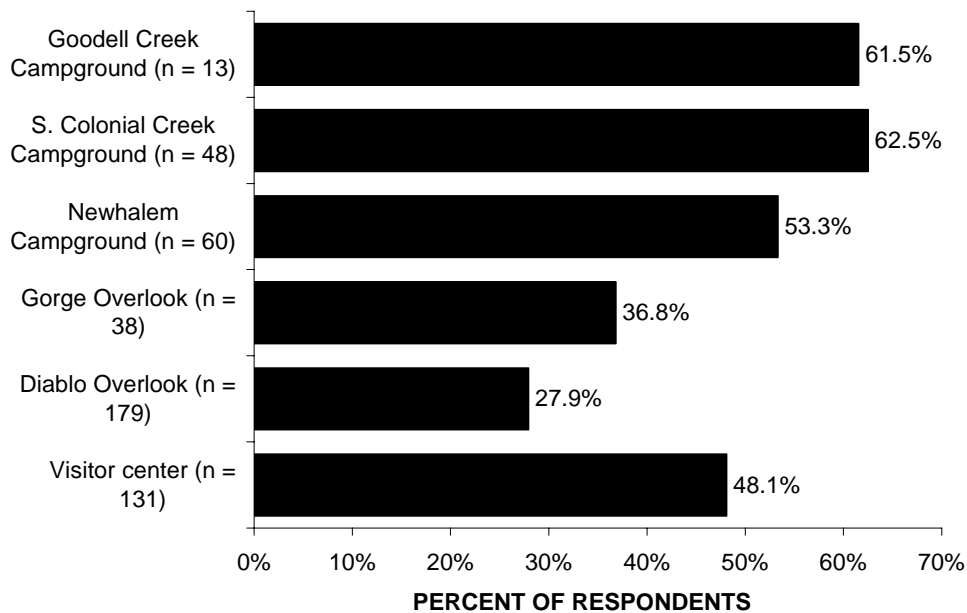
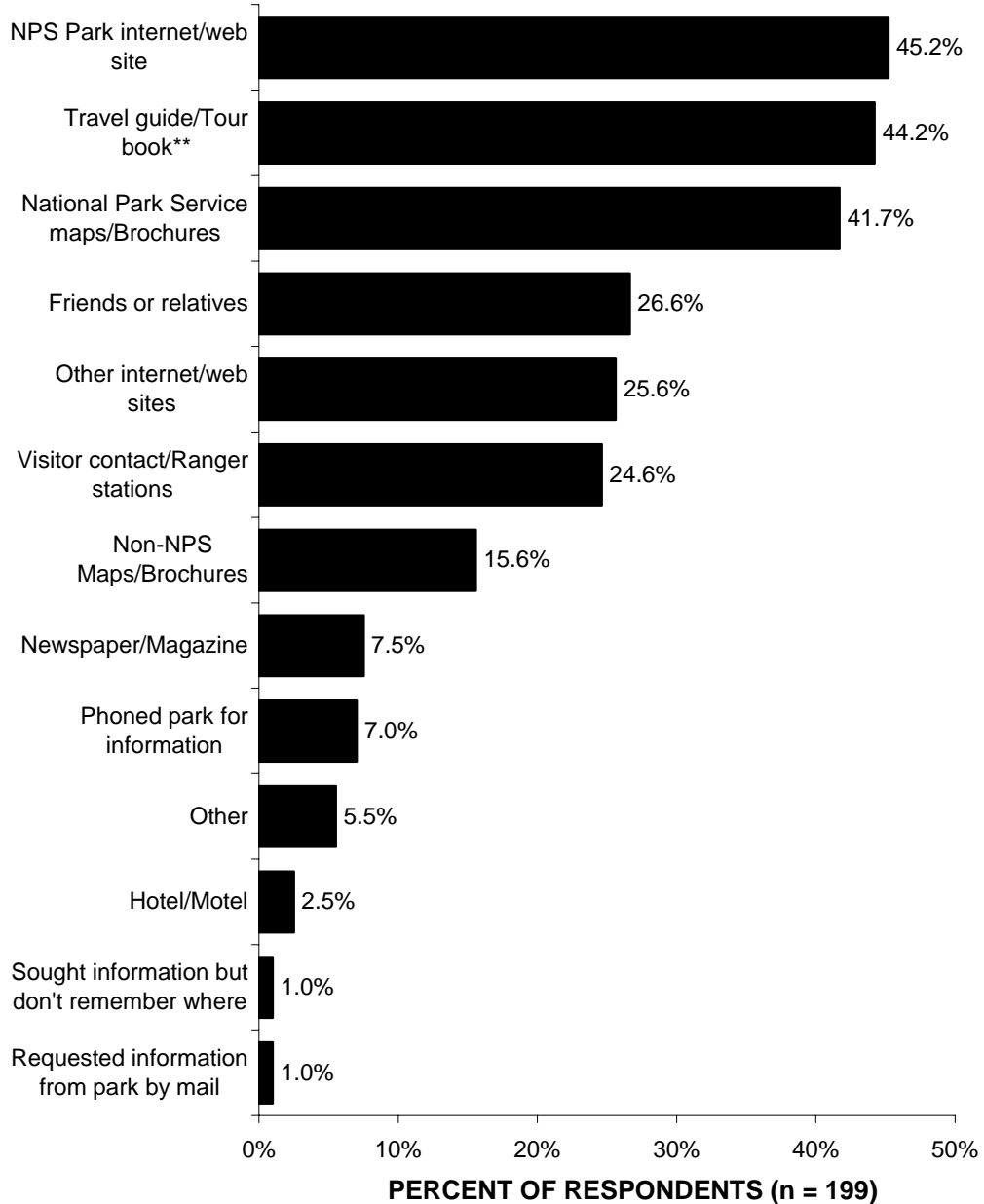


Figure 4.2. ROLA Corridor Survey, Q-2a
Sources from which Information Was Sought*

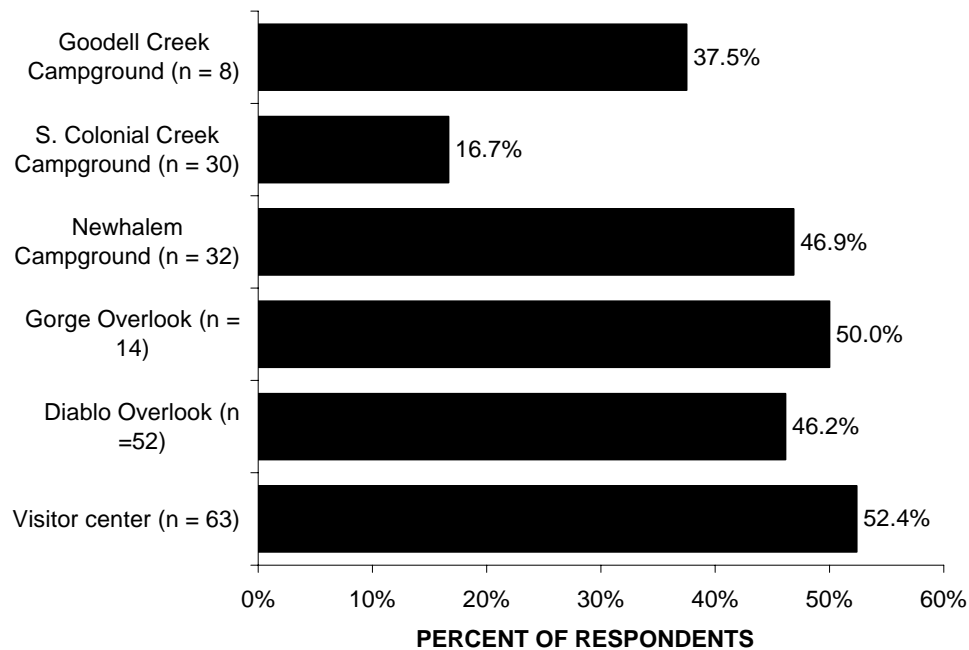


* Includes only the 42% of respondents who sought information prior to visiting.

**The percentage of respondents who obtained information from Travel guides or tour books varied by contact point (see Figure below).

IV. Facilities and Programs

**Figure 4.3. ROLA Corridor Survey, Mail Survey Q-2a
Sought Information from Travel guide/Tour book by Contact Point**



Includes only the 42% of respondents who sought information prior to visiting.

Prior knowledge of facilities and programs

Mail questionnaire

5. Which of the following facilities and programs did you know about before entering Ross Lake NRA on the trip during which you were contacted? (*Check all that apply*).

Seattle City Light Information Center in Newhalem
North Cascades National Park Visitor Center
Environmental Learning Center
Group campsites at Goodell Creek Campground
Group campsites at Newhalem Creek Campground
Thunder Knob Trail
Happy Creek Forest Walk
Happy-Panther Trail
Gorge Overlook Trail
Handicap-accessible dock at Colonial Creek Campground
Interpretive signs/Ranger led programs at Diablo Overlook
Restrooms at Diablo Overlook

Respondents were asked to indicate which facilities and programs they were aware of prior to visiting. Awareness of 9 of the 12 facilities/programs differed by destination type. Table 4.2 summarizes the facilities/programs for which significant differences in knowledge due to destination type were found. Overall, visitors for whom ROLA was a primary destination had the highest knowledge levels of ROLA facilities/programs. With the exception of North Cascades

Visitor Center, visitors for whom ROLA was one of several reasons had knowledge levels that were more similar to the low knowledge levels of incidental visitors than visitors for whom ROLA was a primary destination.

Table 4.2 Summary of knowledge of facilities/programs with significant differences due to destination type

Facility/Program	% Knew of facility/program		
	Primary reason	One of several	Not a reason
Seattle City Light Information Center in Newhalem	53.7	33.3	36.3
North Cascades Visitor Center	75.0	73.0	50.3
Environmental Learning Center	23.4	11.8	10.4
Group campsites at Goodell Creek Campground	27.4	10.5	10.4
Group campsites at Newhalem Creek Campground	33.1	17.8	11.5
Thunder Knob Trail	20.2	9.9	5.5
Gorge Overlook Trail	29.0	20.4	16.4
Handicap-accessible dock at Colonial Creek campground	12.1	3.9	1.1
Restrooms at Diablo Overlook	31.5	19.1	30.1

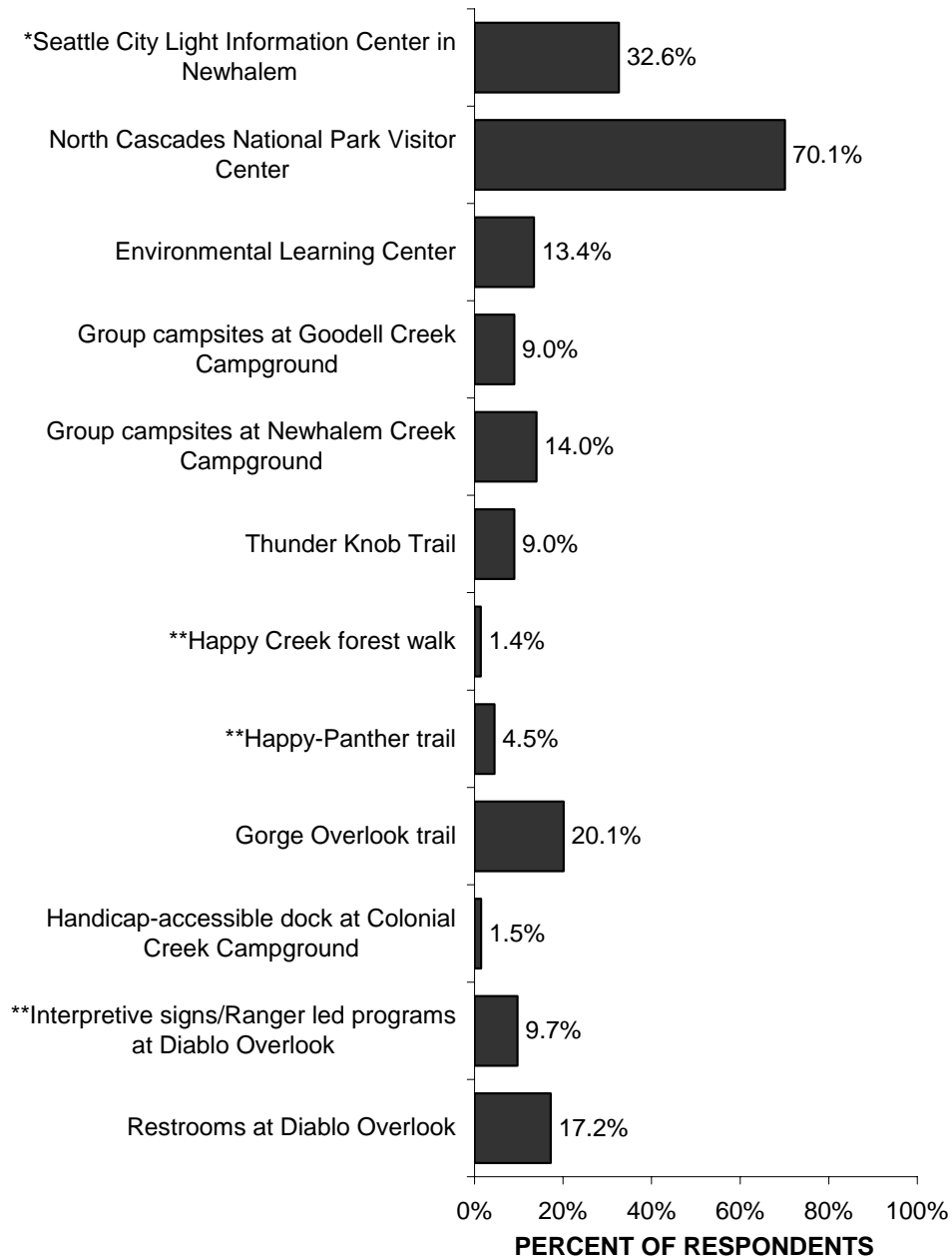
Awareness of these same 9 facilities/programs differed by contact point. Figures 4.4 to 4.9 present the awareness ratings for each contact point. Visitors contacted at campgrounds were more likely to be aware of more facilities/programs than visitors contacted at overlooks. Visitors contacted at Diablo Overlook had the lowest awareness. These findings were consistent with those of destination type.

North Cascades Visitor Center had the highest awareness ratings for all destination types and contact points, and Seattle City Light Information Center in Newhalem had the second or third highest ratings for all destination types and contact points.

Analyses found that people who knew about the group campsites at Goodell Creek Campground were from larger parties than people who did not know about the group campsite ($M = 4.0$ vs. $M = 2.9$), $F(1, 461) = 13.43$, $p < .001$. The same pattern was found for the group campsites at Newhalem Creek Campground ($M = 4.1$ vs. $M = 2.8$), $F(1, 461) = 20.78$, $p < .001$.

IV. Facilities and Programs

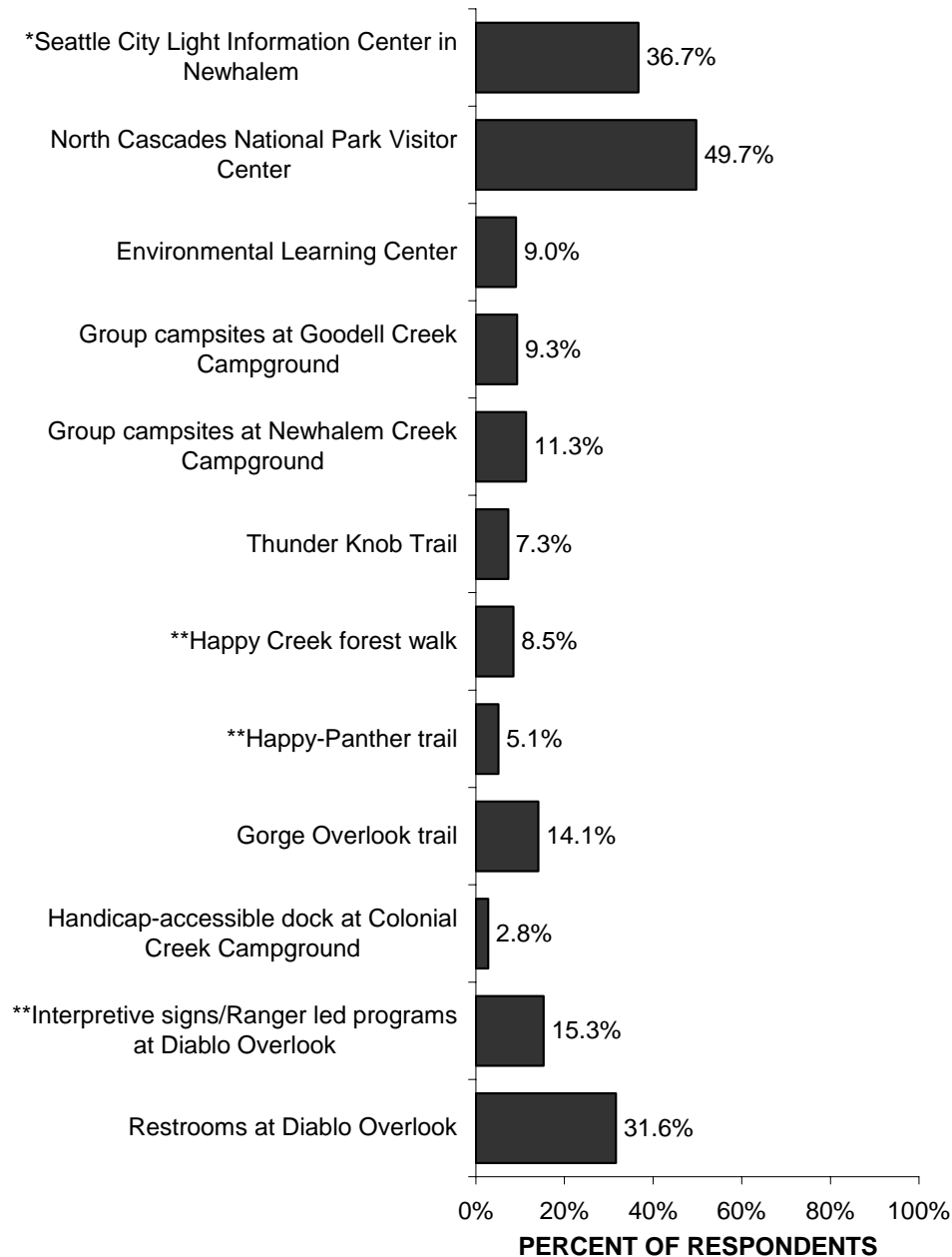
**Figure 4.4. ROLA Corridor Survey, Mail Survey Q-5
Facilities and Programs North Cascades Visitor Center Respondents
Knew about Before Entering ROLA**



*Data were weighted to reflect contact sheet age distribution of respondents.

**Knowledge of this facility/program did not differ statistically by contact point.

**Figure 4.5. ROLA Corridor Survey, Mail Survey Q-5
Facilities and Programs Diablo Overlook Respondents Knew about
Before Entering ROLA**

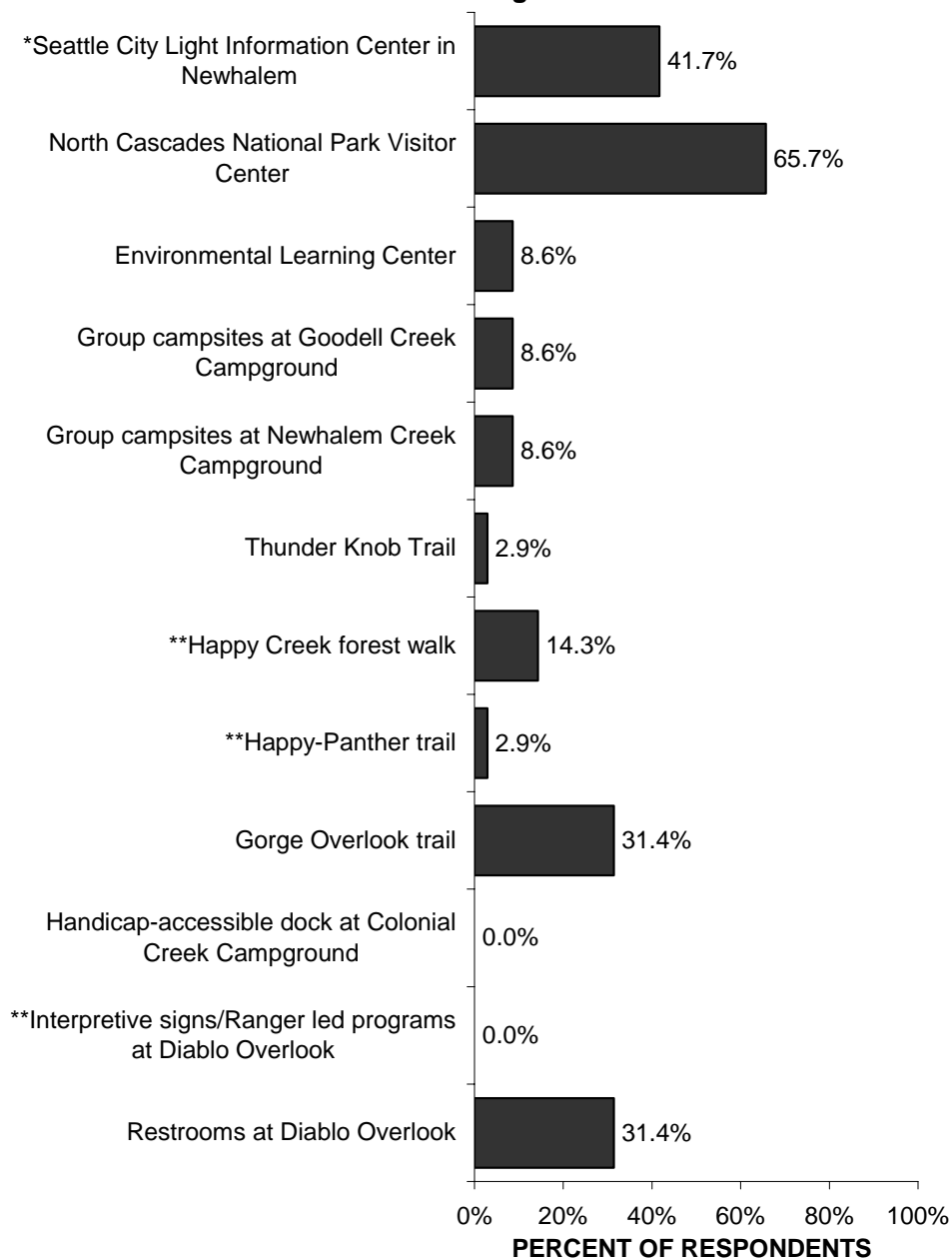


*Data were weighted to reflect contact sheet age distribution of respondents.

**Knowledge of this facility/program did not differ statistically by contact point.

IV. Facilities and Programs

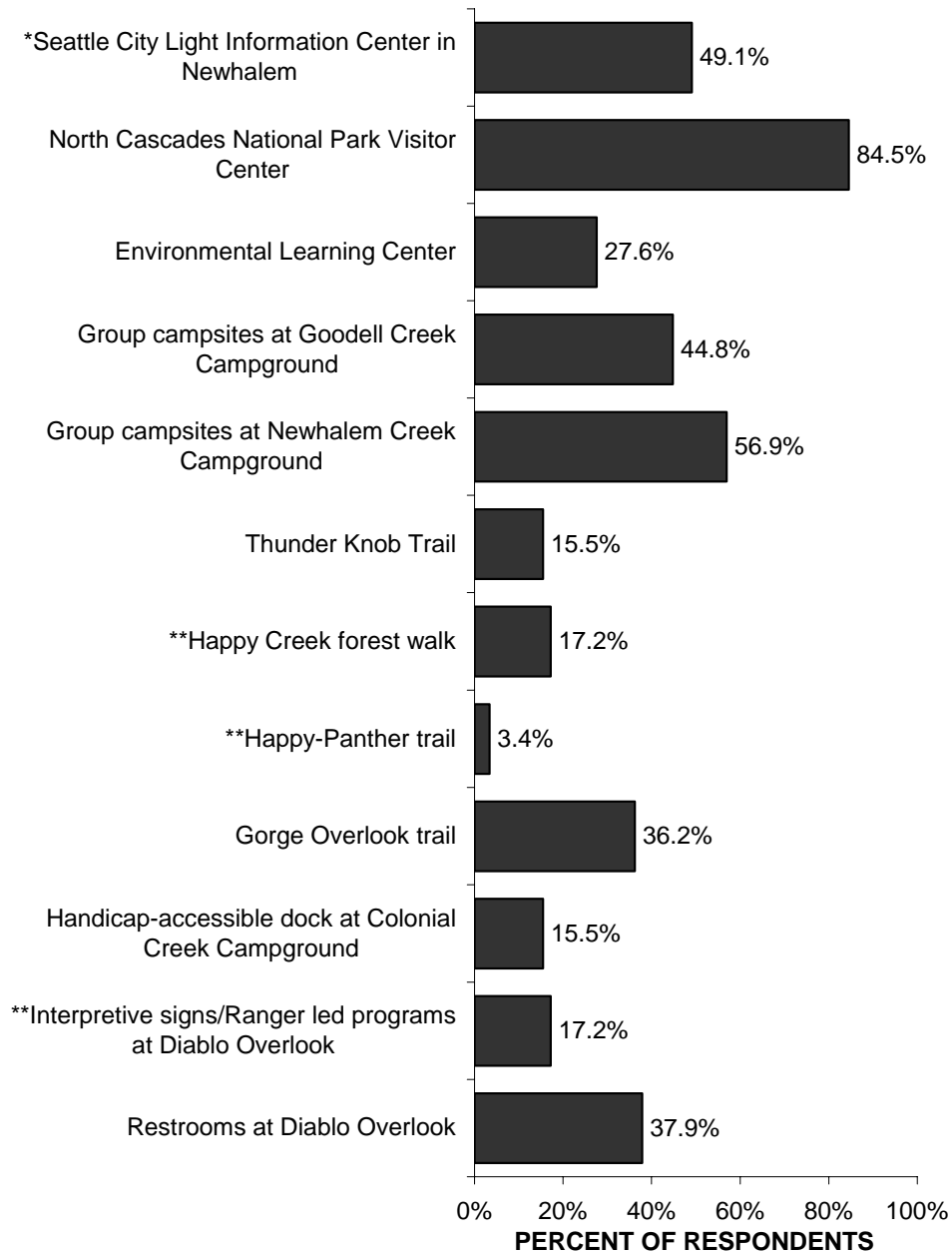
**Figure 4.6. ROLA Corridor Survey, Mail Survey Q-5
Facilities and Programs Gorge Overlook Respondents Knew about
Before Entering ROLA**



*Data were weighted to reflect contact sheet age distribution of respondents.

**Knowledge of this facility/program did not differ statistically by contact point.

**Figure 4.7. ROLA Corridor Survey, Mail Survey Q-5
Facilities and Programs Newhalem Campground Respondents Knew
about Before Entering ROLA**

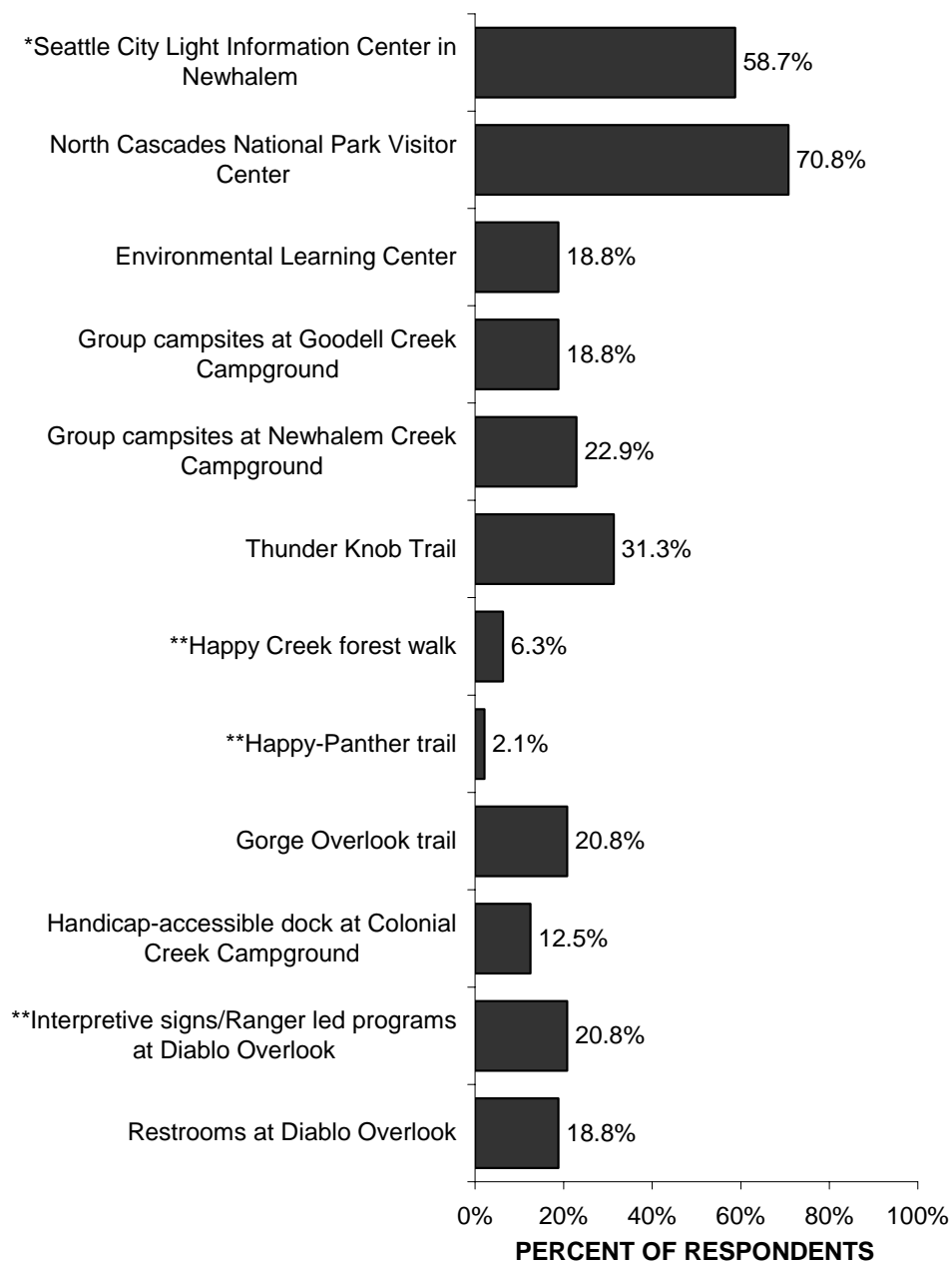


*Data were weighted to reflect contact sheet age distribution of respondents.

**Knowledge of this facility/program did not differ statistically by contact point.

IV. Facilities and Programs

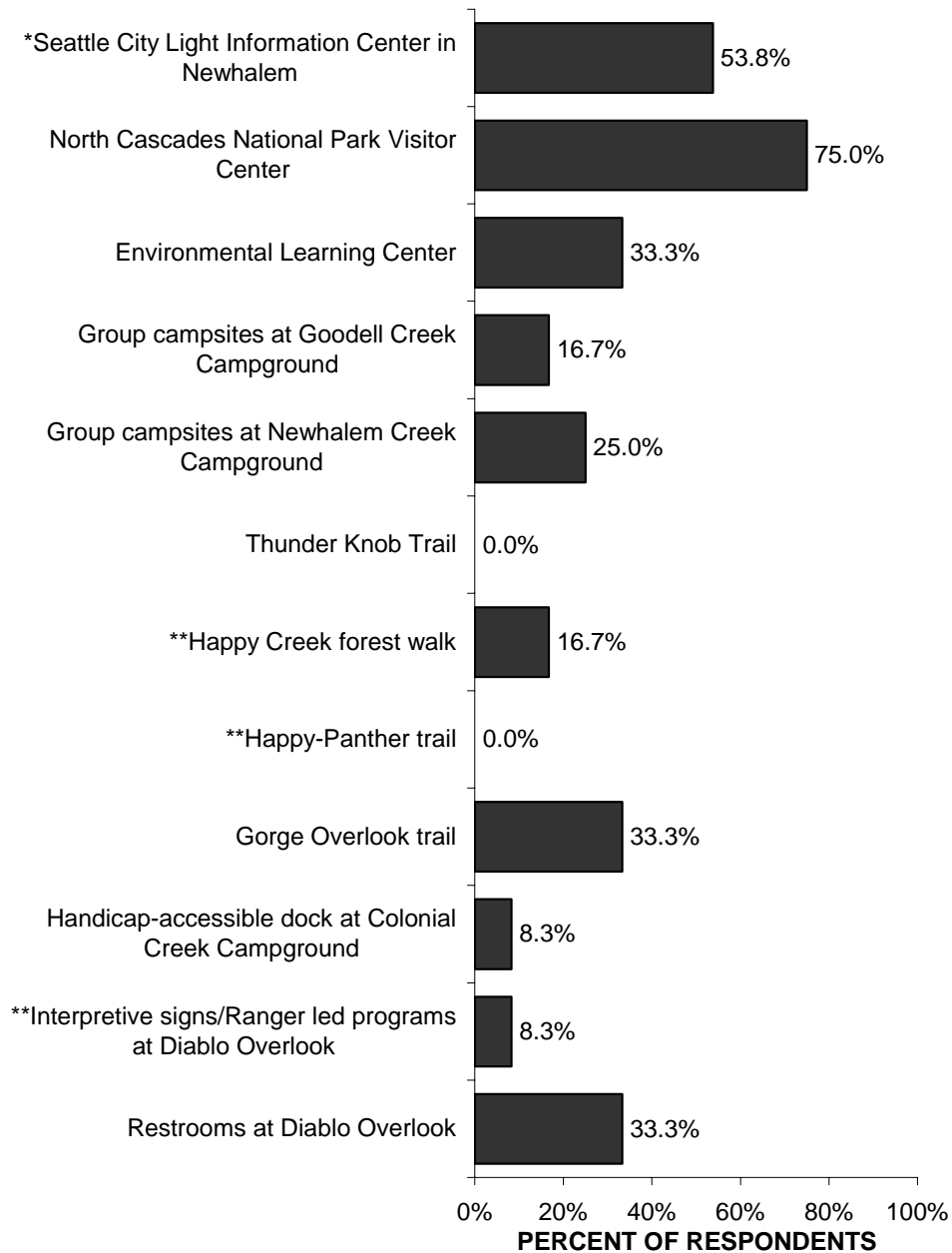
**Figure 4.8. ROLA Corridor Survey, Mail Survey Q-5
Facilities and Programs S. Colonial Creek Campground
Respondents Knew about Before Entering ROLA**



*Data were weighted to reflect contact sheet age distribution of respondents.

**Knowledge of this facility/program did not differ statistically by contact point.

**Figure 4.9. ROLA Corridor Survey, Mail Survey Q-5
Facilities and Programs Goodell Creek Campground Respondents
Knew about Before Entering ROLA**



*Data were weighted to reflect contact sheet age distribution of respondents.

**Knowledge of this facility/program did not differ statistically by contact point.

Awareness of and interest in North Cascades Institute's environmental education programs

Mail questionnaire

7. Are you aware that there are Environmental Education Programs for children and adults offered by North Cascades Institute?
- YES
NO
8. Would you be interested in participating in any of the programs offered by North Cascades Institute? North Cascades Institute offers educational programs including seminars and retreats, school and summer youth programs, teacher education and internships, volunteer stewardship programs, graduate program in environmental education and custom programs.
- Not at all interested
Slightly interested
Moderately interested
Very interested

Awareness of Environmental Education Programs for children and adults offered by North Cascades Institute varied by destination type, χ^2 (n = 467, 2) = 27.48, $p < .001$ (see Table 4.3). Awareness of Environmental Education Programs at North Cascades Institute was highest for those visitors for whom ROLA was a primary destination (47.2%) followed by those for whom it was one of several destinations (35.1%) and incidental visitors (19.5%). Interest in participating in these programs also varied by destination type, $F(2, 459) = 10.04$, $p < .001$ (see Table 4.3). Visitors for whom ROLA was a primary destination had significantly higher interest levels than visitors for whom ROLA was one of several destinations or incidental visitors. No other significant differences were found. Interest ratings were overall very low with averages at best at "slightly interested."

Table 4.3 Awareness of and interest in Environmental Education Programs at North Cascades Institute by destination type

Variable	Destination Type		
	Primary reason	One of several	Not a reason
Aware of Environmental Education Programs at North Cascades Institute	47.2%	35.1%	19.5%
Interest in participating in these programs	2.1	1.7	1.6
1 = Not at all interested, 2 = Slightly interested, 3 = Moderately interested, 4 = Very interested			

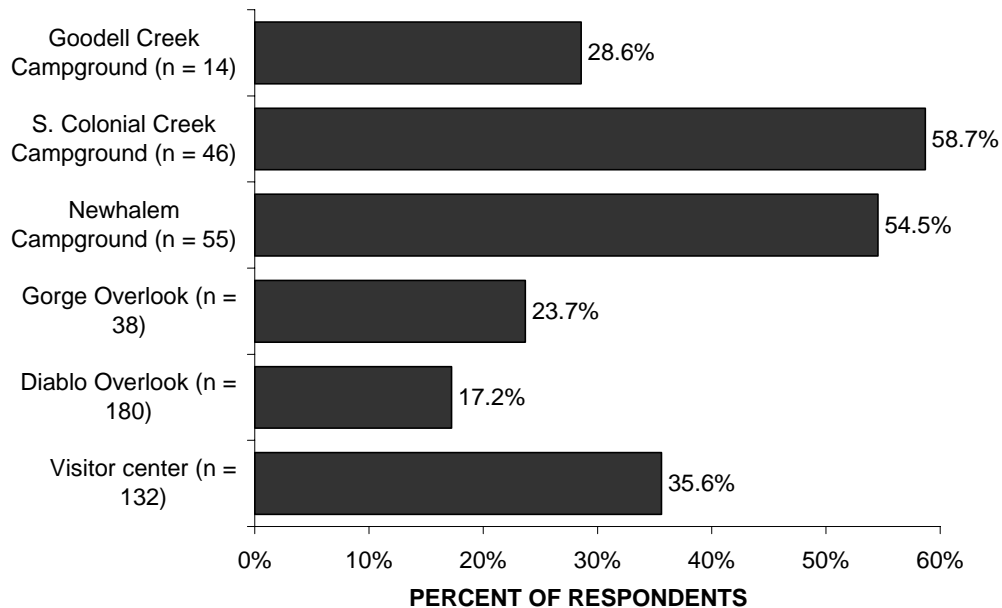
Awareness of Environmental Education Programs for children and adults offered by North Cascades Institute also varied by contact point, χ^2 (n = 451, 4) = 48.03, $p < .001$. As can be seen in Figure 4.10, visitors to S. Colonial Creek and Newhalem campgrounds were the most likely to be aware of these programs and visitors to Diablo Overlook the least likely to be aware. A comparison of these data with prior knowledge of the Environmental Learning Center (see Figures 4.4 – 4.9) indicate that considerably fewer people had knowledge of the Environmental

Learning Center prior to their trip than were aware of North Cascades Institute's Environmental Education Programs. This finding suggests that while people have knowledge or awareness of North Cascades Institute they have yet to learn about the new Learning Center that recently opened.

Interest ratings for participating in these programs also varied by contact point, $F(5, 455) = 4.47$, $p = .001$. Post hoc Tukey tests indicated visitors to South Colonial Creek Campground ($M = 2.2$) were significantly more interested than visitors to Gorge or Diablo Overlooks ($M = 1.5$ and $M = 1.6$, respectively). No other significant differences were found.

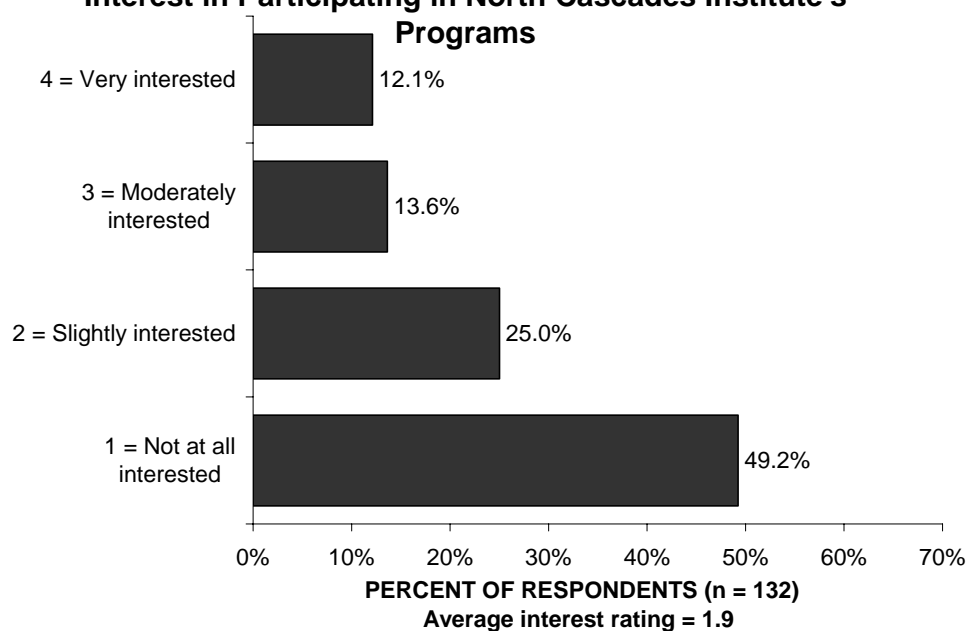
Review of Figures 4.11-4.16 show that between 10.5% and 36.3% of visitors contacted at the different sites were moderately to very interested in these programs. Between 25.9% and 61.8% of visitors at the different contact points expressed no interest in participating in North Cascades Institutes programs.

**Figure 4.10. ROLA Corridor Survey, Mail Survey Q-7
Aware of North Cascades Institute's Environmental Education
Programs by Contact Point**



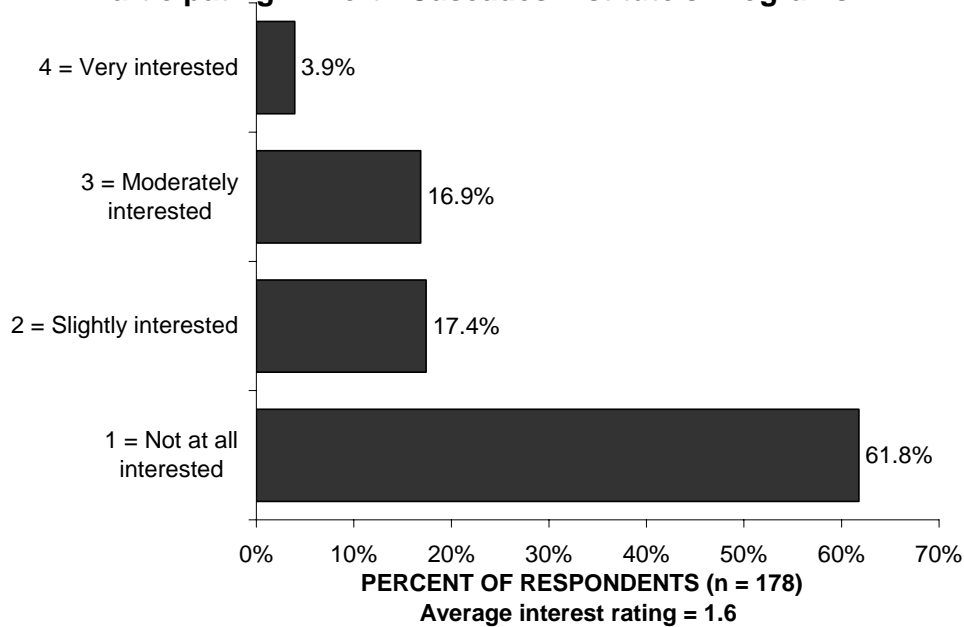
Data were weighted to reflect contact sheet age distribution of respondents.

**Figure 4.11. ROLA Corridor Survey, Mail Survey Q-8
North Cascades Visitor Center Respondents' Degree of
Interest in Participating in North Cascades Institute's
Programs**



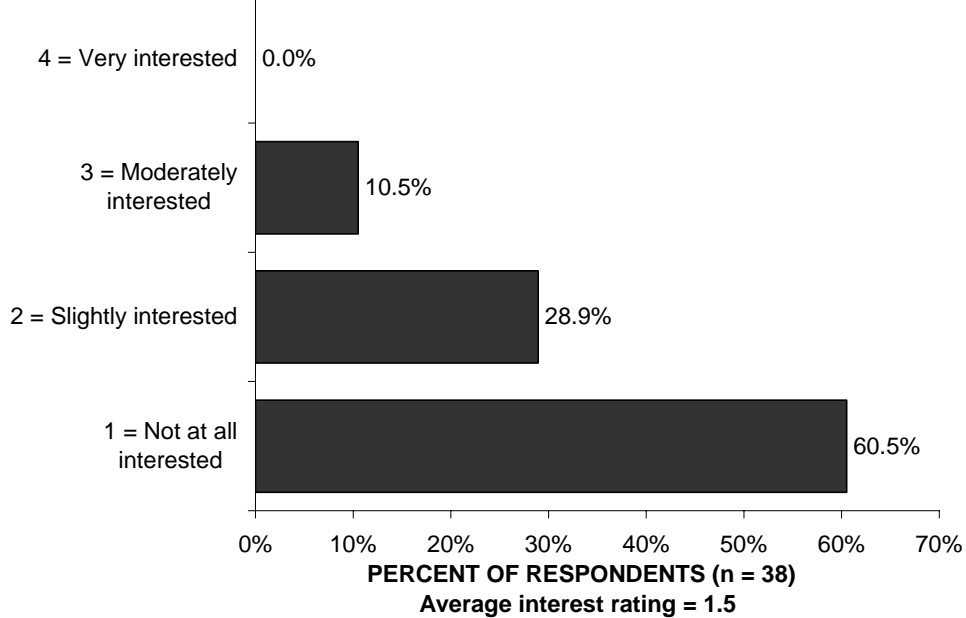
Data were weighted to reflect contact sheet age distribution of respondents.

**Figure 4.12. ROLA Corridor Survey, Mail Survey Q-8
Diablo Overlook Respondents' Degree of Interest in
Participating in North Cascades Institute's Programs**



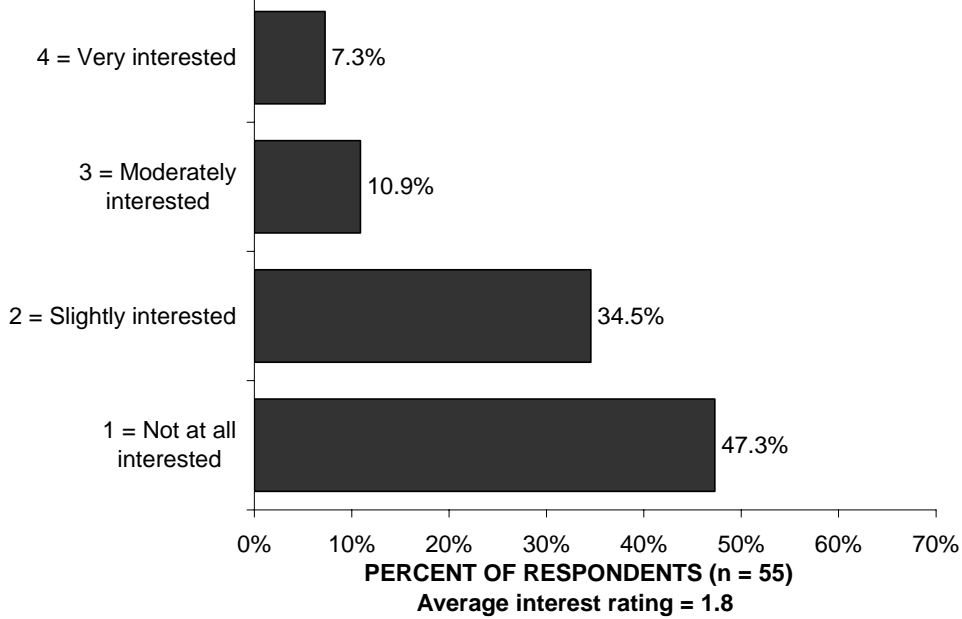
Data were weighted to reflect contact sheet age distribution of respondents.

**Figure 4.13. ROLA Corridor Survey, Mail Survey Q-8
Gorge Overlook Respondents' Degree of Interest in
Participating in North Cascades Institute's Programs**



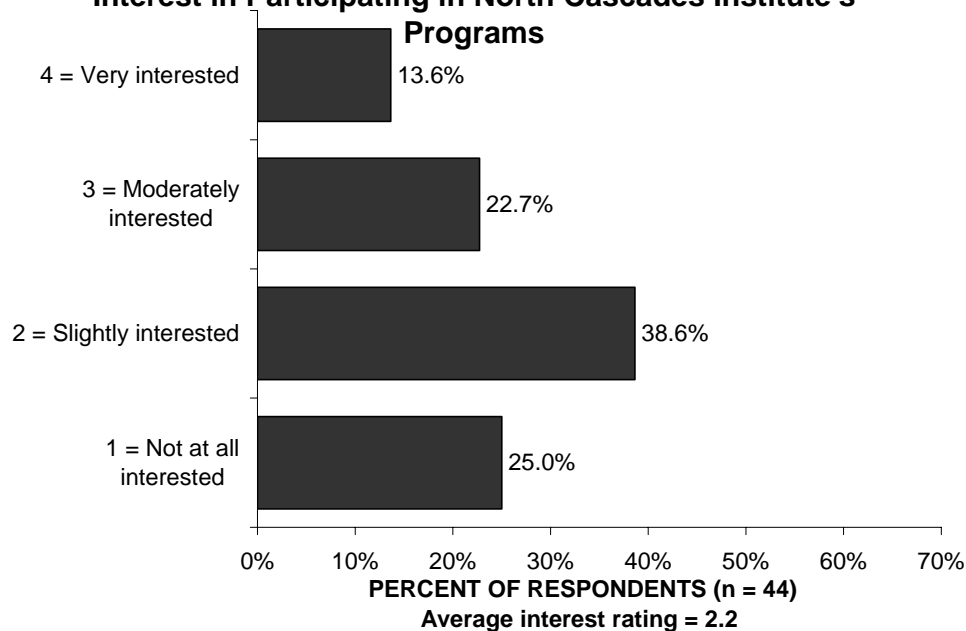
Data were weighted to reflect contact sheet age distribution of respondents.

**Figure 4.14. ROLA Corridor Survey, Mail Survey Q-8
Newhalem Campground Respondents' Degree of Interest in
Participating in North Cascades Institute's Programs**



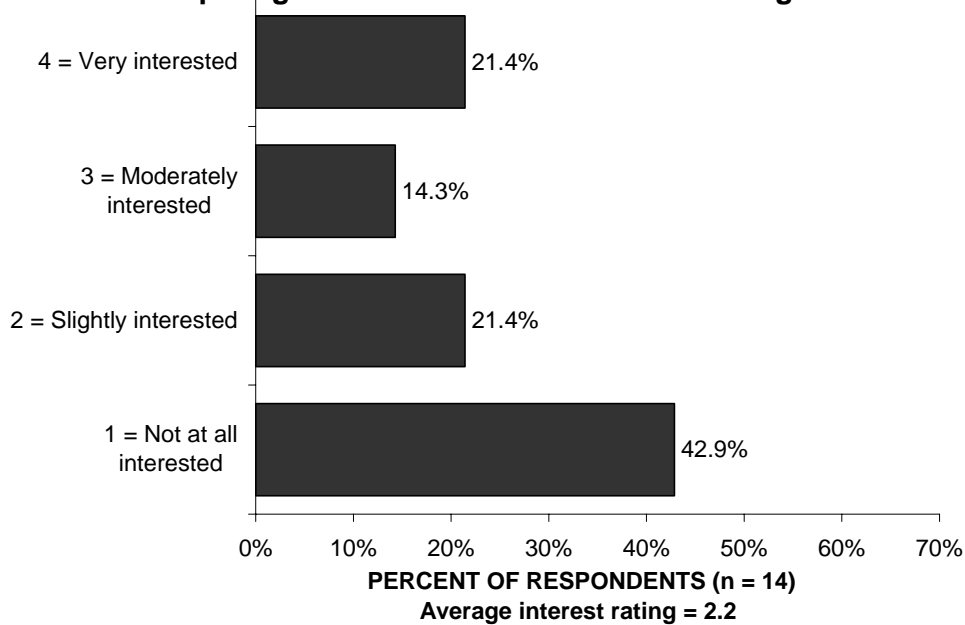
Data were weighted to reflect contact sheet age distribution of respondents.

**Figure 4.15. ROLA Corridor Survey, Mail Survey Q-8
S. Colonial Creek Campground Respondents' Degree of
Interest in Participating in North Cascades Institute's
Programs**



Data were weighted to reflect contact sheet age distribution of respondents.

**Figure 4.16. ROLA Corridor Survey, Mail Survey Q-8
Goodell Creek Campground Respondents' Degree of Interest
in Participating in North Cascades Institute's Programs**



Data were weighted to reflect contact sheet age distribution of respondents.

Interest in different types of ranger activities

Mail questionnaire

9. For each of the following types of ranger activities, please indicate 1) how interested you would be in participating in one, and 2) whether you did participate in one on the trip during which you were contacted.

	How interested are you in participating in this type of ranger activity?					Check (✓) if participated this trip
	↓	↓	↓	↓	↓	
A. EVENING CAMPGROUND PROGRAMS	not interested	slightly interested	moderately interested	very interested	extremely interested	_____
B. DAYTIME PROGRAMS THROUGHOUT PARK	not interested	slightly interested	moderately interested	very interested	extremely interested	_____
C. GUIDED WALKS	not interested	slightly interested	moderately interested	very interested	extremely interested	_____
D. INFORMAL CONTACT WITH RANGERS	not interested	slightly interested	moderately interested	very interested	extremely interested	_____

Visitors were asked to indicate their interest in participating in four different types of ranger programs. Interest in each of these types of programs differed significantly by destination type. Table 4.4 summarizes the average interest rating for participating in four different ranger activities. Analyses showed that for each program, average interest ratings for visitors for whom ROLA was not a reason for their trip were significantly lower than those for the other two groups.

Table 4.4 Summary of average interest in participating in ranger activities

Facility/Program	Primary reason	One of several	Not a reason
Evening campground programs	2.8	2.6	2.0
Daytime programs throughout the park	2.7	2.5	2.0
Guided walks	2.6	2.4	2.1
Informal contact with rangers	3.2	3.1	2.5
The interest rating scale was 1 = Not interested, 2 = Slightly interested, 3 = Moderately interested, 4 = Very interested, and 5 = Extremely interested.			

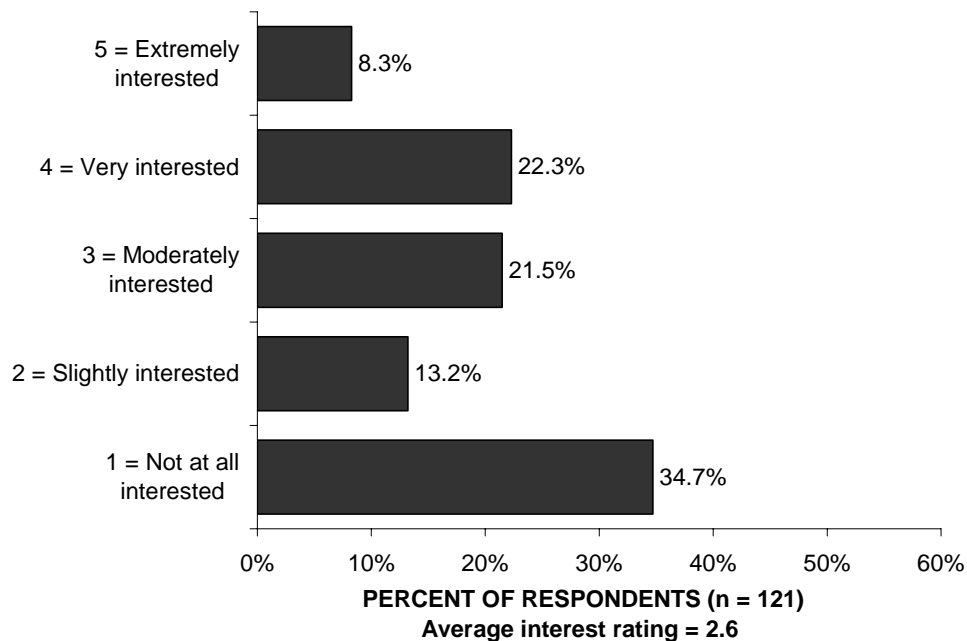
Interest levels for participating in these ranger programs also varied by contact point. As can be seen in Table 4.5, the order of interest by contact point was the same for three of the four types of ranger programs. Visitors contacted at S. Colonial Creek Campground had the highest average interest ratings and visitors contacted at Diablo and Gorge Overlooks had the lowest average interest ratings. Figures 4.17 to 4.40 contain the interest rating distributions for each ranger type and contact point.

IV. Facilities and Programs

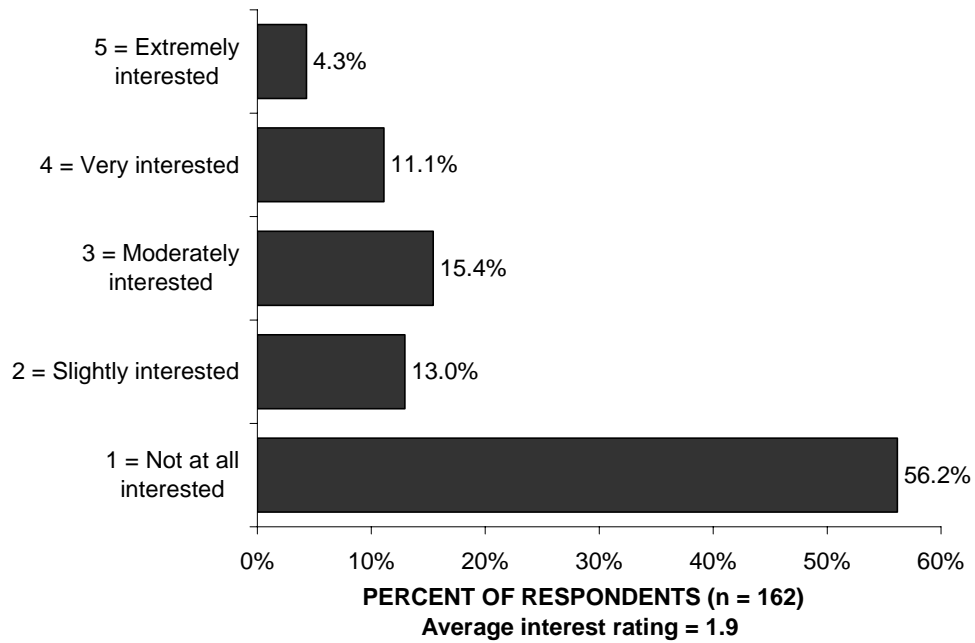
Table 4.5. Average interest ratings for different ranger programs by contact point.

Contact Point	n	Evening campground programs	Daytime programs throughout the park	Guided walks	Informal contact with rangers
South Colonial Creek Campground	45	3.38	2.80	2.72	3.38
Newhalem Campground	53	3.02	2.54	2.39	3.30
Visitor center	121	2.56	2.53	2.51	3.09
Goodell Creek Campground	13	2.15	2.38	2.46	2.69
Diablo Overlook	162	1.94	2.07	2.10	2.57
Gorge Overlook	35	1.94	2.06	1.97	2.66
The interest rating scale was 1 = Not interested, 2 = Slightly interested, 3 = Moderately interested, 4 = Very interested, and 5 = Extremely interested.					

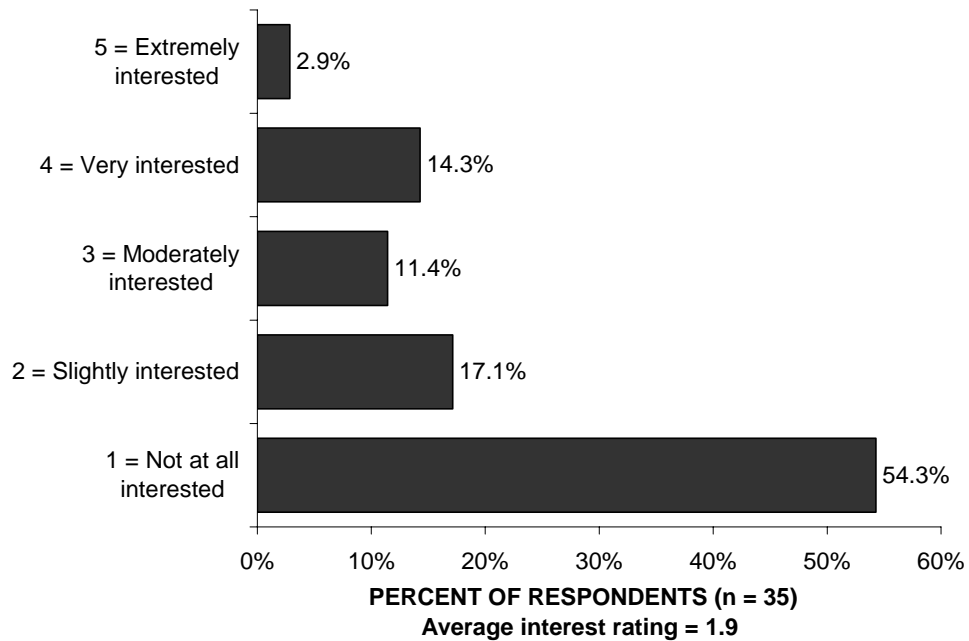
**Figure 4.17. ROLA Corridor Survey, Mail Survey Q-9
North Cascades Visitor Center Respondents' Degree of
Interest in Participating in Evening Campground Programs**



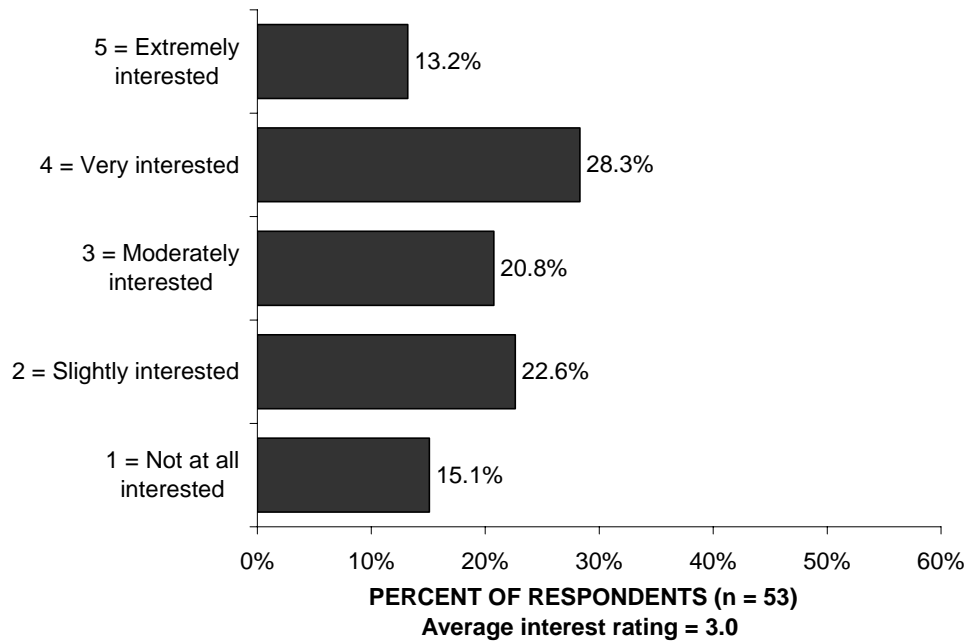
**Figure 4.18. ROLA Corridor Survey, Mail Survey Q-9
Diablo Overlook Respondents' Degree of Interest in
Participating in Evening Campground Programs**



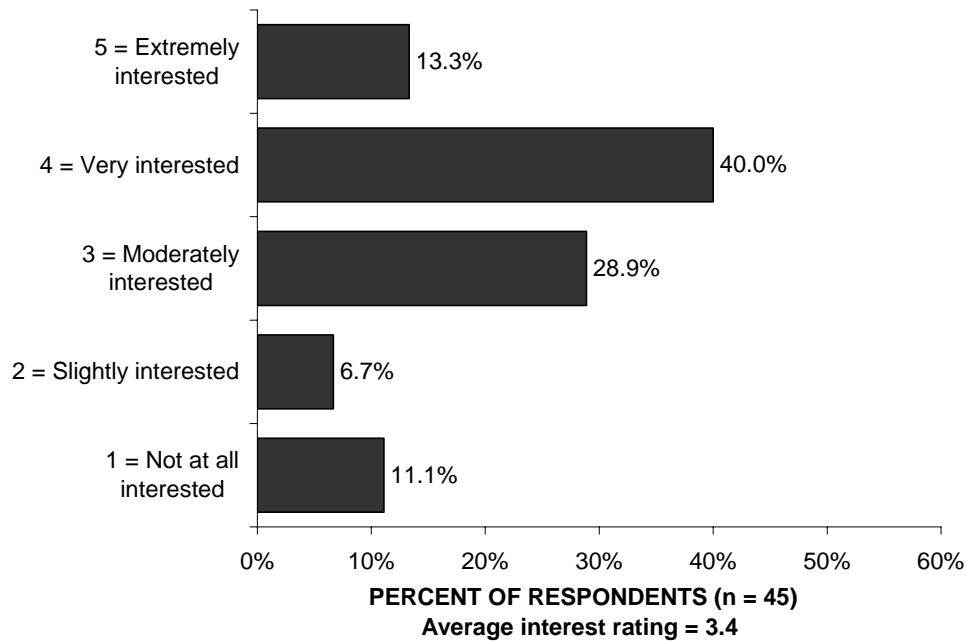
**Figure 4.19. ROLA Corridor Survey, Mail Survey Q-9
Gorge Overlook Respondents' Degree of Interest in
Participating in Evening Campground Programs**



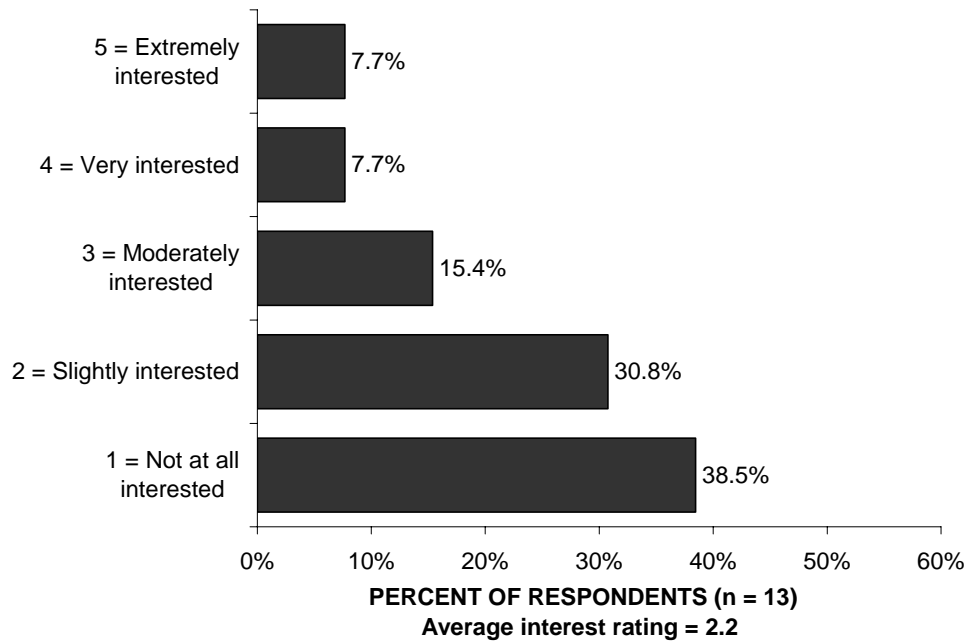
**Figure 4.20. ROLA Corridor Survey, Mail Survey Q-9
Newhalem Campground Respondents' Degree of Interest in
Participating in Evening Campground Programs**



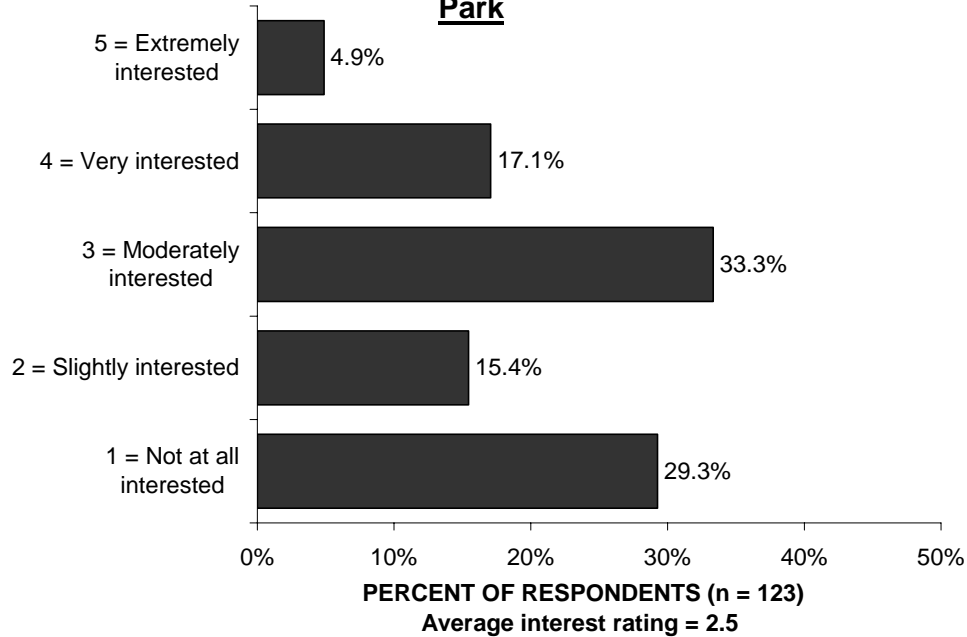
**Figure 4.21. ROLA Corridor Survey, Mail Survey Q-9
S. Colonial Creek Campground Respondents' Degree of
Interest in Participating in Evening Campground Programs**



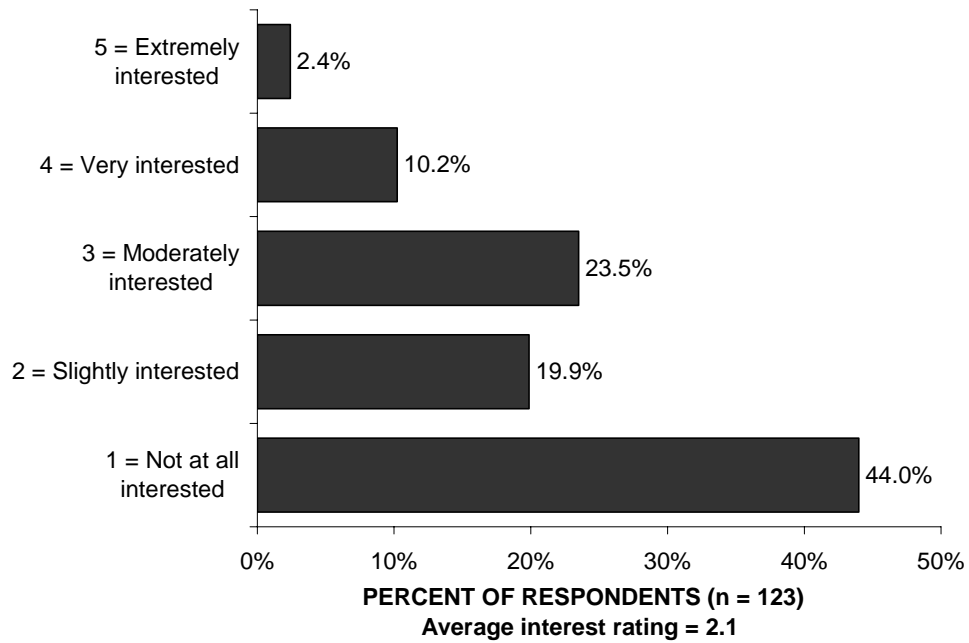
**Figure 4.22. ROLA Corridor Survey, Mail Survey Q-9
Goodell Creek Campground Respondents' Degree of Interest
in Participating in Evening Campground Programs**



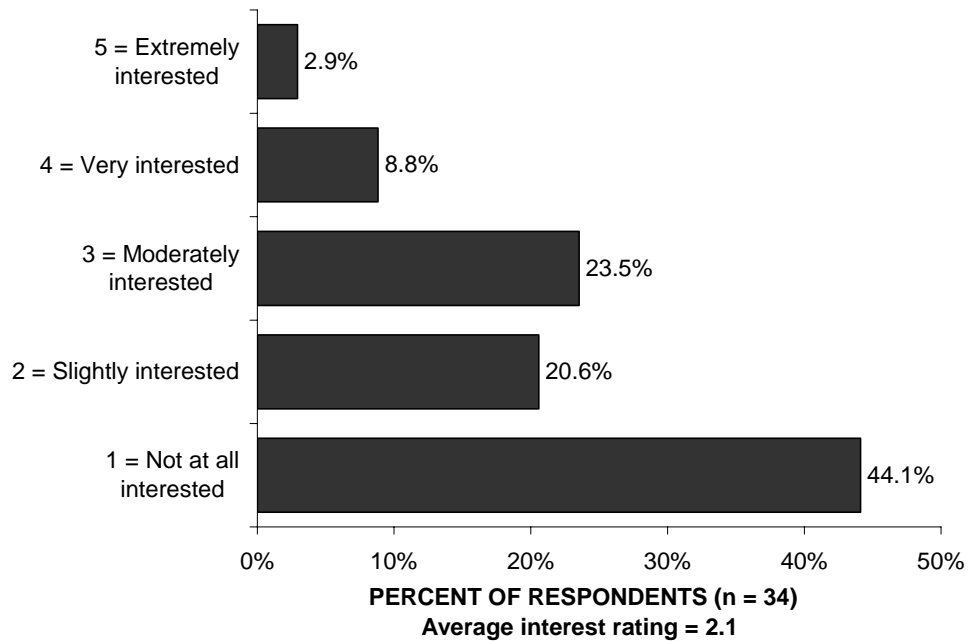
**Figure 4.23. ROLA Corridor Survey, Mail Survey Q-9
North Cascades Visitor Center Respondents' Degree of
Interest in Participating in Daytime Programs Throughout
Park**



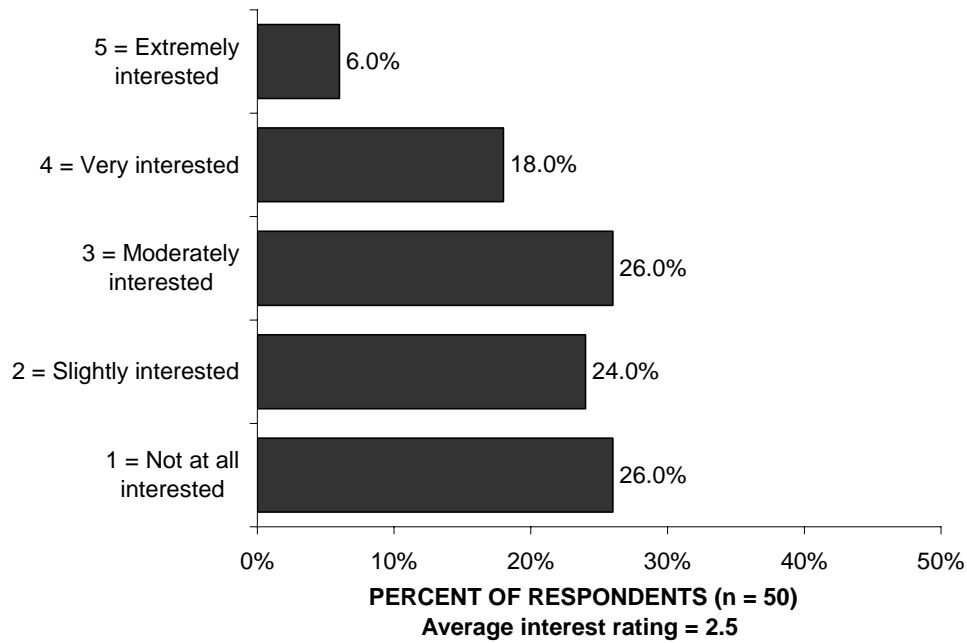
**Figure 4.24. ROLA Corridor Survey, Mail Survey Q-9
Diablo Overlook Respondents' Degree of Interest in
Participating in Daytime Programs Throughout Park**



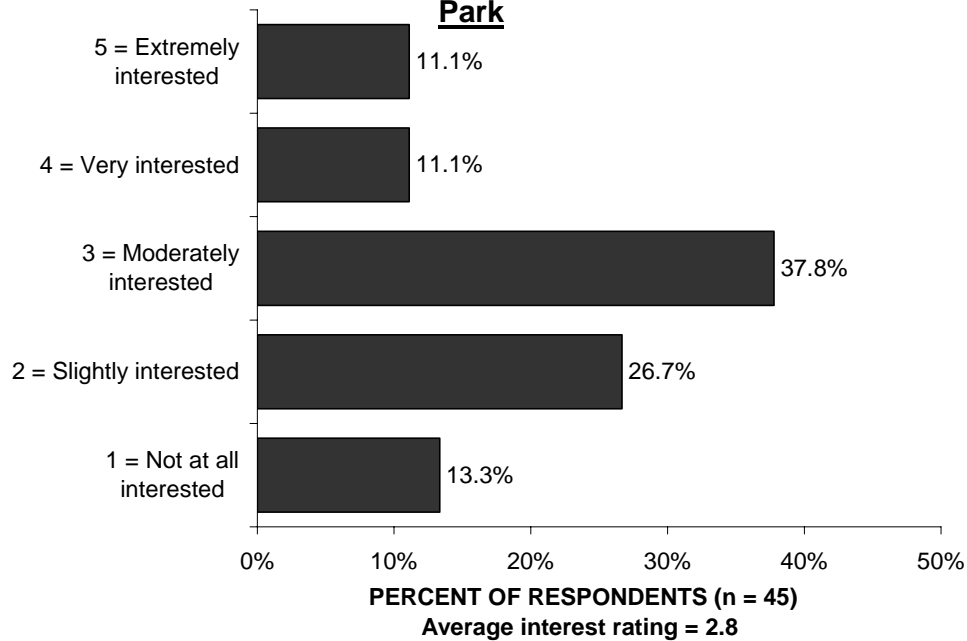
**Figure 4.25. ROLA Corridor Survey, Mail Survey Q-9
Gorge Overlook Respondents' Degree of Interest in
Participating in Daytime Programs Throughout Park**



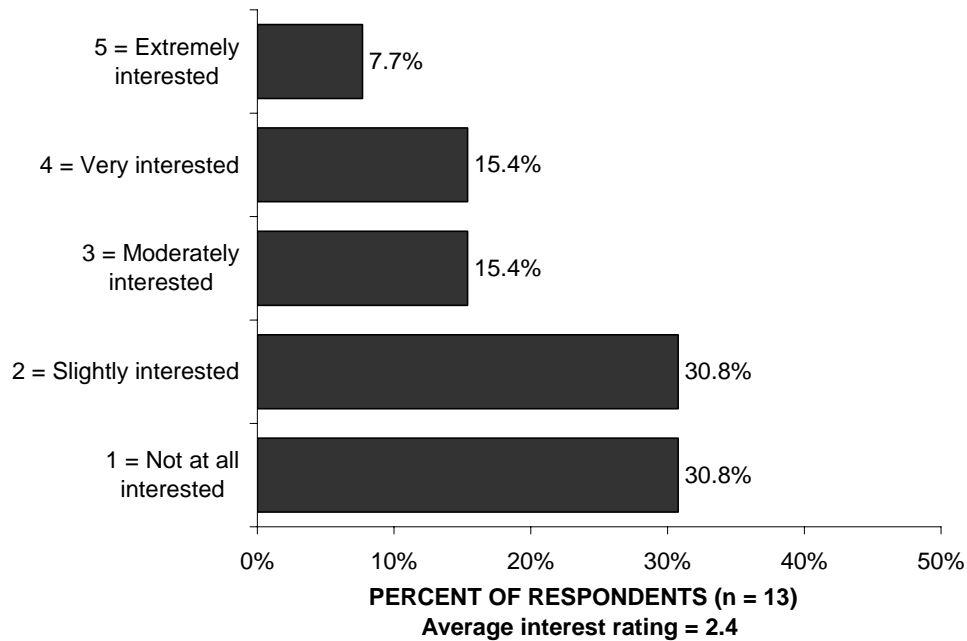
**Figure 4.26. ROLA Corridor Survey, Mail Survey Q-9
Newhalem Campground Respondents' Degree of Interest in
Participating in Daytime Programs Throughout Park**



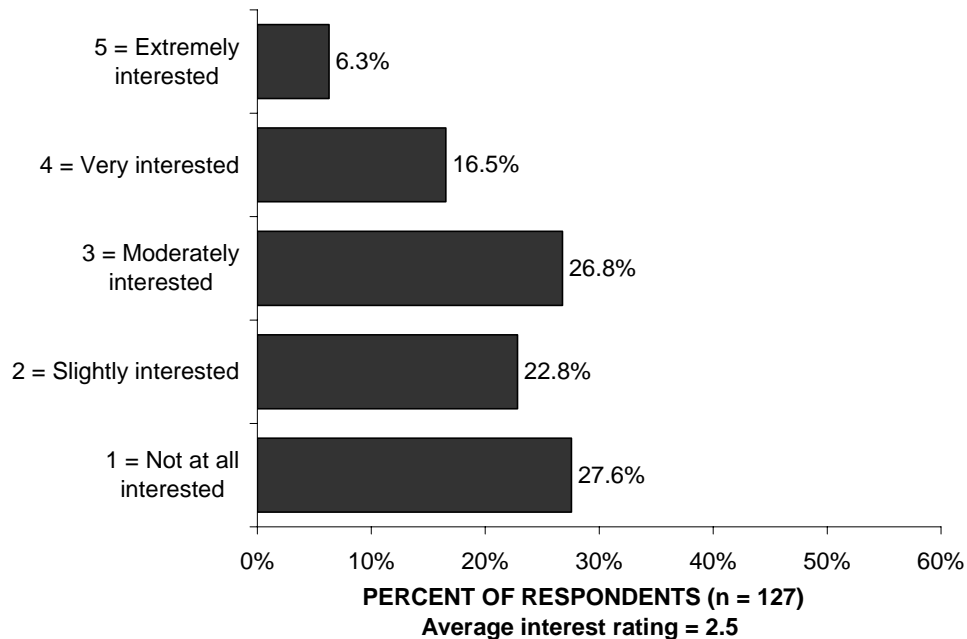
**Figure 4.27. ROLA Corridor Survey, Mail Survey Q-9
S. Colonial Creek Campground Respondents' Degree of
Interest in Participating in Daytime Programs Throughout
Park**



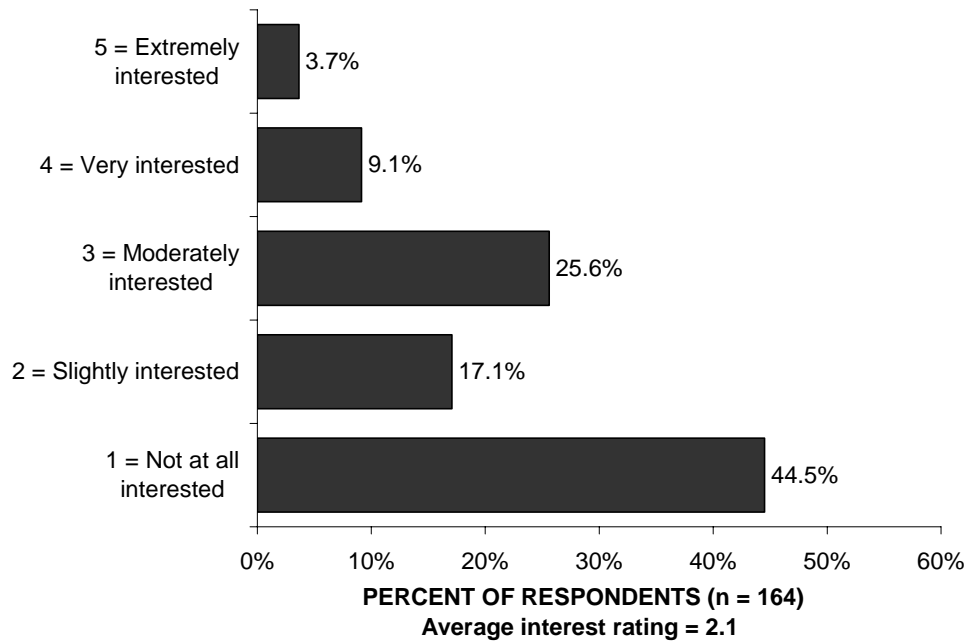
**Figure 4.28. ROLA Corridor Survey, Mail Survey Q-9
Goodell Creek Campground Respondents' Degree of Interest
in Participating in Daytime Programs Throughout Park**



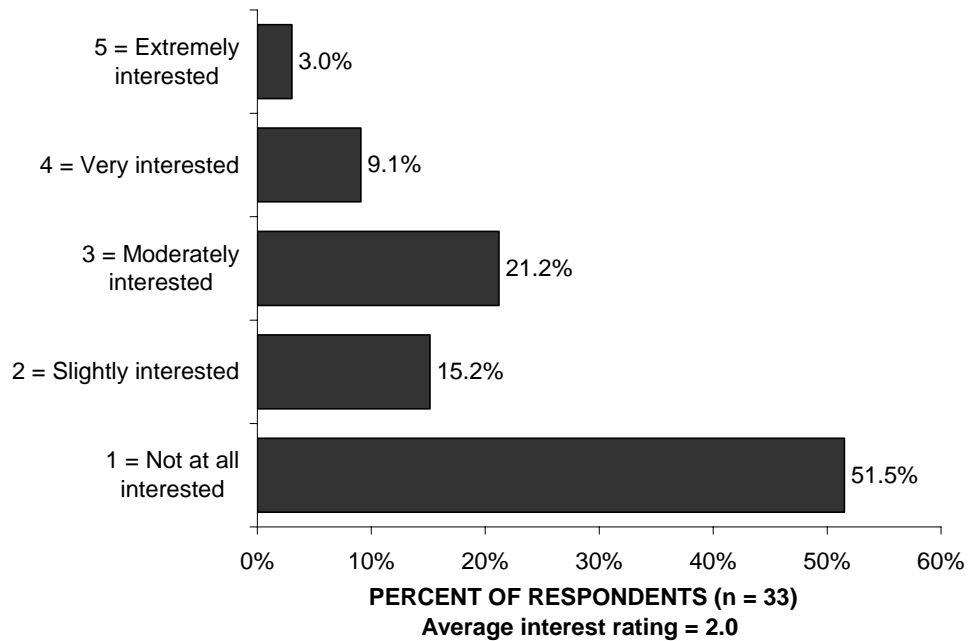
**Figure 4.29. ROLA Corridor Survey, Mail Survey Q-9
North Cascades Visitor Center Respondents' Degree of
Interest in Participating in Guided Walks**



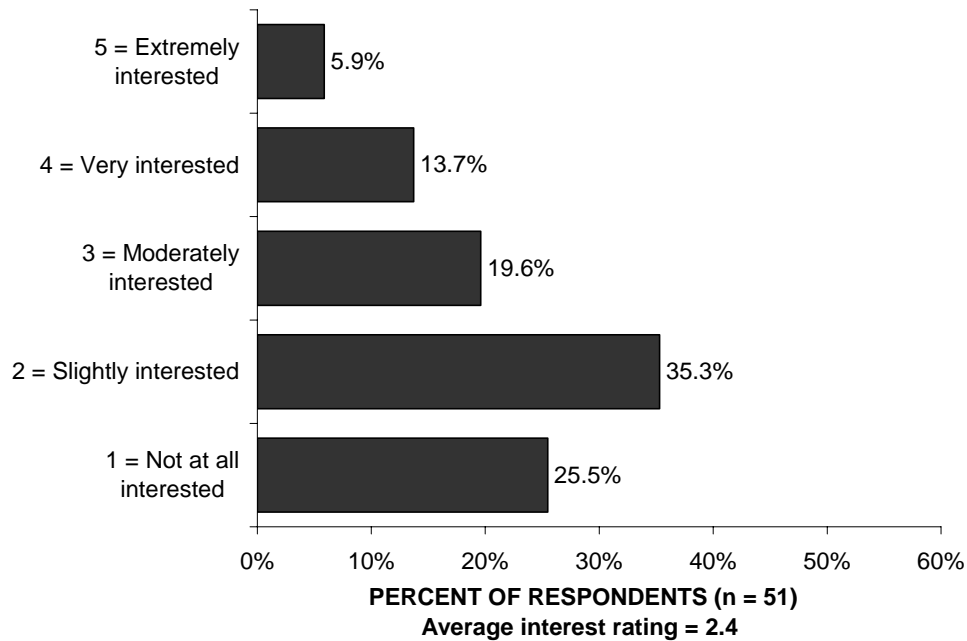
**Figure 4.30. ROLA Corridor Survey, Mail Survey Q-9
Diablo Overlook Respondents' Degree of Interest in
Participating in Guided Walks**



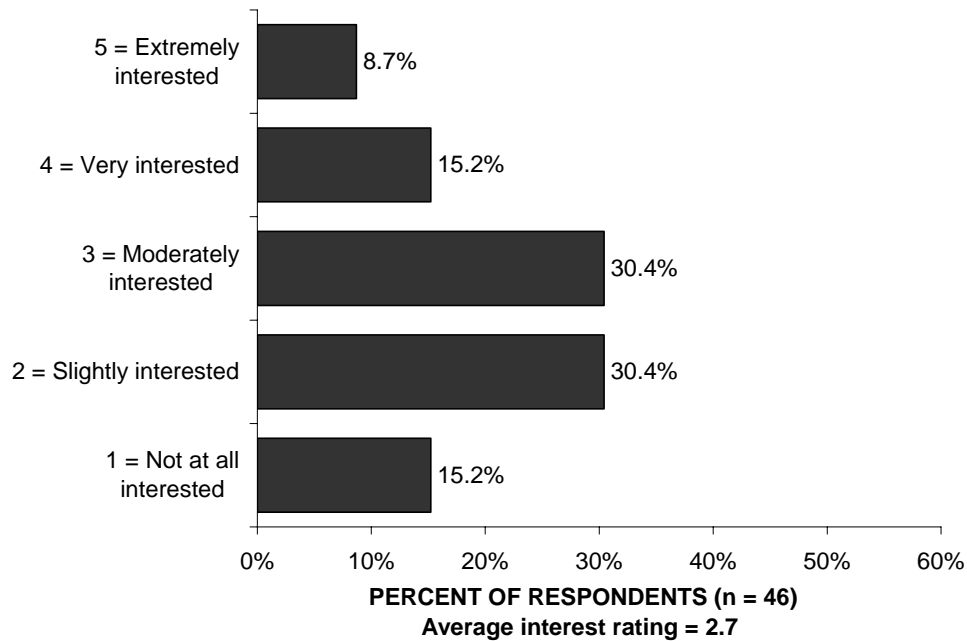
**Figure 4.31. ROLA Corridor Survey, Mail Survey Q-9
Gorge Overlook Respondents' Degree of Interest in
Participating in Guided Walks**



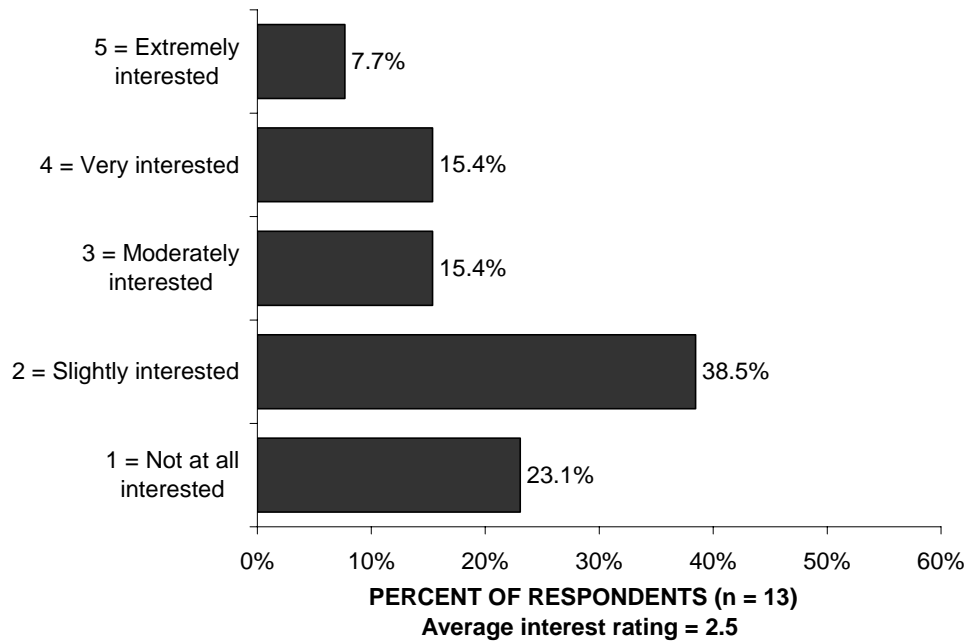
**Figure 4.32. ROLA Corridor Survey, Mail Survey Q-9
Newhalem Campground Respondents' Degree of Interest in
Participating in Guided Walks**



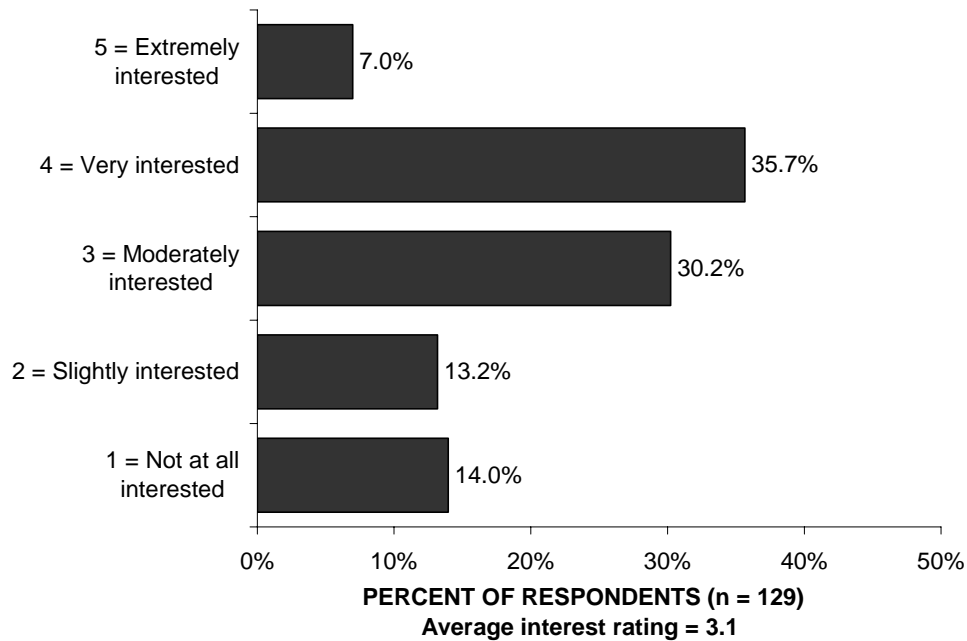
**Figure 4.33. ROLA Corridor Survey, Mail Survey Q-9
S. Colonial Creek Campground Respondents' Degree of
Interest in Participating in Guided Walks**



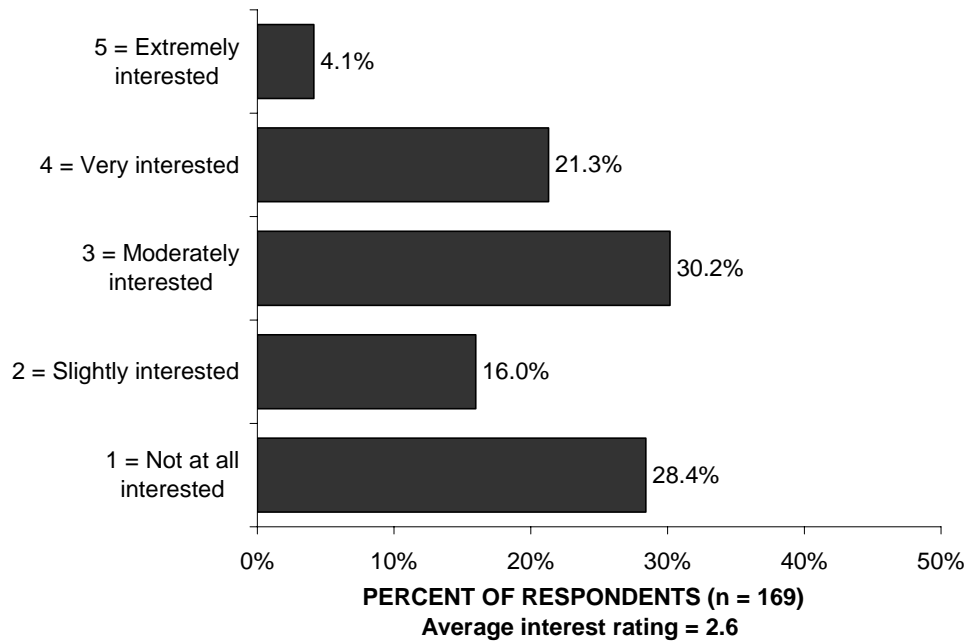
**Figure 4.34. ROLA Corridor Survey, Mail Survey Q-9
Goodell Creek Campground Respondents' Degree of Interest
in Participating in Guided Walks**



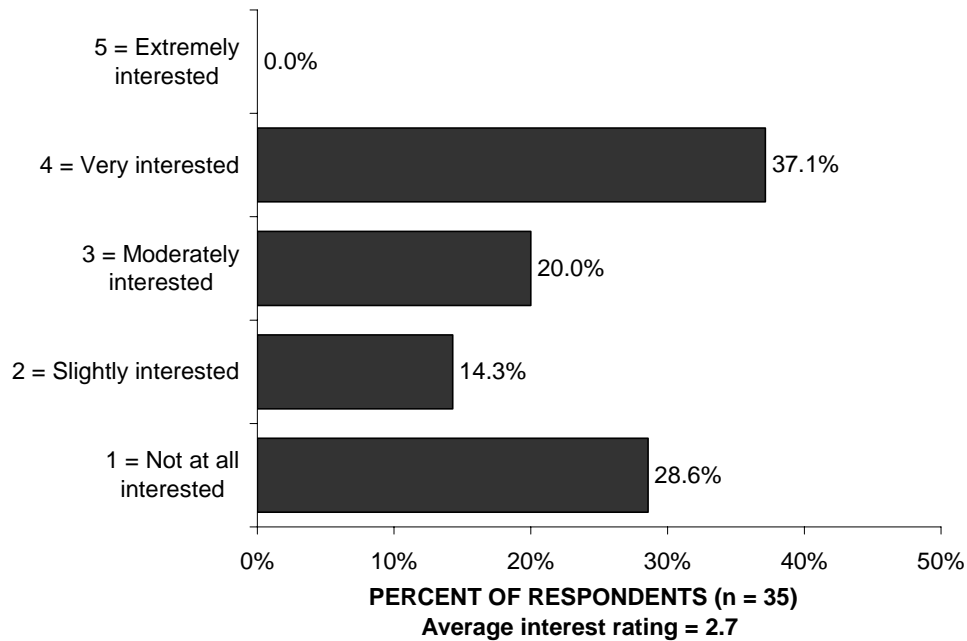
**Figure 4.35. ROLA Corridor Survey, Mail Survey Q-9
North Cascades Visitor Center Respondents' Degree of
Interest in Informal Contact with Rangers**



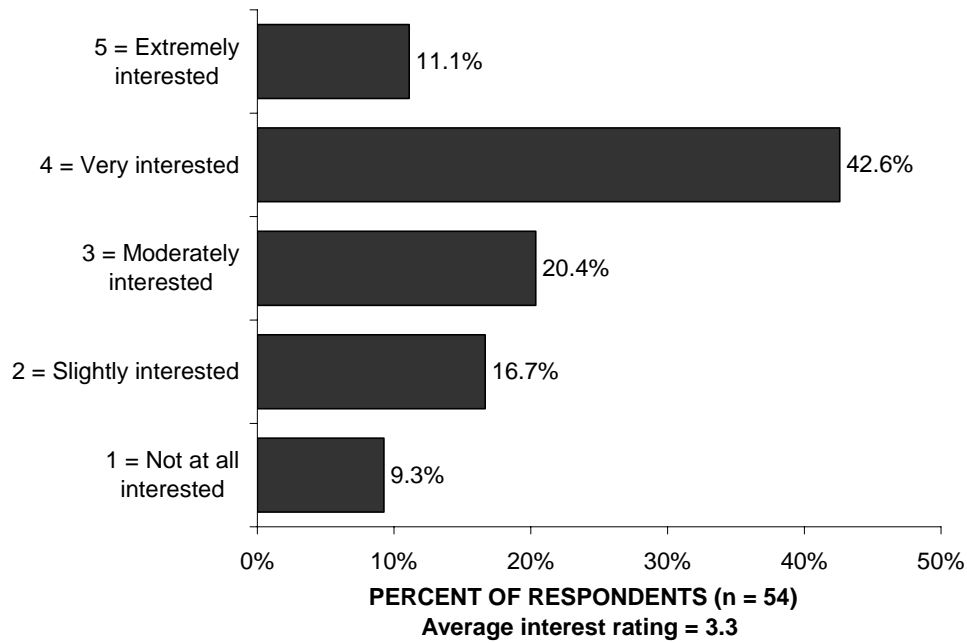
**Figure 4.36. ROLA Corridor Survey, Mail Survey Q-9
Diablo Overlook Respondents' Degree of Interest in Informal
Contact with Rangers**



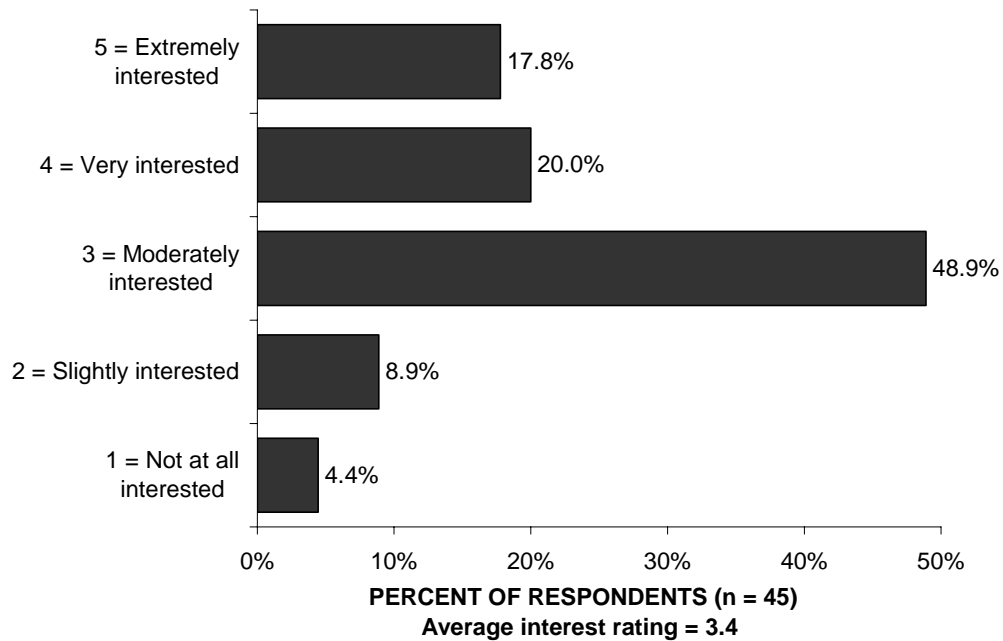
**Figure 4.37. ROLA Corridor Survey, Mail Survey Q-9
Gorge Overlook Respondents' Degree of Interest in Informal
Contact with Rangers**



**Figure 4.38. ROLA Corridor Survey, Mail Survey Q-9
Newhalem Campground Respondents' Degree of Interest in
Informal Contact with Rangers**



**Figure 4.39. ROLA Corridor Survey, Mail Survey Q-9
S. Colonial Creek Campground Respondents' Degree of
Interest in Informal Contact with Rangers**



IV. Facilities and Programs

**Figure 4.40. ROLA Corridor Survey, Mail Survey Q-9
Goodell Creek Campground Respondents' Degree of Interest
in Informal Contact with Rangers**

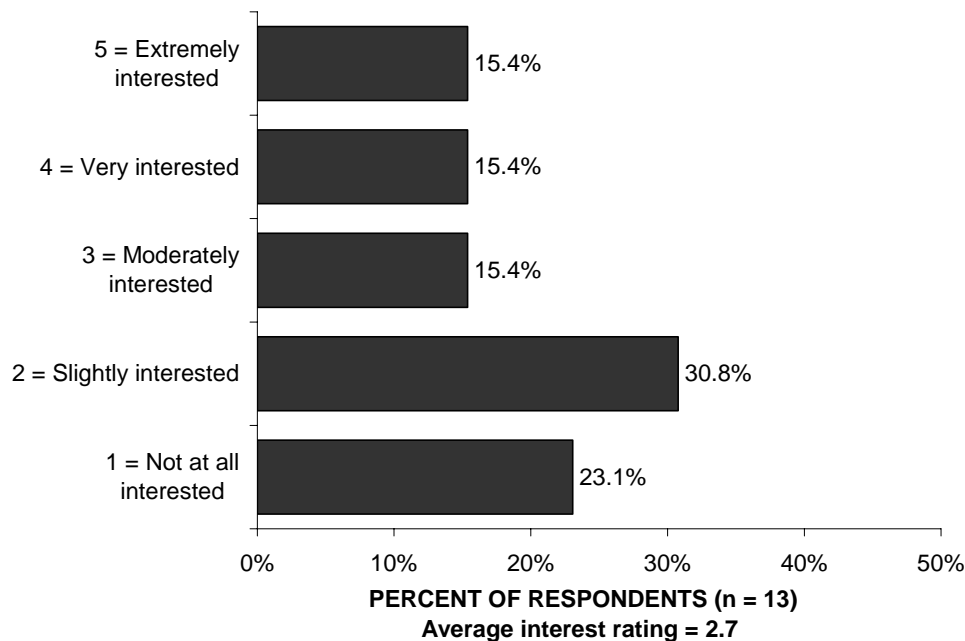


Table 4.6 summarizes participation in the same four types of ranger activities during the trip; all which varied by destination type. The pattern for participation reflects the interest ratings for the four groups. Informal contact with rangers that received the highest interest ratings for all three groups also had the highest participation rates.

Table 4.6 Summary of participation in ranger activities

Facility/Program	% who participated		
	Primary reason	One of several	Not a reason
Evening campground programs	30.3	15.9	5.3
Daytime programs throughout the park	9.3	2.1	1.7
Guided walks	7.6	2.0	1.7
Informal contact with rangers	38.3	26.5	13.7

Participation in the different types of ranger programs also varied by contact point (see Figures 4.41 – 4.44). Visitors contacted at S. Colonial Creek Campground and Newhalem campground were the most likely to participate in each of the programs. Participation in daytime programs and guided walks were the lowest for all contact points and all destination types.

Figure 4.41. ROLA Corridor Survey, Mail Survey Q-9
Respondents' Participation in Evening Campground Programs
by Contact Point

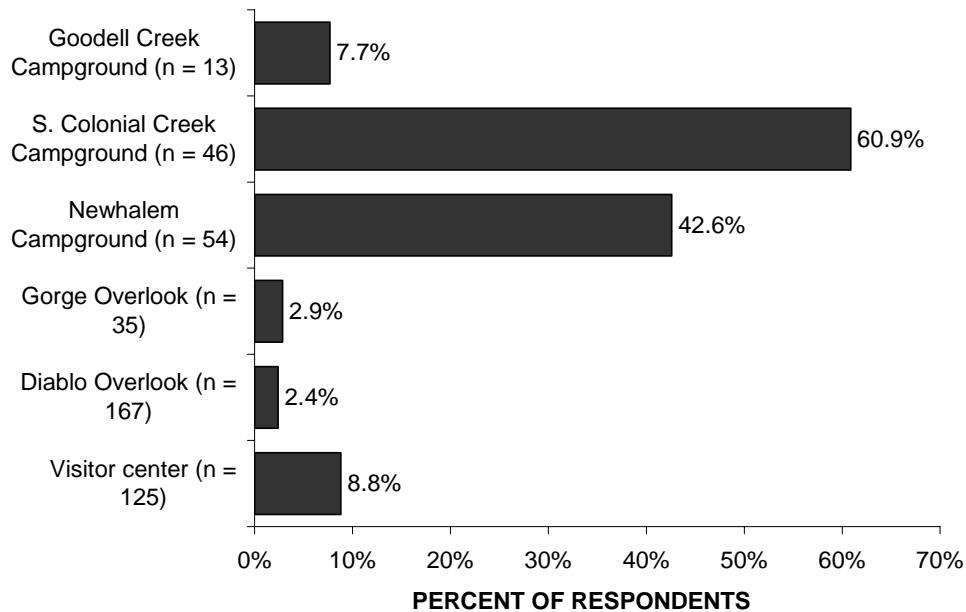


Figure 4.42. ROLA Corridor Survey, Mail Survey Q-9
Respondents' Participation in Daytime Programs Throughout Park
by Contact Point

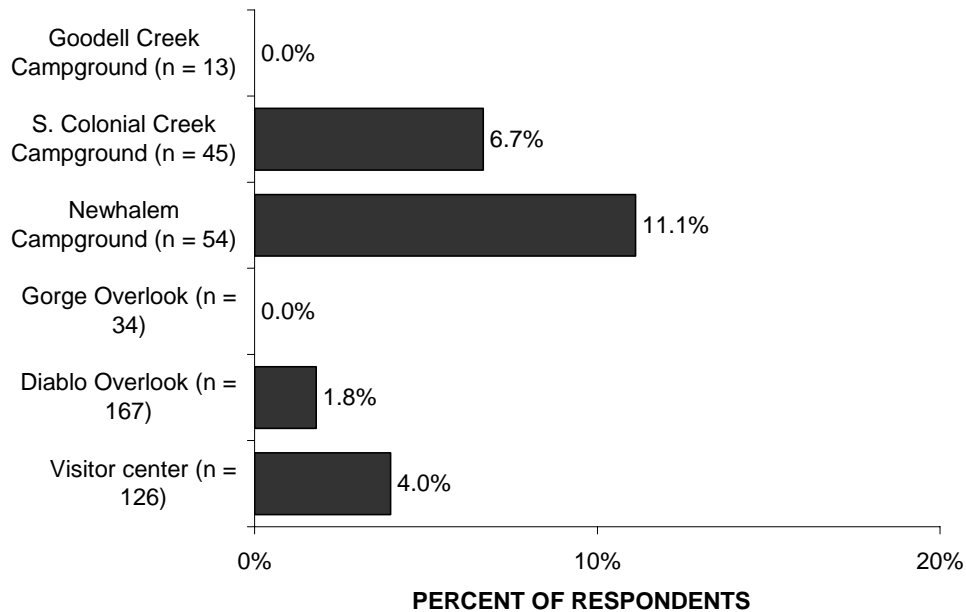


Figure 4.43. ROLA Corridor Survey, Mail Survey Q-9
Respondents' Participation in Guided Walks by Contact Point

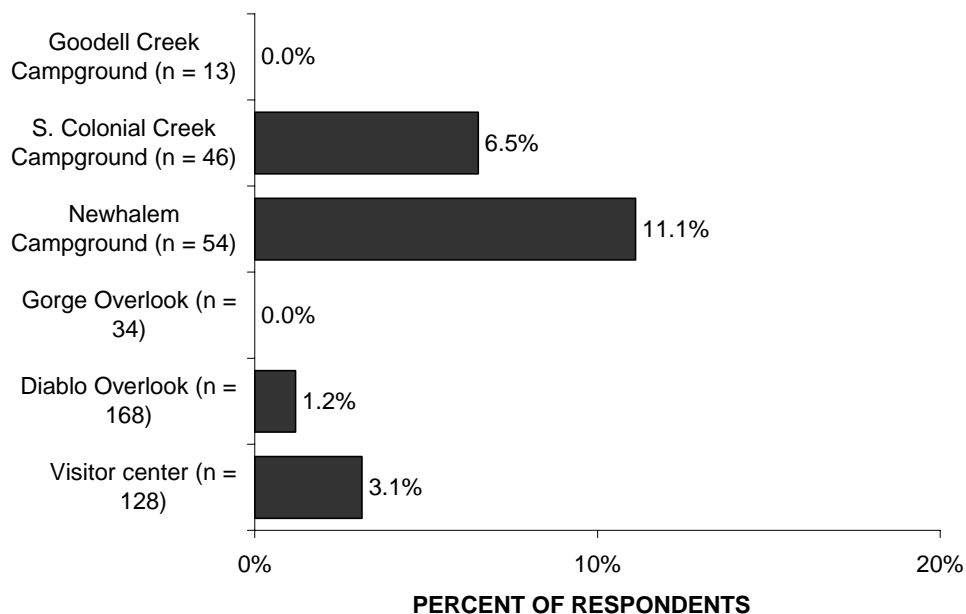
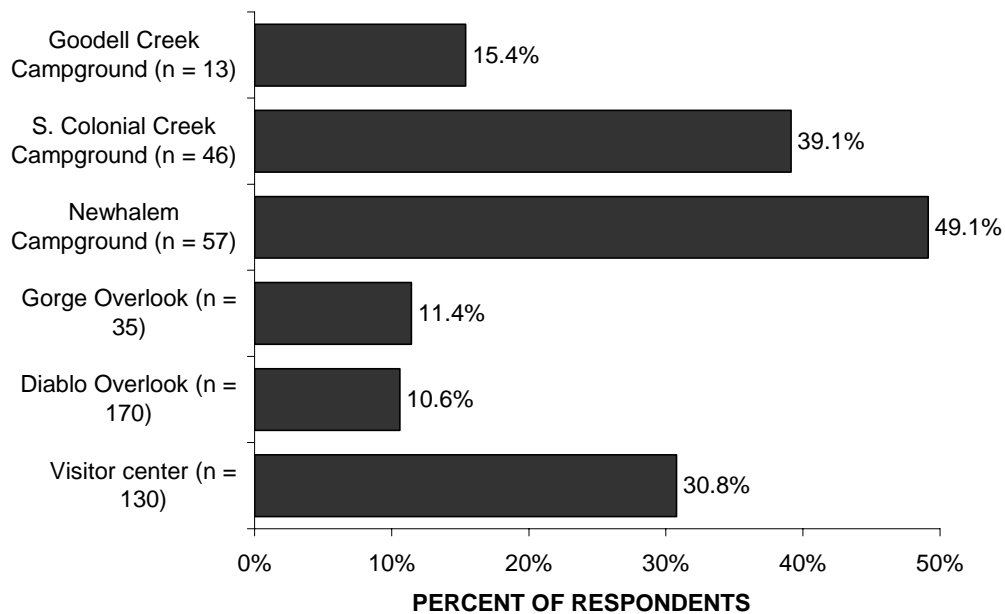


Figure 4.44. ROLA Corridor Survey, Mail Survey Q-9
Respondents' Participation in Informal Contact with Rangers by Contact Point



Visitation of and satisfaction with specific facilities/programs

Mail questionnaire

12. Below are some facilities you may have visited or programs you participated in during the trip in which you were contacted. Please indicate with a check (✓) each place you visited and then indicate how satisfied you were with that facility or program (*circle one response for each facility or program you did*).

	Check (✓) if visited	How satisfied were you with this facility or program?			
		↓	↓	↓	↓
		Not satisfied	Slightly satisfied	Moderately satisfied	Very satisfied
A. NORTH CASCADES VISITOR CENTER	_____				
B. ENVIRONMENTAL LEARNING CENTER	_____				
C. GROUP CAMPSITES AT GOODELL CREEK CAMPGROUND	_____				
D. THUNDER KNOB TRAIL	_____				
E. HAPPY CREEK FOREST WALK	_____				
F. HAPPY-PANTHER TRAIL	_____				
G. GORGE OVERLOOK TRAIL	_____				
H. HANDICAP-ACCESSIBLE DOCK AT COLONIAL CREEK CAMPGROUND	_____				
I. INTERPRETIVE SIGNS/RANGER-LED TALKS AT DIABLO OVERLOOK	_____				
J. RESTROOMS AT DIABLO OVERLOOK	_____				
K. GOODELL GREEK PICNIC SHELTER	_____				
L. NEWHALEM AREA TRAILS (River Loop, Rock Shelter, etc.)	_____				

IV. Facilities and Programs

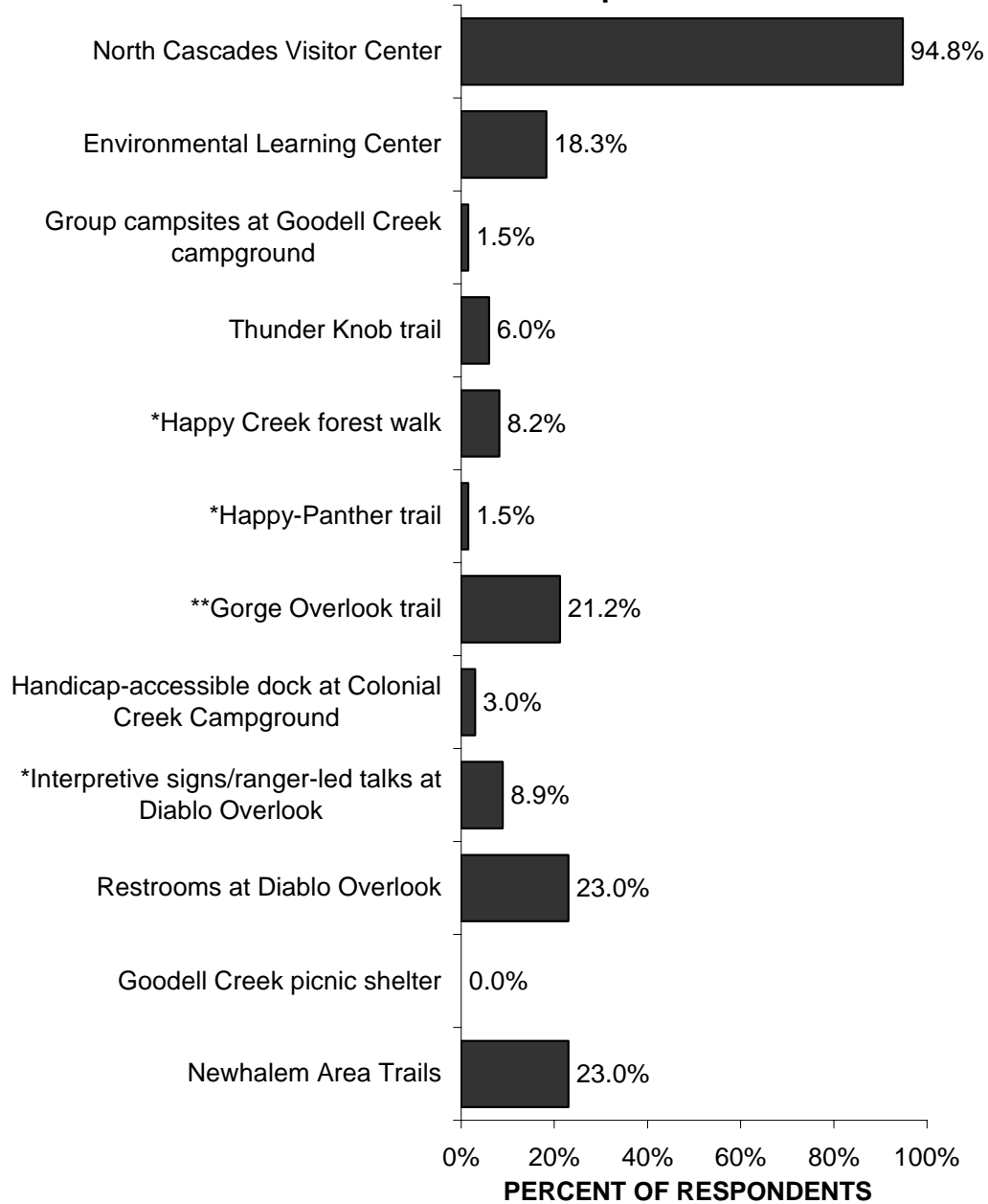
Visitors were asked to indicate which facilities they visited and to indicate their satisfaction with the facilities they visited. Visitation rates differed by destination type for 7 of the 12 facilities. Table 4.7 summarizes visitation rates of facilities that varied by destination type. Incidental visitors were significantly less likely than either group of intentional visitors to visit North Cascades Visitor Center, Group campsites at Goodell Creek Campground, the handicap-accessible dock at Colonial Creek Campground, and Newhalem area trails. Visitation rates for the two intentional groups did not differ significantly. Visitors for whom ROLA was one of several reasons for their trip were the most likely to visit Gorge Overlook Trail and the restrooms at Diablo Overlook. Visitors for whom ROLA was a primary destination were the most likely to visit Thunder Knob Trail followed by visitors for whom ROLA was one of several reasons and then by incidental visitors.

Table 4.7 Summary of visitation of facilities/programs with significant differences due to destination

Facility/Program	% Visited facility/program		
	Primary reason	One of several	Not a reason
North Cascades Visitor Center	72.0	72.6	47.1
Group campsites at Goodell Creek Campground	11.2	11.7	7.0
Thunder Knob Trail	14.4	8.9	4.2
Gorge Overlook Trail	20.8	31.2	19.5
Handicap-accessible dock at Colonial Creek Campground	8.8	7.6	1.6
Restrooms at Diablo Overlook	18.4	47.8	40.5
Newhalem area Trails	36.0	30.6	8.4

Visitation differed by contact point for nine of the twelve facilities and visitation levels are presented by contact point in Figures 4.45 to 4.50.

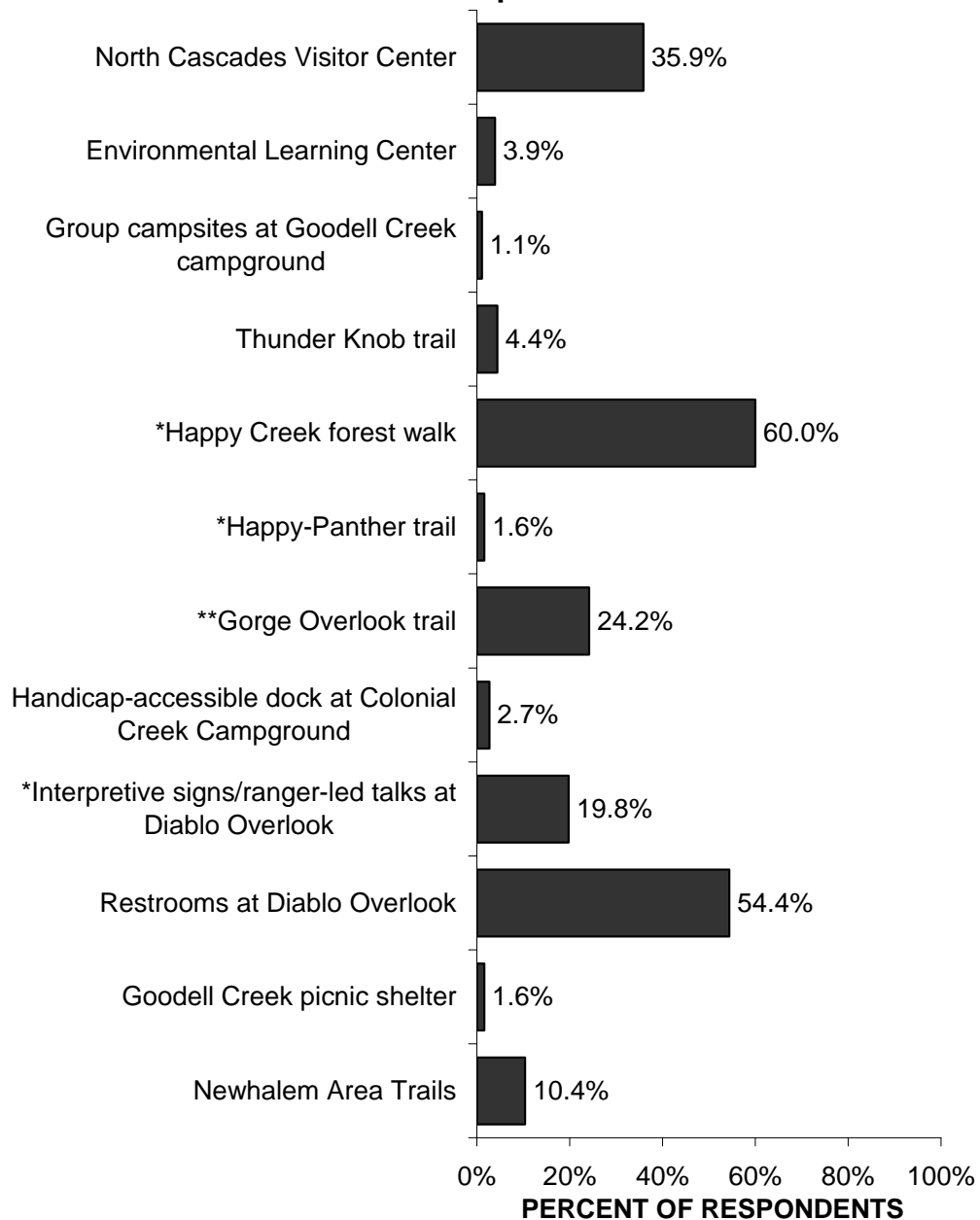
**Figure 4.45. ROLA Corridor Survey, Mail Survey Q-12
Facilities Visited or Programs Participated in by North
Cascades Visitor Center Respondents**



*Visitation of this facility/program did not differ statistically by contact point.

**Data were weighted to reflect contact sheet age distribution of respondents.

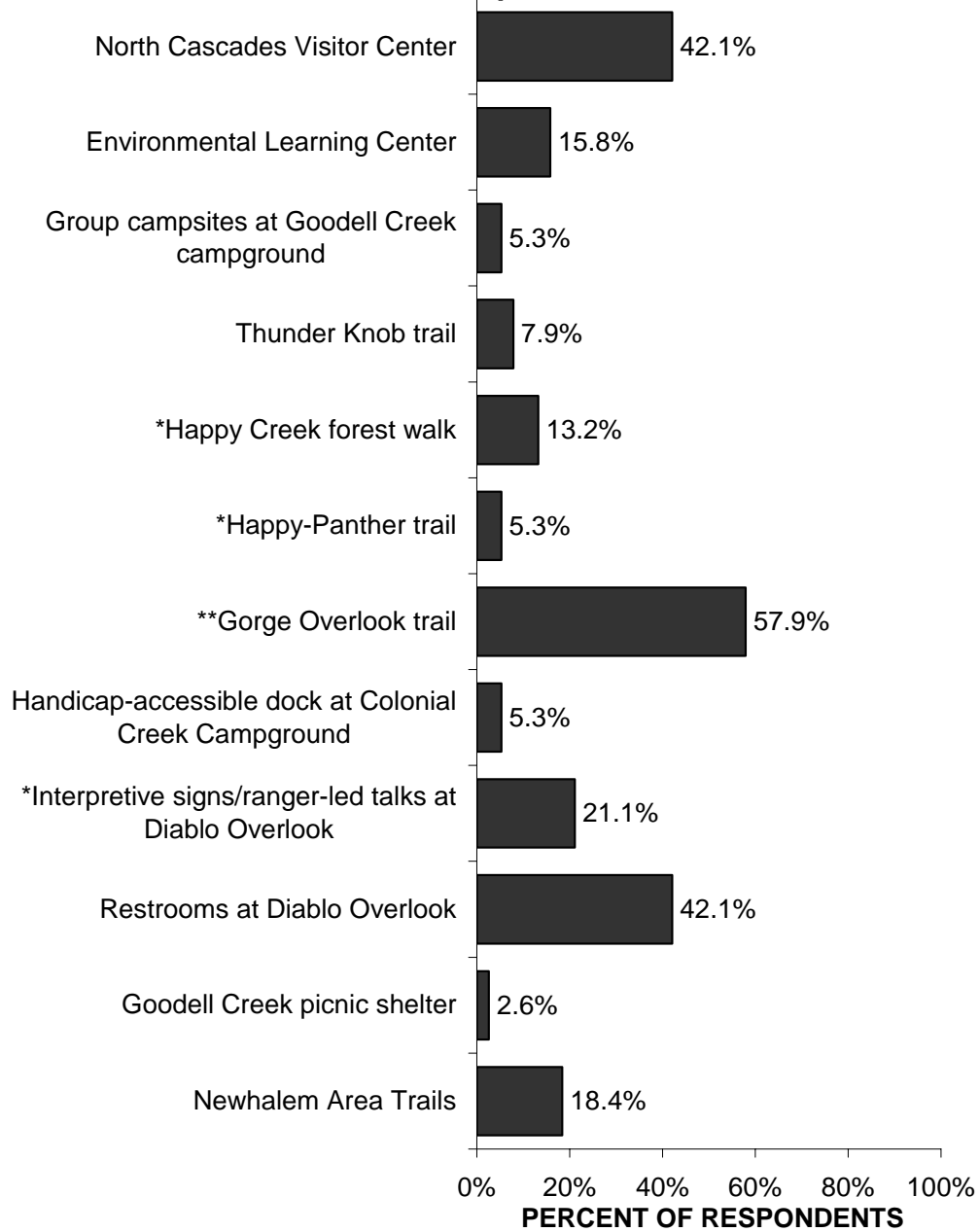
**Figure 4.46. ROLA Corridor Survey, Mail Survey Q-12
Facilities Visited or Programs Participated in by Diablo
Overlook Respondents**



*Visitation of this facility/program did not differ statistically by contact point.

**Data were weighted to reflect contact sheet age distribution of respondents.

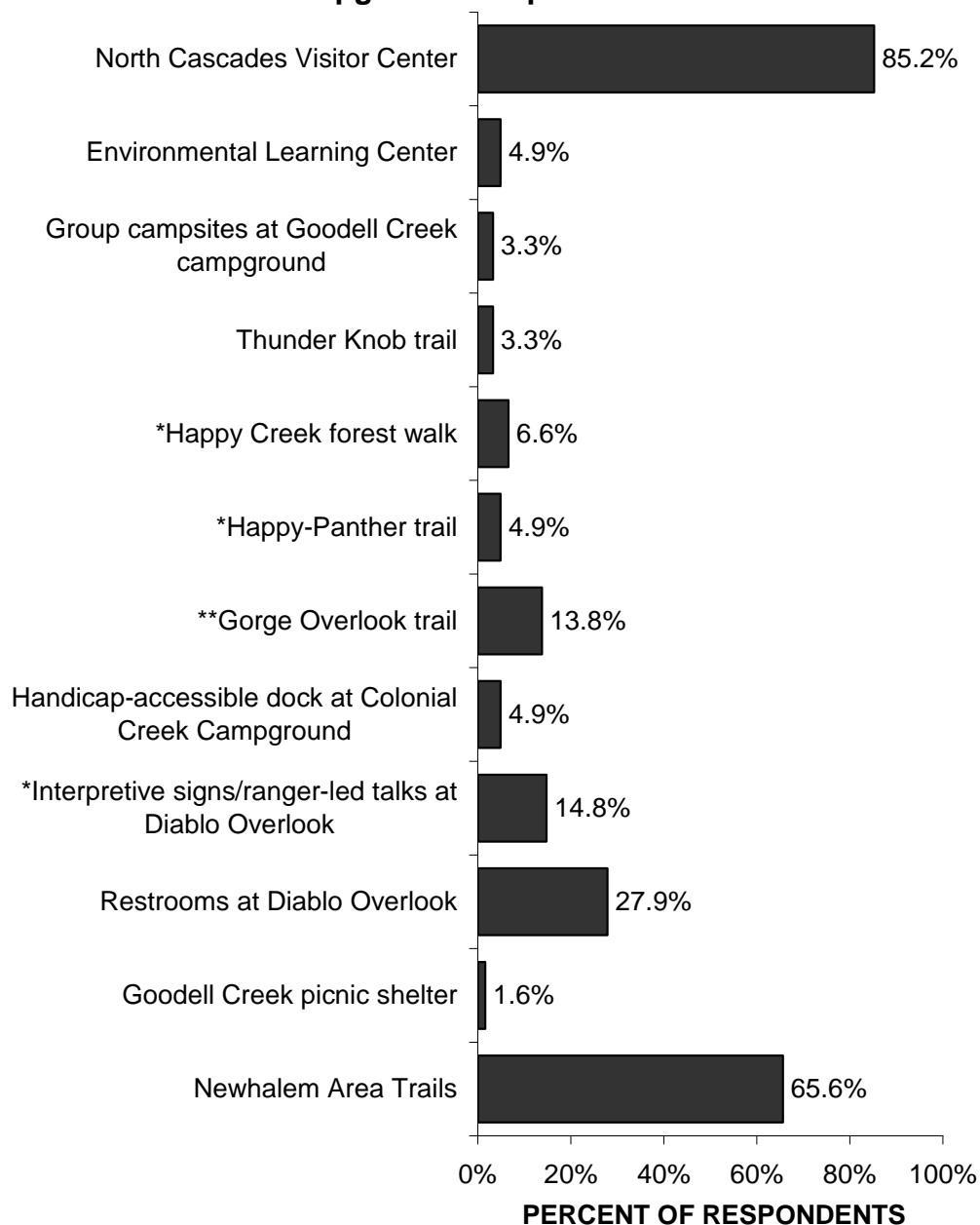
**Figure 4.47. ROLA Corridor Survey, Mail Survey Q-12
Facilities Visited or Programs Participated in by Gorge
Overlook Respondents**



*Visitation of this facility/program did not differ statistically by contact point.

**Data were weighted to reflect contact sheet age distribution of respondents.

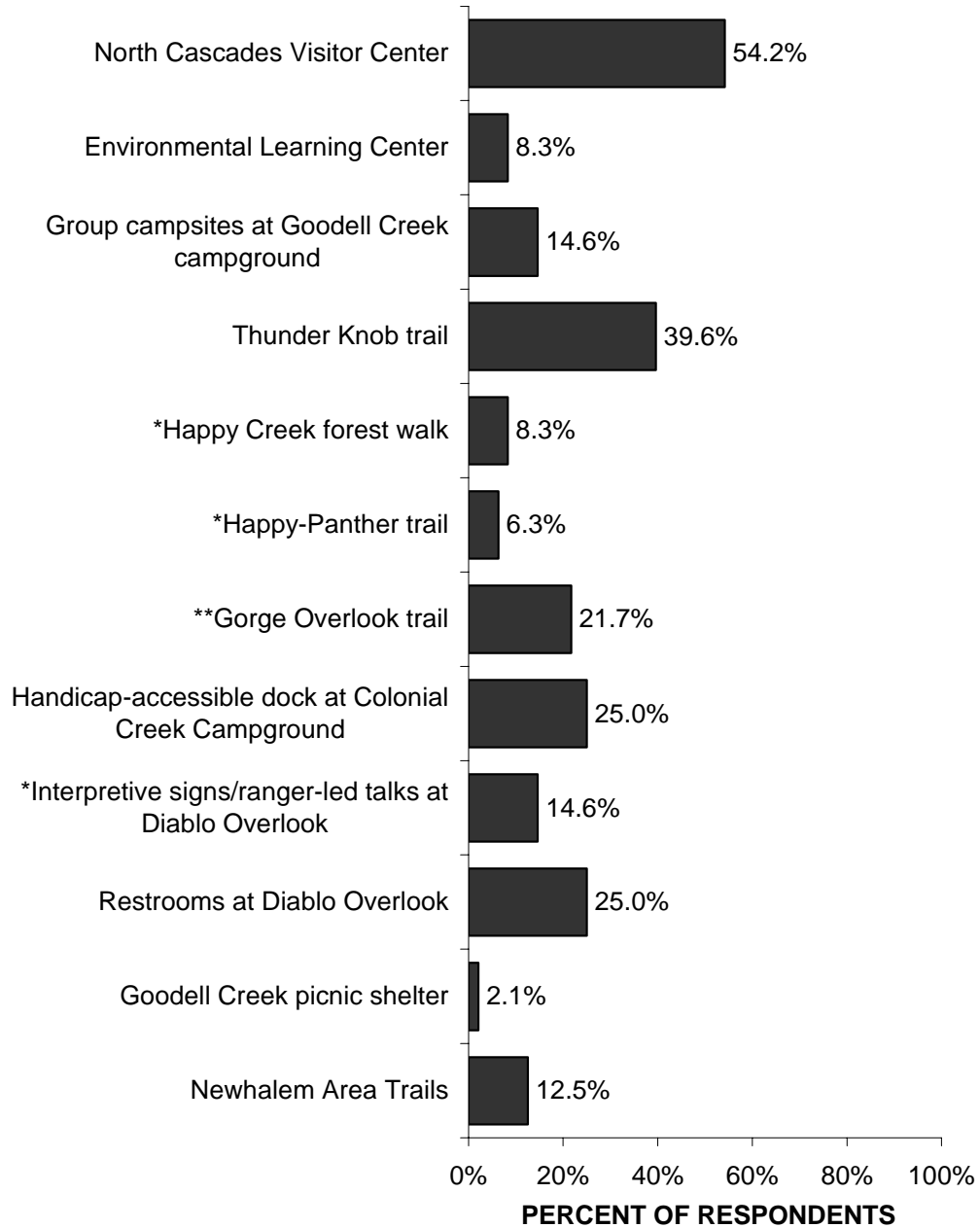
**Figure 4.48. ROLA Corridor Survey, Mail Survey Q-12
Facilities Visited or Programs Participated in by Newhalem
Campground Respondents**



*Visitation of this facility/program did not differ statistically by contact point.

**Data were weighted to reflect contact sheet age distribution of respondents.

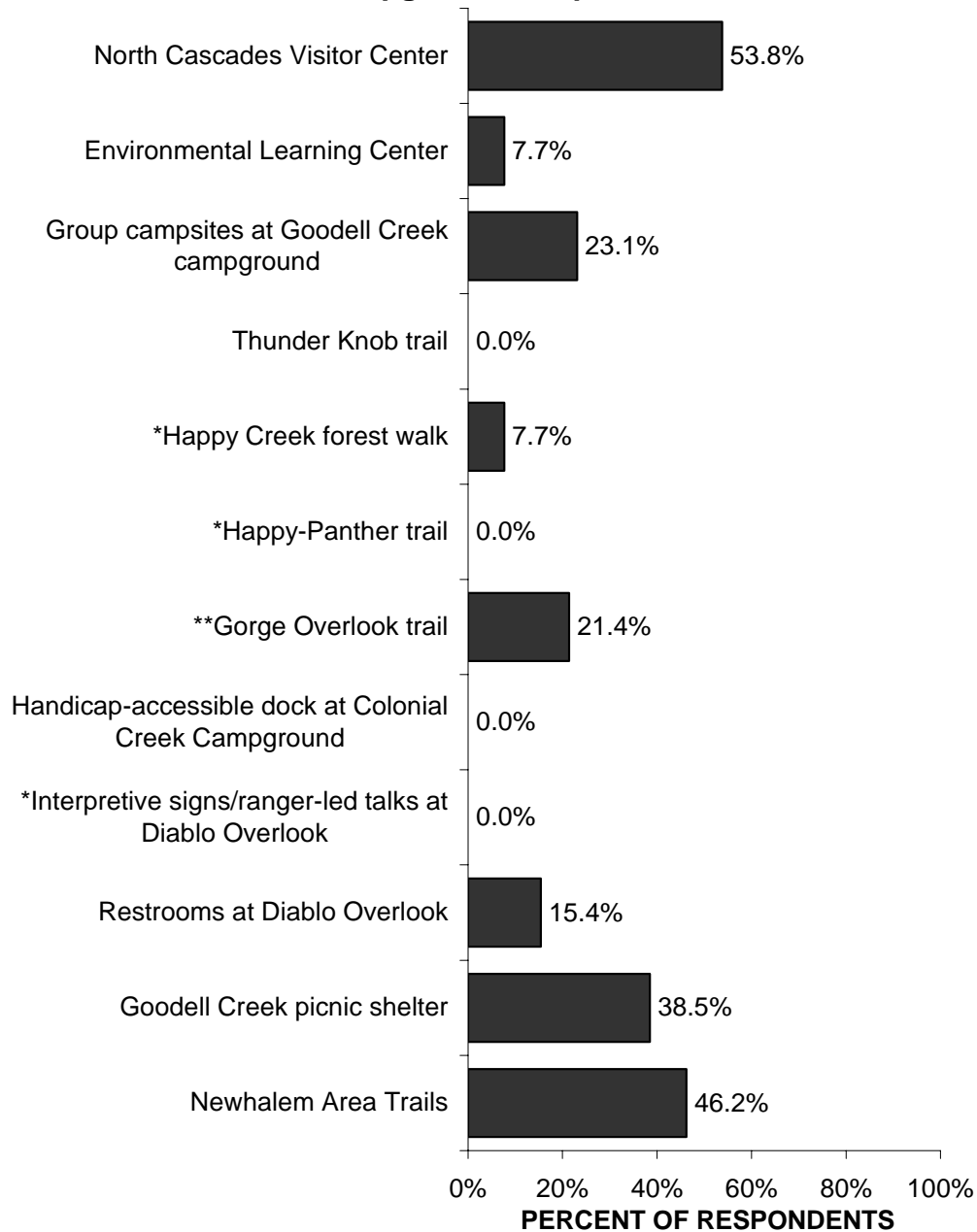
**Figure 4.49. ROLA Corridor Survey, Mail Survey Q-12
Facilities Visited or Programs Participated in by S.
Colonial Creek Campground Respondents**



*Visitation of this facility/program did not differ statistically by contact point.

**Data were weighted to reflect contact sheet age distribution of respondents.

**Figure 4.50. ROLA Corridor Survey, Mail Survey Q-12
Facilities Visited or Programs Participated in by Goodell
Creek Campground Respondents**



*Visitation of this facility/program did not differ statistically by contact point.

**Data were weighted to reflect contact sheet age distribution of respondents.

Although visitation rates differed due to type of destination at a number of locations, visitor satisfaction only differed by type of destination at North Cascades Visitor Center, $F(2, 288) = 4.51$, $p = .012$. Post hoc Tukey tests revealed that incidental visitors reported lower satisfaction with North Cascades Visitor Center than either visitors for whom ROLA was a primary

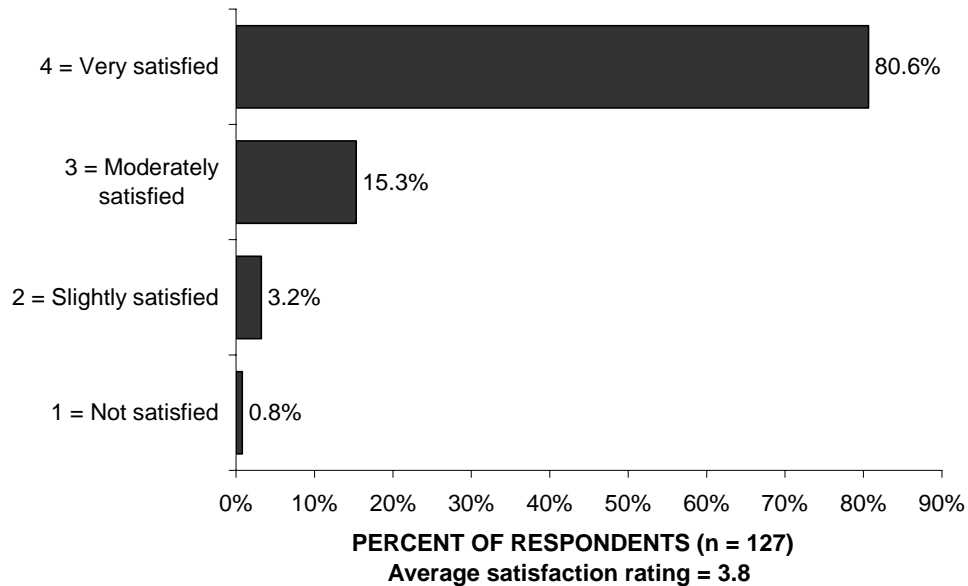
destination or one of several destinations (see Table 4.8). No other significant differences were observed.

Table 4.8 Average satisfaction ratings for North Cascades Visitor Center by destination type

	Destination Type		
	Primary reason	One of several	Not a reason
Satisfaction with North Cascades Visitor Center	3.8	3.7	3.5
Satisfaction scale ratings were 1 = Not at all satisfied, 2 = Slightly satisfied, 3 = Moderately satisfied, 4 = Very satisfied			

Satisfaction with the North Cascades Visitor Center also varied by contact point, $F(5, 279) = 5.11$, $p < .001$. Post hoc Tukey tests revealed that visitors contacted at Newhalem Campground ($M = 3.9$) had significantly higher satisfaction with North Cascades Visitor Center than visitors contacted at Diablo Overlook ($M = 3.5$) or S. Colonial Creek Campground ($M = 3.4$). No other significant differences were observed. The distributions of satisfaction ratings with North Cascades Visitor Center by contact points are presented in Figures 4.51 – 4.56.

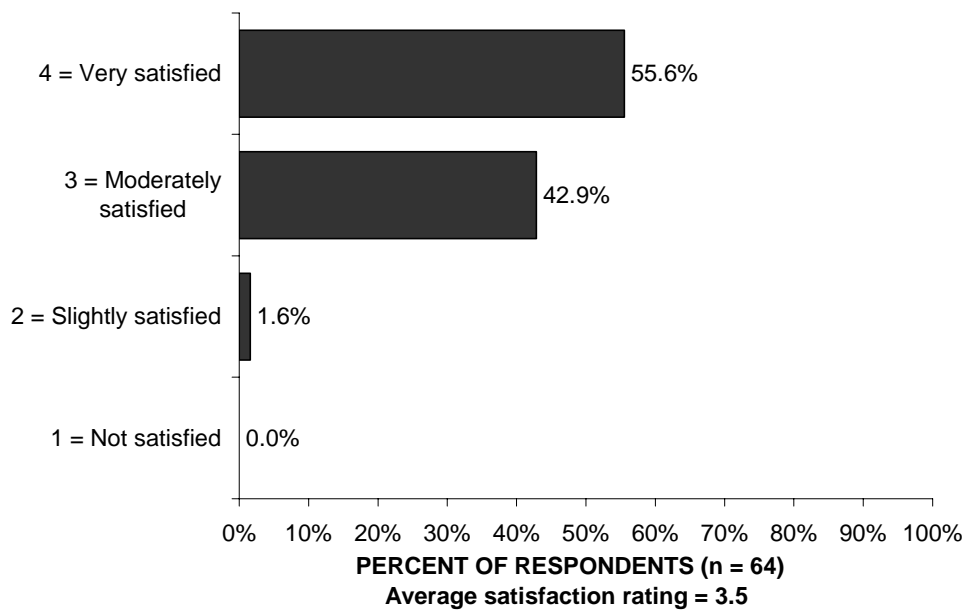
**Figure 4.51. ROLA Corridor Survey, Mail Survey Q-12
Degree of Satisfaction with North Cascades Visitor Center for Visitors
Contacted at North Cascades Visitor Center**



Includes only the 94.8% of respondents who visited North Cascades Visitor Center
Data were weighted to reflect the contact sheet age distribution of respondents.

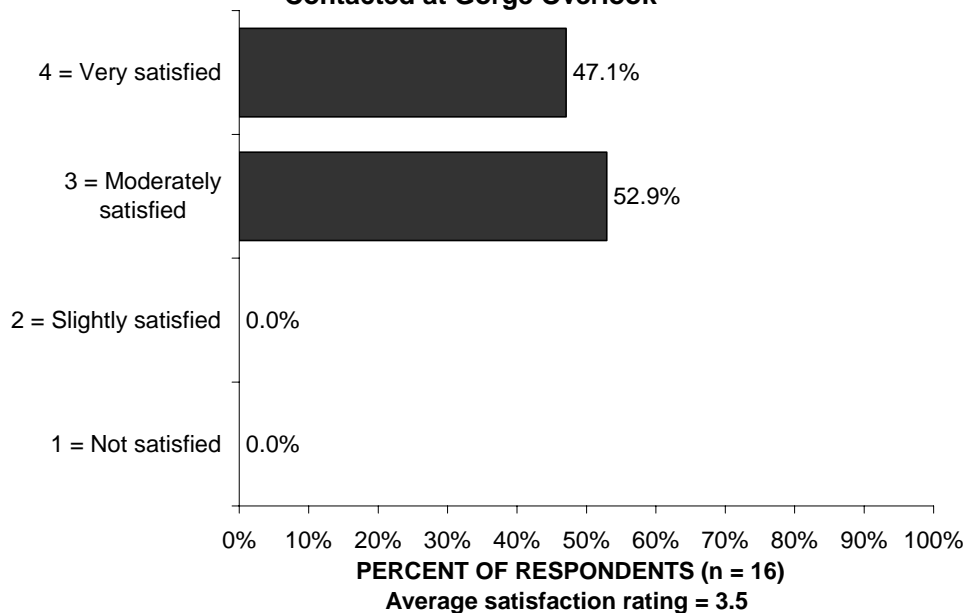
IV. Facilities and Programs

Figure 4.52. ROLA Corridor Survey, Mail Survey Q-12
Degree of Satisfaction with North Cascades Visitor Center for Visitors
Contacted at Diablo Overlook



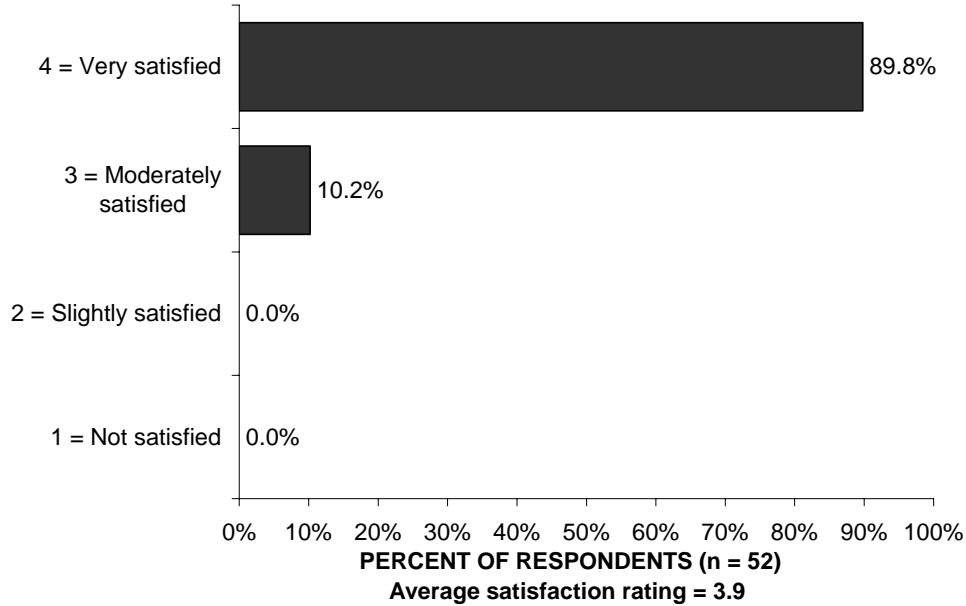
Includes only the 35.9% of respondents who visited North Cascades Visitor Center
Data were weighted to reflect the contact sheet age distribution of respondents.

Figure 4.53. ROLA Corridor Survey, Mail Survey Q-12
Degree of Satisfaction with North Cascades Visitor Center for Visitors
Contacted at Gorge Overlook



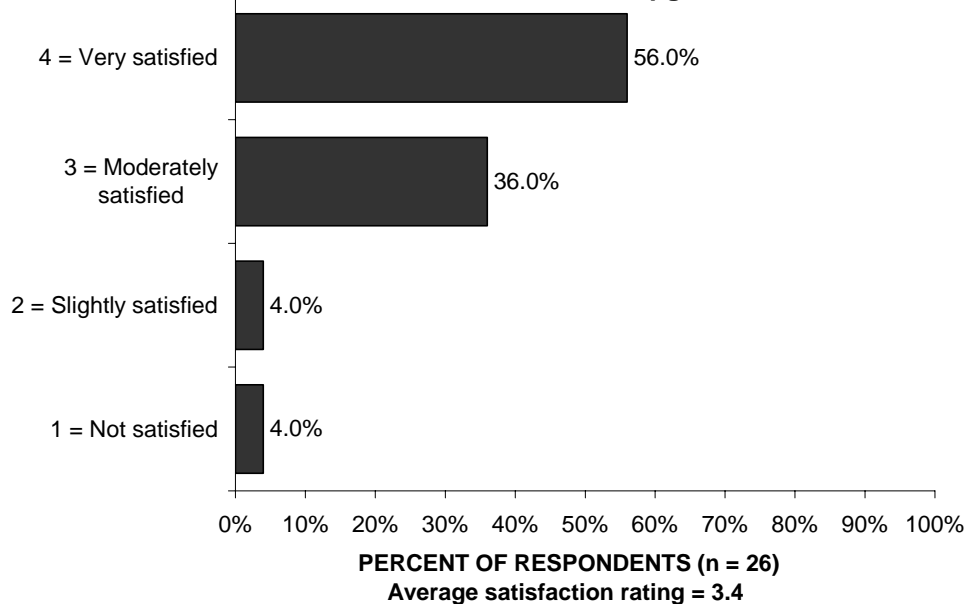
Includes only the 42.1% of respondents who visited North Cascades Visitor Center
Data were weighted to reflect the contact sheet age distribution of respondents.

Figure 4.54. ROLA Corridor Survey, Mail Survey Q-12
Degree of Satisfaction with North Cascades Visitor Center for Visitors
Contacted at Newhalem Campground



Includes only the 85.2% of respondents who visited North Cascades Visitor Center
 Data were weighted to reflect the contact sheet age distribution of respondents.

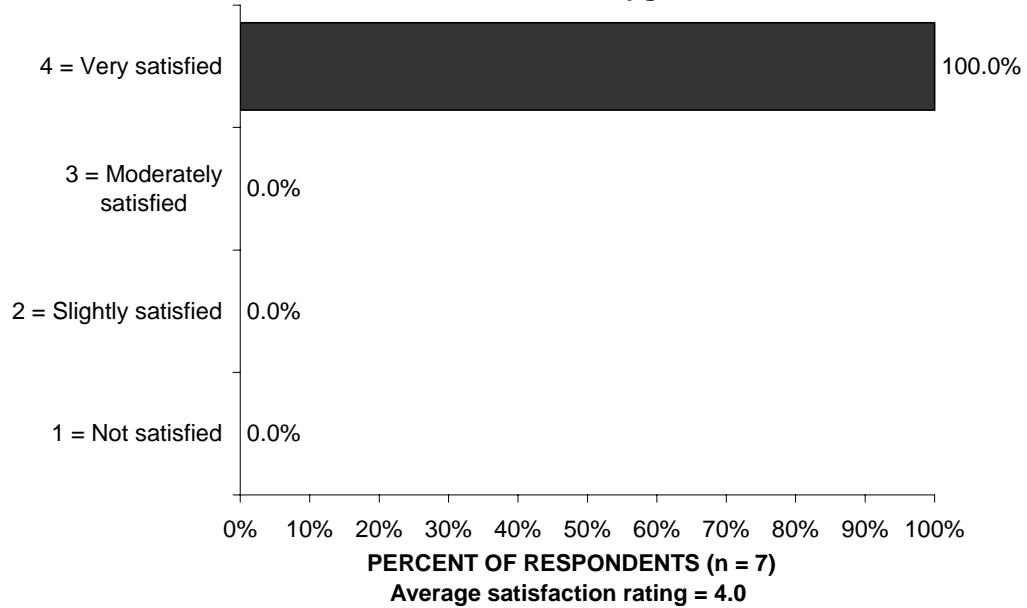
Figure 4.55. ROLA Corridor Survey, Mail Survey Q-12
Degree of Satisfaction with North Cascades Visitor Center for Visitors
Contacted at S. Colonial Creek Campground



Includes only the 54.2% of respondents who visited North Cascades Visitor Center
 Data were weighted to reflect the contact sheet age distribution of respondents.

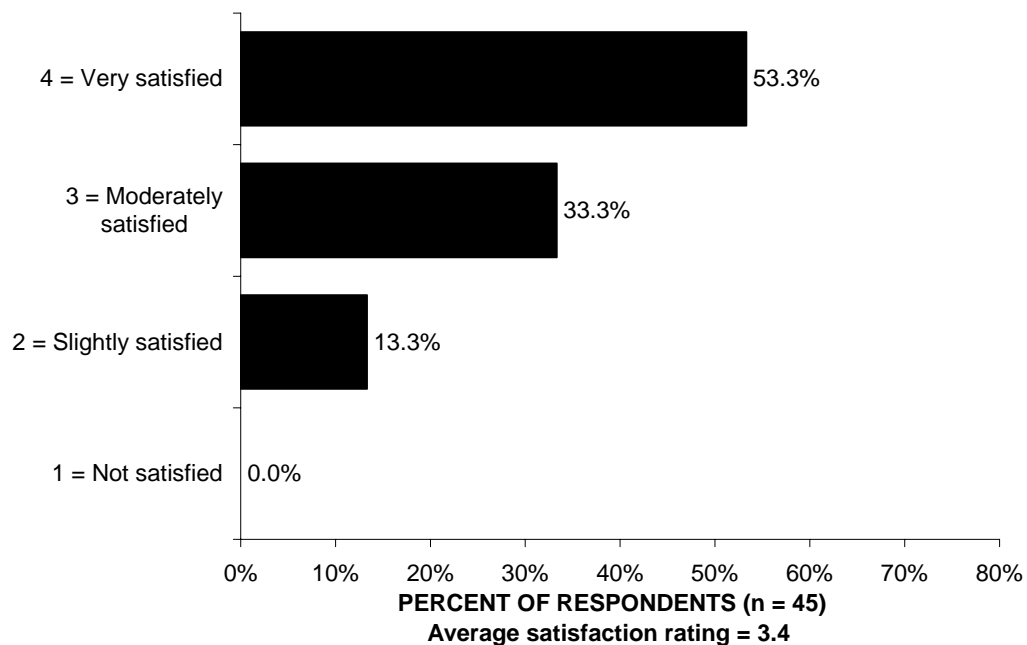
IV. Facilities and Programs

Figure 4.56. ROLA Corridor Survey, Mail Survey Q-12
Degree of Satisfaction with North Cascades Visitor Center for Visitors
Contacted at Goodell Creek Campground



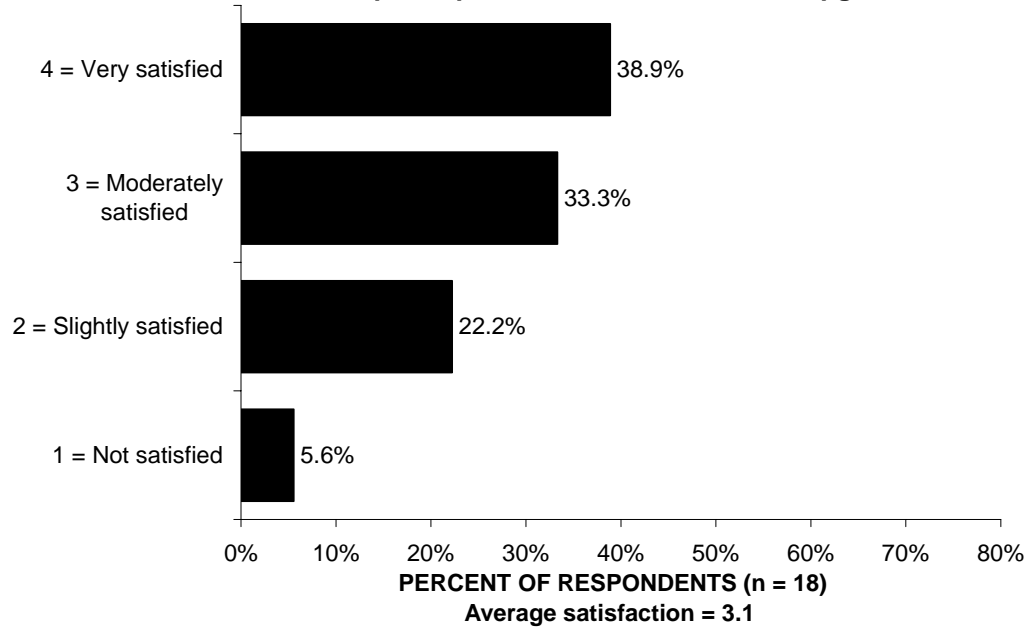
Includes only the 53.8% of respondents who visited North Cascades Visitor Center
Data were weighted to reflect the contact sheet age distribution of respondents.

Figure 4.57. ROLA Corridor Survey, Q-12B
Satisfaction with Environmental Learning Center



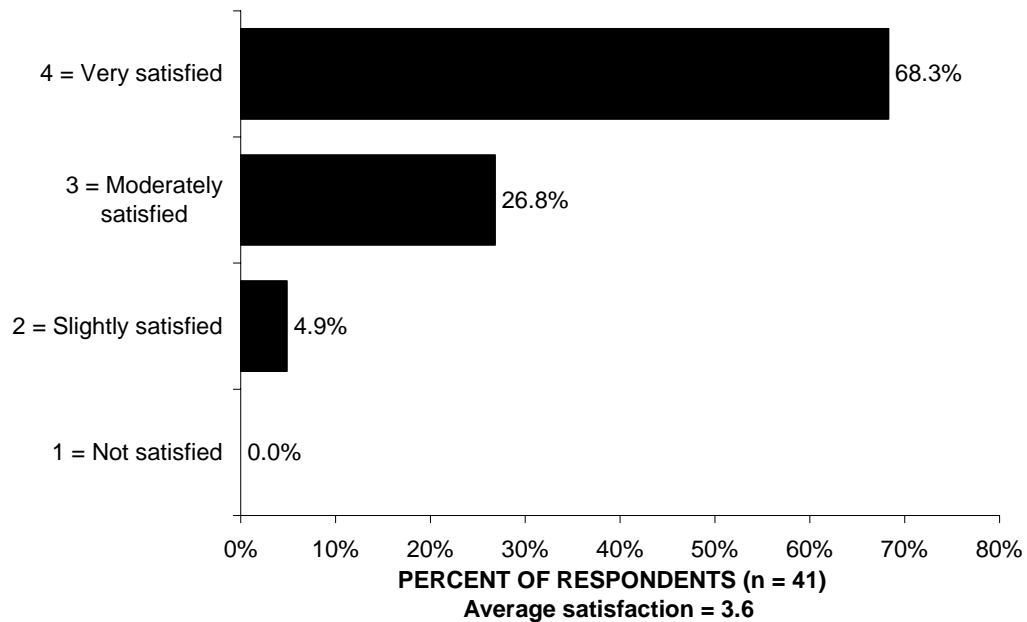
Includes only the 10.7% of respondents who visited the Environmental Learning Center

Figure 4.58. ROLA Corridor Survey, Q-12C
Satisfaction with Group Campsites at Goodell Creek Campground



Includes only the 4.3% of respondents who visited the Group Campsites
 Data were weighted to reflect the contact sheet age distribution of respondents.

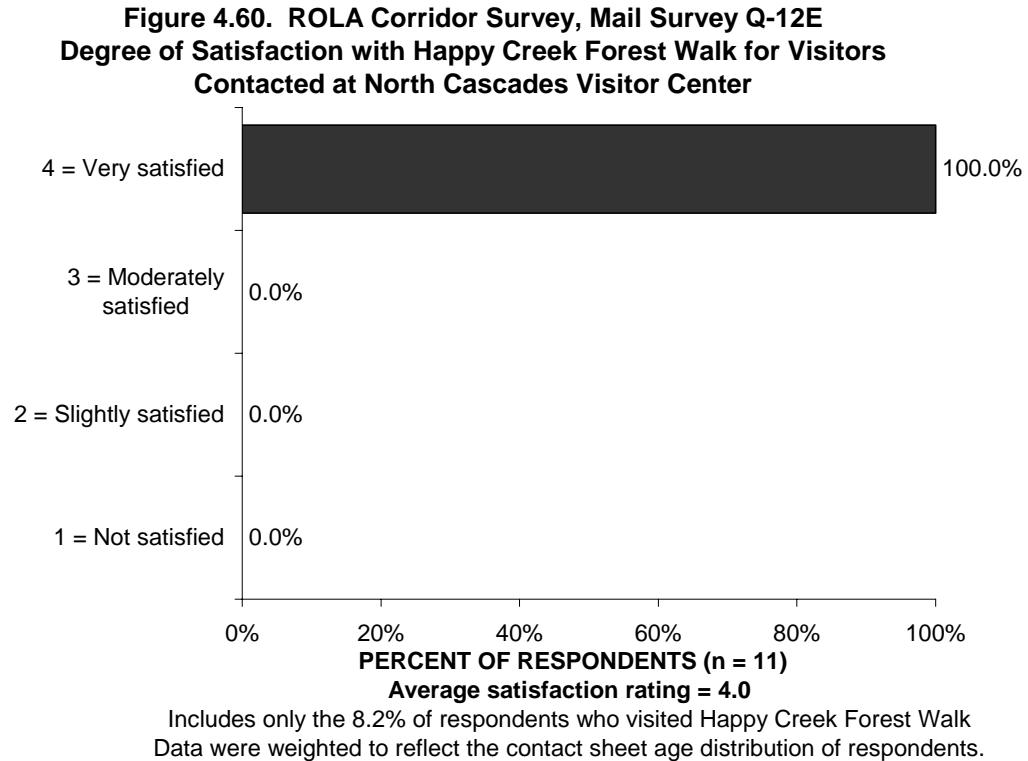
Figure 4.59. ROLA Corridor Survey, Q-12D
Satisfaction with Thunder Knob Trail



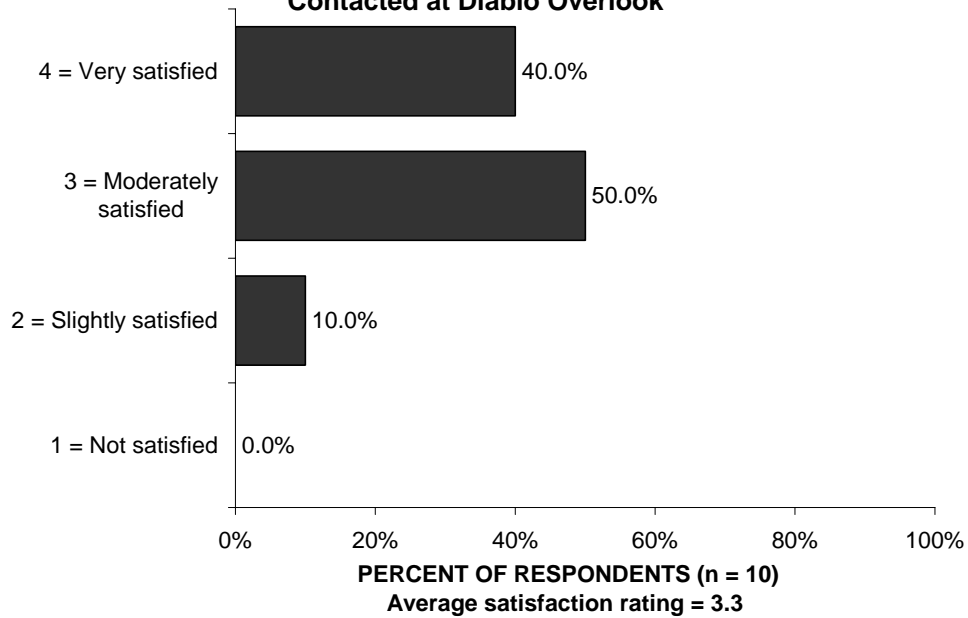
Includes only the 9.7% of respondents who visited Thunder Knob Trail

IV. Facilities and Programs

Satisfaction ratings for Happy Creek forest walk varied by contact point, $F(5, 29) = 3.40$, $p = .015$. Post hoc Tukey tests revealed that visitors contacted at North Cascades Visitor Center ($M = 4.0$) were significantly more satisfied with Happy Creek Forest Walk than visitors contacted at Diablo Overlook ($M = 3.29$) or at Gorge Overlook ($M = 3.19$). No other significant differences were observed. The satisfaction distribution ratings for each contact point are in Figures 4.60 – 4.64.

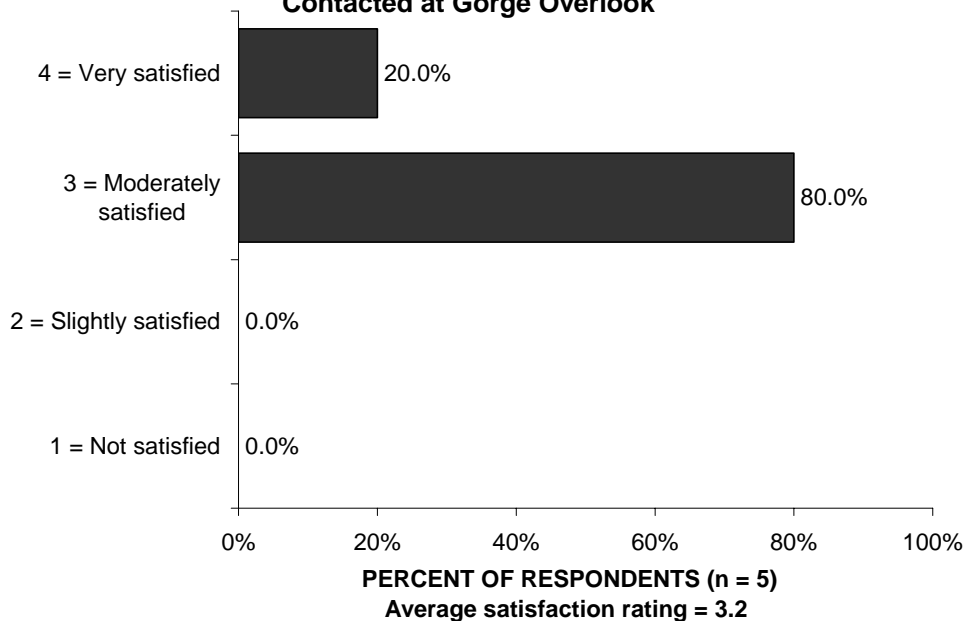


**Figure 4.61. ROLA Corridor Survey, Mail Survey Q-12E
Degree of Satisfaction with Happy Creek Forest Walk for Visitors
Contacted at Diablo Overlook**



Includes only the 60.0% of respondents who visited Happy Creek Forest Walk
Data were weighted to reflect the contact sheet age distribution of respondents.

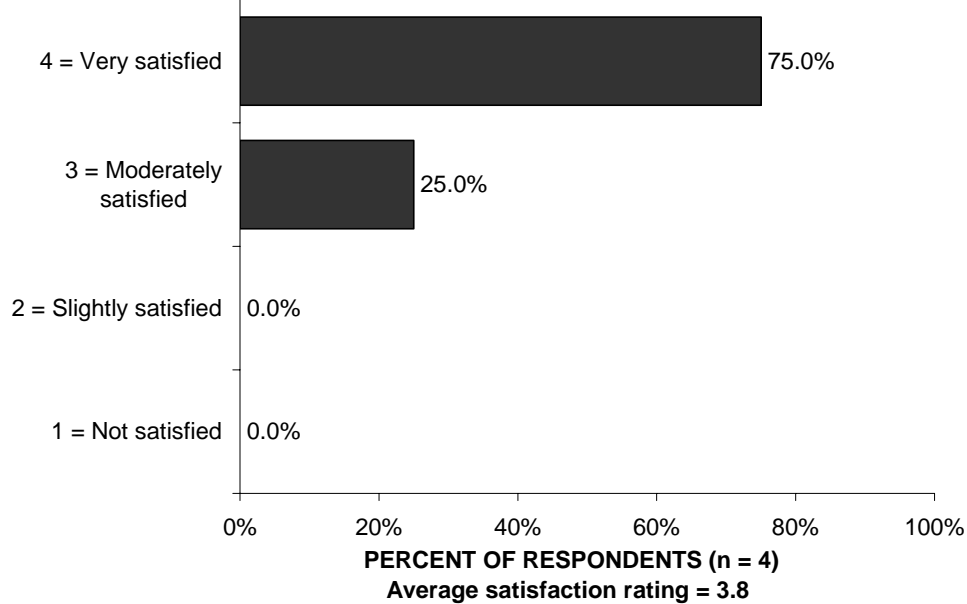
**Figure 4.62. ROLA Corridor Survey, Mail Survey Q-12E
Degree of Satisfaction with Happy Creek Forest Walk for Visitors
Contacted at Gorge Overlook**



Includes only the 13.2% of respondents who visited Happy Creek Forest Walk
Data were weighted to reflect the contact sheet age distribution of respondents.

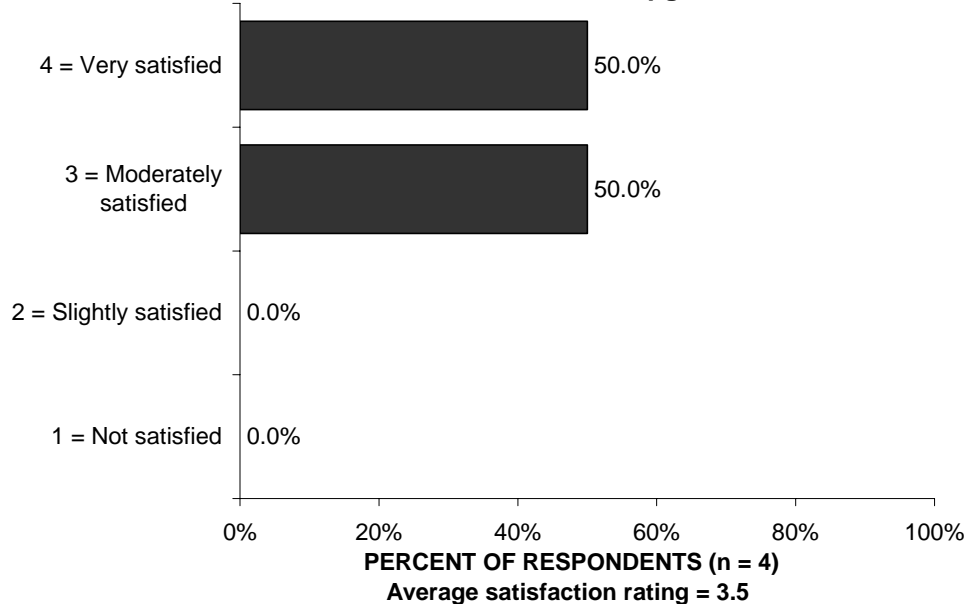
IV. Facilities and Programs

**Figure 4.63. ROLA Corridor Survey, Mail Survey Q-12E
Degree of Satisfaction with Happy Creek Forest Walk for Visitors
Contacted at Newhalem Campground**



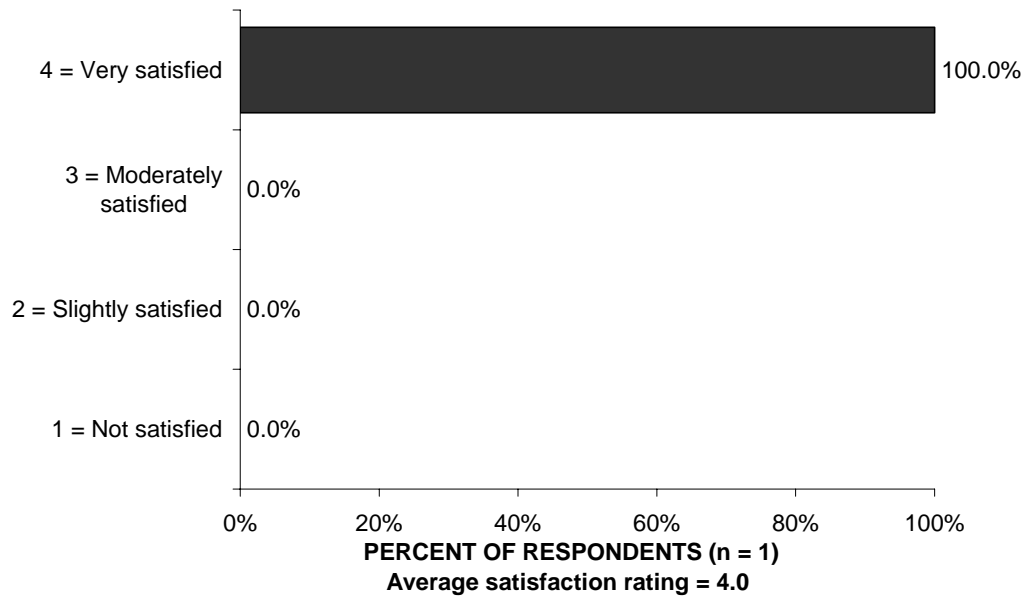
Includes only the 6.6% of respondents who visited Happy Creek Forest Walk
Data were weighted to reflect the contact sheet age distribution of respondents.

**Figure 4.64. ROLA Corridor Survey, Mail Survey Q-12E
Degree of Satisfaction with Happy Creek Forest Walk for Visitors
Contacted at S. Colonial Creek Campground**



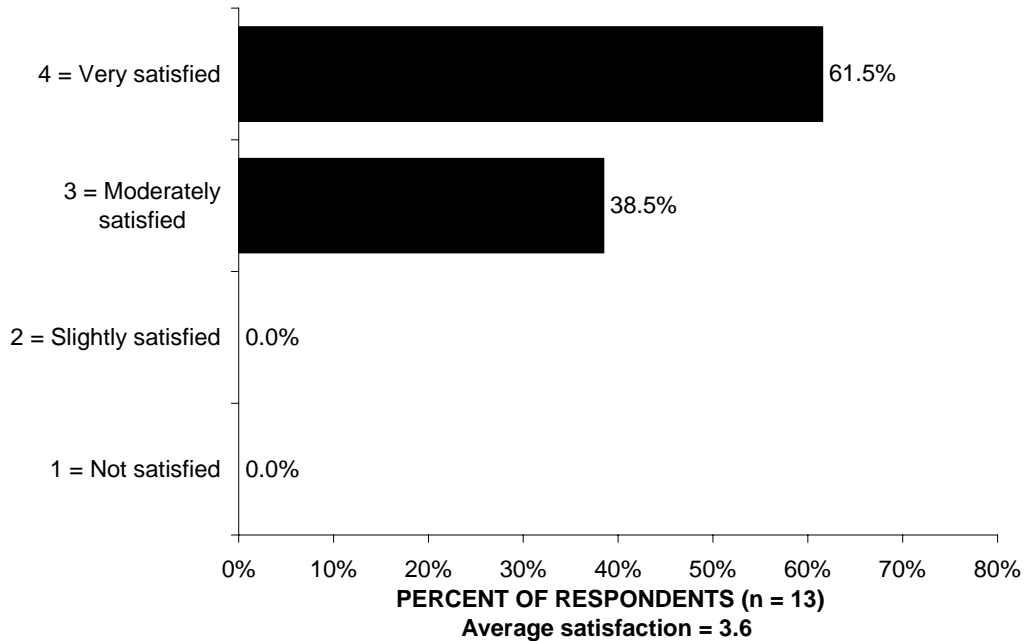
Includes only the 8.3% of respondents who visited Happy Creek Forest Walk
Data were weighted to reflect the contact sheet age distribution of respondents.

**Figure 4.65. ROLA Corridor Survey, Mail Survey Q-12E
Degree of Satisfaction with Happy Creek Forest Walk for Visitors
Contacted at Goodell Creek Campground**



Includes only the 7.7% of respondents who visited Happy Creek Forest Walk
Data were weighted to reflect the contact sheet age distribution of respondents.

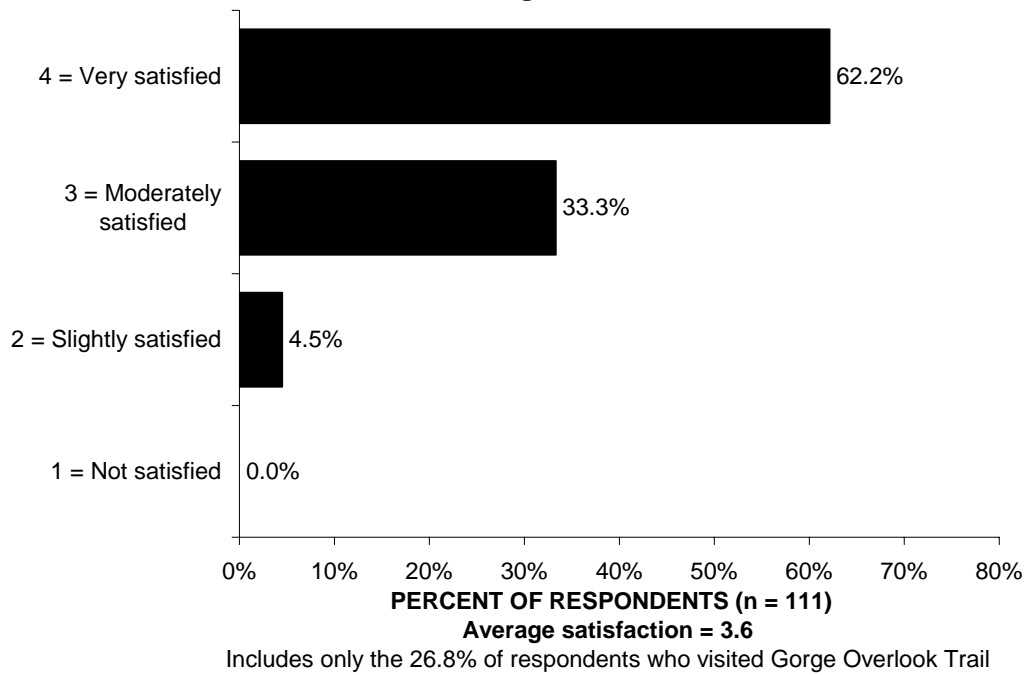
**Figure 4.66. ROLA Corridor Survey, Q-12F
Satisfaction with Happy-Panther Trail**



Includes only the 3.1% of respondents who visited Happy-Panther Trail

IV. Facilities and Programs

**Figure 4.67. ROLA Corridor Survey, Q-12G
Satisfaction with Gorge Overlook Trail**



**Figure 4.68. ROLA Corridor Survey, Q-12H
Satisfaction with Handicap-Accessible Dock at Colonial Creek
Campground**

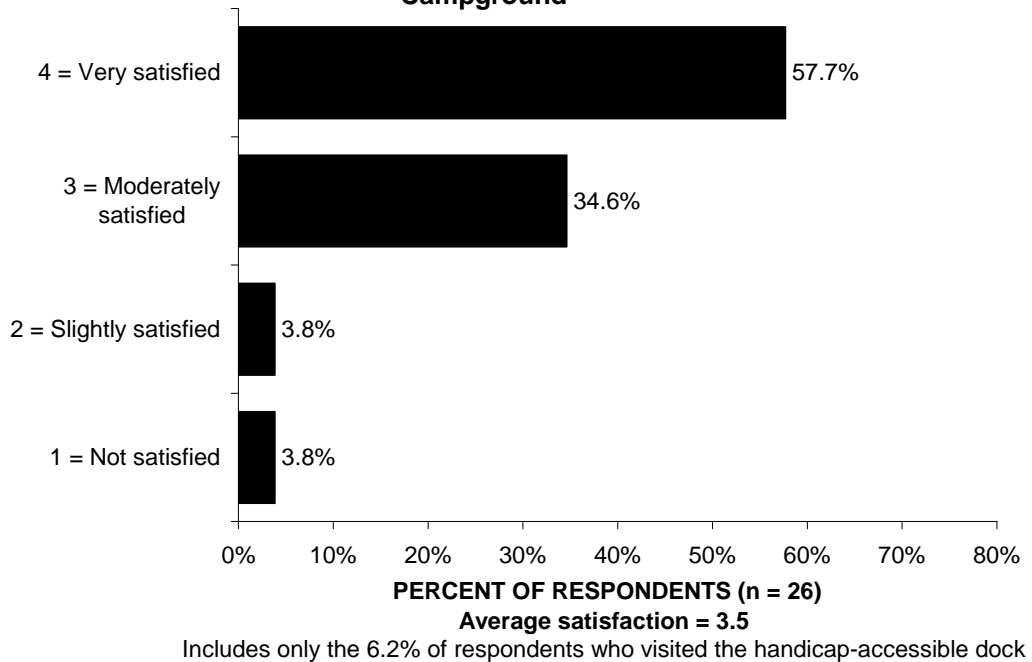
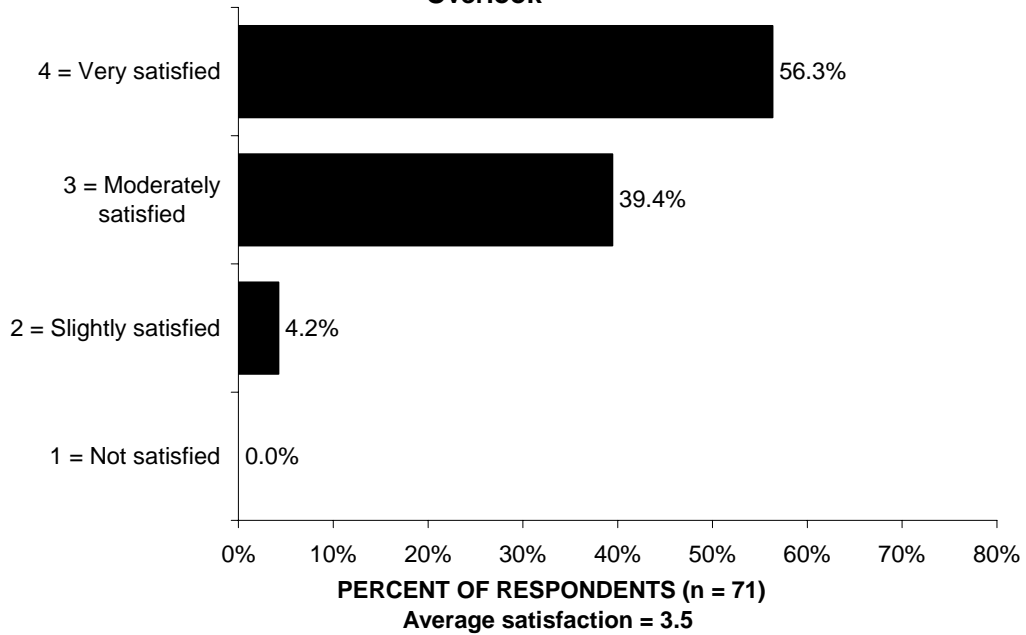
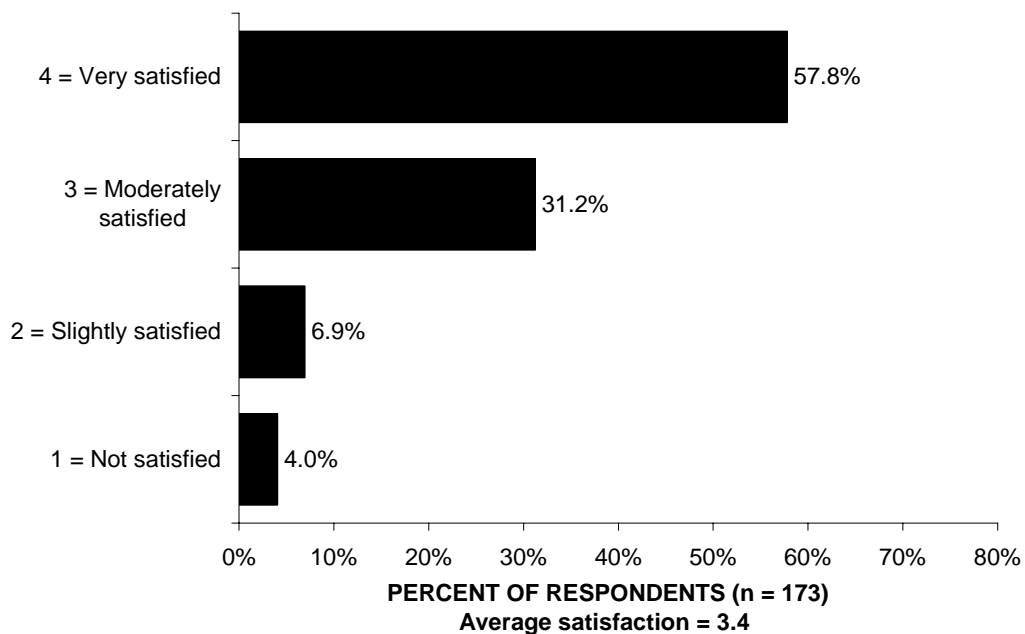


Figure 4.69. ROLA Corridor Survey, Q-12I
Satisfaction with Interpretive Signs/Ranger-Led Talks at Diablo Overlook



Includes only the 17.1% of respondents who participated in ranger programs at Diablo Overlook

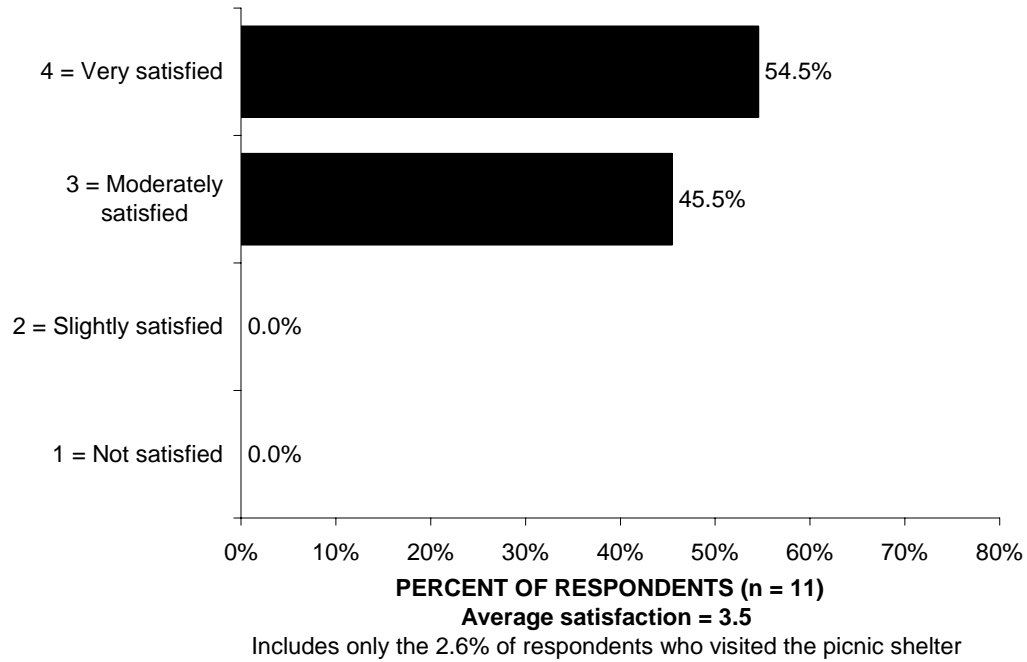
Figure 4.70. ROLA Corridor Survey, Q-12J
Satisfaction with Restrooms at Diablo Overlook



Includes only the 42.2% of respondents who visited Diablo Overlook restrooms

IV. Facilities and Programs

**Figure 4.71. ROLA Corridor Survey, Q-12K
Satisfaction with Goodell Creek Picnic Shelter**



**Figure 4.72. ROLA Corridor Survey, Q-12L
Satisfaction with Newhalem Area Trails**

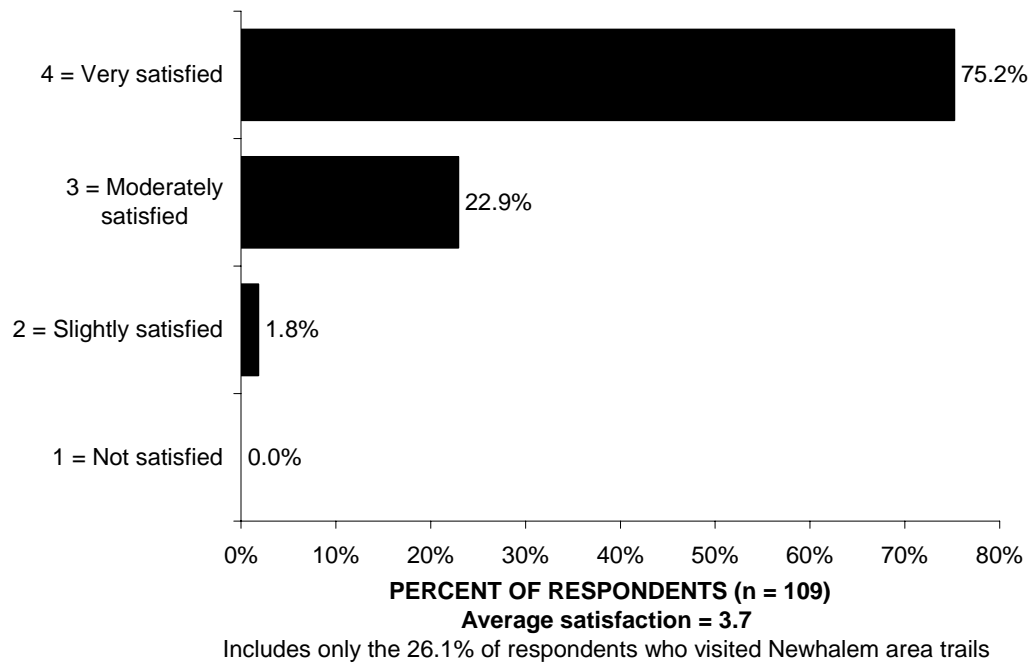


Table 4.9 Summary of average satisfaction ratings for facilities/programs.

Facility	Average Satisfaction Rating¹
North Cascades Visitor Center	3.4 - 4.0 ²
Environmental Learning Center	3.4
Group campsites at Goodell Creek Campground	3.1
Thunder Knob Trail	3.6
Happy Creek Forest Walk	3.2 - 4.0 ²
Happy-Panther Trail	3.6
Gorge Overlook Trail	3.6
Handicap-accessible dock at Colonial Creek Campground	3.5
Interpretive signs/Ranger-led talks at Diablo Overlook	3.5
Restrooms at Diablo Overlook	3.4
Goodell Creek Picnic Shelter	3.5
Newhalem area trails	3.7
¹ Rating scale: 1 = Not satisfied; 2 = Slightly satisfied; 3 = Moderately satisfied; 4 = Very satisfied	
² This is the range of average satisfaction ratings for the different contact points as they differed significantly.	

V. TRIP MOTIVATIONS

Visitors participating in the Ross Lake NRA State Route 20 Corridor User Mail Survey were asked a variety of questions about their trip and the activities they engaged in. This section reports the data collected with these questions.

Trip motivations

Mail questionnaire

(See next page for question.)

V. Trip Motivations

4. Some possible reasons why people visit recreation areas are listed below. How important to you was each of the following reasons for visiting Ross Lake NRA on **this trip**? (Check one response for each reason.)

If a reason is not applicable for this trip, please circle "not important".

How important was each reason for taking **this trip** to Ross Lake NRA?

	↓	↓	↓	↓	↓
	not important	slightly important	moderately important	very important	extremely important
A. DEVELOP YOUR SKILLS AND ABILITIES					
B. DO SOMETHING WITH YOUR FAMILY					
C. EXPERIENCE NEW AND DIFFERENT THINGS					
D. LEARN MORE ABOUT NATURE					
E. TO BE FREE TO MAKE YOUR OWN CHOICES					
F. GET AWAY FROM THE USUAL DEMANDS OF LIFE					
G. TALK TO NEW AND VARIED PEOPLE					
H. BE WITH FRIENDS					
I. EXPERIENCE TRANQUILITY					
J. EXPERIENCE SOLITUDE					
K. BEING CLOSE TO NATURE					
L. VIEWING SCENERY					
M. LEARNING WHAT YOU ARE CAPABLE OF					
N. TO FEEL YOUR INDEPENDENCE					
O. TO GET EXERCISE					

Twelve of the fifteen trip motivations importance ratings varied by destination type. Table 5.1 summarizes the average importance ratings for those trip motivations that differed by destination type. Overall incidental visitors rated more trip motivations lower in importance than either of the intentional visitor groups. The two most important trip motivations for all groups were viewing scenery and being close to nature.

Table 5.1 Summary of trip motivations with significant differences due to destination type

Trip Motivation	Average importance rating ¹			Code see footnote
	Primary reason	One of several	Not a reason	
Develop your skills and abilities	1.7	1.5	1.4	a
Do something with your family	4.0	3.4	3.0	b
Experience new and different things	3.7	4.0	3.4	c
Learn more about nature	3.3	3.4	2.9	c
To be free to make your own choices	3.0	3.0	2.7	d
Get away from the usual demands of life	4.2	4.0	3.4	c
Talk to new and varied people	2.4	2.4	2.0	c
Be with friends	3.1	2.5	2.5	e
Experience tranquility	4.2	3.9	3.5	b
Experience solitude	3.6	3.5	3.0	c
Being close to nature	4.2	4.1	3.5	c
Viewing scenery	4.5	4.6	4.2	c
Learning what you are capable of	2.1	2.1	1.8	d
To feel your independence	2.5	2.4	2.2	d
To get exercise	3.1	3.1	2.5	c
¹ The rating scale was 1 = Not important, 2 = Slightly important, 3 = Moderately important, 4 = Very important, and 5 = Extremely important. a – The highest and lowest averages were the only significant difference. b – Every group differed significantly from the others. c – “Not a reason” important rating was significantly lower than the other two groups (which did not differ significantly from each other). d – Groups did not differ significantly from each other. e – “Primary reason” importance rating was significantly higher than the other two groups (which did not differ significantly from each other).				

All but six trip motivations differed significantly by contact point. These results and their associated charts are presented below. The average importance ratings for each trip motivation are summarized in Table 5.2 and show the relative average importance of the different trip motivations. “Viewing scenery” had the highest overall importance rating although visitors to S. Colonial Creek campground rated “get away from the usual demands of life” as equally important ($M = 4.4$) and visitors contacted at Goodell Creek campground rated “experiencing tranquility” as more important ($M = 4.7$).

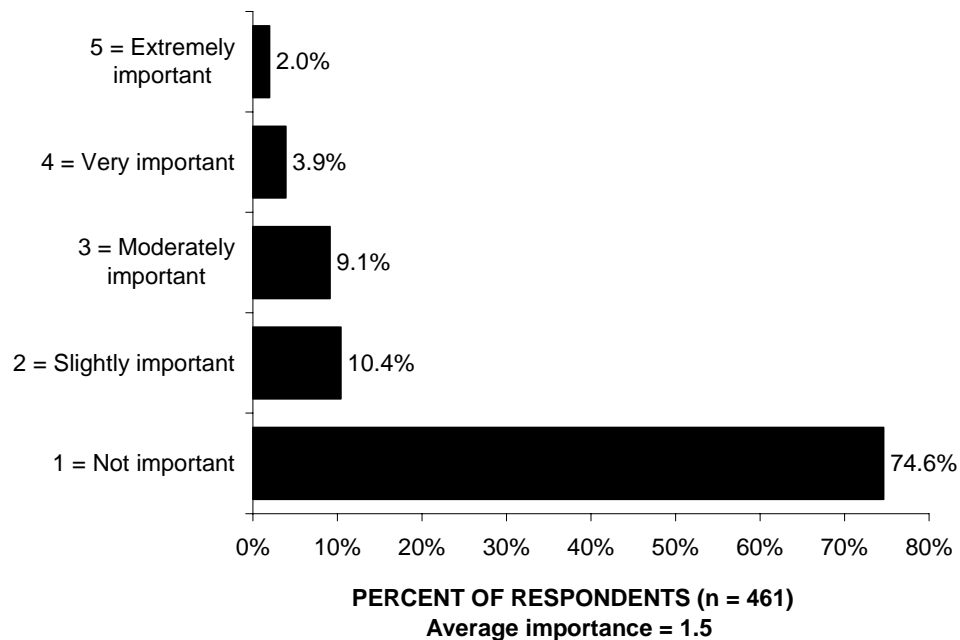
The importance of two trip motivations varied with party size. The larger a party the more important “do something with your family” was rated, $r(n = 459) = .19, p < .001$, and the more important “be with friends” was rated, $r(n = 459) = .25, p < .001$.

V. Trip Motivations

Table 5.2 Summary of average importance ratings for trip motivations.

Trip Motivation	Average Importance Rating¹
Develop skills and abilities	1.5
Do something with your family	3.1 – 4.2 ²
Experience new and different things	3.4 – 3.9 ²
Learn more about nature	2.9 – 3.5 ²
To be free to make your own choices	2.9
Get away from the usual demands of life	3.6 – 4.0 ²
Talk to new and varied people	2.2
Be with friends	2.7
Experience tranquility	3.4 – 4.7 ²
Experience solitude	3.0 – 3.9 ²
Being close to nature	3.5 – 4.3 ²
Viewing scenery	4.4
Learning what you are capable of	1.8 – 2.4 ²
To feel your independence	2.4
To get exercise	2.4 – 3.5 ²
¹ Rating scale: 1 = Not important; 2 = Slightly important; 3 = Moderately important; 4 = Very important; 5 = Extremely important	
² This is the range of average importance ratings for the different contact points as they differed significantly.	

**Figure 5.1. ROLA Corridor Survey, Q-4
Importance of Develop Your Skills and Abilities**



The importance of “Do something with your family” varied by contact point, $F(5, 454) = 3.78$, $p = .002$. Visitors contacted at S.Colonial Creek Campground ($M = 4.1$) and Goodell Creek Campground ($M = 4.2$) rated “Do something with your family” more importantly as a trip motivation than visitors contacted at the other four locations (M s range from 3.1 to 3.4). The distributions of importance ratings for “Do something with your family” for each contact point are presented in Figures 5.2 – 5.7.

**Figure 5.2. ROLA Corridor Survey, Mail Survey Q-4
Importance of Do Something with Your Family for North Cascades
Visitor Center Respondents**

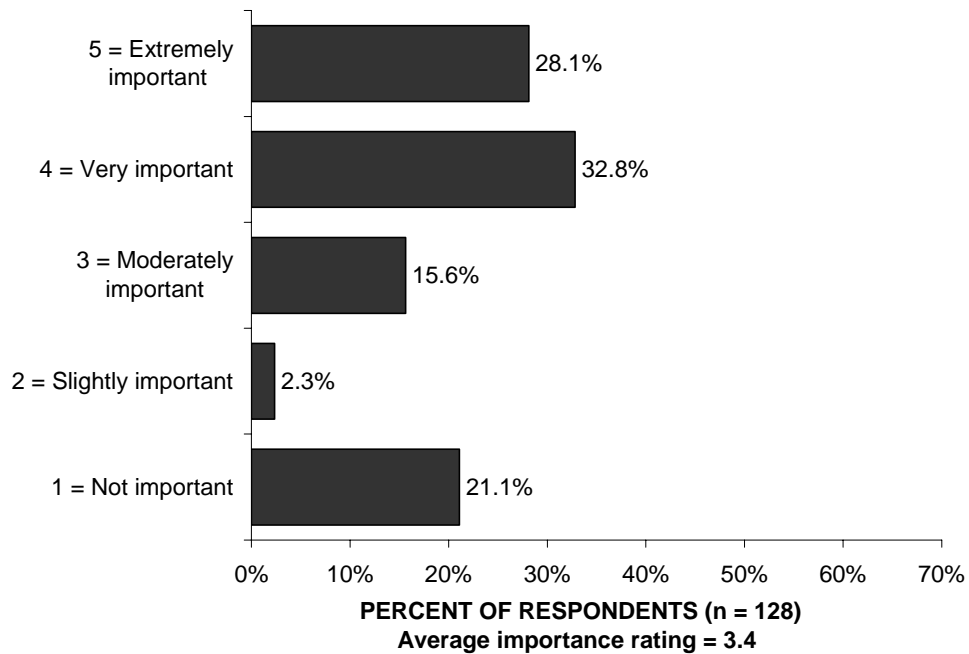


Figure 5.3. ROLA Corridor Survey, Mail Survey Q-4
Importance of Do Something with Your Family for Diablo Overlook
Respondents

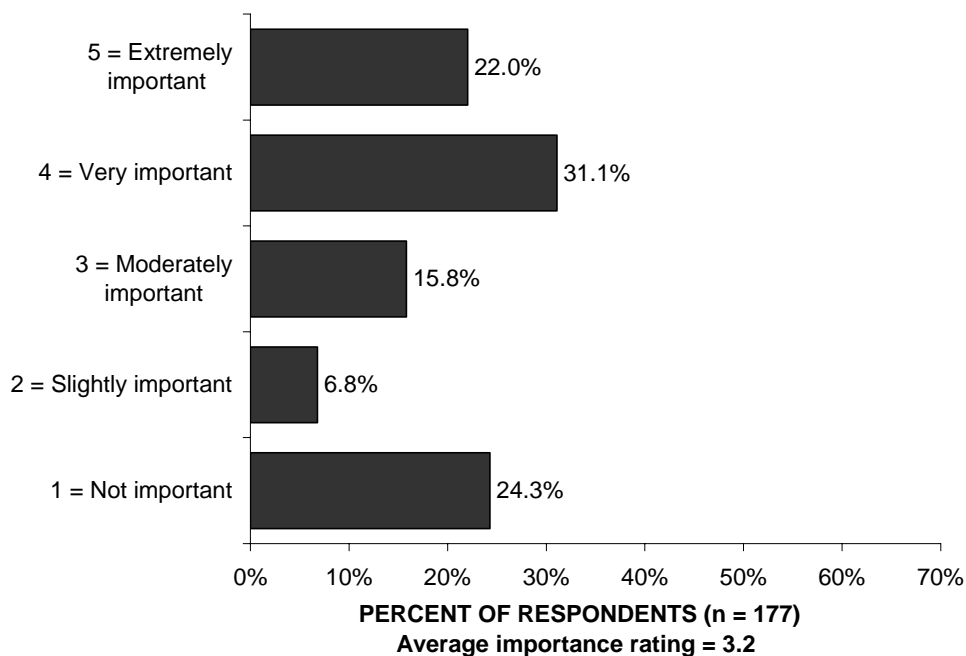
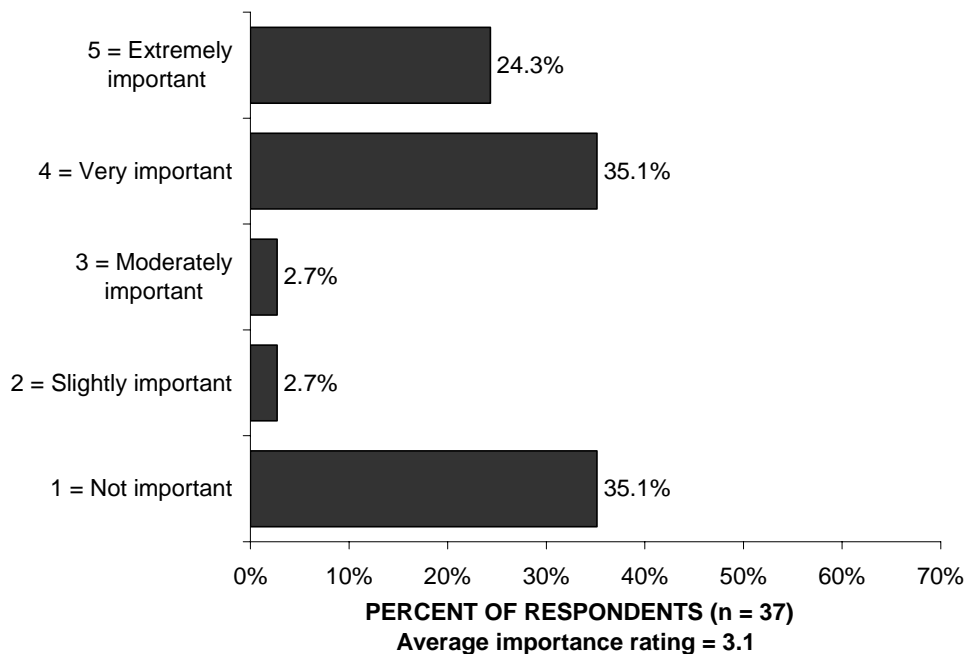
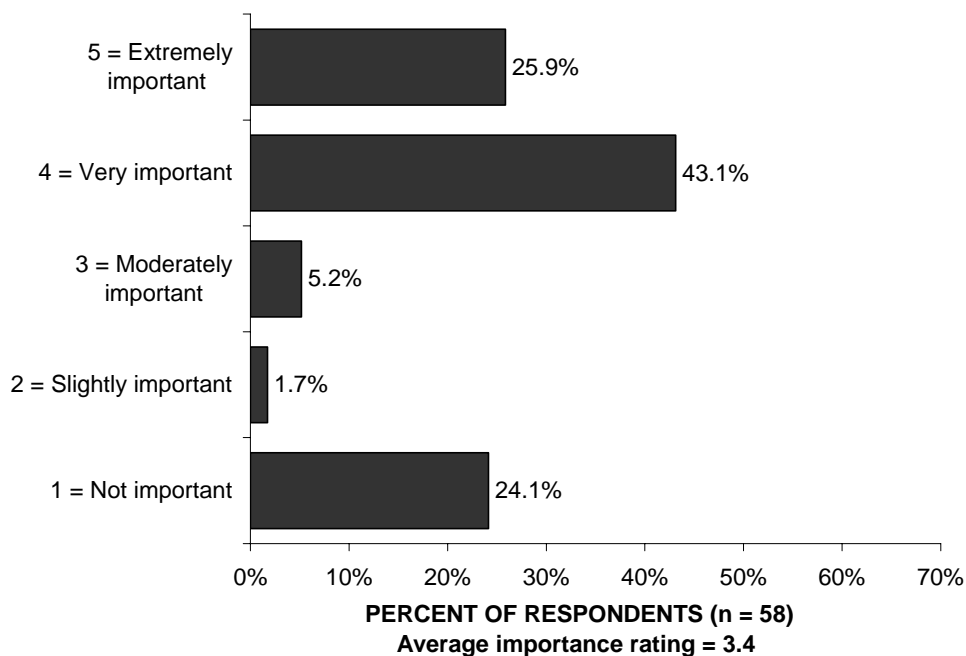


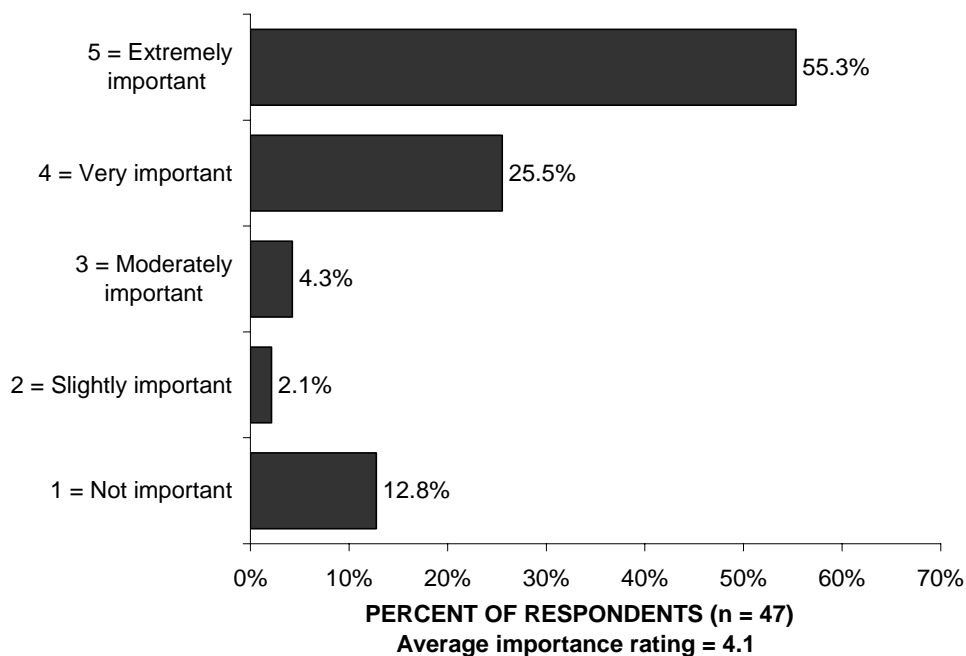
Figure 5.4. ROLA Corridor Survey, Mail Survey Q-4
Importance of Do Something with Your Family for Gorge Overlook
Respondents



**Figure 5.5. ROLA Corridor Survey, Mail Survey Q-4
Importance of Do Something with Your Family for Newhalem
Campground Respondents**

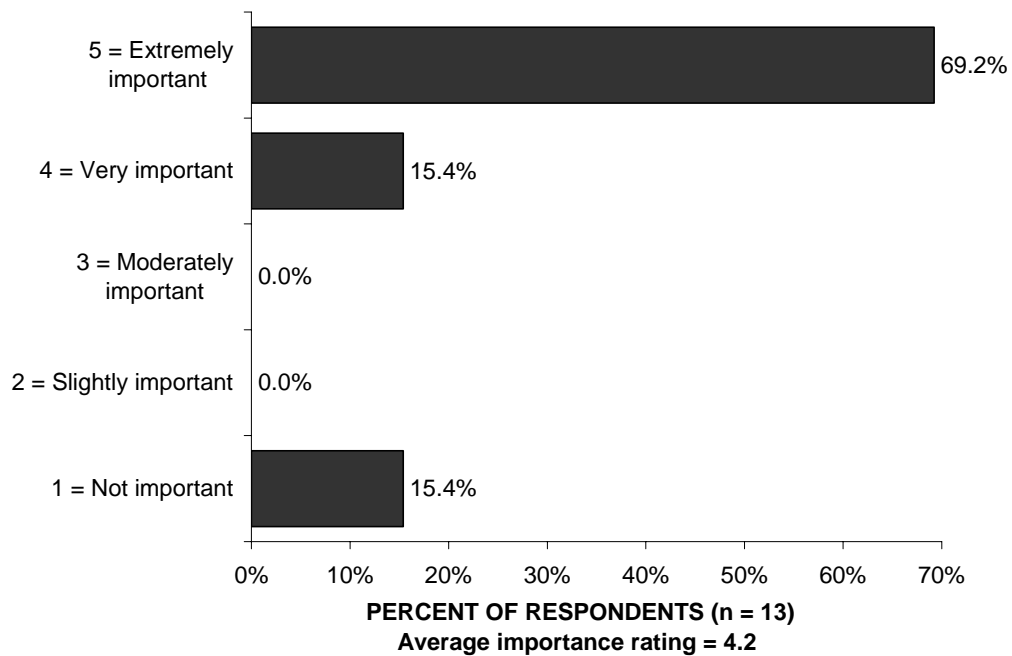


**Figure 5.6. ROLA Corridor Survey, Mail Survey Q-4
Importance of Do Something with Your Family for S. Colonial Creek
Campground Respondents**



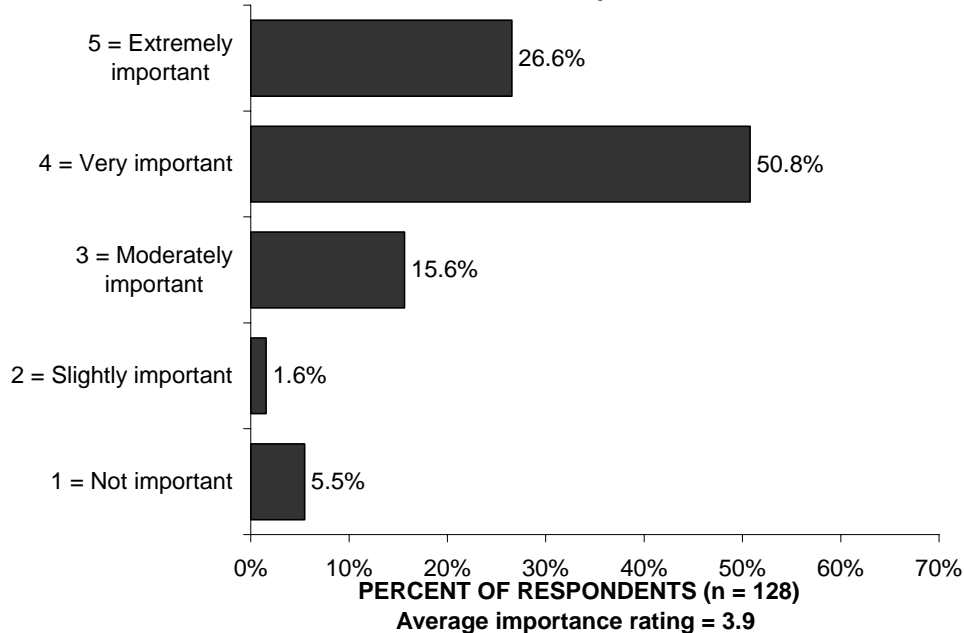
V. Trip Motivations

**Figure 5.7. ROLA Corridor Survey, Mail Survey Q-4
Importance of Do Something with Your Family for Goodell Creek
Campground Respondents**



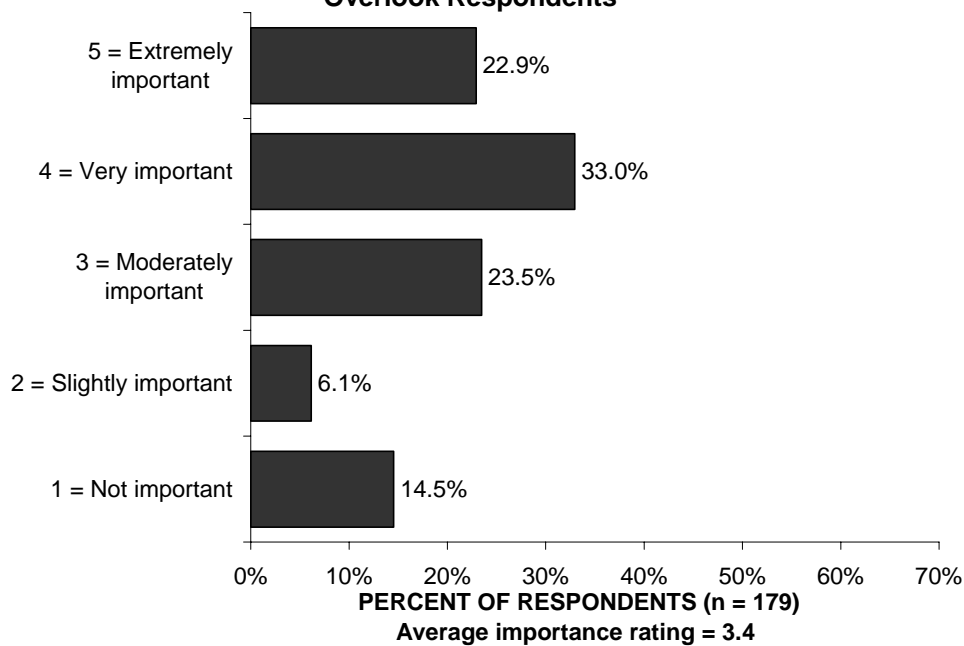
The importance of “Experience new and different things” varied by contact point, $F(5, 451) = 2.7, p = .019$. Post hoc Tukey tests revealed visitors contacted at North Cascades Visitor Center ($M = 3.9$) rated “Experience new and different things” significantly more important as a trip motivation than visitors contacted at Diablo Overlook ($M = 3.4$). No other significant differences were observed. The distributions of importance ratings for “Experience new and different things” for each contact point are presented in Figures 5.8 to 5.13.

**Figure 5.8. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience New and Different Things for North
Cascades Visitor Center Respondents**



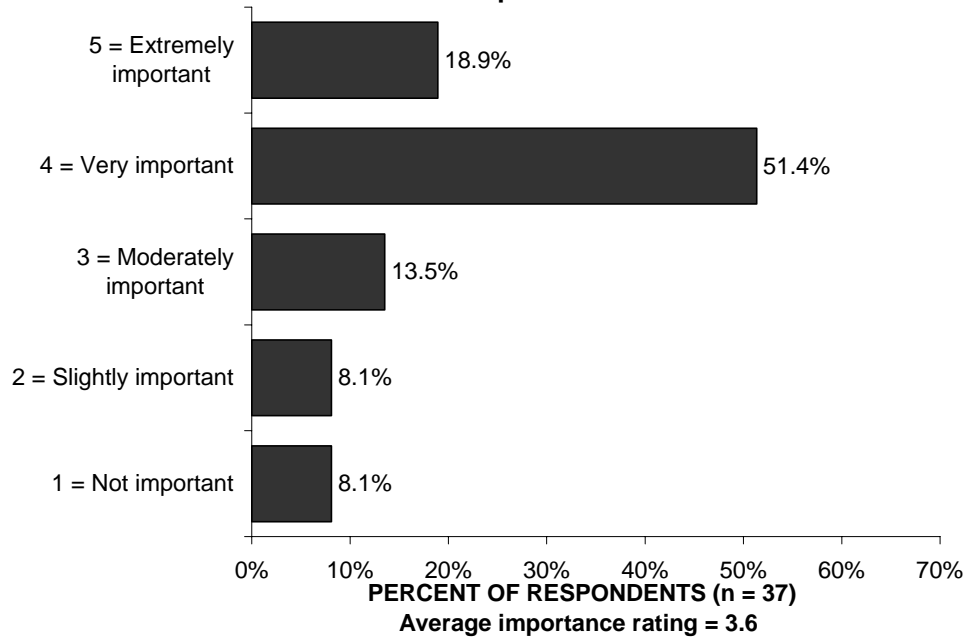
Data were weighted to reflect the contact sheet age distribution of respondents.

**Figure 5.9. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience New and Different Things for Diablo
Overlook Respondents**



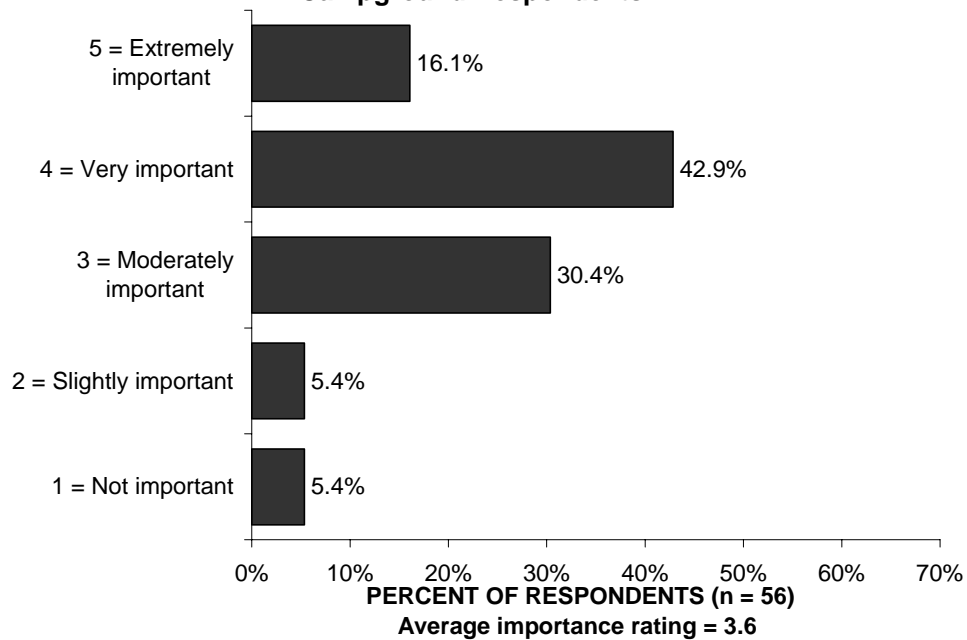
Data were weighted to reflect the contact sheet age distribution of respondents.

**Figure 5.10. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience New and Different Things for Gorge
Overlook Respondents**



Data were weighted to reflect the contact sheet age distribution of respondents.

**Figure 5.11. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience New and Different Things for Newhalem
Campground Respondents**



Data were weighted to reflect the contact sheet age distribution of respondents.

Figure 5.12. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience New and Different Things for S. Colonial
Creek Campground Respondents

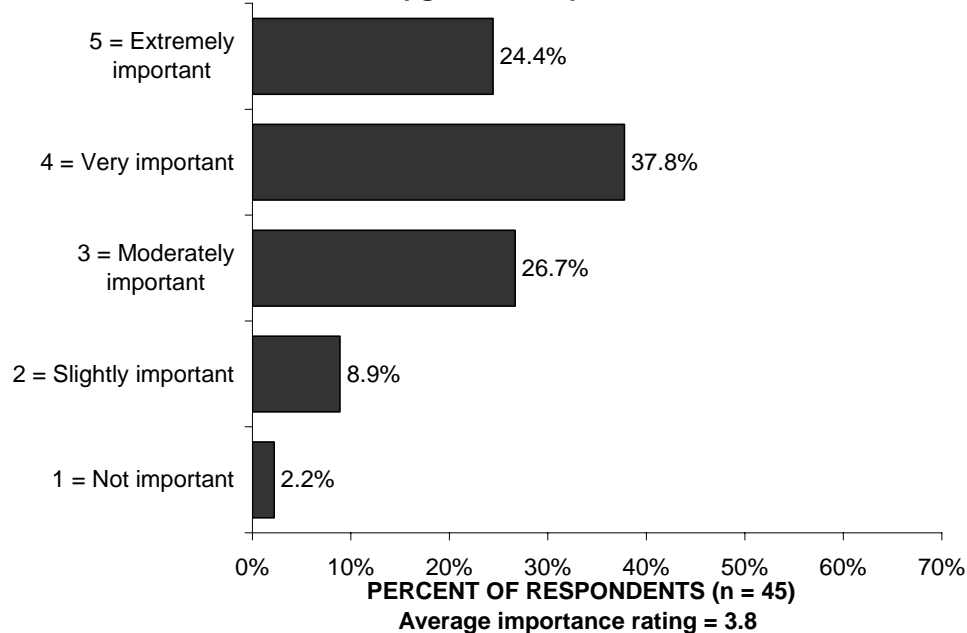
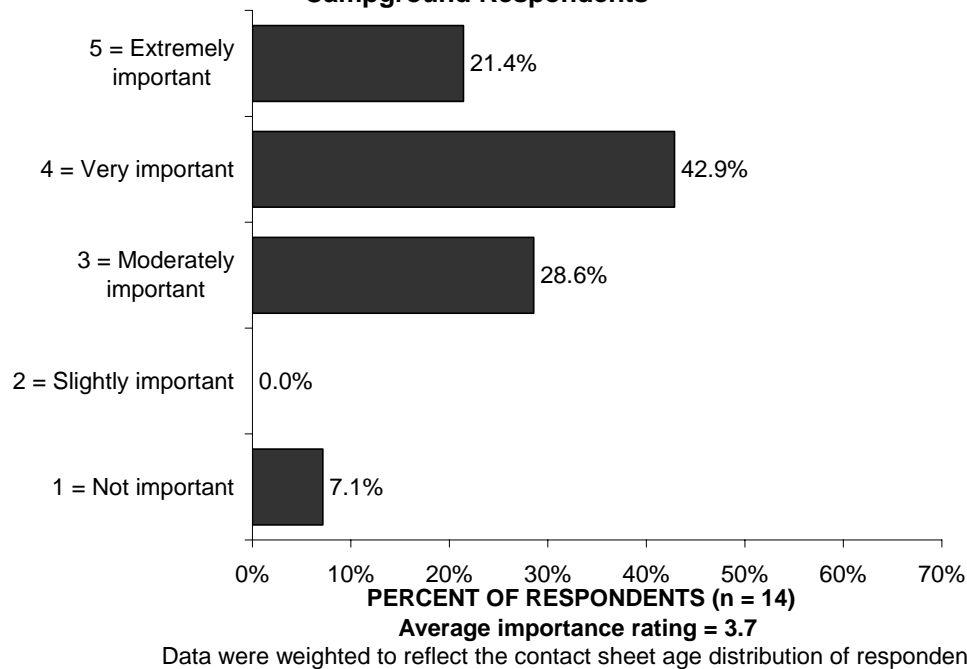


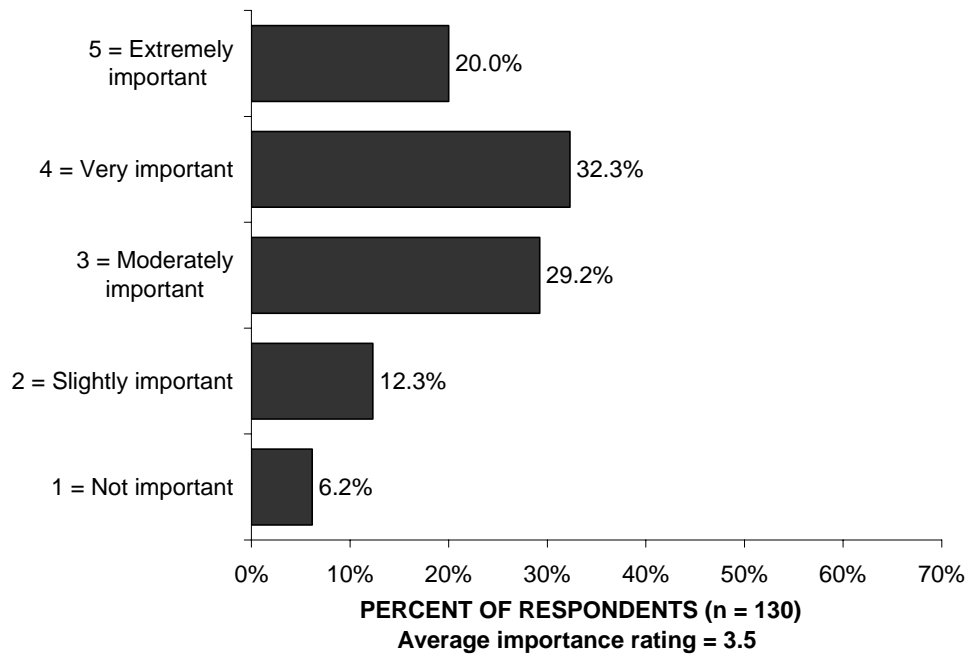
Figure 5.13. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience New and Different Things for Goodell Creek
Campground Respondents



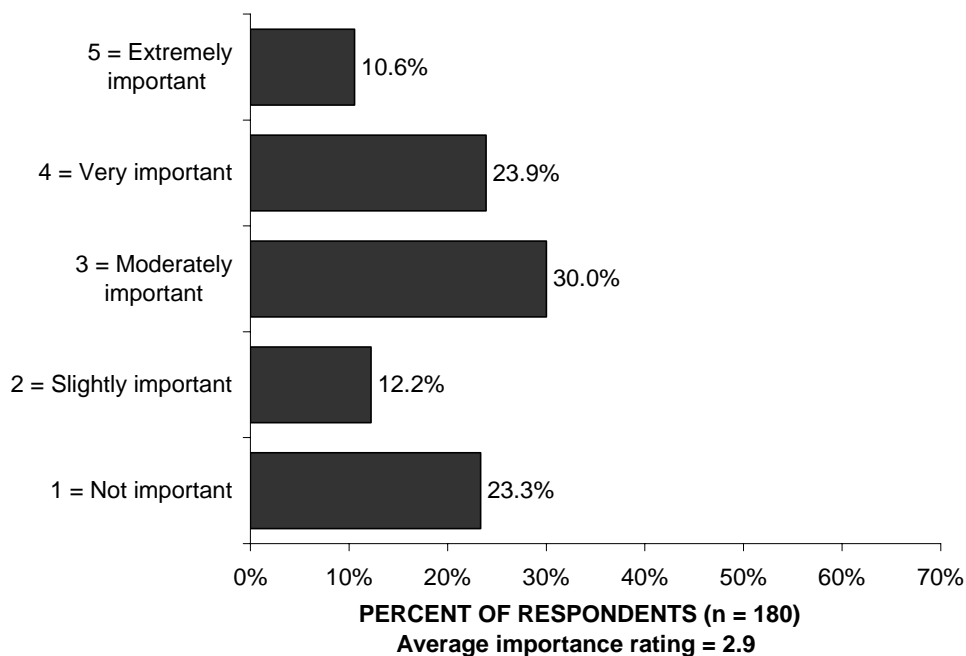
V. Trip Motivations

The importance of “Learn more about nature” varied by contact point, $F(5, 459) = 4.75$, $p < .001$. Post hoc tests revealed visitors contacted at Diablo Overlook ($M = 2.9$) rated “Learn more about nature” significantly less important as a trip motivation than visitors contacted at North Cascades Visitor Center ($M = 3.5$), S. Colonial Creek Campground ($M = 3.3$), and Newhalem Campground ($M = 3.3$). No other significant differences were observed. The distributions of importance ratings for “Learn more about nature” for each contact point are presented in Figures 5.14 – 5.19.

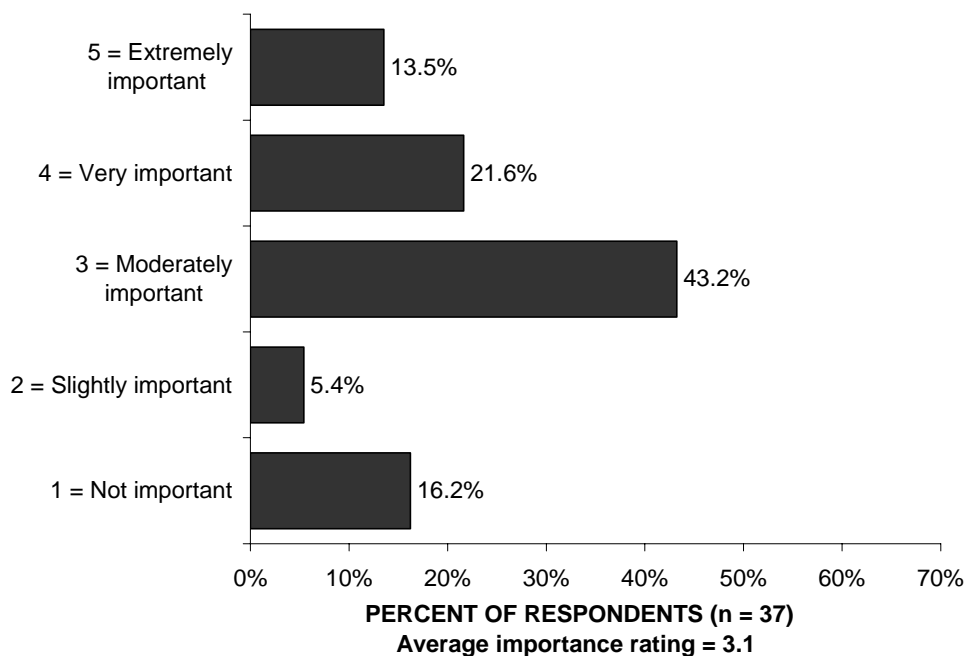
**Figure 5.14. ROLA Corridor Survey, Mail Survey Q-4
Importance of Learn More about Nature for North Cascades Visitor
Center Respondents**



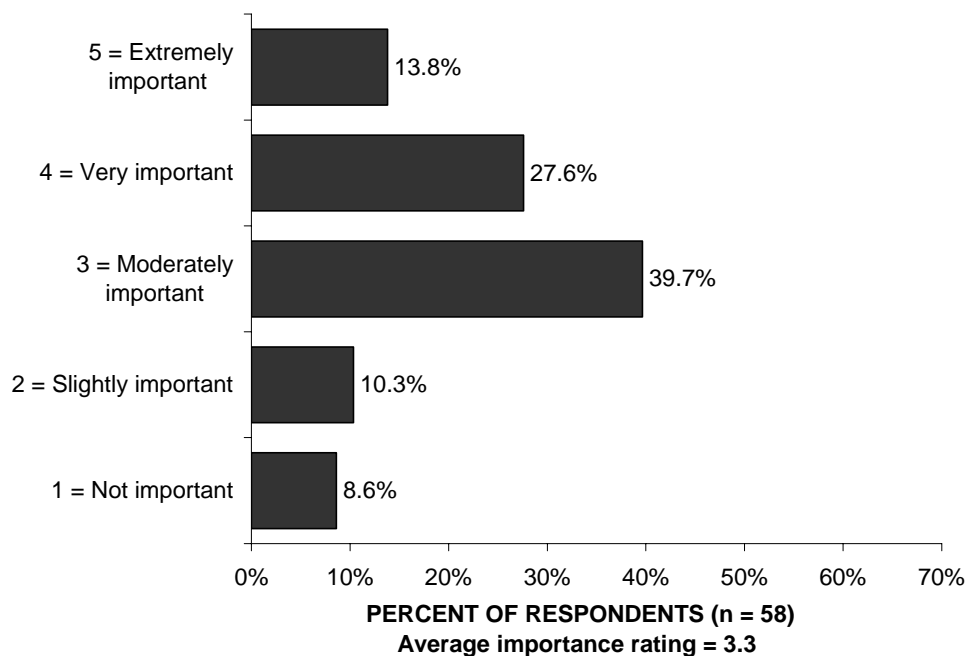
**Figure 5.15. ROLA Corridor Survey, Mail Survey Q-4
Importance of Learn More about Nature for Diablo Overlook
Respondents**



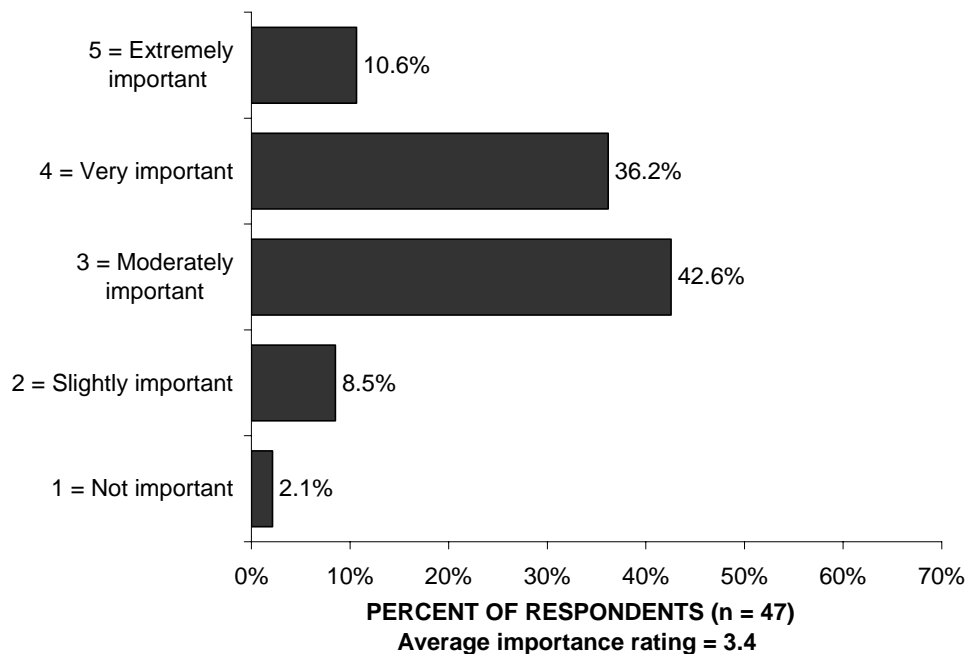
**Figure 5.16. ROLA Corridor Survey, Mail Survey Q-4
Importance of Learn More about Nature for Gorge Overlook
Respondents**



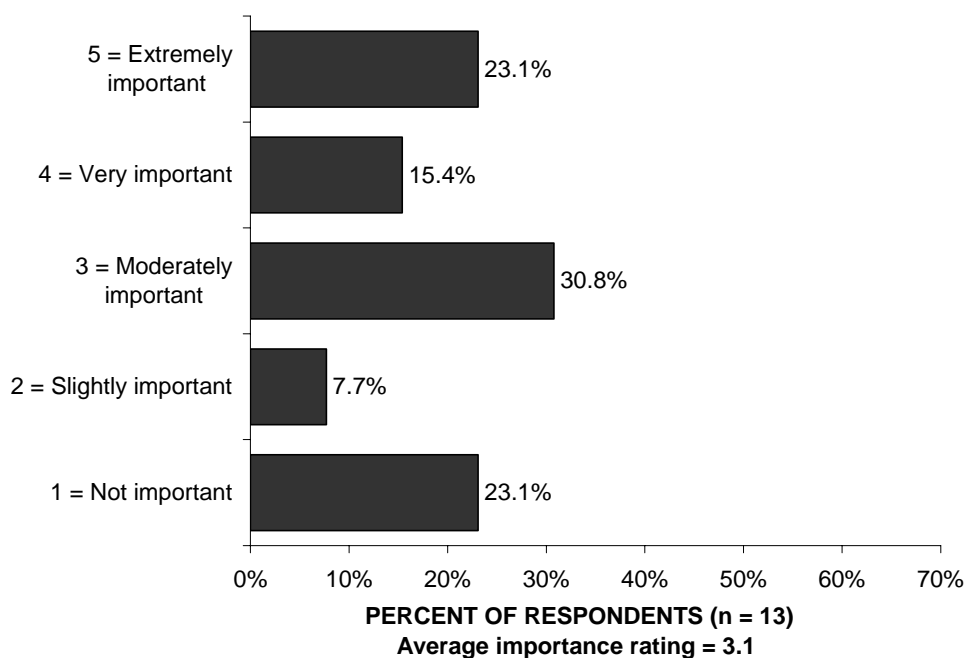
**Figure 5.17. ROLA Corridor Survey, Mail Survey Q-4
Importance of Learn More about Nature for Newhalem Campground
Respondents**



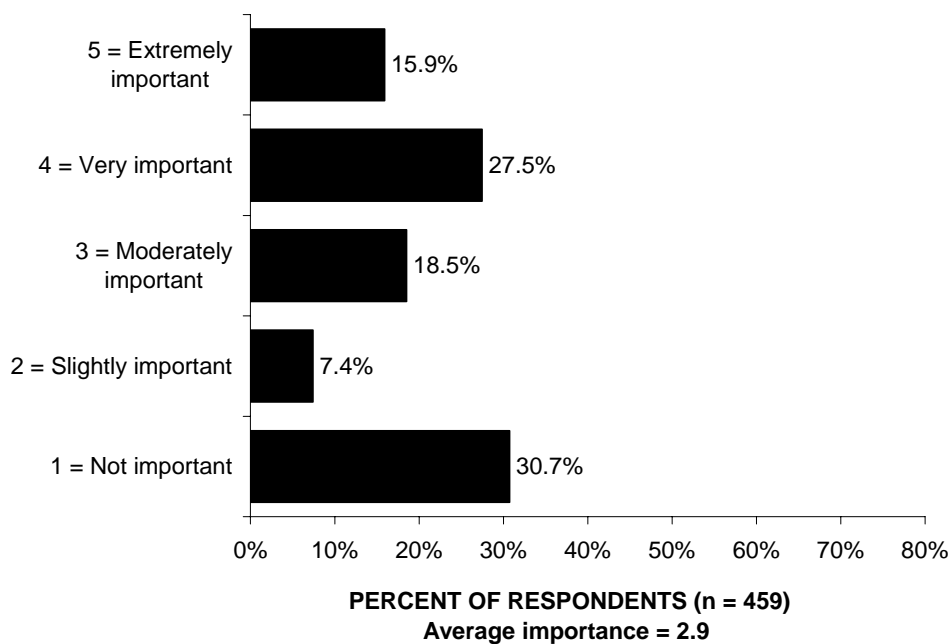
**Figure 5.18. ROLA Corridor Survey, Mail Survey Q-4
Importance of Learn More about Nature for S. Colonial Creek
Campground Respondents**



**Figure 5.19. ROLA Corridor Survey, Mail Survey Q-4
Importance of Learn More about Nature for Goodell Creek
Campground Respondents**



**Figure 5.20. ROLA Corridor Survey, Q-4
Importance of To Be Free to Make Your Own Choices**



V. Trip Motivations

The importance of “Get away from the usual demands of life” varied by contact point, $F(5, 453) = 4.21, p = .001$. Post hoc tests revealed visitors contacted at Diablo Overlook ($M = 3.6$) rated “Get away from the usual demands of life” significantly less important as a trip motivation than visitors contacted at North Cascades Visitor Center ($M = 3.9$), S. Colonial Creek Campground ($M = 4.4$), Newhalem Campground ($M = 4.0$), and Goodell Creek Campground ($M = 4.3$). Additionally, visitors contacted at Gorge Overlook ($M = 3.8$) and at North Cascades Visitor Center ($M = 3.9$) rated “Get away from the usual demands of life” as less important as a trip motivation than visitors contacted at S. Colonial Creek Campground ($M = 4.3$). The small number of respondents contacted at Goodell Creek Campground resulted in limited power for detecting significant differences even though the mean importance rating for this group was the highest of all groups. The distributions of importance ratings for “Get away from the usual demands of life” for each contact point are presented in Figures 5.21 – 5.26.

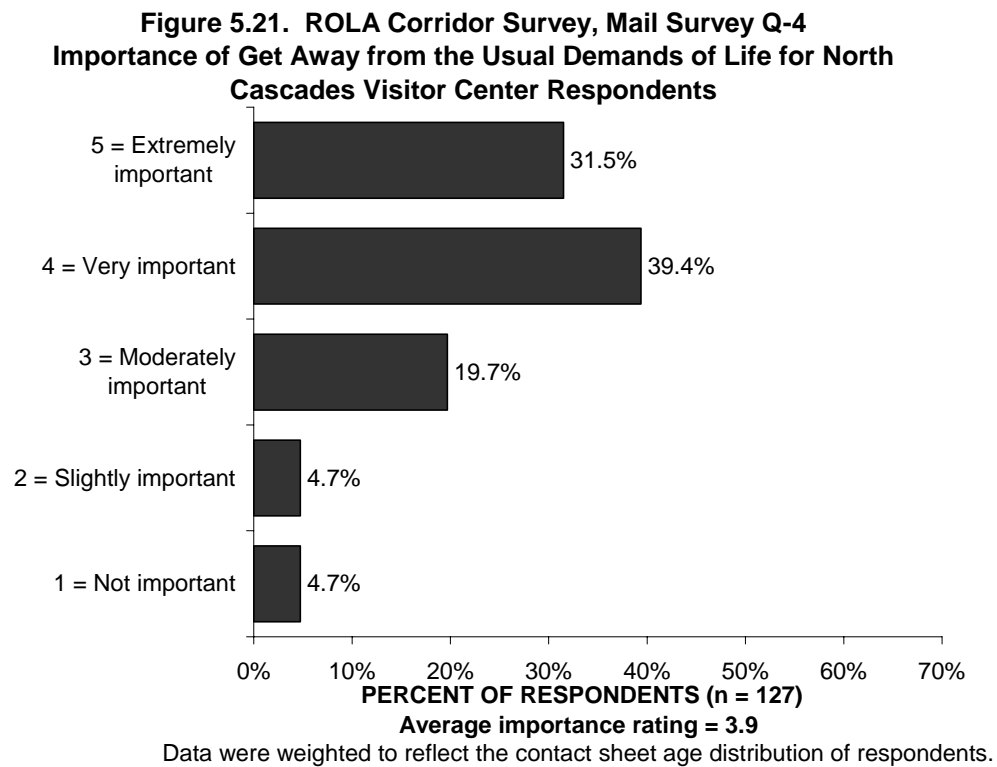


Figure 5.22. ROLA Corridor Survey, Mail Survey Q-4
Importance of Get Away from the Usual Demands of Life for Diablo
Overlook Respondents

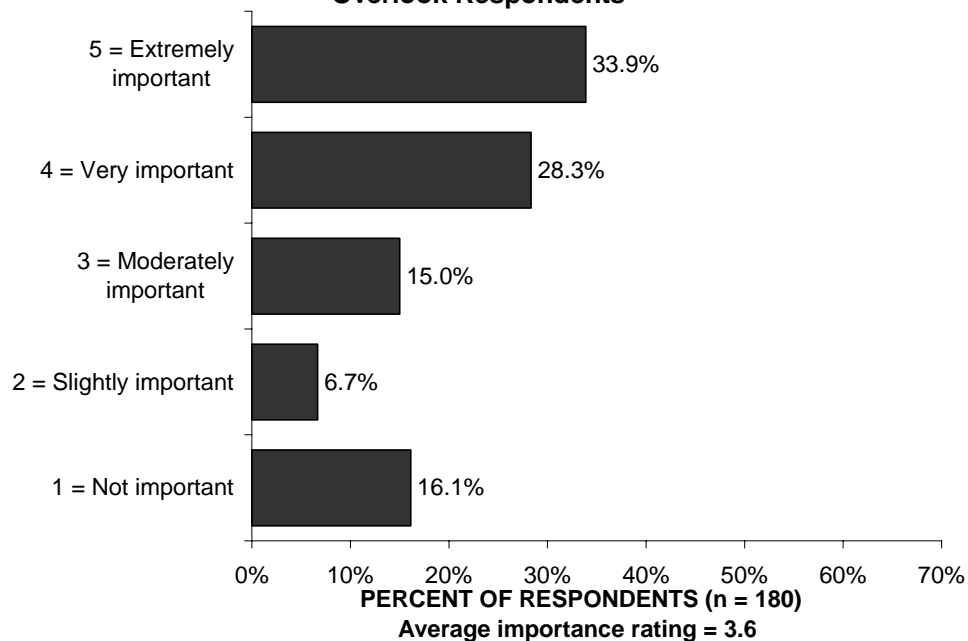
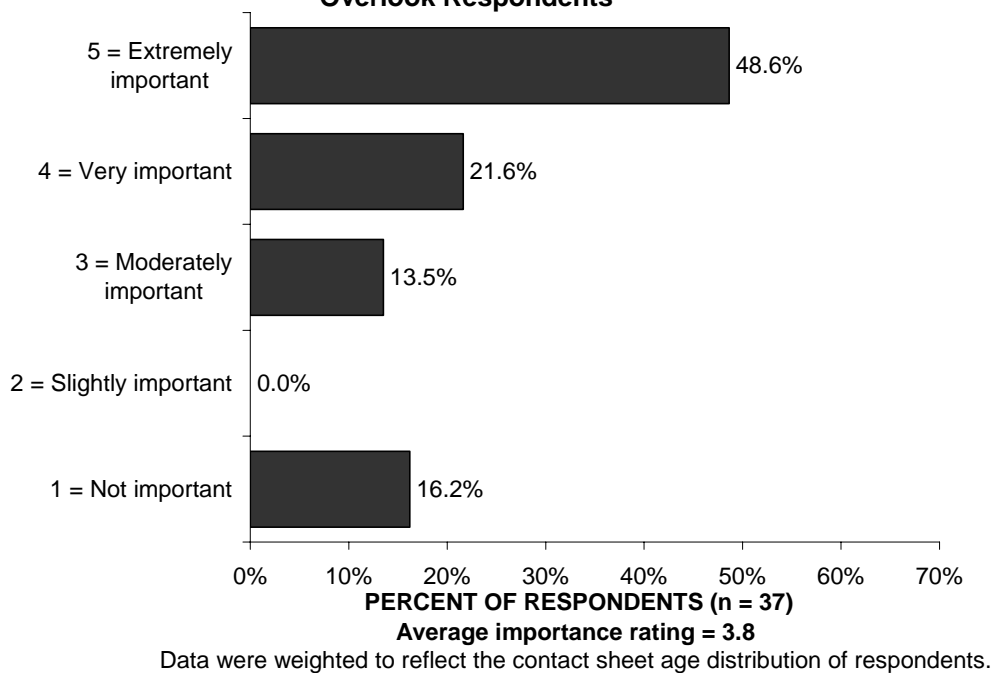
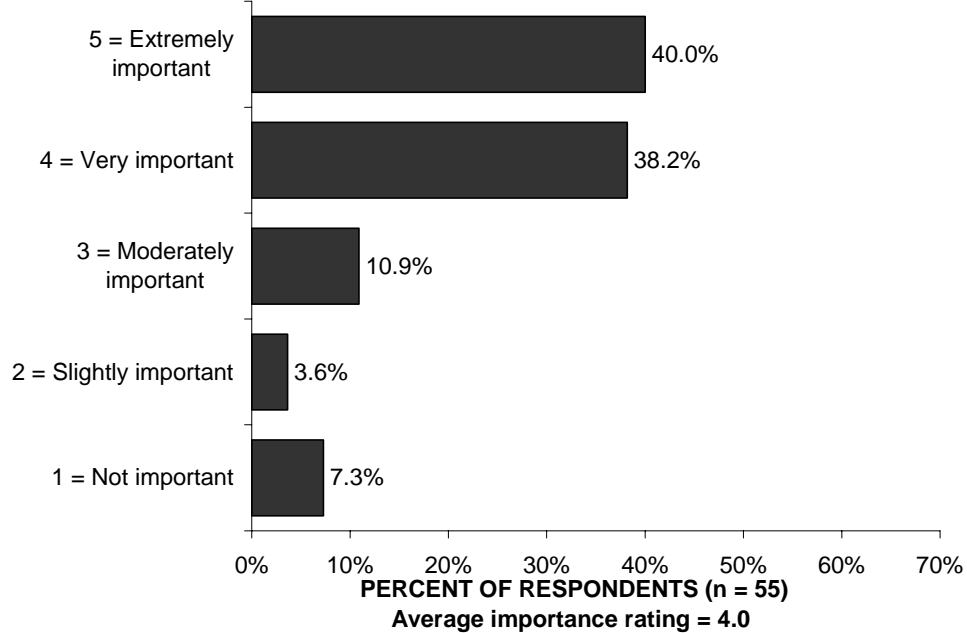


Figure 5.23. ROLA Corridor Survey, Mail Survey Q-4
Importance of Get Away from the Usual Demands of Life for Gorge
Overlook Respondents

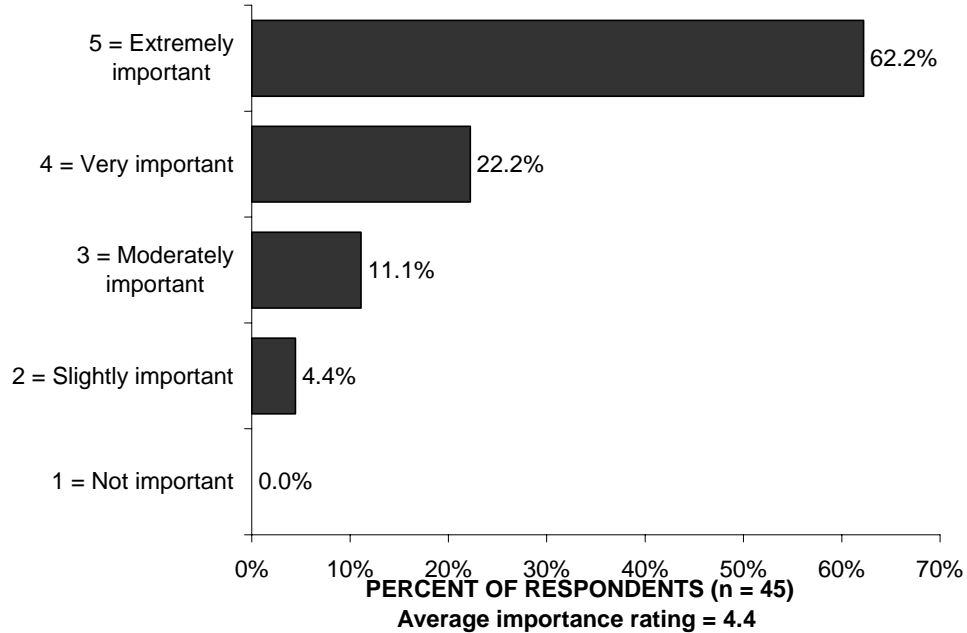


**Figure 5.24. ROLA Corridor Survey, Mail Survey Q-4
Importance of Get Away from the Usual Demands of Life for
Newhalem Campground Respondents**



Data were weighted to reflect the contact sheet age distribution of respondents.

**Figure 5.25. ROLA Corridor Survey, Mail Survey Q-4
Importance of Get Away from the Usual Demands of Life for S.
Colonial Creek Campground Respondents**



Data were weighted to reflect the contact sheet age distribution of respondents.

Figure 5.26. ROLA Corridor Survey, Mail Survey Q-4
Importance of Get Away from the Usual Demands of Life for Goodell
Creek Campground Respondents

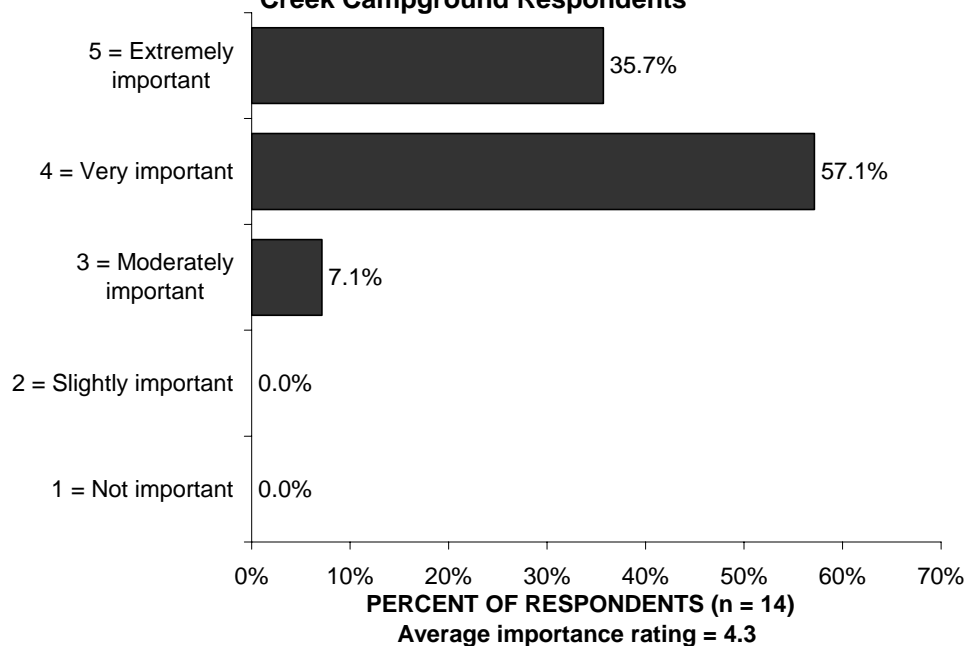
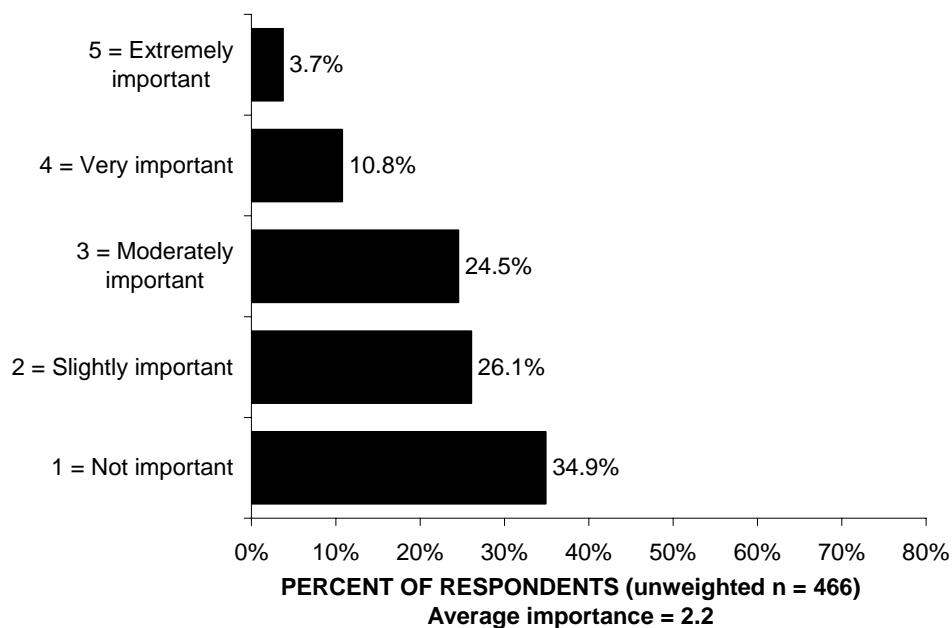
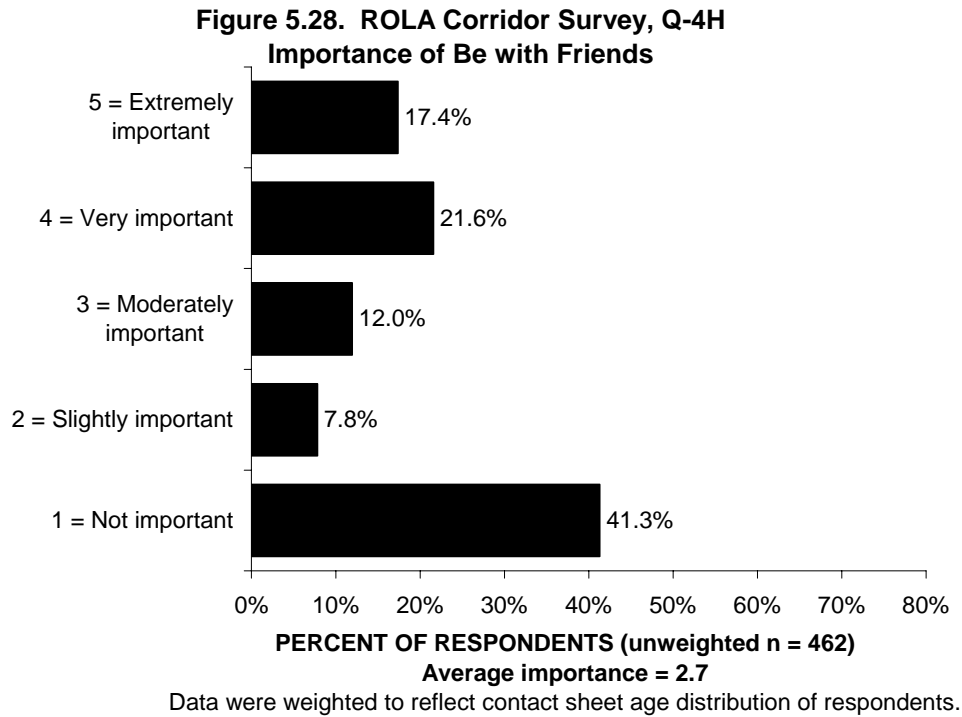


Figure 5.27. ROLA Corridor Survey, Q-4G
Importance of Talk to New and Varied People

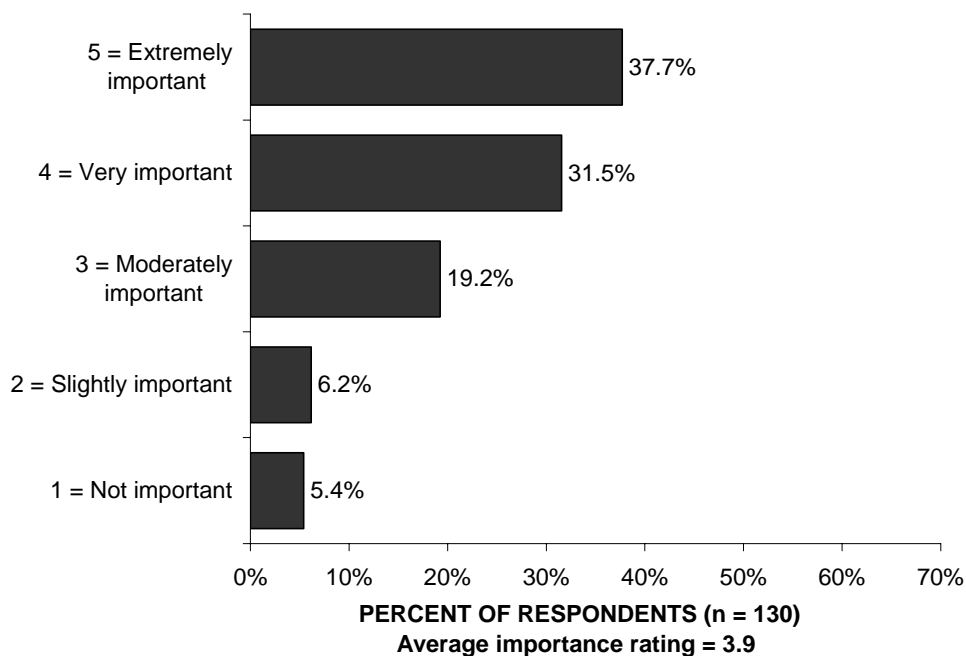


V. Trip Motivations

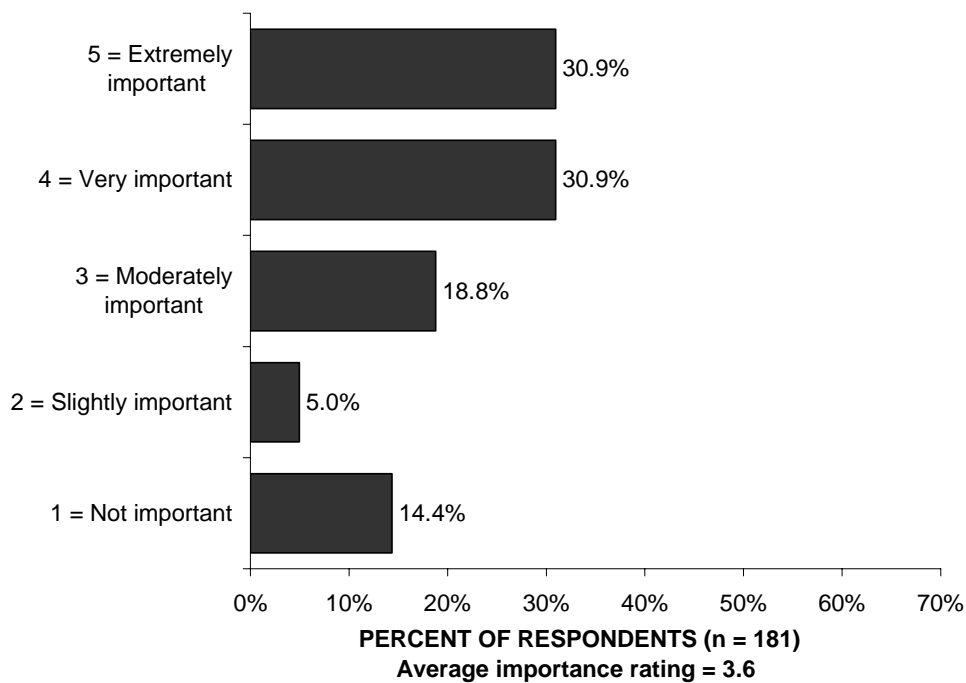


The importance of “Experience tranquility” varied by contact point, $F(5, 460) = 4.69, p < .001$. Post hoc tests revealed visitors contacted at Diablo Overlook ($M = 3.6$) and Gorge Overlook ($M = 3.4$) rated “Experience tranquility” significantly less important as a trip motivation than visitors contacted at the other four locations (M s ranged from 3.9 to 4.5). The distributions of importance ratings for “Experience tranquility” for each contact point are presented in Figures 5.29 – 5.34.

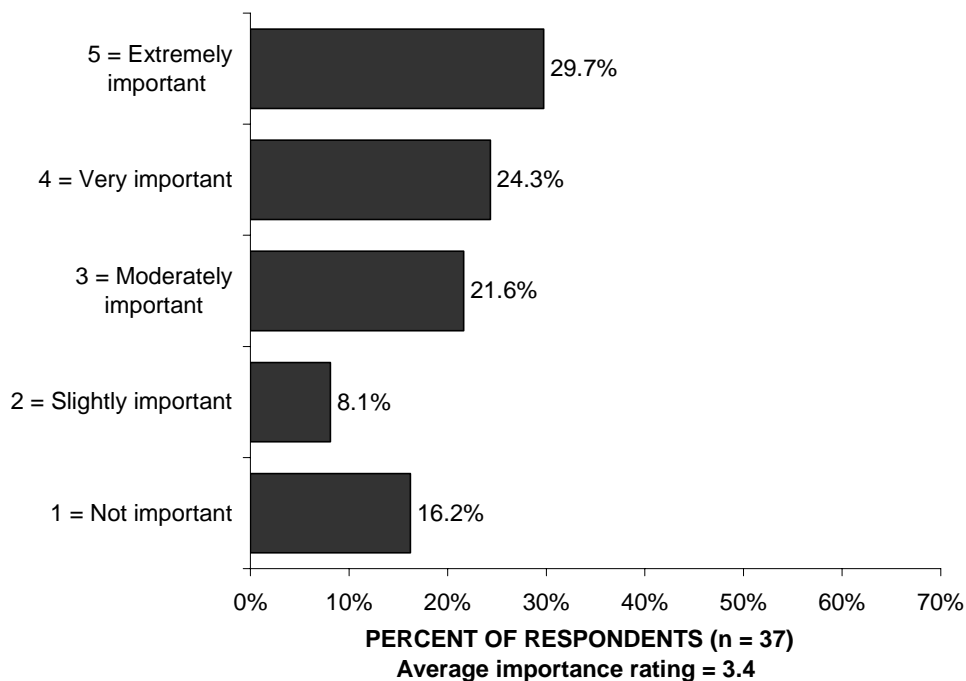
**Figure 5.29. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience Tranquility for North Cascades Visitor
Center Respondents**



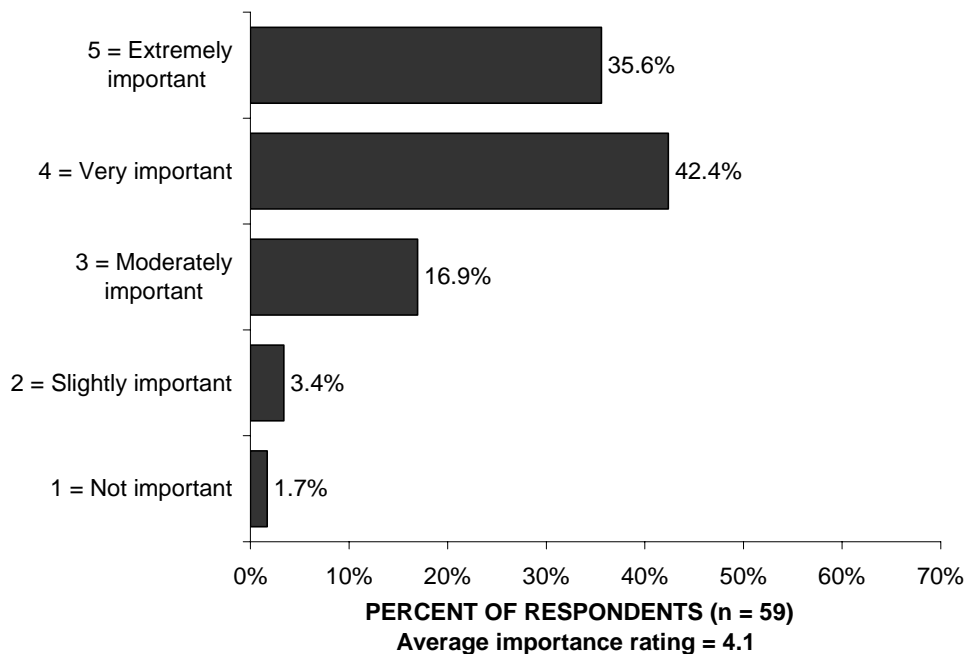
**Figure 5.30. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience Tranquility for Diablo Overlook Respondents**



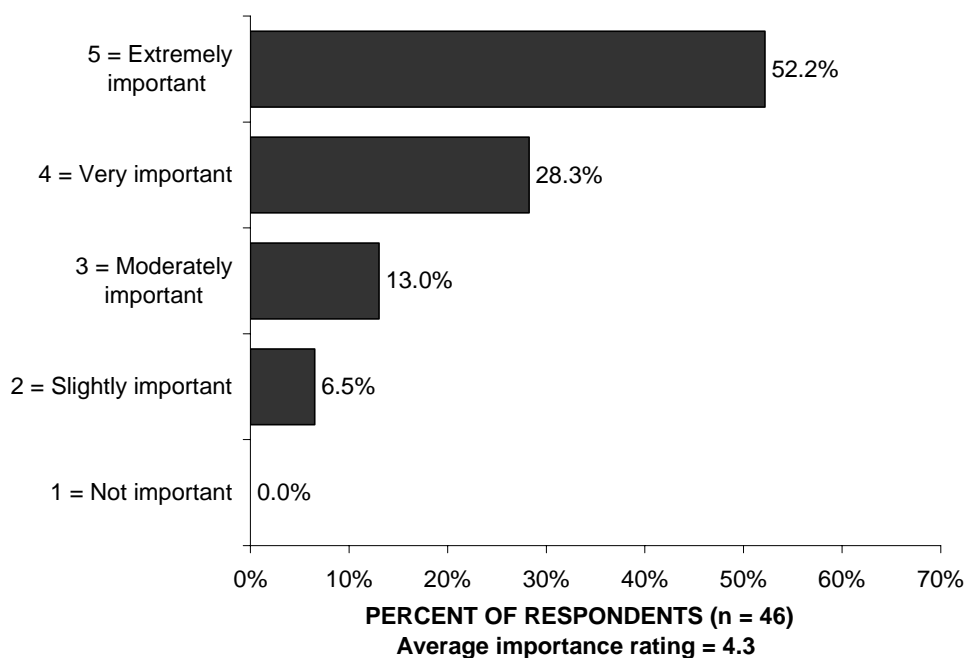
**Figure 5.31. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience Tranquility for Gorge Overlook Respondents**



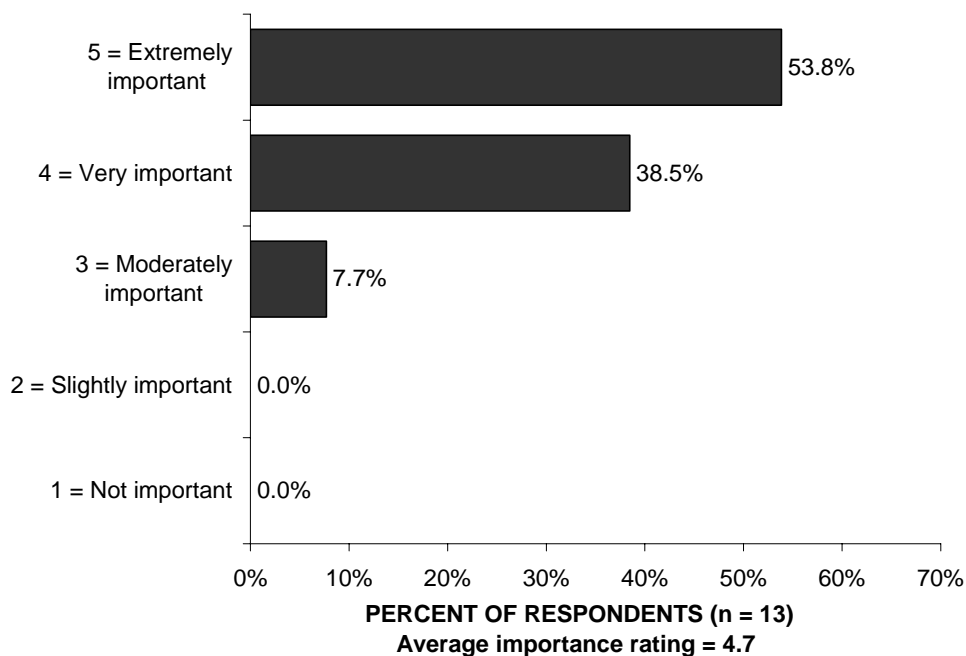
**Figure 5.32. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience Tranquility for Newhalem Campground Respondents**



**Figure 5.33. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience Tranquility for S. Colonial Creek
Campground Respondents**



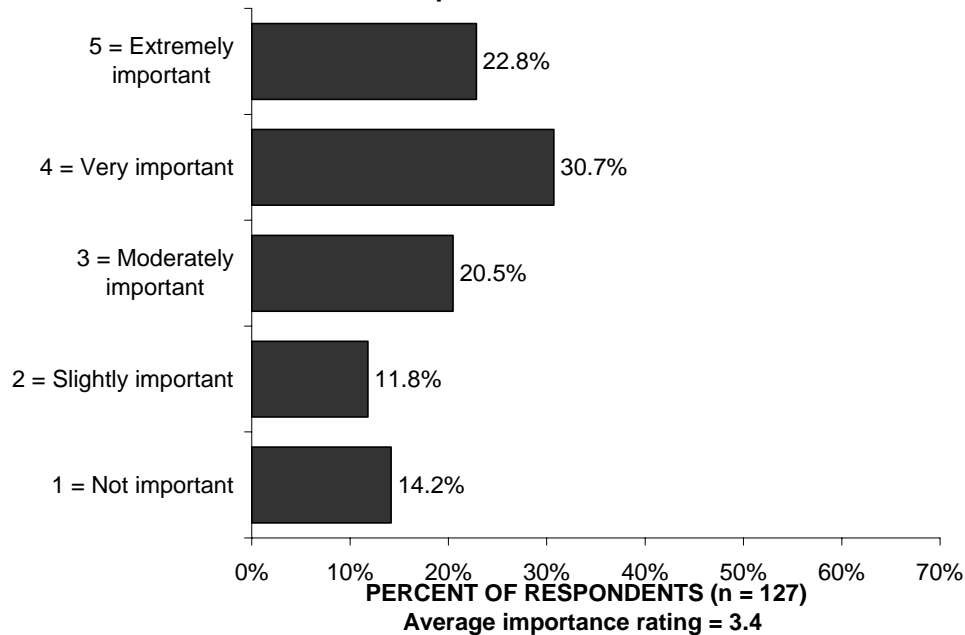
**Figure 5.34. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience Tranquility for Goodell Creek Campground
Respondents**



V. Trip Motivations

The importance of “Experience solitude” varied by contact point, $F(5, 449) = 3.74, p = .002$. Post hoc tests revealed visitors contacted at Diablo Overlook ($M = 3.1$) and Gorge Overlook ($M = 3.0$) rated “Experience solitude” significantly less important as a trip motivation than visitors contacted at S. Colonial Creek Campground ($M = 3.9$) and Goodell Creek Campground ($M = 3.9$). Visitors contacted at North Cascades Visitor Center rated “Experience solitude” as a less important trip motivation than visitors contacted at S. Colonial Creek Campground. The distributions of importance ratings for “Experience solitude” for each contact point are presented in Figures 5.35 – 5.40.

**Figure 5.35. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience Solitude for North Cascades Visitor Center
Respondents**



Data were weighted to reflect the contact sheet age distribution of respondents.

Figure 5.36. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience Solitude for Diablo Overlook Respondents

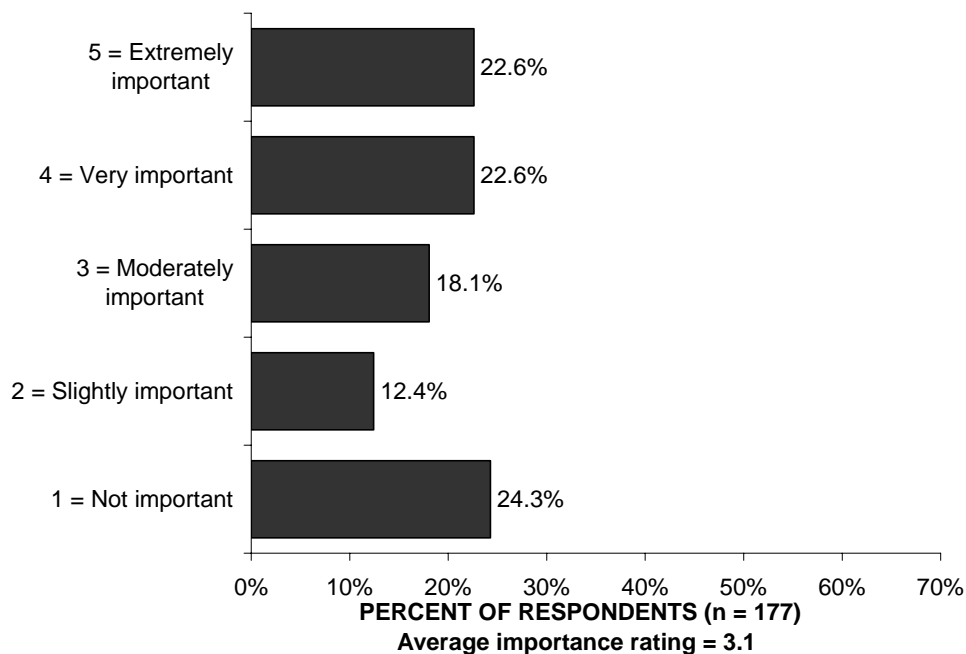
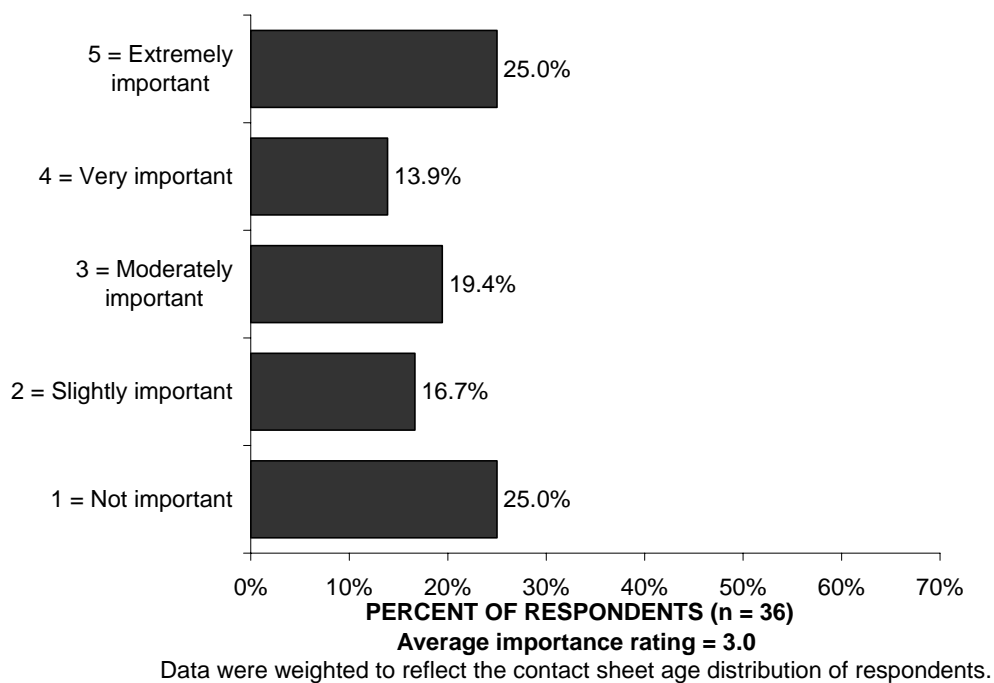
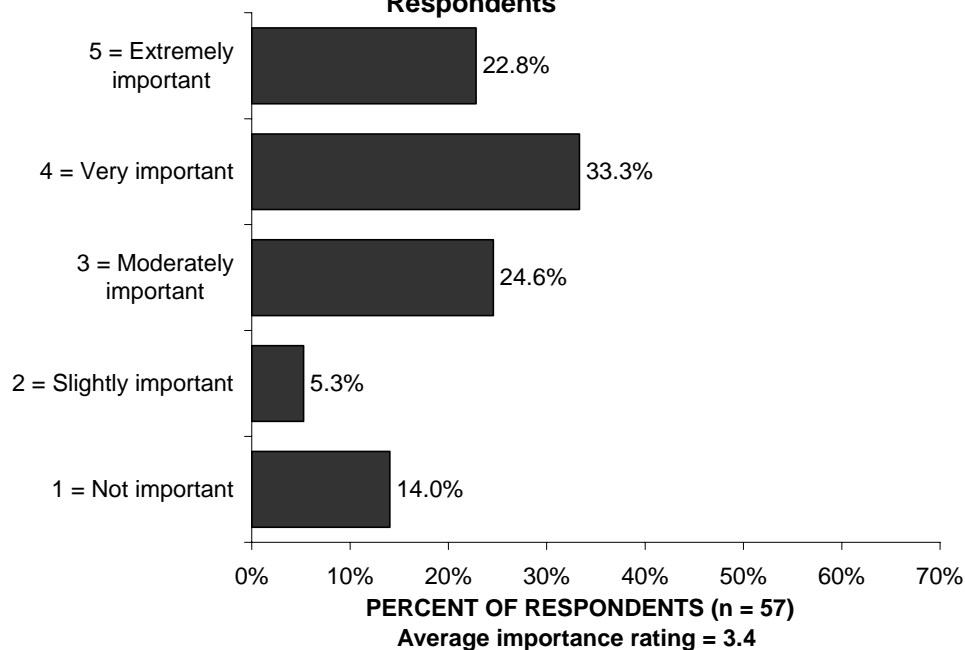


Figure 5.37. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience Solitude for Gorge Overlook Respondents

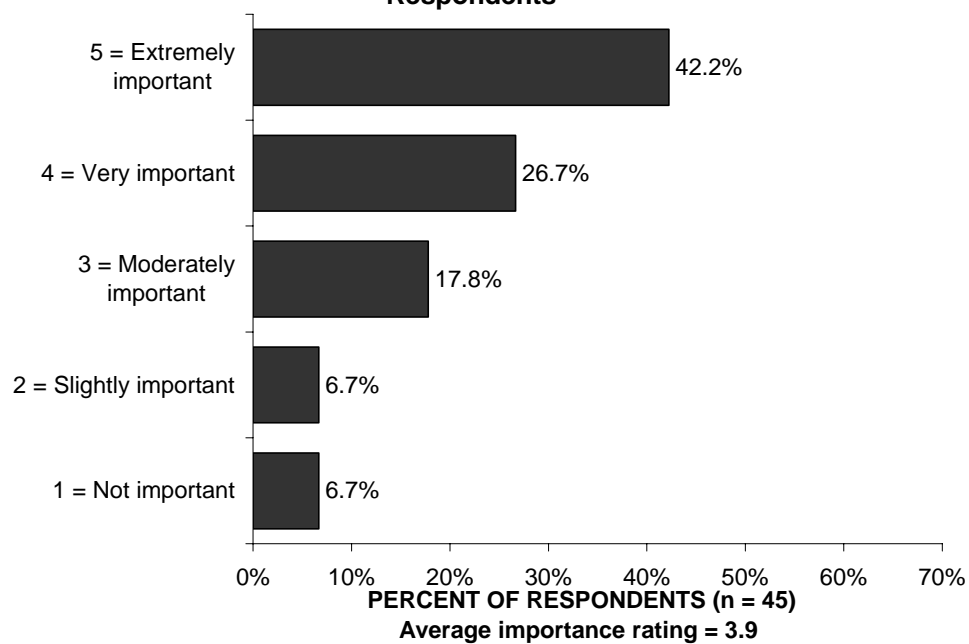


**Figure 5.38. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience Solitude for Newhalem Campground Respondents**



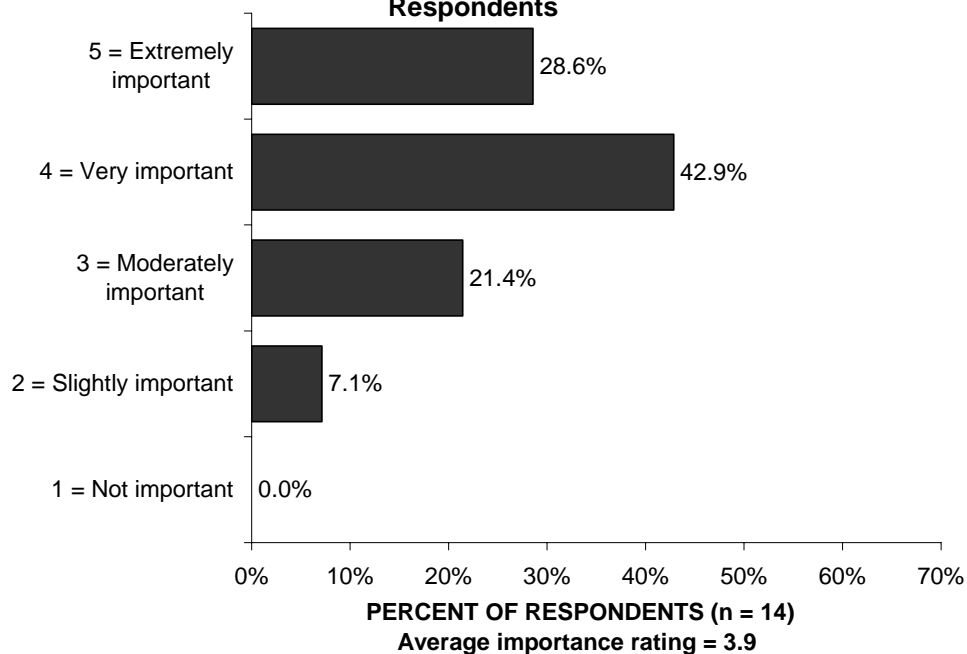
Data were weighted to reflect the contact sheet age distribution of respondents.

**Figure 5.39. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience Solitude for S. Colonial Creek Campground Respondents**



Data were weighted to reflect the contact sheet age distribution of respondents.

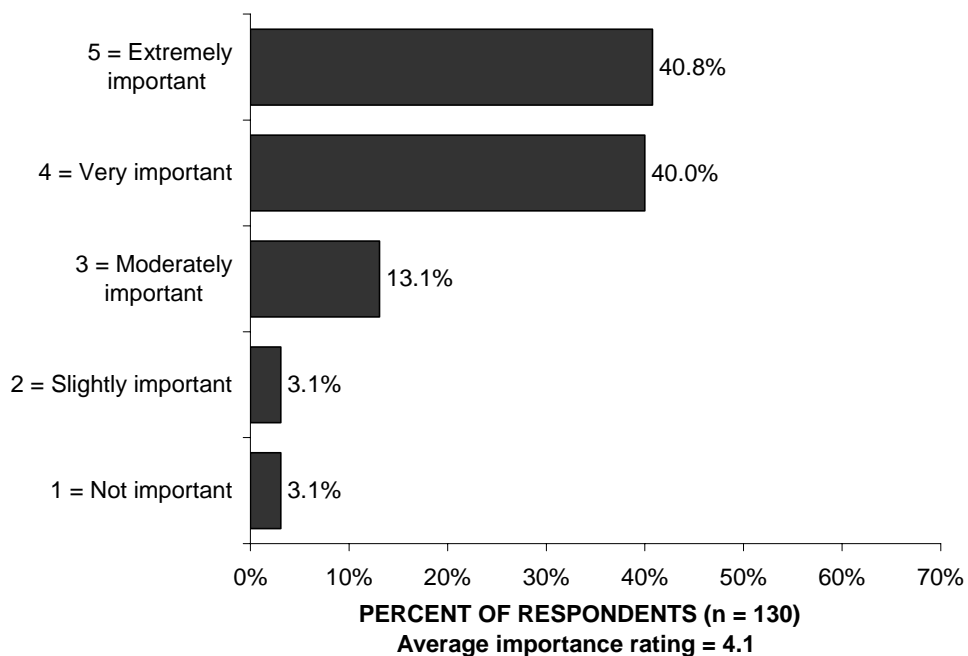
Figure 5.40. ROLA Corridor Survey, Mail Survey Q-4
Importance of Experience Solitude for Goodell Creek Campground
Respondents



Data were weighted to reflect the contact sheet age distribution of respondents.

The importance of “Being close to nature” varied by contact point, $F(5, 461) = 4.74, p < .001$. Post hoc tests revealed visitors contacted at Diablo Overlook ($M = 3.7$) and Gorge Overlook ($M = 3.6$) rated “Being close to nature” significantly less important as a trip motivation than visitors contacted at S. Colonial Creek Campground ($M = 4.3$) and Goodell Creek Campground ($M = 4.2$), North Cascades Visitor Center ($M = 4.1$) and Newhalem Campground ($M = 4.1$). The distributions of importance ratings for “Being close to nature” for each contact point are presented in Figures 5.41 – 5.46.

**Figure 5.41. ROLA Corridor Survey, Mail Survey Q-4
Importance of Being Close to Nature for North Cascades Visitor
Center Respondents**



**Figure 5.42. ROLA Corridor Survey, Mail Survey Q-4
Importance of Being Close to Nature for Diablo Overlook Respondents**

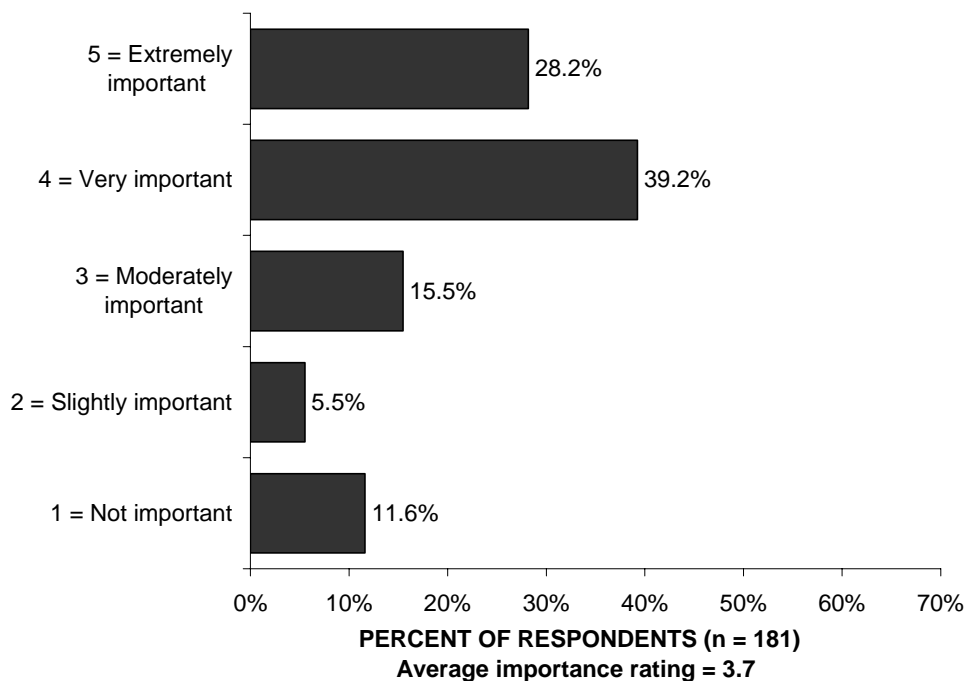


Figure 5.43. ROLA Corridor Survey, Mail Survey Q-4
Importance of Being Close to Nature for Gorge Overlook Respondents

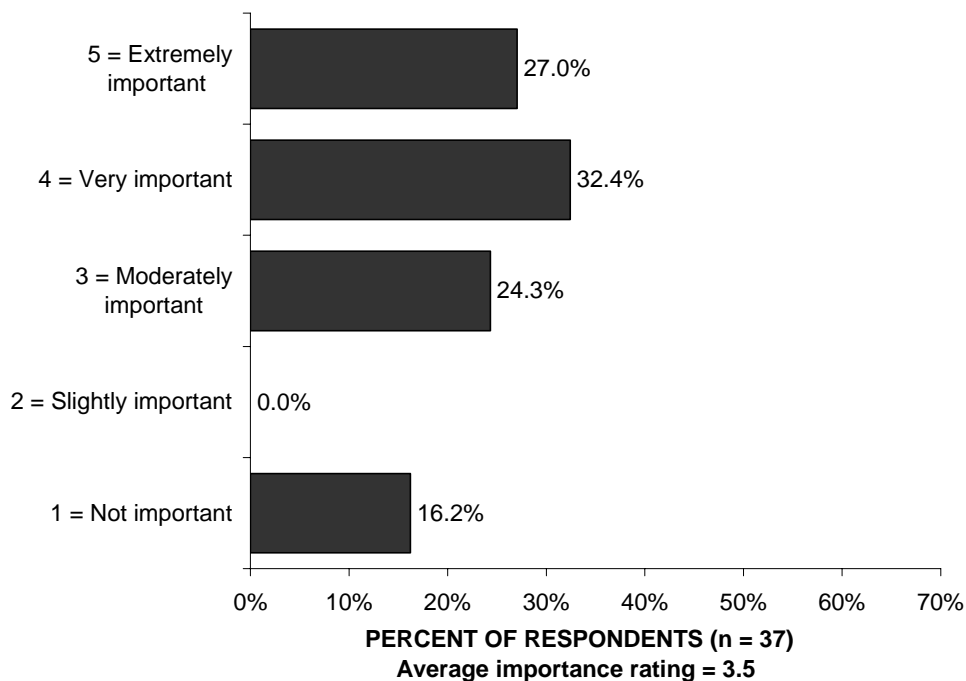
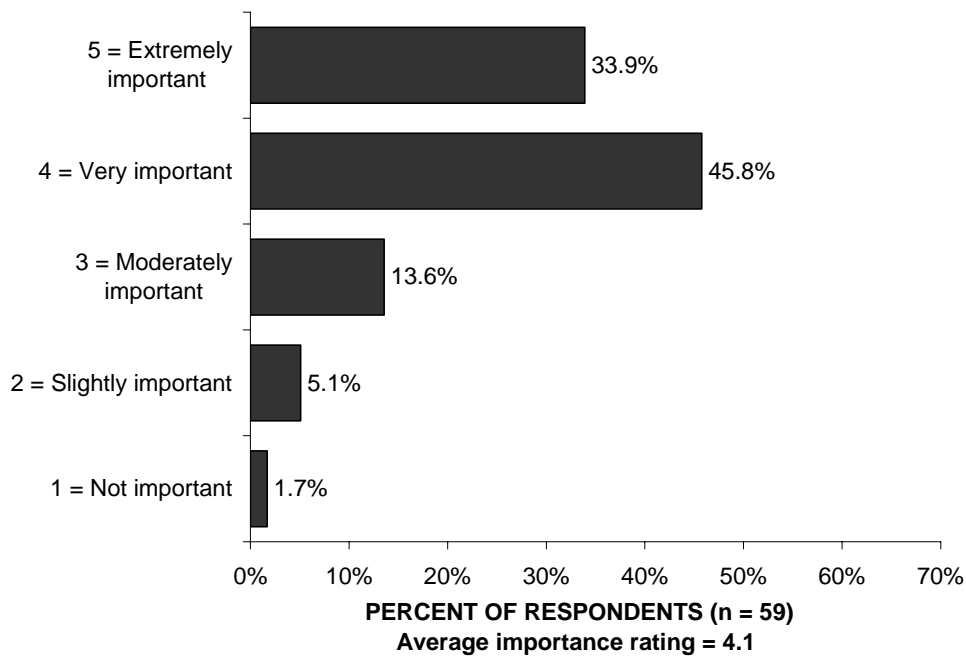
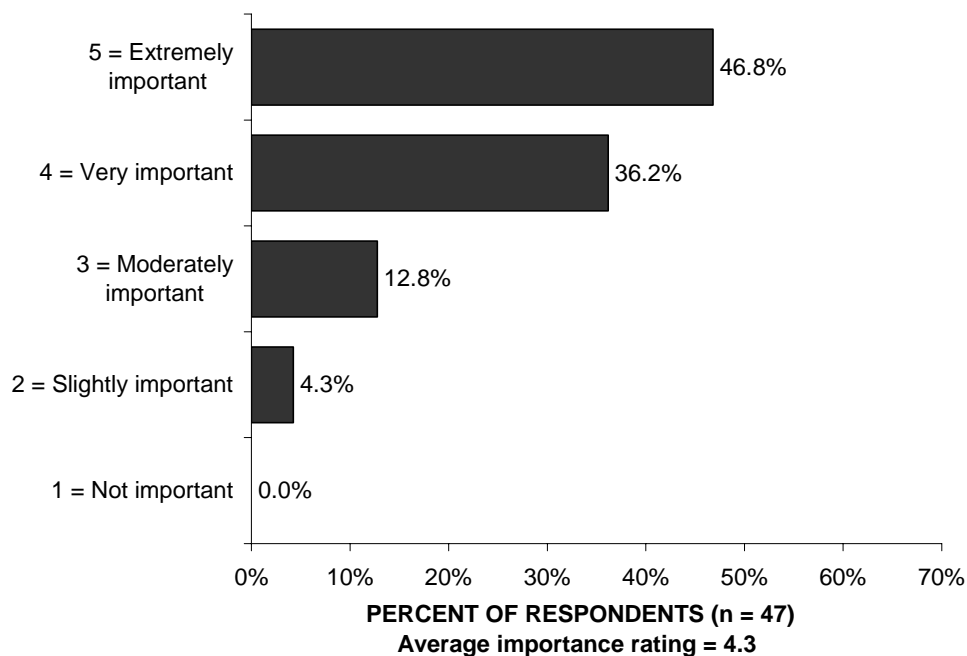


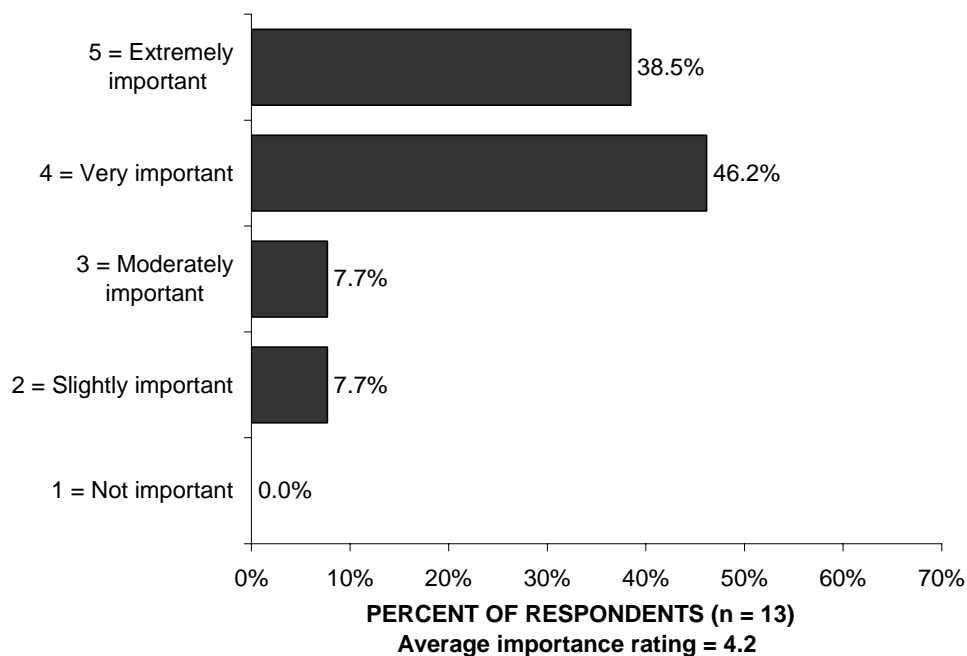
Figure 5.44. ROLA Corridor Survey, Mail Survey Q-4
Importance of Being Close to Nature for Newhalem Campground Respondents



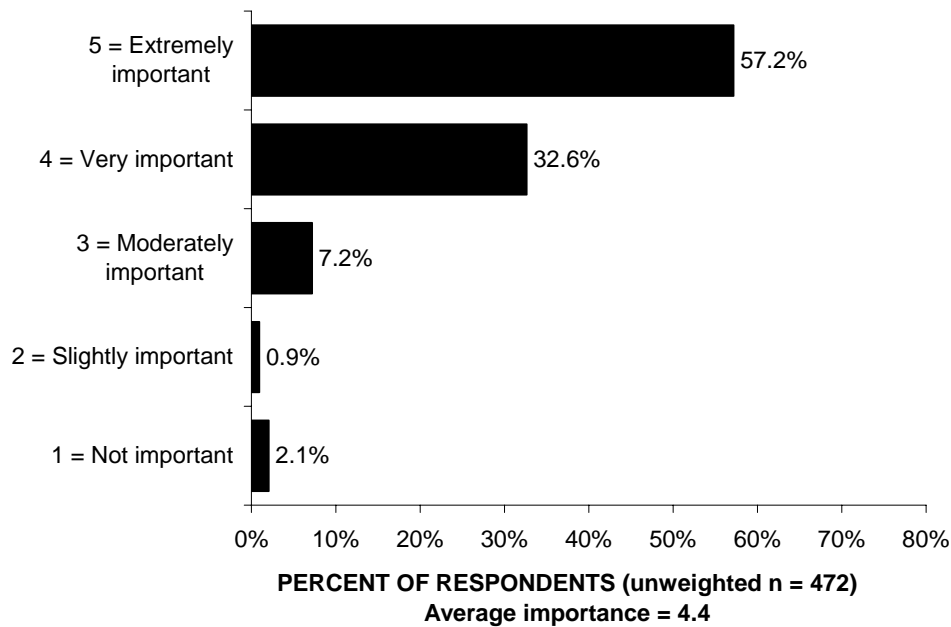
**Figure 5.45. ROLA Corridor Survey, Mail Survey Q-4
Importance of Being Close to Nature for S. Colonial Creek
Campground Respondents**



**Figure 5.46. ROLA Corridor Survey, Mail Survey Q-4
Importance of Being Close to Nature for Goodell Creek Campground
Respondents**



**Figure 5.47. ROLA Corridor Survey, Q-4L
Importance of Viewing Scenery**



The importance of “Learning what you are capable of” varied by contact point, $F(5, 457) = 2.47$, $p = .032$. Post hoc Tukey tests revealed visitors contacted at Diablo Overlook ($M = 1.8$) and Gorge Overlook ($M = 1.8$) rated “Learning what you are capable of” significantly less important as a trip motivation than visitors contacted at S. Colonial Creek Campground ($M = 2.4$), Goodell Creek Campground ($M = 2.3$), and Newhalem Campground ($M = 2.3$). Visitors contacted at North Cascades Visitor Center rated “Learning what you are capable of” ($M = 1.9$) significantly less important as a trip motivation than visitors contacted at S. Colonial Creek Campground ($M = 2.4$). No other significant differences were observed. The distributions of importance ratings for “Learning what you are capable of” for each contact point are presented in Figures 5.48 – 5.53.

Figure 5.48. ROLA Corridor Survey, Mail Survey Q-4
Importance of Learning What You Are Capable of for North Cascades
Visitor Center Respondents

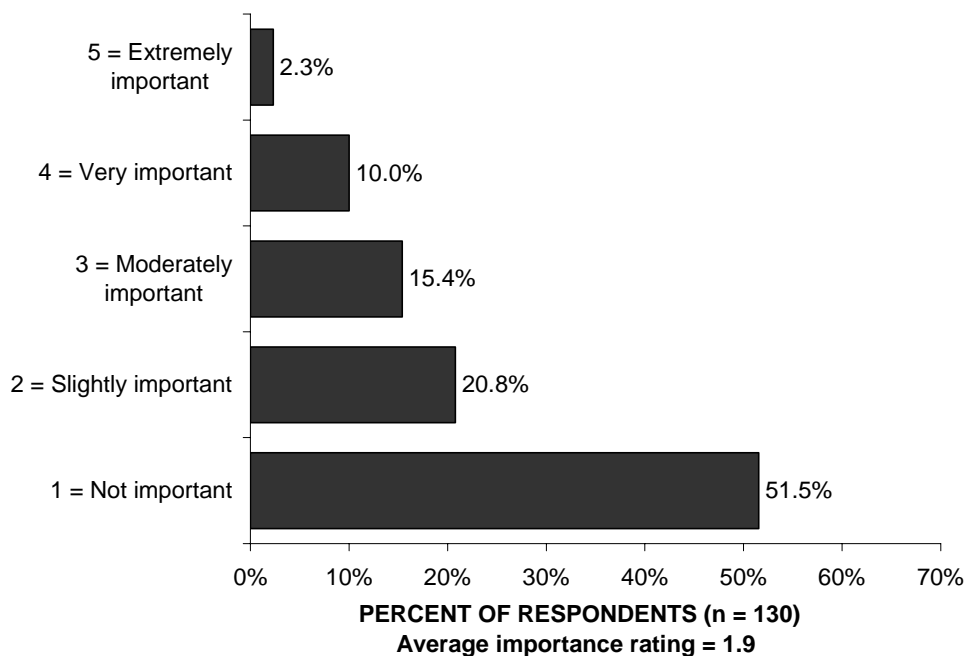


Figure 5.49. ROLA Corridor Survey, Mail Survey Q-4
Importance of Learning What You Are Capable of for Diablo Overlook
Respondents

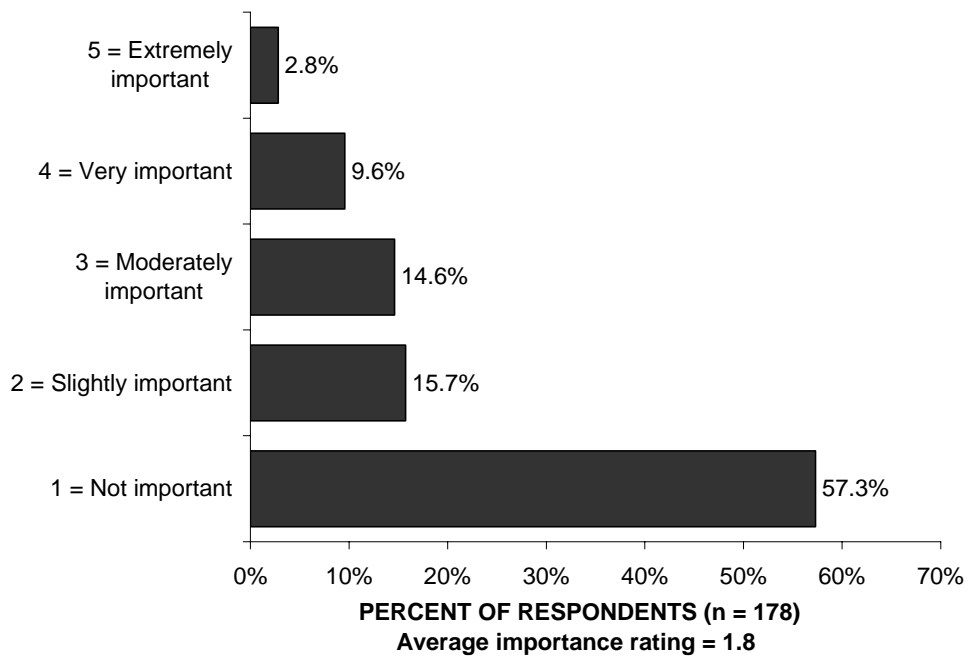


Figure 5.50. ROLA Corridor Survey, Mail Survey Q-4
Importance of Learning What You Are Capable of for Gorge Overlook
Respondents

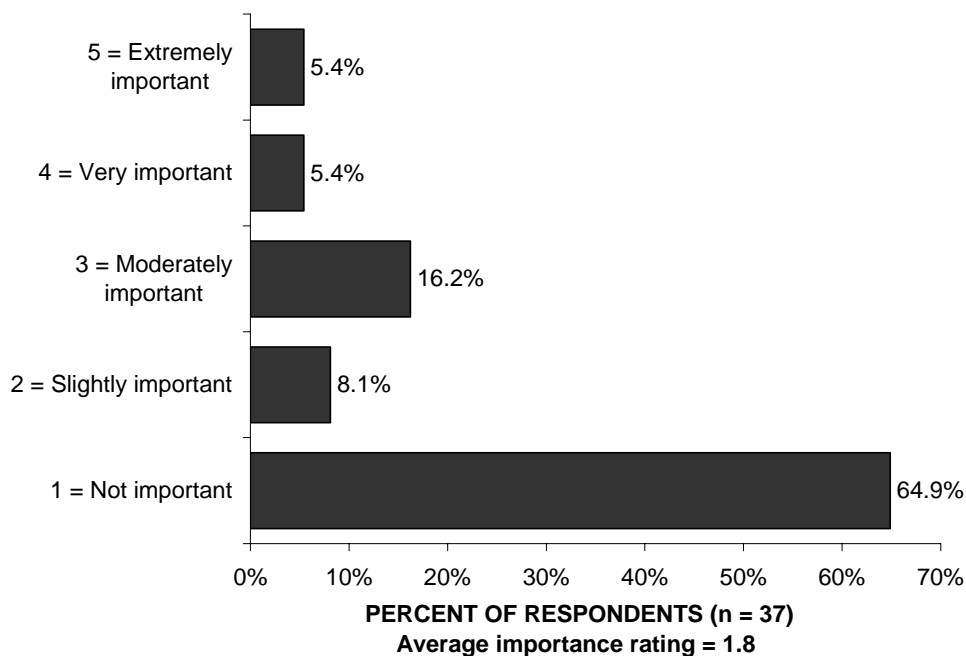


Figure 5.51. ROLA Corridor Survey, Mail Survey Q-4
Importance of Learning What You Are Capable of for Newhalem
Campground Respondents

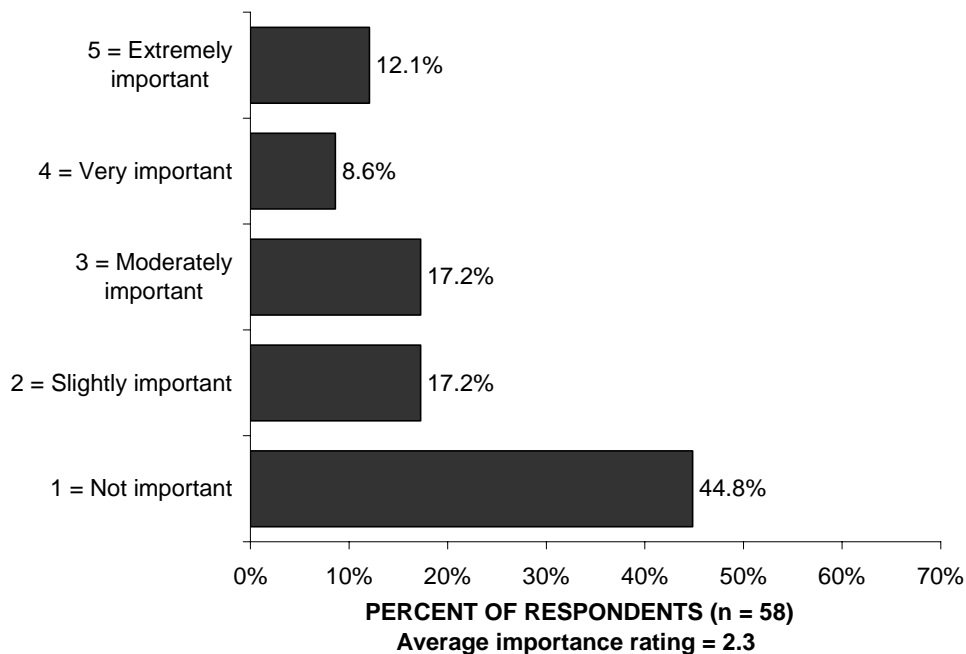


Figure 5.52. ROLA Corridor Survey, Mail Survey Q-4
Importance of Learning What You Are Capable of for S. Colonial Creek
Campground Respondents

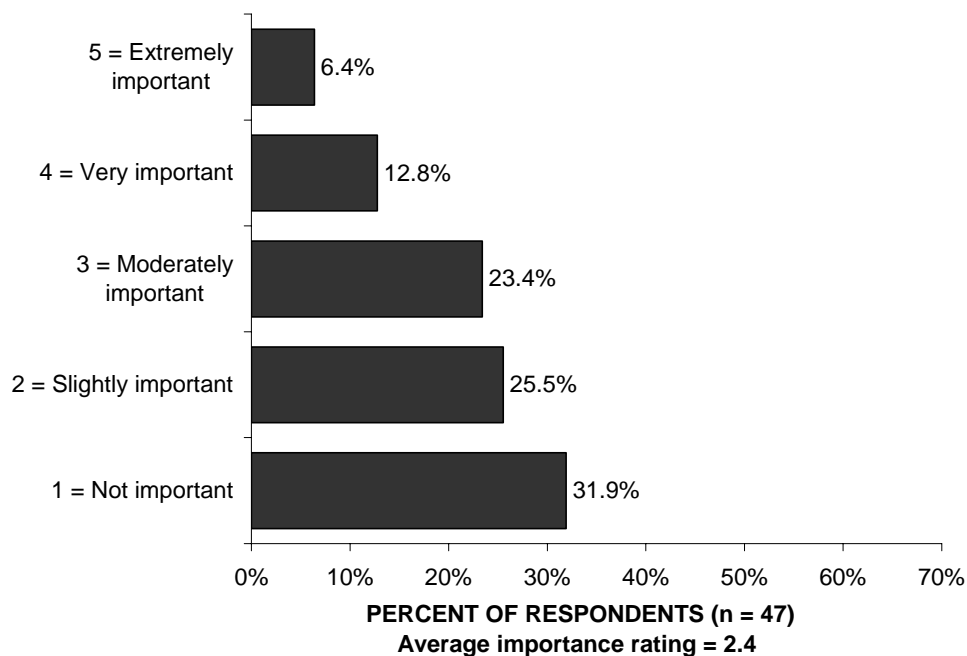
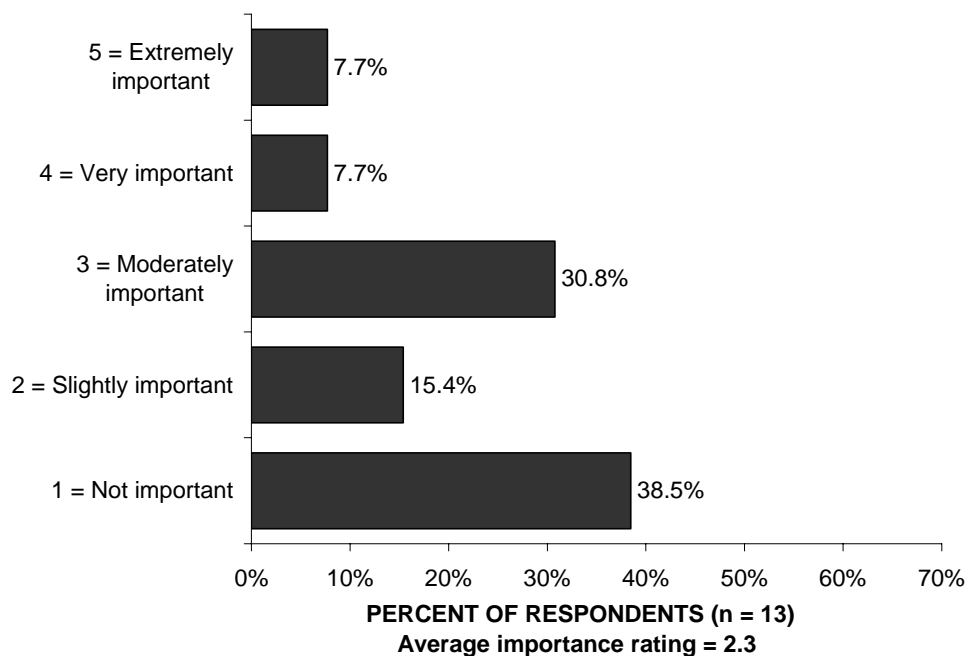
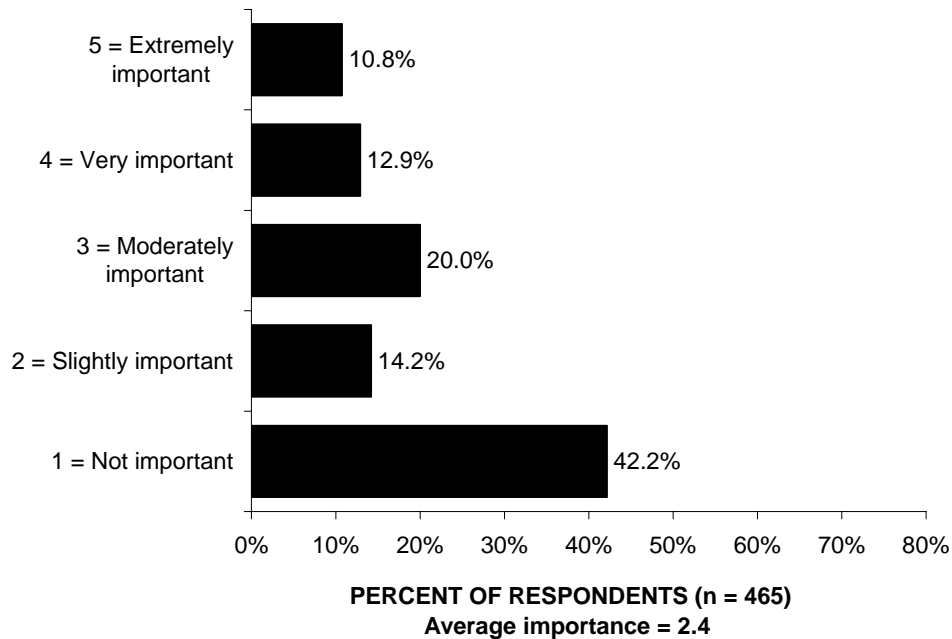


Figure 5.53. ROLA Corridor Survey, Mail Survey Q-4
Importance of Learning What You Are Capable of for Goodell Creek
Campground Respondents

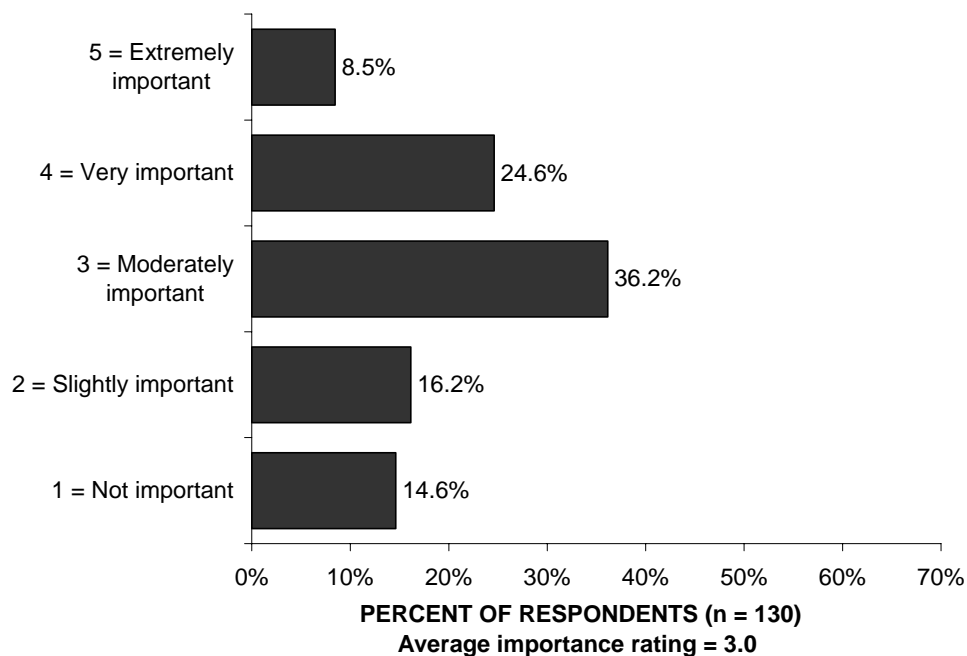


**Figure 5.54. ROLA Corridor Survey, Q-4N
Importance of To Feel Your Independence**

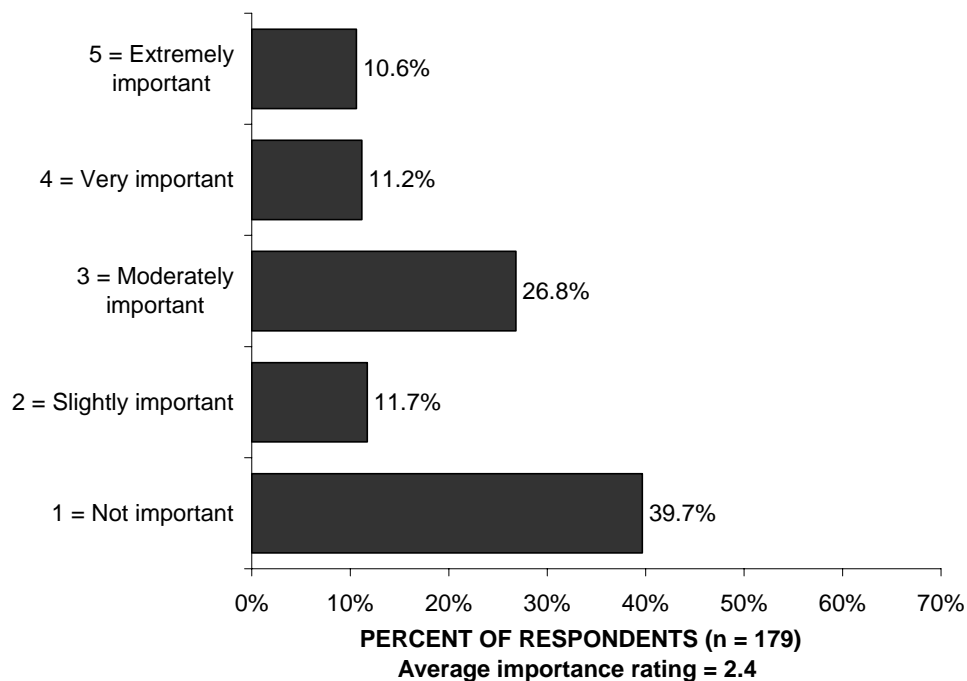


The importance of “To get exercise” varied by contact point, $F(5, 459) = 8.35, p < .001$. Post hoc tests revealed visitors contacted at Diablo Overlook ($M = 1.8$) rated “To get exercise” significantly less important as a trip motivation than visitors contacted at the other five locations (M s ranged from 2.9 to 3.5). Visitors contacted at North Cascades Visitor Center ($M = 3.0$) and at Gorge Overlook ($M = 2.9$) rated “To get exercise” significantly less important as a trip motivation than visitors contacted at S. Colonial Creek Campground ($M = 3.5$). No other significant differences were observed. The distributions of importance ratings for “To get exercise” for each contact point are presented in Figures 5.55 – 5.60.

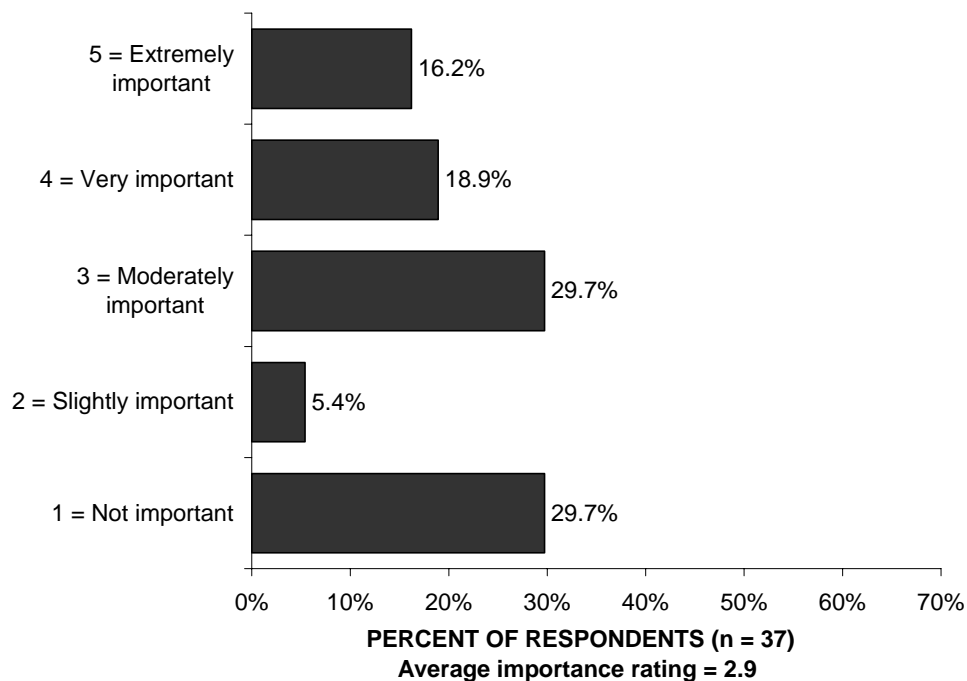
**Figure 5.55. ROLA Corridor Survey, Mail Survey Q-4
Importance of To Get Exercise for North Cascades Visitor Center
Respondents**



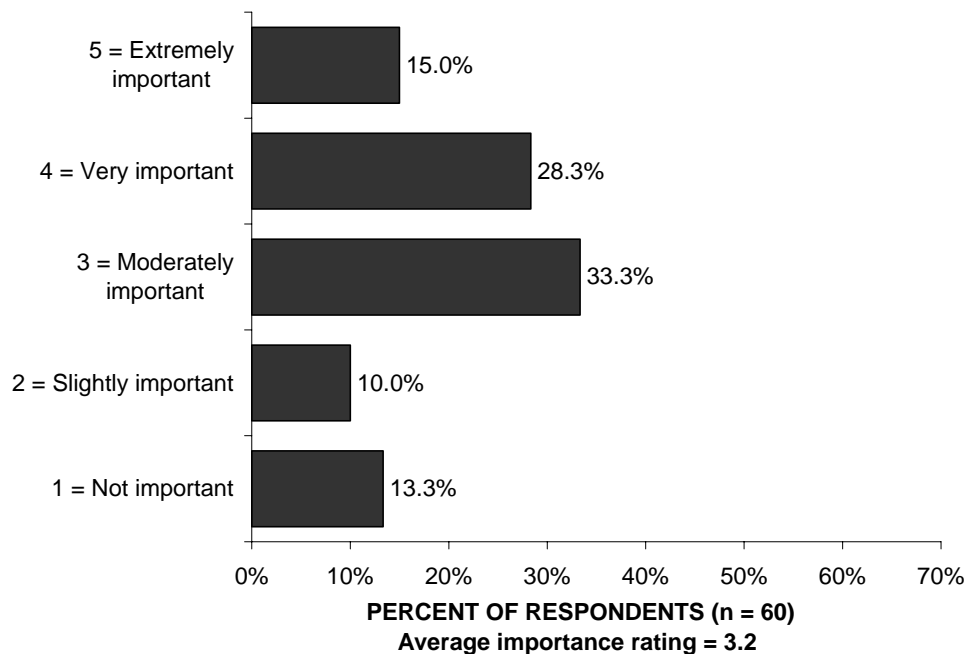
**Figure 5.56. ROLA Corridor Survey, Mail Survey Q-4
Importance of To Get Exercise for Diablo Overlook Respondents**



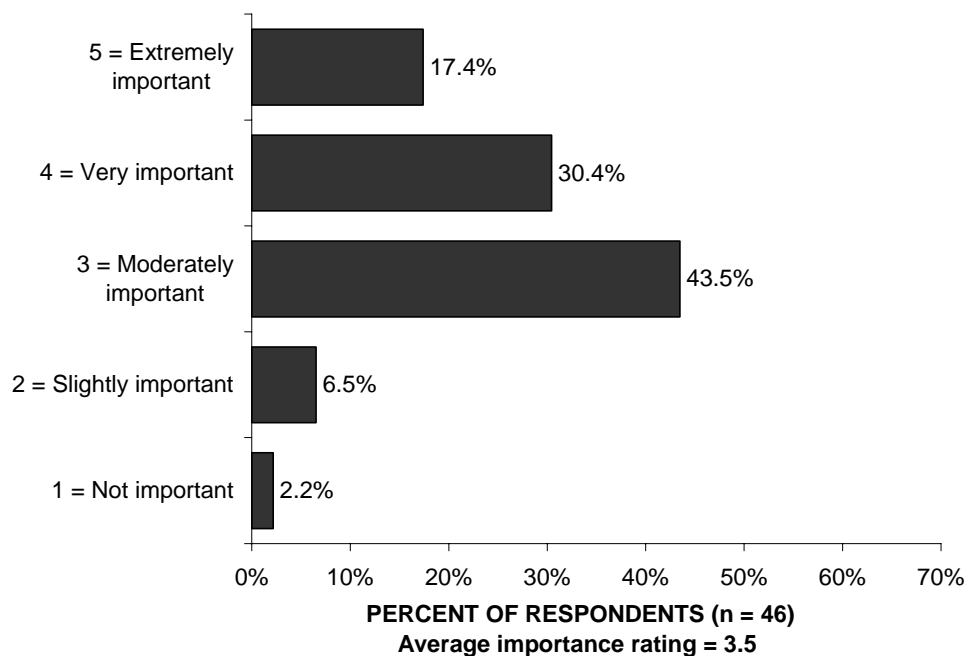
**Figure 5.57. ROLA Corridor Survey, Mail Survey Q-4
Importance of To Get Exercise for Gorge Overlook Respondents**



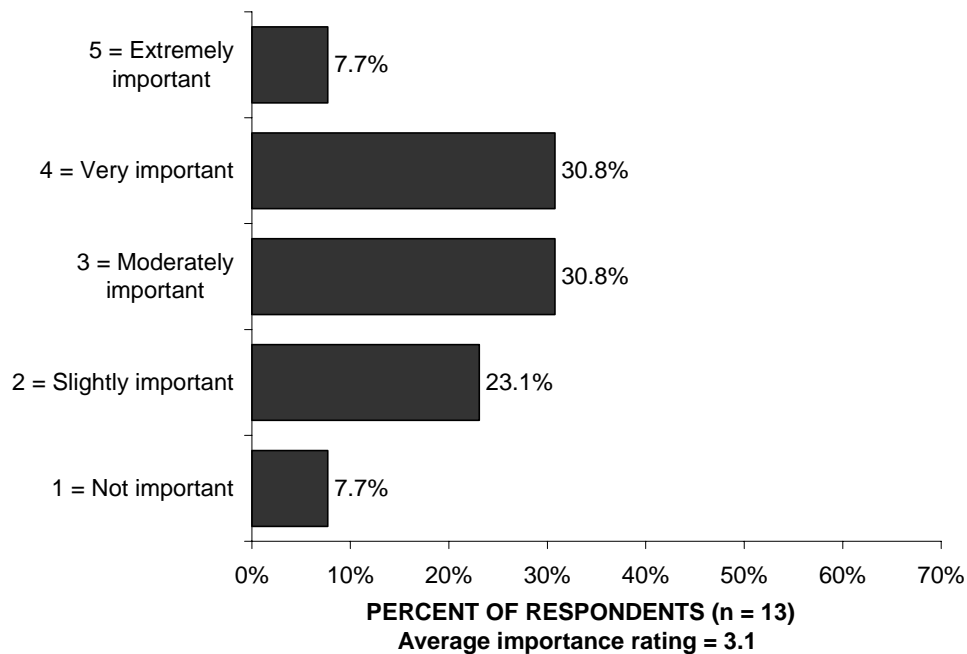
**Figure 5.58. ROLA Corridor Survey, Mail Survey Q-4
Importance of To Get Exercise for Newhalem Campground
Respondents**



**Figure 5.59. ROLA Corridor Survey, Mail Survey Q-4
Importance of To Get Exercise for S. Colonial Creek Campground
Respondents**



**Figure 5.60. ROLA Corridor Survey, Mail Survey Q-4
Importance of To Get Exercise for Goodell Creek Campground
Respondents**



VI. LOCAL VISITORS

People who live locally and are able to make a day-visit to the park are of interest because 1) they often differ in meaningful ways from people who live further away in terms of use, experience, and support for different management policies, and 2) a demographic comparison of local park users and local residents (based on census data) provides information on whether current local park users represent local residents in terms of ethnicity/race, education, gender, and age. Analyses examined how local ROLA visitors compared to the population and how they compared to visitors who lived further away.

Comparison of local visitors with local residents using census data

Through discussion with park staff, the following towns were defined as being local to ROLA: Sedro Woolley, Mount Vernon, Rockport, Marblemount, Darrington, Concrete, Burlington, Winthrop, Twisp, and Methow. General demographic data from the 2000 U.S. Census were gathered using the zip codes for these towns and then aggregated to provide results for the designated local area as a whole.

Table 6.1 summarizes demographic data for local residents per the 2000 Census and for local corridor visitors to ROLA. The same demographic information is presented for the United States Census and for two other groups of survey visitors: Regional WA visitors and Other visitors (each group is mutually exclusive and does not include local users). It should be noted that the Ross Lake Corridor User Survey sample included 39 local visitors who were contacted and 29 of them returned the mail survey. Analyses comparing the values from the sample of local visitors with the values from the census found no significant differences between the sample of local visitors and the population of local residents on any variable. Although some of the differences seem large enough to consider as practically meaningful, caution should be used as the small number of visitors in the local sample makes those estimates less reliable estimates of the true population values.

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Table 6.1. Summary and comparison of demographic data for local residents and local park visitors.

	2000 Census Data		2005 Corridor Survey Data		
	U.S.	Local	Local visitors	Regional WA visitors	Other visitors
Total n (population or sample)	281,421,906	84,268	29-39	203-291	237-315
% male	49.1	49.7	53.8	51.2	56.5
18 –24 years	13.01	12.6	5.1	3.8	4.8
25 – 64 years	70.3	69.7	82.1	87.8	77.4
65 years and over	16.7	17.7	12.8	8.4	17.7
One race	97.6	97.6	100	98.0	97.3
White	75.1	85.9	100	92.7	98.6
Black or African-American	12.3	0.5	0	0.5	0
American Indian and Alaska Native	0.9	1.4	0	0.	0
Asian	3.6	1.4	0	6.8	1.4
Native Hawaii & Other Pacific Islander	0.1	0.2	0	0	0
Some other race	5.5	8.3	0	0	0
Two or more races	2.4	2.4	0	2.0	2.7
Hispanic or Latino	12.5	12.8	7.4	0.5	2.7
Education Percentages are Percent of people 25 years or more					
High school grad or higher	80.4	82%	96.2	100	98.6
Bachelor's degree or higher	24.4	18%	34.6	58.2	66.4

Comparison of local to non-local park users

The same definition of local park users was the basis for these analyses. Three visitor groups resulted: Local visitors, regional WA visitors, and all other visitors. Analyses examined whether each variable differed by visitor residence. Although the primary focus was to compare local visitors with the other two groups, some significant results were due to differences between regional WA visitors and other visitors and not differences with local visitors. These findings are included below.

Visitor Profile

The gender, age, party size, and likelihood of having party members under age 18 of local visitors did not differ from regional WA visitors or other visitors. Local visitors were more likely to be white (100% vs. 98% and 97.3%) and less likely to be Asian (0% vs. 6.8% and 1.4%) than regional WA visitors or other visitors. Education level was lowest for local visitors ($M = 14.9$ years of schooling), although it was only significantly lower than education for other visitors ($M = 16.3$ years of schooling).

Number of visits in the past three years clearly reflected the proximity of the park to visitors. Local visitors had taken significantly more trips to ROLA in the past three years ($M = 9.2$) than either Regional WA visitors or other visitors ($M = 3.3$ and $M = 1.2$, respectively).

Trip characteristics

Table 6.2 summarizes trip characteristics that differed significantly by visitor residence. The type of destination for local visitors did not differ from regional WA visitors, although both of them differed from other visitors. ROLA was a primary destination for fewer other visitors (14.1%) than for local (39.5%) or Regional WA visitors (36.9%).

The type of vehicle driven to ROLA did not differ by residence, however the driving pattern did. Compared to regional WA visitors and other visitors, local visitors were most likely to drive a loop starting west of the park (42.4% and 16.9% vs. 54.1%, respectively) and least likely to drive a loop starting east of the park (4.7% and 5.0% vs. 0%) or driving east to west (22.3% and 36.1% vs. 10.8%).

Although local visitors did not differ in their likelihood of staying overnight in ROLA, those that did stayed significantly more nights ($M = 4.1$ nights) than regional WA visitors ($M = 2.4$ nights) or other visitors ($M = 2.2$ nights). There were no observed differences in the number of hours visitors stayed if they did not spend the night.

Table 6.2 Summary of trip characteristics with significant differences due to residence

	Local visitors	Regional WA visitors	Other visitors
Type of destination			
Primary reason for trip	39.5%	36.9%	14.1%
One of several reasons for trip	26.3%	22.8%	42.6%
Was not a reason for our trip	34.2%	40.3%	43.3%
Driving pattern			
Drove west to east	35.1%	30.6%	42.1%
Drove east to west	10.8%	22.3%	36.1%
Loop starting to the west	54.1%	42.4%	16.9%
Loop starting to the east	0.0%	4.7%	5.0%
Number of nights stayed over in ROLA	4.1	2.4	2.2

Compared to regional WA visitors and other visitors, local visitors were less likely to engage in some of the typical tourist activities including taking photos, going to the visitor center, driving around viewing scenery, viewing the lakes (see Table 6.3). Local visitors were more likely to camp overnight in a car/drive-in campground, to motorboat and to fish than the other two groups. Local visitors were more like regional WA visitors (and less like other visitors) in viewing wildlife and they were less like regional WA visitors (and more like other visitors) for backpacking and attending an NPS led program.

The most important activity contributing to trip enjoyment varied by visitor residence. Camping in a car/drive-in campground was the most important activity for 32% of local visitors and 23% of regional WA visitors compared to 8% of other visitors. Viewing scenery was the activity listed

VI. Local Visitors

most frequently by other visitors (37%) as being most important compared to 20% for the other two groups.

Table 6.3 Summary of activities engaged in with significant differences due to residence

Activities engaged in during trip	% Engaged in activity		
	Local visitors	Regional WA visitors	Other visitors
Viewed wildlife	67.9	67.0	53.2
Took photographs	44.8	70.4	84.8
Went to visitor center	46.4	52.3	64.8
Viewed lakes	64.3	80.2	83.7
Drove around viewing scenery	55.2	68.8	80.8
Backpacked	0.0	7.5	1.8
Camped overnight in car/drive-in campground	50.0	40.1	29.6
Went motor-boating	7.1	4.1	0.4
Went fishing	17.9	8.6	2.6
Attended a program led by a NPS interpreter ranger or volunteer	14.3	23.4	12.1

Local visitors were equally likely to take a walk/hike during their trip as the other groups. Of visitors who took walks/hikes, however local visitors on average took significantly more walks ($M = 5.4$) than did regional WA visitors ($M = 2.4$) or other visitors ($M = 2.1$), although the length of their longest walk did not differ from the other visitors.

Table 6.4 summarizes the percent of visitors who stopped at the different locations as indicated on the map question. Review of Table suggests that Local Washington residents stopped at fewer stops than Other visitors with Regional WA visitors somewhere in between. Further analyses indicated that number of stops differed significantly by residence. Post hoc tests indicated that Local WA residents did indeed stop at significantly fewer stops ($M = 2.4$) than Other visitors ($M = 3.7$). The number of stops Regional WA visitors made ($M = 3.3$) did not differ from the other two groups.

The locations visited per the map for the different groups were consistent with the different types of activities they indicated engaging in. For example, local visitors were less likely to do the typical tourist activities and more likely to camp. Table 6.4 indicates that local visitors were less likely to stop at Overlooks and North Cascades Visitor Center and more likely to stop at campgrounds.

Table 6.4 Summary of location stopped in ROLA per map by visitor residence.

Locations stopped in ROLA per map	% who stopped		
	Local visitors	Regional WA visitors	Other visitors
Goodell Creek Campground	19.0	9.6	9.0
Goodell Creek Group Campground	4.8	2.4	2.6
Gorge Overlook	19.0	24.7	49.7
Gorge campground/boat launch	14.3	7.8	4.8
Environmental Learning Center	4.8	15.7	9.0
Ross Lake Overlook	38.1	34.3	53.4
Happy-Panther Trail	0.0	2.4	1.1
Happy Creek Forest Walk	0.0	7.8	8.5
Diablo Lake Overlook	14.3	52.4	65.1
Thunder Knob Trail	4.8	15.1	8.5
Colonial Creek Campground	19.0	19.3	18.0
Pyramid Lake Trail	0.0	2.4	3.2
Rock Shelter Trail	9.5	6.6	6.3
Newhalem	23.8	24.7	19.0
Newhalem Creek Trail	4.8	11.4	5.3
Newhalem Creek Campground	14.3	20.5	18.5
North Cascades Visitor Center	33.3	51.8	65.6
River Loop Trail	4.1	15.7	15.9

Prior knowledge of facilities and programs

Table 6.5 summarizes the facilities/programs for which significant differences in knowledge due to residence were found. North Cascades Visitor Center was the only facility for which no difference in knowledge was observed.

As can be seen in Table 6.5 for the most part, knowledge was linked with proximity to the park. Happy-Panther Trail was the only facility for which local visitors were not either the most knowledgeable of any group or equally knowledgeable of as the most aware group. Regional WA visitors were the most knowledgeable of Happy-Panther Trail. The low knowledge levels (many under 10%) of other visitors for the different facilities should be noted.

VI. Local Visitors

Table 6.5 Summary of knowledge of facilities/programs with significant differences due to residence

Facility/Program	% Knew of facility/program		
	Local visitors	Regional WA visitors	Other visitors
Seattle City Light Information Center in Newhalem	76.7	62.5	16.1
Environmental Learning Center	44.8	21.2	4.4
Group campsites at Goodell Creek Campground	44.8	21.7	5.3
Group campsites at Newhalem Creek Campground	48.3	28.8	7.6
Thunder Knob Trail	17.2	17.2	4.9
Happy Creek Forest Walk	27.6	13.1	5.8
Happy-Panther Trail	1.3	6.1	1.3
Gorge Overlook Trail	37.9	30.8	11.1
Handicap-accessible dock at Colonial Creek campground	27.6	6.6	0.9
Interpretive signs/Ranger led programs at Diablo Overlook	27.6	20.7	4.9
Restrooms at Diablo Overlook	62.1	40.9	11.1

Local visitors (43.3%) and regional WA visitors (39.9%) did not differ significantly in their awareness of Environmental Education Programs for children and adults offered by North Cascades Institute, however both of these groups had significantly higher awareness rates than other visitors (22.9%). Regional WA visitors had the highest interest rating ($M = 2.1$) although it was not significantly different than that for local visitors ($M = 1.8$). Both of these groups however were significantly more interested than other visitors ($M = 1.5$).

There were no observed differences between the three residence groups for interest in or participation in the different types of ranger activities asked about in Q9 of the mail survey.

Visitation of and satisfaction with specific facilities/programs

Visitors were asked to indicate the specific facilities/programs they visited and their satisfaction with each. Although analyses revealed that visitation rates differed due to residence for some facilities, there were no observed differences in satisfaction for people who visited a facility. Table 6.6 presents the visitation rates for these facilities by residence. Again, local visitors were the least likely to do more typical tourist activities including going to North Cascades Visitor Center, hiking Gorge Overlook Trail, or partaking of interpretive signs/ranger-led programs at Diablo Overlook. Local visitors did not differ significantly from regional WA visitors or other visitors in their visitation of the Environmental Learning Center (10.3% vs. 14.6% and 4.8%). Regional WA visitors (14.6%) however were significantly more likely to visit the Environmental Learning Center than other visitors (4.8%).

Regional WA residents reported significantly higher overall trip satisfaction ($M = 4.7$) than other visitors ($M = 4.4$). However, local visitors overall satisfaction ($M = 4.6$) did not differ significantly from the other groups.

Table 6.6 Summary of visitation of facilities/programs with significant differences due to residence

Facility/Program	% Visited facility/program		
	Local visitors	Regional WA visitors	Other visitors
North Cascades Visitor Center	41.4	59.5	66.0
Environmental Learning Center	10.3	14.6	4.8
Gorge Overlook Trail	13.8	16.9	28.9
Interpretive signs/Ranger-led talks at Diablo Overlook	6.9	11.4	19.1

Trip Motivations

Table 6.7 summarizes the trip motivations that had significant differences due to residence. For “develop skills,” “learn what you are capable of,” and “to get exercise,” local visitors importance ratings fell between those for the other two groups and did not differ significantly from either group. However, regional WA visitors and other visitors differed significantly on these three trip motivations.

The trip motivations “do something with your family” and “be with friends” were significantly less important to other visitors than to either local visitors or regional WA visitors. No significant differences were observed between local and regional visitors for these two trip motivations.

Importance ratings of “viewing scenery,” “experiencing new and different things,” and “to get exercise” were least for local visitors. For “viewing scenery,” local visitors had significantly lower importance ratings ($M = 4.1$) than other visitors ($M = 4.5$), although not for regional visitors ($M = 4.4$). For “experiencing new and different things,” local visitors had significantly lower importance ratings ($M = 3.0$) than either regional visitors ($M = 3.6$) or other visitors ($M = 3.8$). For “to get exercise” other visitors had significantly lower importance ratings than regional WA visitors. Although local visitors had the same average importance rating as other visitors, the smaller sample for local visitors resulted in limited the power to find this difference significant.

Table 6.7 Summary of trip motivations with significant differences due to residence

Trip Motivation	Average importance rating ¹		
	Local visitors	Regional WA visitors	Other visitors
Develop your skills and abilities	1.6	1.7	1.3
Do something with your family	3.8	3.6	3.2
Experience new and different things	3.0	3.6	3.8
Be with friends	3.0	3.1	2.3
Viewing scenery	4.1	4.4	4.5
Learning what you are capable of	2.0	2.1	1.8
To get exercise	2.7	3.0	2.7

¹The rating scale was 1 = Not important, 2 = Slightly important, 3 = Moderately important, 4 = Very important, and 5 = Extremely important.

VII. SOUGHT VERSUS DID NOT SEEK INFORMATION

Because ROLA does not have park entrance gates where visitors can obtain a park map, use of the park and quality of park experiences may differ for visitors who sought out information prior to visiting and those who did not. Less than half (42%) of respondents sought information prior to their visit. Analyses comparing these two groups of visitors can identify such differences as well as individual characteristics that may help park managers improve informational efforts.

Visitor profile

Age, gender, race, ethnicity, party size, whether party's had members under age 18, type of group, and number of trips to ROLA in the past three years did not differ for visitors who sought information and those who did not seek information.

Visitors who sought information were more likely to be other non-U.S. residents (6.3% vs. 1.9%) and less likely to be Canadian residents (2.6% vs. 6.4%) than visitors who did not seek information. No other residence differences were significant.

Trip Characteristics

Whereas transportation to ROLA did not differ by whether visitors sought information, the type of destination and driving pattern did. ROLA was more likely to be a primary or one of several destinations for people who sought information than for those who did not. Not surprisingly, those who did not seek information were more likely to be incidental visitors (ROLA was not a reason for their trip). Visitors who sought information were more likely to drive a loop starting west of the park (42.4% vs. 21.4%) and less likely to drive through either west to east (32.1% vs. 41.6%) or east to west (21.7% vs. 32.1%). This finding in conjunction with destination suggests that people not seeking information were more likely to be driving across WA on SR20 (in either direction) and traveled through ROLA without it being a reason for their trip.

Visitors who sought information were more likely to stay overnight in ROLA than visitors who did not seek information (55.6% vs. 26.6%). While the length of stay for overnight visitors did not differ by whether they sought information, the number of hours spent in ROLA for day visitors did. Visitors who sought information stayed longer than those who did not (4.4 vs. 2.3 hours). These findings were consistent with the idea that people seeking information were more likely to be intentional visitors.

Engaging in many of the activities depended on whether visitors sought information or not. Table 7.1 presents the percentage of visitors who engaged in each activity that differed significantly by sought information. As can be seen in Table 7.1, visitors who sought information were more likely to engage in each activity than visitors who did not seek information. The percentage of visitors who reported taking walks/hikes in a separate question (Q10 in mail survey) also differed by sought information and was comparable to that reported in this question; 72.4% of visitors who sought info took walks compared to 42.1% of visitors who did not seek information. No differences in the number or length of walks/hikes were observed.

VII. Sought vs. Did Not Seek Information

Table 7.1 Summary of activities engaged in with significant differences for sought information

Activities engaged in during trip	% Engaged in activity	
	Sought Info	Did not seek info
Viewed wildlife	70.3	53.5
Viewed wildflowers/vegetation	80.5	6.6
Went bird-watching	15.9	9.7
Took photographs	83.9	71.1
Had a picnic	43.6	22.7
Went to visitor center	71.3	48.3
Viewed lakes	85.6	77.7
Took walks/hikes	77.9	43.9
Camped overnight in car/drive-in campground	47.2	27.5
Read educational displays and materials	74.9	55.0
Visited historical sites	15.4	8.9
Attended a program led by a NPS interpreter ranger or volunteer	25.6	17.3

Although the same three activities were most frequently listed as the most important activity that contributed to overall enjoyment by both groups, the ordering differed for the two groups (see Table 7.2).

Table 7.2 Top three most important activities by sought information

Activity	% Listed as most important activity	
	Sought Info	Did not seek info
Drove around viewing scenery	24.2	33.1
Took walks/hikes	23.1	13.3
Camped overnight in car/drive-in campground	12.9	19.9

Visitors who sought information were more likely to have used a map (other than the one in the survey) during their trip than visitors who did not seek information (62.9% vs. 34.2%)

Visitors who sought information stopped at more locations in ROLA ($M = 4.1$) than visitors who did not seek information ($M = 3.0$), $F(1, 355) = 25.88$, $p < .001$ (see Table 7.3).

VII. Sought vs. Did Not Seek Information

Table 7.3 Summary of location stopped in ROLA per map by sought information.

Locations stopped in ROLA per map	% Stopped	
	Sought Info	Did not seek info
Goodell Creek Campground	14.6	5.3
Goodell Creek Group Campground	3.5	1.9
Gorge Overlook	48.0	28.2
Gorge campground/boat launch	6.4	7.2
Environmental Learning Center	9.9	12.9
Ross Lake Overlook	43.9	44.5
Happy-Panther Trail	1.8	1.4
Happy Creek Forest Walk	12.3	3.8
Diablo Lake Overlook	58.5	56.5
Thunder Knob Trail	13.5	9.6
Colonial Creek Campground	24.0	16.3
Pyramid Lake Trail	4.1	1.9
Rock Shelter Trail	9.4	5.3
Newhalem	28.7	17.2
Newhalem Creek Trail	10.5	5.7
Newhalem Creek Campground	27.5	12.9
North Cascades Visitor Center	68.4	49.3
River Loop Trail	21.6	11.0

Facilities and programs

Visitors were asked whether they knew about a variety of facilities and programs in ROLA before entering the recreation area. Knowledge rates for three facilities/programs varied by sought information and these are presented in Table 7.4.

Table 7.4 Prior knowledge of facilities/programs by sought information

Facility/Program	% Knew facility/program	
	Sought Info	Did not seek info
North Cascades Visitor Center	80.0	51.7
Thunder Knob Trail	15.4	7.6
Interpretive signs/Ranger-led talks at Diablo Overlook	17.9	9.9

Although visitors who sought information were more likely to be aware of the Environmental Education Programs for children and adults offered by North Cascades Institute than visitors who did not seek information (37.5% vs. 27.9%), their interest levels did not differ. Furthermore, no differences in participation or interest in participating in four types of ranger activities were observed.

VII. Sought vs. Did Not Seek Information

Visitors were asked to indicate the specific facilities/programs they visited and their satisfaction with each. Analyses revealed two facilities/programs whose visitation rates depended on whether visitors sought information and one facility's satisfaction rates that depended on whether visitors sought information. Visitors who sought information compared to those who did not were more likely to visit North Cascades Visitor Center (73.2% vs. 53.3%) and Newhalem area trails (31.3% vs. 16.8%). Visitors who sought information were significantly more satisfied with North Cascades Visitor Center than visitors who did not seek information ($M = 3.7$ vs. $M = 3.6$).

Trip motivations

The importance of 7 of the 15 trip motivations respondents were asked about differed by whether respondents sought information or not. Table 7.5 summarizes the average importance ratings by group for the trip motivations that differed. Of the 15 trip motivations, these 7 trip motivations were in the top 9 rated most important. Importance of "viewing scenery" which had the highest importance rating of any trip motivation did not differ. Review of the table indicates that people who sought information rated the 7 trip motivations as more important than people who did not seek information. These findings suggest that people for whom the trip was more important were more likely to seek information. However, it may also be that the process of seeking information makes the trip more important to people.

Table 7.5 Summary of trip motivations with significant differences due to sought info

Trip Motivation	Average importance rating ¹	
	Sought info	Did not seek info
Experience new and different things	3.9	3.5
Learn more about nature	3.4	3.0
Get away from the usual demands of life	4.0	3.7
Experience tranquility	4.0	3.7
Experience solitude	3.5	3.2
Being close to nature	4.2	3.7
To get exercise	3.1	2.7
¹ The rating scale was 1 = Not important, 2 = Slightly important, 3 = Moderately important, 4 = Very important, and 5 = Extremely important.		

VIII. Visitor Distribution Data

During the 2005 summer data collection, visitor count data were collected at contact locations on each sampling day. These data can be used to generate entry distributions for each contact location. Entry distributions provide information on how use is distributed across the day, when periods of concentrated use occur, when peak demand for a site occurs, and differences in weekend and weekday use. This information is useful when making staffing decisions including best time periods to have interpretive rangers available for the most visitors. They can also be useful in the development of sample plans for future visitor research.

Method

During the times when survey workers were sampling at Diablo Overlook, Gorge Overlook, and North Cascades Visitor Center, survey workers counted the number of vehicles entering these locations. Specifically, bins corresponding to every half-hour starting on the hour (e.g., 9:00 to 9:30, 9:30 to 10:00, etc.) were established and then all vehicles entering during a bin were tallied and recorded. Vehicles included motor vehicles such as cars, campers, motorcycles as well as bicycles, although there were relatively few of these.

Because collecting this visitor count data was secondary to the project's objective, not all bin periods at all locations ended up with the same number of observation periods. As can be seen in Figures 8.1 to 8.3, the number of observation periods was overall highest at North Cascades Visitor Center followed by Diablo Overlook. Gorge Overlook had the fewest observations and thus the resulting vehicle entry distribution data will not be the least reliable.

Although these data were collected using people, comparable data can be collected with traffic counters designed to collect data into small time periods (often referred to as bins). To ensure accurate data, traffic counters need to be monitored regularly including downloading data, calibration, and validation.

Figure 8.1 ROLA Corridor Survey, Visitor Count Data
Number of Observation Periods for Each Time Period: North Cascades
Visitor Center

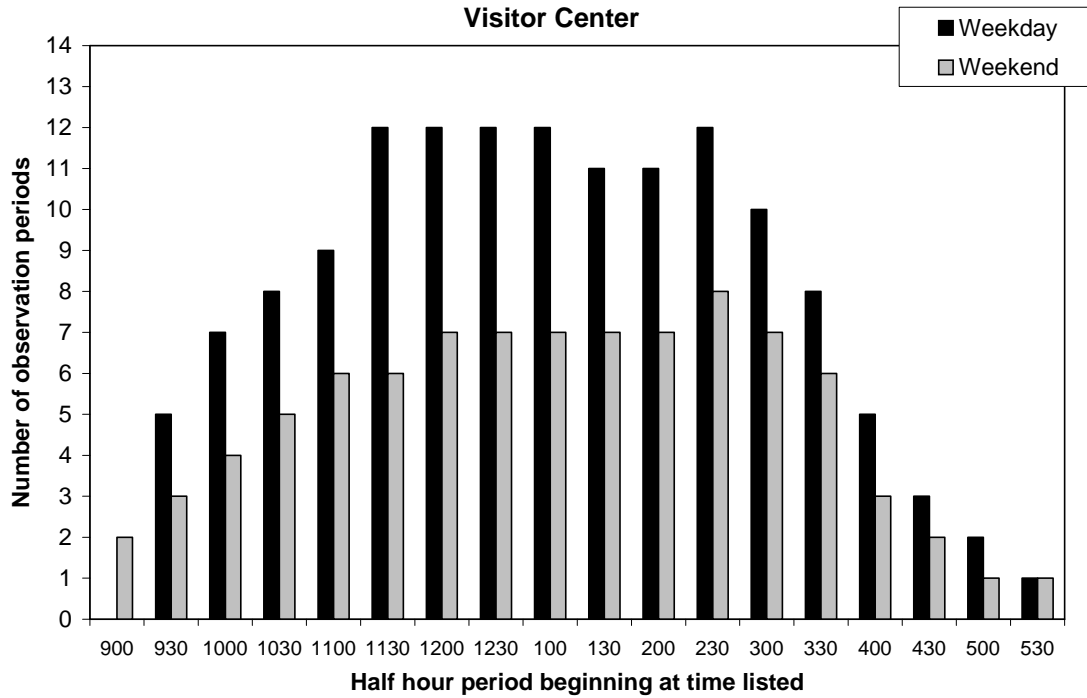


Figure 8.2 ROLA Corridor Survey, Visitor Count Data
Number of Observation Periods for Each Time Period: Diablo Overlook

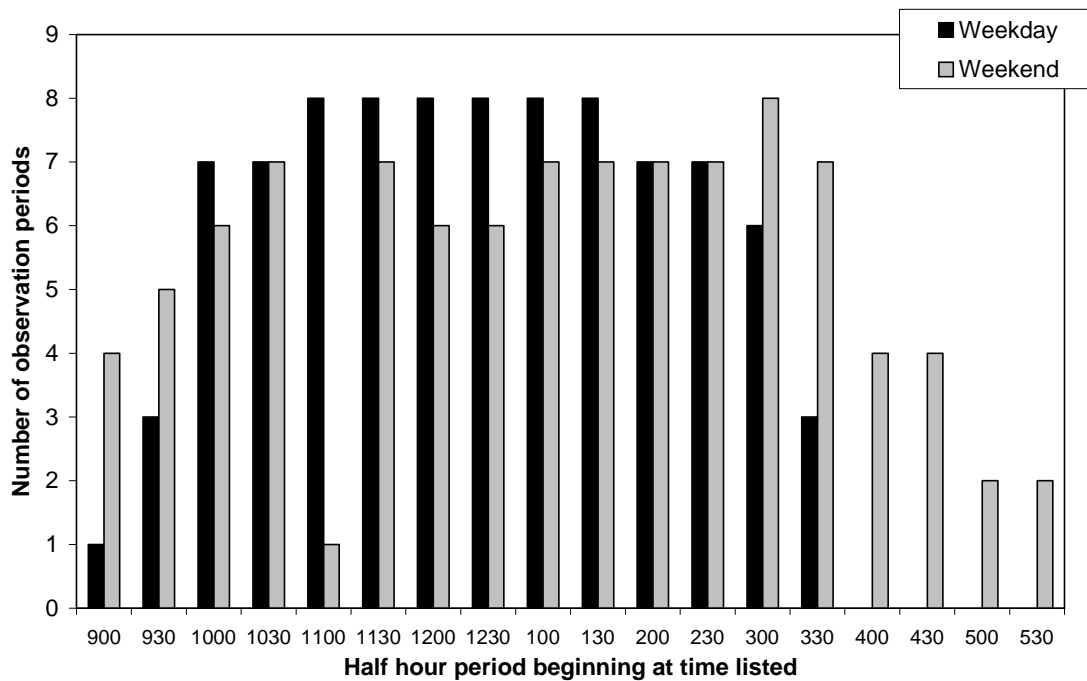
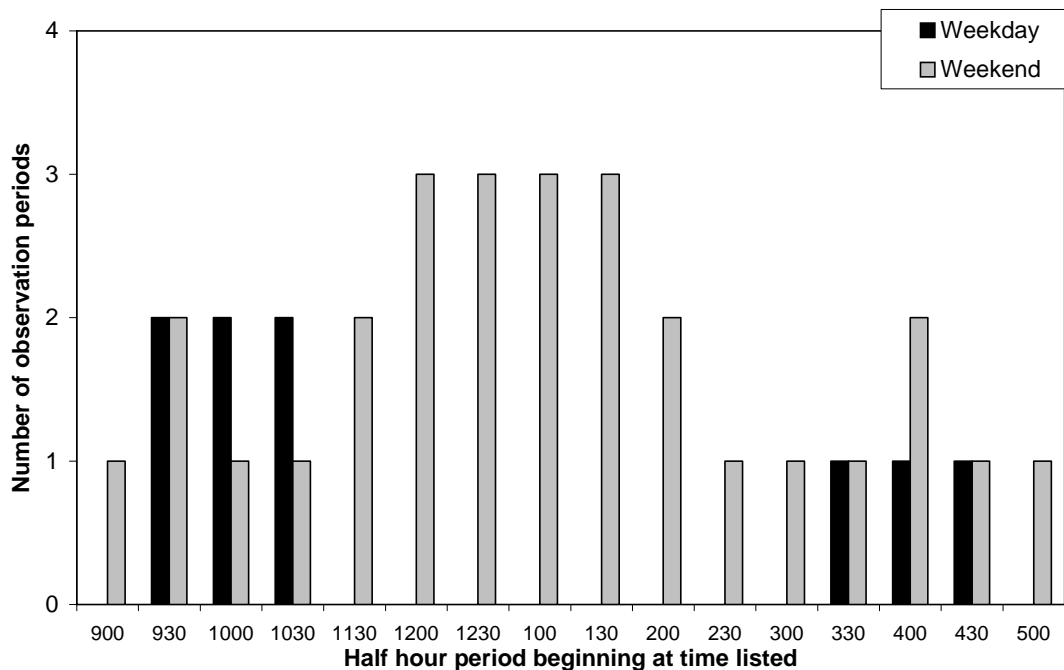


Figure 8.3 ROLA Corridor Survey, Visitor Count Data
Number of Observation Periods for Each Time Period: Gorge Overlook



Results

Visitor count data were aggregated to provide a distribution of visitor vehicle entries on weekdays and weekend days. The best estimate of the number of vehicle entries for a half-hour period was the average number of vehicles counted during the different observation periods. Thus, averages based on more observation periods would be expected to be more reliable and reflective of the true number of visitor vehicle entries for that time period. Figures 8.4 to 8.6 show the visitor vehicle entry distributions for the three locations.

Review of the vehicle entry distributions indicates generally bell-shaped distributions with the most entries occurring around 1:00 p.m. Weekend days had more entries than weekdays and particularly at Diablo Overlook where during the peak times there were about twice as many entries on weekends as weekdays. In fact, the weekday distribution at Diablo Overlook is relatively flat between 10:30 a.m. and 3:30 p.m. These differences most likely reflect the addition of more day visitors during summer weekends.

The difference in weekend and weekday vehicle entries at North Cascades Visitor Center was less dramatic and the overall distribution was flatter indicating fairly consistent visitation throughout the day.

Figure 8.4 ROLA Corridor Survey, Visitor Count Data
Distribution of Visitor Vehicle Entries at North Cascades Visitor Center

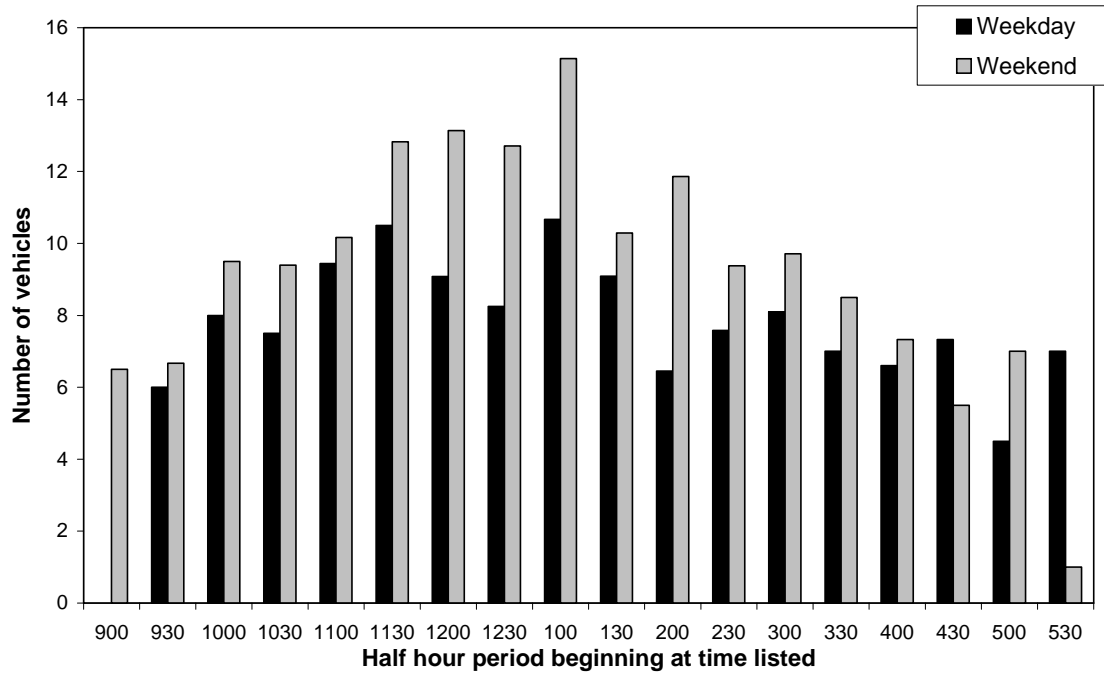
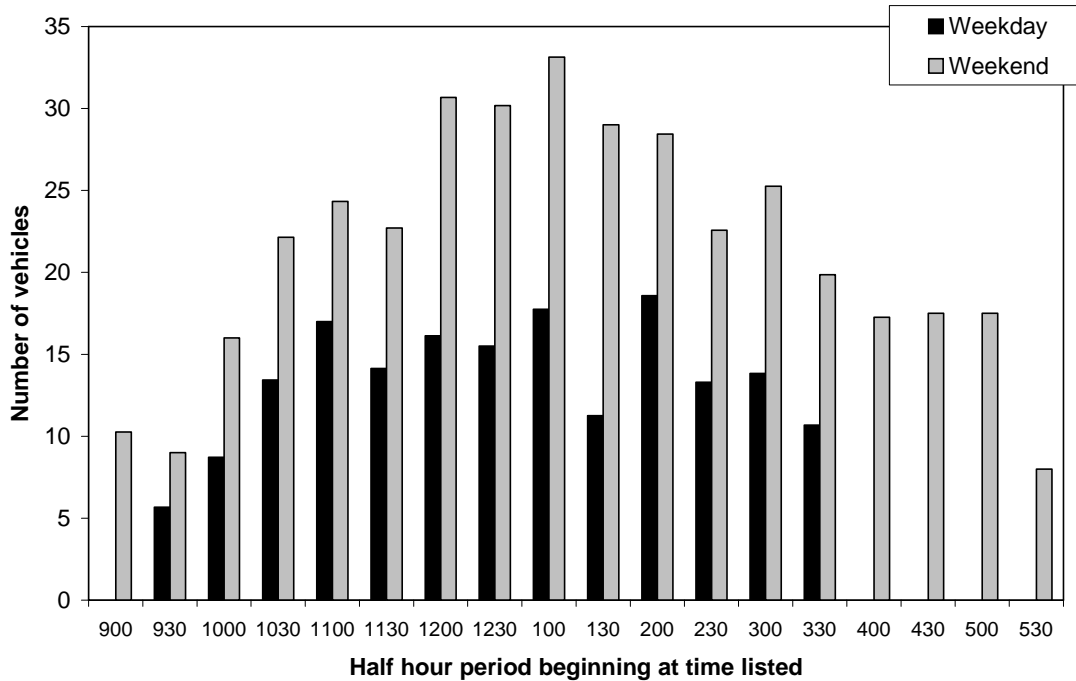
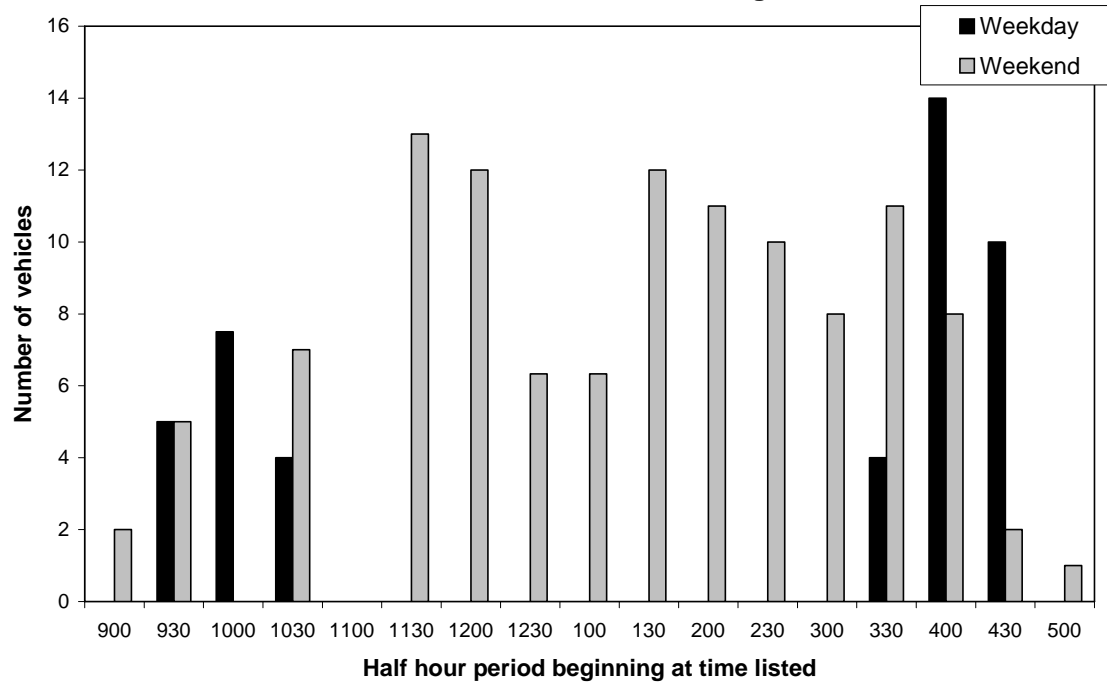


Figure 8.5 ROLA Corridor Survey, Visitor Count Data
Distribution of Visitor Vehicle Entries at Diablo Overlook



**Figure 8.6 ROLA Corridor Survey, Visitor Count Data
Distribution of Visitor Vehicle Entries at Gorge Overlook**



A SURVEY OF ROSS LAKE USERS

Ross Lake User Survey Highlights

Visitor Profile

The sample of visitors that completed the Ross Lake National Recreation Area (ROLA) Lake User Survey, which included no one younger than 18, consisted of 58% males. Although most visitors were between the ages of 25 and 69, visitors contacted at Ross Dam Trail were significantly younger ($M = 41$ years) than visitors contacted at Hozomeen ($M = 44$ years) or Diablo Portage ($M = 45$ years). Visitors who sought information were more likely to be female (69% vs. 59%) and younger (43 years vs. 47 years) than visitors who did not seek information.

Visitors were predominantly white (94%) and well-educated (average education level was equivalent to college degree and about one-third had completed post-graduate work). Asian was the second highest race represented among visitors (3.3%), and only 1.4% of visitors indicated being of Hispanic or Latino ethnicity. The racial make-up of visitors contacted at different locations did not differ, although visitors contacted at Ross Dam Trail had significantly higher educational levels than visitors contacted at Diablo Portage (16.9 vs. 16.1 years, respectively).

At all contact points, most parties were families (46% to 57%) and were not part of a larger group (92%). Parties contacted at Diablo Portage were twice as likely to consist of family and friends (27% vs. 13%) and were significantly larger ($M = 4.8$ people) than parties contacted at Ross Dam Trail ($M = 3.3$ people) or Hozomeen ($M = 3.6$ people). Visitors contacted at Ross Dam Trail and Hozomeen most commonly traveled in groups of two (46% and 44%), three (15% and 13%) or four (17% and 11%). In contrast, parties contacted at Diablo Portage were less likely to travel in groups of 2 (25%) and more likely to travel in a larger group (9% traveled in groups of six and 11% traveled in groups of 9 or more). Thirty-five percent of parties included children under age 18. Parties contacted at Ross Dam Trail were significantly less likely to include children under age 18 (30%) than parties contacted at Hozomeen (39%) or Diablo Portage (41%). The average number of children under age 18 was 2.5 and most parties had 1 (33%) or 2 (36%) children under age 18.

Although visitors to ROLA traveled from all over the world, visitors contacted at U.S. locations were most commonly residents of WA (Ross Dam Trail 71%, Diablo Portage 93%) and visitors contacted at Hozomeen in Canada were most likely Canadian (66%). Ross Dam Trail had the highest percentage of other U.S. residents (22%) and non-U.S. visitors excluding Canadians (4%).

The number of trips to ROLA in the last three years (including the trip they were contacted) varied by contact point. Visitors contacted at Hozomeen had taken significantly more trips in the last three years ($M = 4.3$ trips) than visitors contacted at Ross Dam Trail ($M = 2.1$ trips) or Diablo Portage ($M = 2.6$ trips). The number of trips taken for visitors contacted at all locations varied from 1 to over 7 trips, however visitors contacted at Hozomeen were more likely to have made 7 or more trips in the last three years than visitors contacted at the other locations (18% vs. 1% and 5%). For 65% of visitors contacted at Ross Dam Trail, this trip was their first to ROLA compared to 39% of visitors contacted at Hozomeen and 31% of visitors contacted at Diablo Portage.

Trip Characteristics

Almost two-thirds (63%) of Ross Lake Users sought information prior to their trip. People contacted at Ross Dam Trail were the most likely to seek information prior to their trip (52%) followed by those visitors contacted at Diablo Portage (29%) and those contacted at Hozomeen (19%). Visitors sought information prior to their trip from a variety of sources with the most common being the National Park Service Park web site (50%) and friends and relatives (40%).

Most lake users stayed overnight in the park. Visitors contacted at Diablo Portage were the most likely to stay overnight (98% vs. Hozomeen: 86% and Ross Dam Trail: 56%) and they stayed significantly more nights ($M = 3.4$) than visitors contacted at Hozomeen ($M = 2.8$) or Ross Dam Trail ($M = 2.3$). Seventy percent of visitors contacted at Ross Dam Trail spent 1 or 2 nights whereas 60% of visitors contacted at Diablo Portage and Hozomeen spent 2 or 3 nights. Over one-fourth (26%) of visitors contacted at Diablo Portage spent 5 or more nights compared to less than 10% of visitors contacted at the other locations. Visitors who did not stay overnight spent 4.1 hours in the park.

Visitors contacted at the different locations differed in their trip types and the activities they engaged in. When asked to specify the activity that was most important to their enjoyment of the park, visitors gave a diverse array of responses, and these varied for the three groups.

Visitors contacted at Hozomeen were most likely to indicate that their trip was best described as camping overnight along lakeshore (48%) followed by car-camping (18%). Visitors contacted at Hozomeen were the most likely to car-camp (58% vs. 22% and 10%) and car-camping was the most frequently listed most important activity contributing to enjoyment (25%). Fishing was the second most frequently listed most important activity for visitors contacted at Hozomeen (18%) and 44% of visitors contacted at Hozomeen fished.

Visitors contacted at Ross Dam Trail were most likely to describe their trip as drove from home or other lodging to spend the day (33%), followed by car-camping (19%), and camping overnight along lakeshore (17%). Visitors contacted at Ross Dam Trail were the most likely to day-hike (79% vs. 71% and 57%) and to backpack (29% vs. 10% and 9%). These two activities were the most frequently listed most important activity contributing to their enjoyment: took walks/hikes (27%) and backpacked (10%).

Visitors contacted at Diablo Portage were most likely to describe their trip as staying overnight at Ross Lake Resort (53%) followed by camping overnight along lakeshore (35%). Visitors contacted at Diablo Portage were the most likely to stay at Ross Lake Resort (55% vs. 14% and 7%), to go motor-boating (64% vs. 29% and 24%), to kayak/canoe (38% vs. 20% and 20%), and to camp overnight at a boat-in campsite (46% vs. 25% and 19%). The most commonly listed most important activity contributing to their enjoyment for visitors contacted at Diablo Portage was stayed at Ross Lake Resort (29%) followed by camped overnight at boat-in campsite (21%), and went kayaking/canoeing (20%).

Four percent of visitors reported experiencing low water levels during their trip that affected their use of the lake. On average, low water levels were experienced 1.5 times on Ross Lake and 1.0 times on Diablo Lake. Visitors contacted at Ross Dam Trail were the least likely to have experienced low water levels on prior trips (6% vs. Diablo Portage: 25% and Hozomeen: 33%). The average number of times low water levels were experienced on prior trips was 2.6 times on Ross Lake and 0.1 times on Diablo Lake.

Overall trip experience varied for visitors contacted at the different locations. Visitors contacted at Diablo Portage had significantly higher overall trip satisfaction than visitors contacted at Ross Dam Trail. Although visitors contacted at all locations were most likely to rate their trip as “excellent”, visitors contacted at Diablo Portage were more so (57% vs. Ross Dam Trail: 47%

and Hozomeen: 41%). Visitors contacted at Diablo Portage were also more likely to rate their trip as “perfect” (20% vs. 9% and 17%) and less likely to rate it “very good” (18% vs. 30% and 27%) or “good” (3% vs. 12% and 13%). A small minority of visitors contacted at all locations rated their trip as “poor” or “fair”.

Trip Motivations

Nine of the fifteen trip motivations differed by contact point. The highest trip motivation importance ratings for all visitors included 1) viewing scenery, 2) experience tranquility, 3) being close to nature, and 4) getting away from the usual demands of life. This order was observed for visitors contacted at Ross Dam Trail and Diablo Portage. The order for visitors contacted at Hozomeen was 1) get away from the usual demands of life, 2) experience tranquility, 3) viewing scenery, and 4) being close to nature. These top four trip motivations were all rated between “very important” and “extremely important”.

The three least important trip motivations were 1) develop your skills and abilities, 2) talk to new and varied people, and 3) to feel your independence.

Impacts of Other Visitors

Almost all of the visitors (98%) contacted at Diablo Portage spent time when they could view Ross Lake compared to 83% of visitors contacted at Ross Dam Trail and 79% of visitors contacted at Hozomeen. The number of people seen on the lake by these visitors was as expected for 38% of all visitors, fewer than expected for 23% of visitors, and a lot fewer than expected for 14% of visitors. Although actual number of visitors seen was as expected or less, 62% of respondents indicated that the number of people seen on the lake was as preferred, 17% indicated there were more people than they preferred, and 3% indicated there were a lot more people than they preferred. Three percent of visitors indicated they saw fewer people on the lake than they preferred.

Visitors contacted at Ross Dam Trail were most likely to hike inland on trails (75%) followed by visitors contacted at Diablo Portage (59%) and Hozomeen (43%). Expectations and preferences did not vary by contact point, but did differ by whether people sought information. For both expectations and preferences, people who did not seek information were more likely to have no expectations or preferences than people who sought information. Otherwise, the distributions were generally similar for the two groups on both variables and revealed the same pattern as was observed for people seen on Ross Lake. The number of people seen on inland trails by people hiking on inland trails was as expected for 39% of these visitors, fewer than expected for 30% of visitors, and a lot fewer than expected for 11% of visitors. Two-thirds of visitors said the number of people seen on inland trails was as preferred and 10% said the number of people were more than they preferred. Six percent of visitors indicated that the number of people seen on inland trails was fewer than they preferred.

Nineteen percent of visitors indicated that another party’s behavior detracted from their enjoyment. These incidents were most likely to occur when respondents were on the shore of Ross Lake. Visitors contacted at Hozomeen were most likely to describe the party that affected their experience as having 8 or more party members whereas visitors contacted at Ross Dam Trail or Diablo Portage were more likely to describe the party that affected their experience as being in motorized boats. Visitors contacted at Hozomeen reported a greater degree of detraction than visitors contacted at the other two sites. Over half (52%) of visitors contacted at Hozomeen indicated that this behavior detracted greatly whereas over half of visitors contacted at Diablo Portage (63%) and at Ross Dam Trail (56%) reported that this behavior detracted slightly.

Review of the descriptions of these behaviors indicated that loud behavior that often goes on late into the night and sometimes accompanied by alcohol was more prevalent at Hozomeen than the other locations and may be the behavior that results in the higher detraction ratings.

About one fourth of visitors contacted at Diablo Portage and Ross Dam Trail and 40% of visitors contacted at Hozomeen reported feeling crowded to some extent. The two factors rated highest as contributing to feelings of crowding were number of boating parties seen and number of parties camped in sight/sound.

Although visitors who sought information were more likely to see evidence of human impacts on park natural resources (50%) than visitors who did not seek information (33%), the degree to which these human impacts detracted from their enjoyment did not differ. Slightly less than half (47%) of people who saw evidence of human impacts indicated that the impacts did not detract from their experience and 39% indicated the impacted detracted slightly. The most common impacts seen were litter (48%) and hiker-made trails (36%). Nine percent of visitors who saw evidence of human impacts specified in the other impact option, the dam and dam-related items (i.e., power lines, maintenance equipment, road) as a human impact seen.

Potential Actions

Lower than normal water levels due to hydroelectric demands occur sometimes in Ross Lake and Diablo Lake. Visitors were asked the extent to which three possible effects of these low water levels would affect their visit and responses depend on where visitors were contacted. Overall, the increased likelihood of running aground or hitting a stump had the highest detraction rating followed by the inability to use a boat dock with a powerboat, and exposed bare shoreline and tree stumps. Visitors contacted at Hozomeen and Diablo Portage detraction ratings followed this order whereas exposed bare shoreline and tree stumps had the highest detraction rating for visitors contacted at Ross Dam Trail. These differences most likely reflect the relative differences in time spent on the lake in watercraft. Approximately 20% of visitors contacted at Hozomeen and Diablo Portage indicated that increased likelihood of running aground or hitting stumps and the inability to use a boat dock with a powerboat as detracting greatly from their experience.

Support or opposition for four different potential use fees was assessed: a fee of \$10 per week to launch a boat, a fee of \$5 to use an RV dump station, a fee of \$20 per trip for motorized boats longer than 15ft, and a fee of \$10 per campsite reservation in vehicle-accessed campgrounds. Overall, visitors contacted at Hozomeen had less supportive (more oppositional) ratings for all four use fees than visitors contacted at Ross Dam Trail and at Diablo Portage. These findings may reflect a general difference in the relative willingness to pay for the opportunity to use the park between the primarily Canadian visitors contacted at Hozomeen with the primarily U.S. residents contacted at the other two sites. However, it is also possible that visitors contacted at Hozomeen are less supportive because these are fees that would affect most of the visitors contacted at Hozomeen given the typical trips of visitors contacted at Hozomeen. Visitors contacted at Ross Dam Trail were generally the most supportive and may reflect that few of them will be impacted if such fees are put in place.

Support or opposition for seven different use rationing policies was obtained. The policy receiving the most support was for issuing a limited number of permits on a first-come, first-served basis, which is the current system. The distribution for issuing a limited number of permits on a drawing or lottery basis and the distribution for charging a fee of \$10 per person per visit were received more opposition with more than half of people opposing or strongly opposing these policies. The policy option allowing use without rationing (i.e., unlimited use) had strong differences in support depending on where people were contacted. Visitors contacted at Hozomeen were the most likely to strongly support (18% vs. 6% and 7%) this policy whereas

visitors contacted at Diablo Portage were most likely to strongly oppose it (31% vs. 17% and 9%) and visitors contacted at Ross Dam Trail were most likely to oppose it (30% vs. 18% and 22%). These differences suggest that visitors contacted at Hozomeen may not perceive the same need to balance use with resource protection as visitors contacted at Diablo Portage or Ross Dam Trail. The remaining use policy support/opposition distributions were fairly bell-shaped around neutral.

I. INTRODUCTION AND METHOD

Ross Lake National Recreation Area (NRA) is part of North Cascades National Park Service Complex.¹ Ross Lake NRA contains a portion of State Route 20 (a.k.a. North Cascades Highway), the primary East-West road through the complex. For many visitors, driving the North Cascades Highway, with or without stops at interpretive or scenic waysides, is the extent of their trip to “North Cascades National Park.” Consistent with park visitation guidelines, people who drive along State Route 20 and make at least one stop within the park boundaries were considered a visitor for this project.

Ross Lake NRA also contains Ross, Diablo, and Gorge Lakes. These lakes are the result of hydroelectric dams and are the primary lakes in the NRA. Ross Lake extends from the highway corridor to the Canadian border. Having no road connection on the U.S side of the border, Ross Lake is relatively inaccessible and thus, is managed to “retain its character as the only large wild lake in the region, offering excellent opportunities for canoeing, kayaking, and fishing” (GMP, 1988). Although most land is designated wilderness, a small strip of land immediately surrounding the lake and the lake itself are not (see map). For some visitors trails leading from the lake serve as entry points to the wilderness.

Development of a recreation management plan for the Ross Lake National Recreation Area that amends the 1988 General Management Plan (GMP) began in early 2006. Information about visitors and their use of and experiences in the recreation area are integral to an effective planning process. Since the 1988 GMP, changes in park infrastructure (e.g., new visitor center, Environmental Learning Center) and visitor activities (e.g., increased rock climbing and kayaking/canoeing, less fishing) have occurred that need to be addressed in the recreation plan. Given the limited information about visitors to NOCA generally and to Ross Lake NRA specifically, a survey of Ross Lake NRA visitors was warranted. The research was proposed by North Cascades National Park Service Complex management and was funded by Skagit Environmental Endowment Commission (SEEC) and the PNW CESU.

Visitors to Ross Lake NRA fall into two primary groups: Corridor visitors and lake visitors. Corridor visitors were people who primarily drive along State Route 20 and make at least one stop within the park boundaries. Lake visitors are people who visit the lakes. It was possible that some lake visitors may also stop along the corridor. Because the types of experiences differ substantially for these two groups, a survey was developed for each group. These surveys will be referred to as the Corridor User Survey and the Lake User Survey and are reported on in separate sections.

- Section 1: A Survey of State Route 20 Corridor Users
- Section 2: A Survey of Ross Lake Users

Ross Lake User Survey

The primary objectives of the Ross Lake User Survey was 1) describe current lake users, 2) the types of experiences they expect and have, and 3) their attitudes toward potential management policies. Understanding what current visitors desire and experience is one source of knowledge that informs the planning process. Such information is particularly useful for providing insight

¹ North Cascades National Park Service Complex is comprised of Ross Lake National Recreation Area, Lake Chelan National Recreation Area, and North Cascades National Park.

into current and desired experiences, managing potential user conflicts, and understanding public response to potential management actions. Although this information is collected, managers are not obliged to provide experiences and policies consistent with visitor responses.

Survey design and development

The survey procedures were developed based on discussions with park managers and staff and included two primary components: 1) An on-site questionnaire and 2) a mail questionnaire. The on-site questionnaire collected general demographic and party data, and contact information for follow-up mailings. The mail questionnaire included questions about trip planning, trip motivations, trip expectations and experiences, effects of other visitors (e.g., crowding), and potential management policies. (See Appendix C for questionnaires).

Sampling and contact procedures

The sampling plan provided for a random sample of parties to be contacted. For questions related to the party (e.g., party size, locations visited during trip), the results represent the population of parties with members over the age of 17 who accessed Ross Lake between June 24, 2005 and September 4, 2005. For questions related to the individual (e.g., age, number of prior visits, attitudes toward management policies), the results represent the population of visitors over the age of 17 selected to represent their party who accessed Ross Lake between June 24, 2005 and September 4, 2005.

Users of Ross Lake include boaters (kayak/canoe/motor/sail/etc.), Ross Lake Resort guests, fishermen, people who take the water taxi to hike (day or overnight) from trailheads located along the lakeshore, and people who hike lakeshore trails from road access. Based on discussions with park staff, four sampling locations were selected to ensure contacting a representative sample of parties visiting Ross Lake.

1. The Ross Lake Portage operation was selected as many visitors launch their boats in Diablo Lake and then have their boat portaged to Ross Lake.
2. The Ross Dam Trail was selected as many Ross Lake Resort guests, day hikers, fishermen, and other visitors who rent boats from the resort or use the water taxi access the area via this trail. The survey worker was located where Ross Dam Trail intersects the portage road.
3. Hozomeen, located in Canada, was selected as a third location. This location is the only place where visitors can drive up and launch their boat directly into the lake. Thus, more motorboat users enter the lake here than in the southern part of the lake. The survey worker was located on the entry road at the U.S. side of the border.
4. The East Bank Trail

Our original target sample sizes reflected our best estimate of visitor distribution while allowing a comparison of Hozomeen users with users who access Ross Lake from the south. Further the sampling plan was designed to allow a comparison of visitors contacted during the peak season with those contacted during the shoulder season (see discussion below on page 178).

The number of visitors encountered on the East Bank Trail was so low during the first shoulder season contact period ($n = 1$) and continued to be so low during the start of the peak season ($n = 0$) that it was no longer a reasonable use of survey worker time to continue sampling there. If the usage of East Bank Trail during the summer of 2005 differed from usage in other years than the final sample may not be representative of visitors in other years.

I. Introduction and Method

By July 13th, it was evident that the number of people visiting Ross Lake was lower than expected. Starting with the next work period, on days we sampled, efforts were made to contact all visitors accessing Ross Lake via the Ross Dam Trail and the Diablo Take out. Some days this was achieved by having one survey worker cover both locations by leaving the Ross Dam trail to meet people coming on the Diablo ferry at 9am and 3pm. People portaging at other times were contacted as possible. PASRU survey workers developed a good working relationship with the portage truck driver who would notify them of people portaging and sometimes even provided a ride down or up from the portage. Although it was possible that we did not contact all people on either site on these days, this strategy allowed us to contact more people than we could have by focusing on only one site that day. Whenever possible, a survey worker was scheduled for each location. To obtain the desired number of participants at Hozomeen, all people were contacted on the days we sampled there. The final sample sizes by location, day of week, and time of season are presented in Table 1.1.

Table 1.1 Sample sizes by contact point

Contact Point	Number of People Sampled					
	Peak Season			Shoulder Season		
	Week Days	Weekend	Total Peak	Week Days	Weekend	Total Shoulder
Ross Lake Dam Trail	109	148	257	15	57	72
Diablo Portage	84	63	147	5	33	38
Hozomeen	80	40	120	0	0	0

This sampling plan had the potential to result in a biased sample because people were not representatively sampled across contact point or day of week. First, the proportion of days people were contacted on weekdays and weekends did not reflect the actual 5:2 proportion of week to weekend days (see Table 1.2). This sampling issue was primarily of concern for the peak season as shoulder season use was primarily on weekends. With a sampling plan of contacting all visitors during the shoulder season, the actual number of people contacted on weekdays and weekend days indicates that most shoulder season activity was indeed on weekend days (see Table 1.1). However, during peak season visitation occurs throughout the week and respondents contacted on different days of the week (weekend versus weekday) may also differ in their responses to the survey. Statistical analyses were performed for peak season visitors examining the effect of day of week (weekend vs. weekday) for each research finding. Statistically significant differences were observed in 26 of the 144 tests. Given the large number of tests performed, these differences may be due to chance alone. In fact, only three effects were significant when the Bonferroni correction² for multiple comparisons was used. For all variables that had significant day of week effects, the data were weighted to reflect the 5:2 week to weekend day ratio. A comparison of these weighted data with the unweighted data revealed only minimal differences that would not alter conclusions. Thus, there was no evidence that day of week contacted biased our sample, and the data presented were not weighted for day of week contacted.

² The Bonferroni correction for multiple comparisons corrects for the increased likelihood of obtaining a significant result when many related comparisons are made. The per comparison significance level is obtained by taking .05 divided by the number of comparisons.

Table 1.2 Number of weekend and week days sampled by contact point

Contact Point	Number of Days Sampled			
	Peak Season		Shoulder Season	
	Week Days	Weekend	Week Days	Weekend
Ross Lake Dam Trail	21	13	4	8
Diablo Portage	21	13	4	8
Hozomeen	11	8	0	0

Second, if people contacted at different locations differed in their responses then aggregating across contact point would not accurately represent the population because the proportion of people contacted at each site was not reflective of the actual proportion of the population visiting each site. Given that the different contact locations tended to reflect different types of users, identifying differences due to contact point may assist park staff in their management efforts. Statistical analyses were performed to examine whether respondents contacted at the different locations differed on each research finding in this report. Whenever significant effects of contact point were observed, they are reported. When contact point is not discussed, readers can assume that analyses found no significant effect of contact point.

Third, selecting one person from each vehicle (i.e., party) results in a representative sample of parties for questions related to the party (e.g., type of party, length of stay, etc.), but a sample that over-represents small parties for questions related to the individual (e.g., age, overall trip satisfaction, etc.). If people from small parties differ from people from large parties, then data from questions related to the individual will be biased. Statistical analyses were performed examining the effect of party size for each research finding related to individuals. Statistically significant differences were observed in 10 of the 108 tests. Given the large number of tests performed, these differences may be due to chance alone. In fact, only one of these effects was significant when the Bonferroni correction³ for multiple comparisons was used. The findings for these variables are reported in the body of the report when the particular question is discussed. When party size is not discussed, the reader should assume there was no effect of party size.

Survey administration

During the survey periods, survey workers contacted visitors at specified access sites during randomly selected blocks of time. Parties passing each contact point were stopped and one party member asked to participate in the survey. An easy procedure that generally does not introduce bias into the sample selection process is to select the party member in the car who has had the most recent birthday. The person with the most recent birthday was asked specifically to complete the on-site and mail questionnaires. A sample of approximately 650 visitors was contacted during the sampling time periods (includes both the shoulder season and summer season). Refusals were recorded and less than 10% of people refused to participate. When a visitor refused, the next party was stopped and the party member with the most recent birthday was asked to participate. The on-site questionnaire took approximately 2 minutes to complete. Respondents completed the on-site questionnaire and returned it to the survey worker.

³ The Bonferroni correction for multiple comparisons corrects for the increased likelihood of obtaining a significant result when many related comparisons are made. The per comparison significance level is obtained by taking .05 divided by the number of comparisons.

I. Introduction and Method

Respondents were then given the mail questionnaire and return envelope to complete at the end of their trip.

Administration of mailings

Protected Area Social Research Unit personnel in Seattle, WA administered mailings. The names of visitors agreeing to participate were received electronically within one week and added to the database that served as the basis for administering the mailings. All people who provided a name and address on the on-site questionnaire were mailed a thank you/reminder letter about one week after they received the questionnaire. Non-respondents received a second reminder letter and an additional copy of the questionnaire about 14 days after the first reminder. For those who did not respond to the second reminder, a third letter and yet another copy of the questionnaire were sent about 14 days after the second reminder. Of the 635 questionnaires distributed, 16 were returned due to incorrect or out-of-date addresses. The final response rate was 71.0 percent, with 451 out of 635 questionnaires completed and entered in the data file.

Peak versus shoulder season visitors

People who visit on weekends before and after the peak season (shoulder season) were contacted to allow a comparison peak versus shoulder season visitors. The shoulder season consisted of the weekend prior to peak season beginning and the days between Labor Day and September 25, 2006. A total of 110 visitors were contacted during the shoulder season. No visitors were contacted at Hozomeen during the shoulder season due to logistics and costs. Statistical analyses were performed examining whether shoulder season visitors and peak season visitors differed on each research finding. Statistically significant differences were observed in 16 of the 144 tests. Given the large number of tests performed, these differences may be due to chance alone. In fact, only one of these effects was significant when the Bonferroni correction⁴ for multiple comparisons was used. Type of trip remained differed significantly for peak and shoulder season visitors, $\chi^2 (n = 634, 5) = 31.05, p < .001$. As can be seen in Table 1.3, peak season visitors were more likely than shoulder season visitors to camp along the lakeshore (30.7% vs. 15.5%) and to car camp (14.3% vs. 8.2%). Shoulder season visitors were more likely to drive from home or other lodging to spend the day (33.6% vs. 18.3%) or to stay at Ross Lake Resort (34.5% vs. 21.2%). These findings most likely reflect cooler and wetter weather during the shoulder season than during the peak season. Overall, there was little evidence that shoulder season visitors differed from peak season visitors.

⁴ The Bonferroni correction for multiple comparisons corrects for the increased likelihood of obtaining a significant result when many related comparisons are made. The per comparison significance level is obtained by taking .05 divided by the number of comparisons.

Table 1.3 Type of trip distribution for Shoulder and Peak Seasons

	Shoulder season n = 110	Peak season n = 524	Total n = 634
Drove from home or other lodging to spend the day	33.6%	18.3%	21.0%
Car-camping	8.2%	14.3%	13.2%
Staying overnight at Ross Lake Resort	34.5%	21.2%	23.5
Camping overnight along lakeshore	15.5%	30.7%	28.1%
Boating in, backpacking away from lakeshore, and camping inland	3.6%	9.2%	8.2%
Other trip type	3.6%	9.2%	8.2%
	100.0%	100.0%	100.0%

Sub-group analyses

Conversation with park management resulted in the identification of analyses comparing different sub-groups of park visitors to be performed. These analyses included a comparison of: 1) local and non-local park visitors, 2) visitors who sought information and those who did not, and 3) different user groups. Of the 635 people contacted for the Ross Lake User Survey, 27 (4.3%) were local Washington residents. Of these 27 local Washingtonians, 19 returned the mail survey. These sample sizes were too small to provide reliable results when comparing local park users to other users. The findings for the other two sets of analyses are presented in the report when each variable is discussed. When significant differences were observed, they are reported. An absence of a discussion of sought information or contact point should be interpreted as indicating no significant effects were found.

Statistical considerations

Readers not familiar with statistical analyses of survey data are encouraged to refer to Appendix E, "How to Use this Report". *Consistent with convention, statistical significance was set at the .05 level for analyses included in this report.* Statistical tests with *p*-values equal to or less than .05 are interpreted as indicating effects that are reliable or real (observed effects have a 5 percent or less probability of being due to chance alone). Although the analyses highlight statistically significant effects, they do not reveal whether effects have important practical implications. Some effects that fall just short of the .05 significance level may have large practical implications while other effects with high statistical significance may have no practical implications. Thus, it is important to consider both the statistical significance and the practical implications of these data.

Limitations

The Ross Lake NRA Ross Lake User Survey has several general limitations that should be kept in mind when 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 Ross Lake NRA visitors who were contacted at the specified Ross Lake access sites. In addition, there are other limitations

I. Introduction and Method

noted in the body of the report that are due to the manner in which individual questions were interpreted. Finally, there are limitations that revolve around the issue of non-response (i.e., possible bias in the sample due to differences between the visitors who completed the questionnaires and those who did not). Potential limitations associated with non-response are discussed below.

Non-response

It is mathematically possible that the people who completed both the on-site questionnaire and the mail questionnaire differed sufficiently from the people who only completed the on-site questionnaire so that the sample data do not accurately represent the population⁵. A variety of data from the on-site questionnaire provided an opportunity for the use of statistical tests to identify differences between respondents and non-respondents to the mail questionnaire. Specifically, possible differences were assessed using Chi-square tests for independence that determined whether response rates were independent of a particular visitor characteristic (using a .05 significance level). The visitor characteristics that were used in assessing possible non-response bias were party size, any children under the age of 18 in the party, type of personal group, type of larger group (if personal group was part of one), trip type, activities planned to do, gender, age, and location of residence.

For the visitor characteristics listed above, statistically significant differences in response rates were found only for age, $t(615) = -6.24, p < .001$. Respondents who returned the mail questionnaire were significantly older than respondents who did not return the mail questionnaire (44.4 vs. 37.7 years). Because it was possible that people's experiences and knowledge of Ross Lake NRA differed based on age, the impact of visitors' age was examined for each research finding in this report. Statistically significant differences were observed in 16 of the 130 tests. Given the large number of tests performed, some of these differences may be due to chance alone. In fact, only three of these effects remained significant when the Bonferroni correction⁶ for multiple comparisons was used. For each significant difference, a comparison was made with the results weighted to correct for any age bias. In all cases, no differences of practical significance were observed. Thus, none of these differences are reported in the body of this report.

Accuracy of the sample

The sampling plan provides for a random sample of parties to be contacted. One person from each party was selected to participate. For questions related to the party (e.g., party size, locations visited during trip), the respondent universe will be parties with members over the age of 17 who accessed Ross Lake. For questions related to the individual (e.g., age, number of prior visits, attitudes toward management policies), the respondent universe will be persons over the age of 17 selected to represent their party who accessed Ross Lake.

Although questions in the survey reflected these two different universes, the number of people responding to each was the same. Thus, assuming a random sample and questions of the yes/no type in which the true occurrences of these values in the population are 50%/50%, the data from the larger sample from the contact sheet (i.e., 635 respondents) can be generalized to each of the

⁵ No data were collected on those persons who refused to participate in any part of the study (i.e., the contact interview and the mail questionnaire) and thus, non-response analyses were not possible.

⁶ The Bonferroni correction for multiple comparisons corrects for the increased likelihood of obtaining a significant result when many related comparisons are made. The per comparison significance level is obtained by taking .05 divided by the number of comparisons.

two universes with a 95 percent assurance that the obtained or observed percentages to any item will vary no more than $\pm 3.9\%$. For questions from the contact sheet, assuming a random sample and questions of the yes/no type in which the true occurrences of these values in the population are 50%/50%, the data from the smaller sample from the mail survey (i.e., 451 respondents) can be generalized to the population of people selected to represent their party that use the corridor with a 95 percent assurance that the obtained or observed percentages to any item will vary no more than $\pm 4.6\%$.

Subject to the limitations stated previously, the authors generally believe that the data are representative of recreational visitors aged 18 or older to Ross Lake NRA who visited during the time of the survey. This confidence is based on the large sample size, the small differences in response rates for different types of visitors, and the fact that deviations from the sampling plan were relatively minor.

Conventions followed in this report

As mentioned previously, an on-site questionnaire and a mail questionnaire were used to collect the data presented in this report. These questionnaires are included in this report (see Appendix C), and it is recommended that they be reviewed before reading the body of this report. In the body of this report, each question is presented as it appeared on the questionnaire, and corresponding graphs, tables, or analyses follow it. The specific survey instrument 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.

When a chart reports data for a subset of respondents (*c.f. Figure 2.19: Number of Party Members under Age 18*), a note describes the sub-sample included in the chart.

As noted above, the sample may be biased because the proportion of people contacted at different locations did not reflect actual visitation rates. We looked for differences in survey responses for visitors contacted at different sites. When significant effects of contact location were found, they are reported. When contact point is not discussed, readers can assume that analyses found no significant effects of this variable. When contact point differences exist, they are always reported because the overall sample data may misrepresent the individual groups of visitors.

Similarly, because of the likelihood of non-response bias due to differing response rates among respondents based on age, we looked for differences due to respondents' age. When significant effects of respondents' age were found, they are reported. When age is not discussed, readers can assume that analyses found no significant effects of this variable. When age differences exist, they are always reported because the overall sample data may misrepresent the individual groups of visitors.

Missing data for up to 10 percent of respondents to a particular question are generally not considered likely to alter the interpretation of that question. Throughout this report, few questions had more than 10 percent missing data. Exceptions are noted in the text and charts.

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

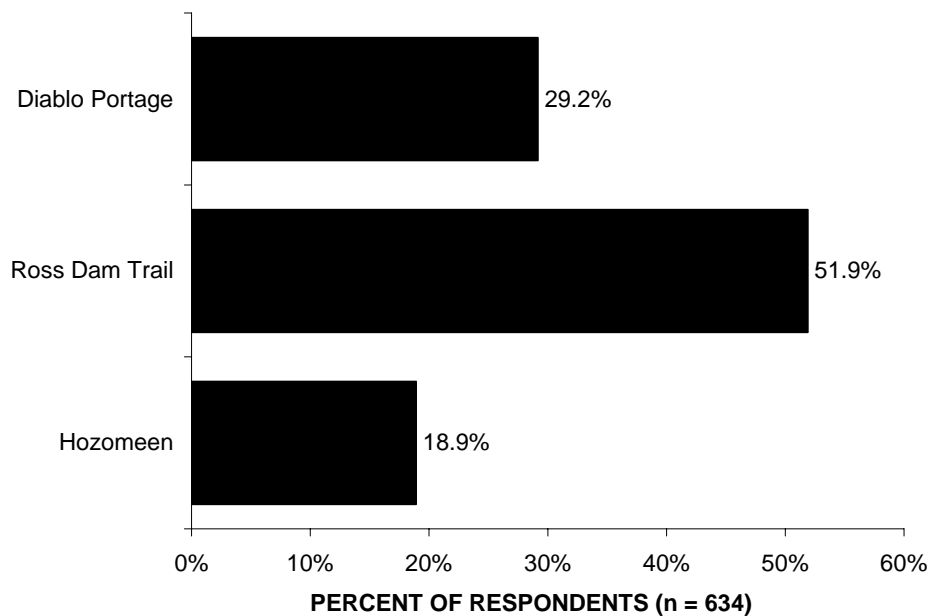
II. VISITOR PROFILE

Visitors participating in the Ross Lake NRA State Route 20 Corridor User Mail Survey were asked a series of demographic questions. Responses to these questions are used here to characterize or give a profile of, these corridor visitors.

Location contacted and Sought information

Respondents were contacted at three sites in Ross Lake National Recreation Area (NRA) where Ross Lake can be accessed and the sampling plan did not allow for a sample that represented the relative use of each area. If people or their activity varies by the sites they visit (i.e., contact point), then aggregating the responses across contact point may misrepresent the overall population of visitors. People accessing the lake from these different sites were believed to reflect different user groups. Thus, analyses were conducted to determine if responses varied by contact point. When significant differences were observed, they are reported. An absence of a discussion of contact point should be interpreted as indicating no significant effects were found. Because the sampling plan may not reflect actual visitation proportions across the three sites, Figure 2.1 may not represent the true relative use of these areas.

**Figure 2.1. ROLA Lake User Survey
Contact Point**

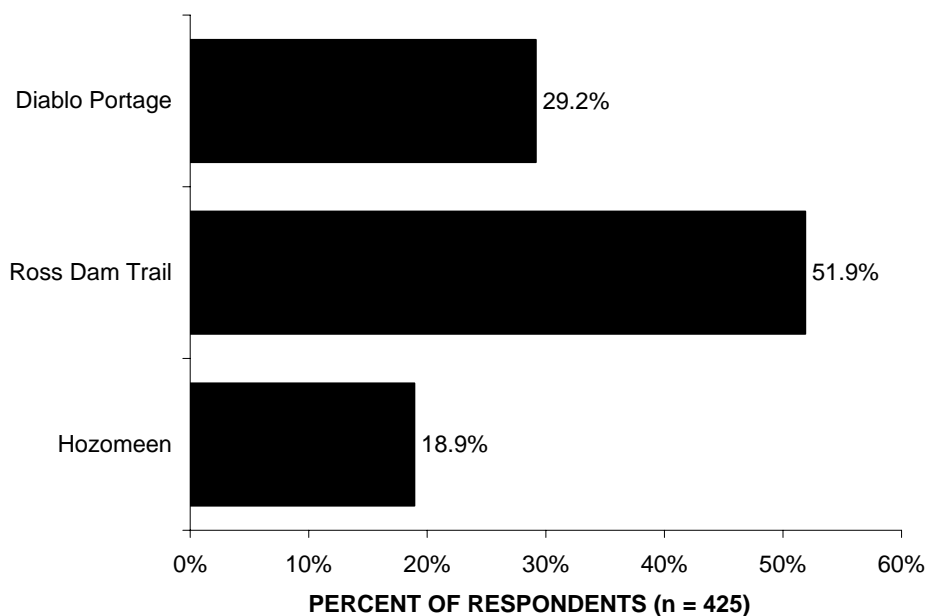


Almost two-thirds (63.3%) of Ross Lake Users sought information prior to their trip. Because it was possible that people who seek information prior to their trip may differ from those who did not in terms of their trip planning, experiences, and attitudes, analyses compared these those who sought information with those who did not for every research finding. When significant differences were found they are reported. An absence of a discussion of sought information should be interpreted as indicating no significant effects were found.

People contacted at different location differed in their likelihood of seeking information, $\chi^2(n = 425, 2) = 7.25, p = .027$. As can be seen in Figure 2.2, people contacted at Ross Dam Trail were the most likely to seek information prior to their trip (51.9%) whereas visitors contacted at Hozomeen were the least likely (18.9%).

Because contact point and seek information were related, when significant effects were observed for both of these variables on a research finding, additional analyses were conducted to examine their independent contributions and any possible interaction between them.

**Figure 2.2. ROLA Lake User Survey
Sought Information by Contact Point**



II. Visitor Profile

Age of respondents

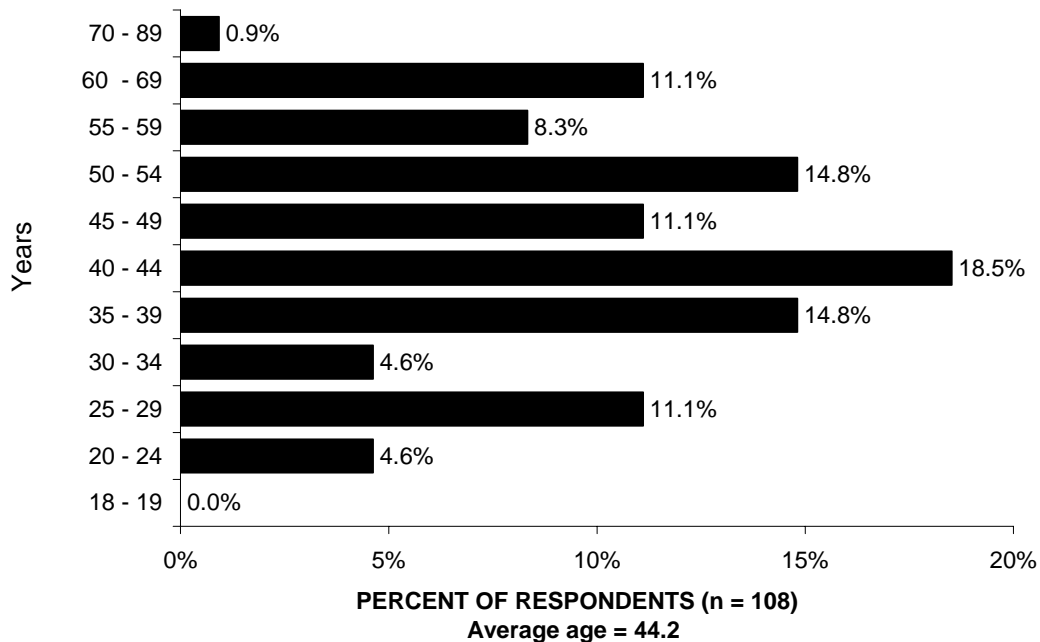
Contact sheet

7. What year were you born? 19 ____

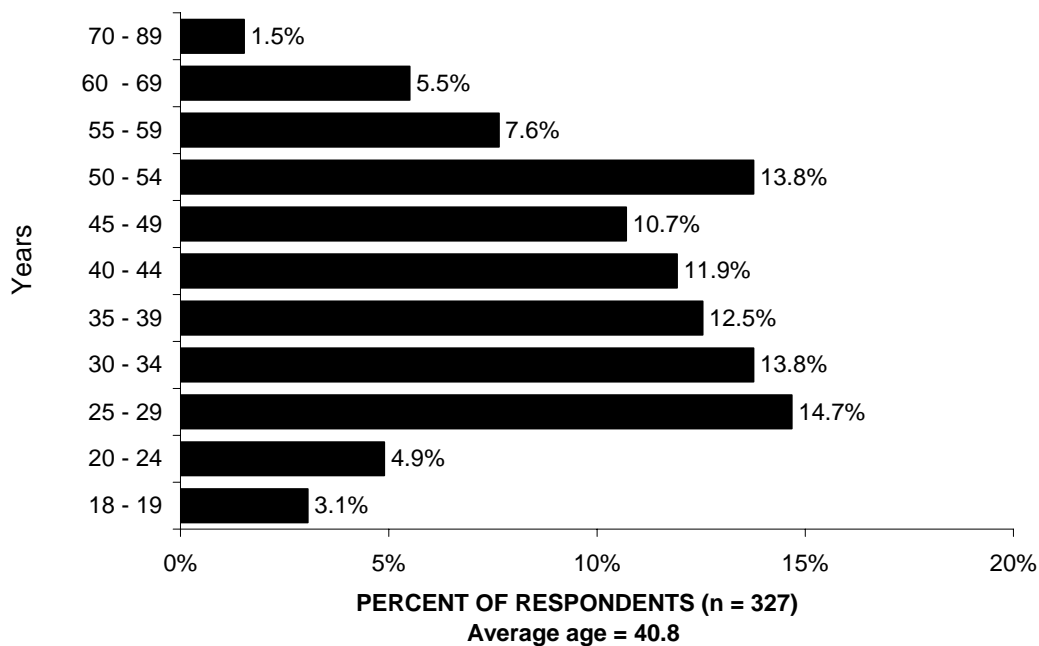
Separate analyses revealed that age of all visitors over age 17 differed by contact point and by sought information. Further analyses including both variables revealed no significant interaction between these variables, although each remained significant.

Age of all visitors over age 17 differed by contact point, $F(2, 405) = 5.22, p = .006$ (see Figures 2.3 – 2.5). Post Hoc Tukey Tests revealed that visitors contacted at Ross Dam Trail ($M = 40.8$) were significantly younger than visitors contacted at Hozomeen ($M = 44.2$) and Diablo Portage ($M = 44.5$). No other differences between contact points were found.

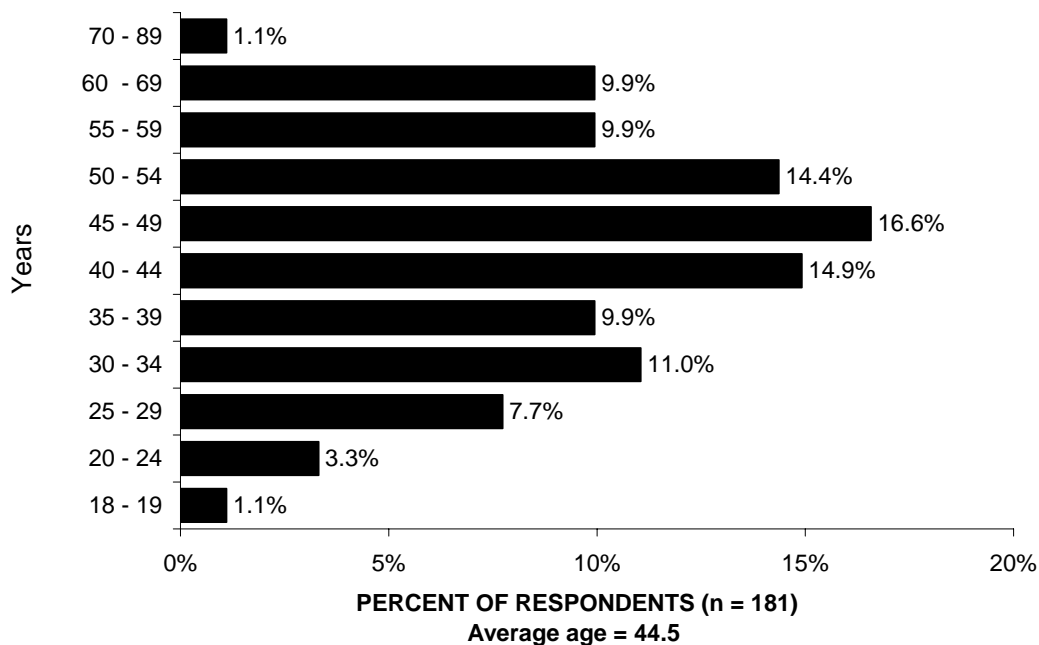
Figure 2.3. ROLA Lake User Survey, Contact Sheet Q-7
Age of Visitors Over Age 17 Contacted at Hozomeen



**Figure 2.4. ROLA Lake User Survey, Contact Sheet Q-7
Age of Visitors Over Age 17 Contacted on Ross Dam Trail**

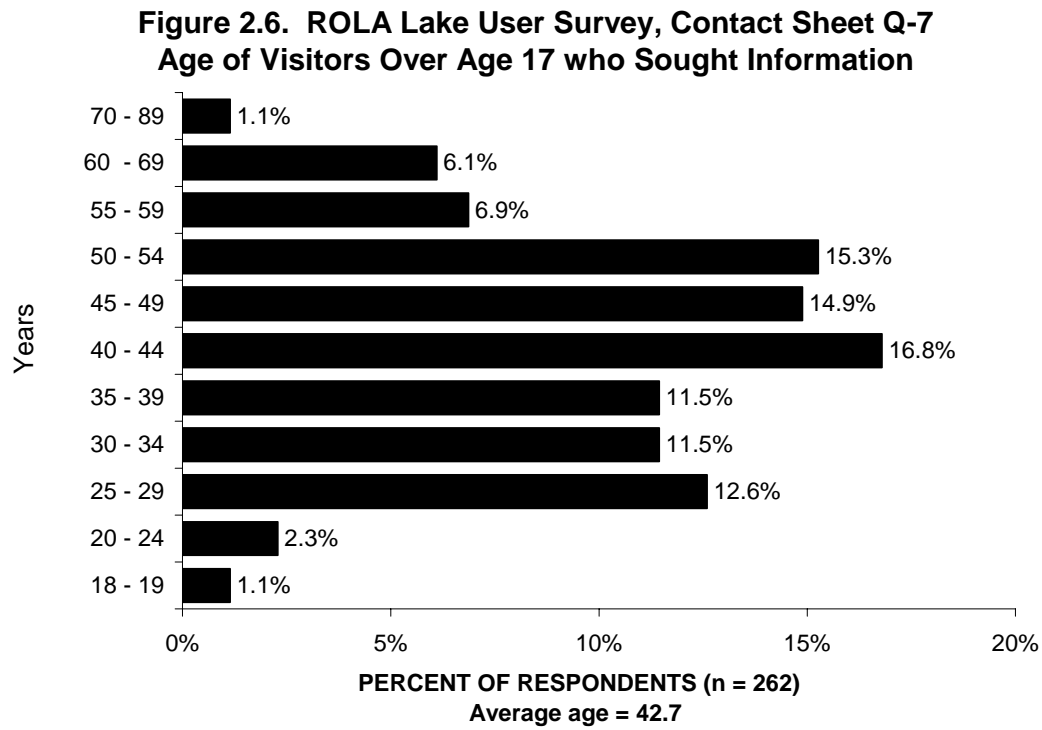


**Figure 2.5. ROLA Lake User Survey, Contact Sheet Q-7
Age of Visitors Over Age 17 Contacted at Diablo Portage**

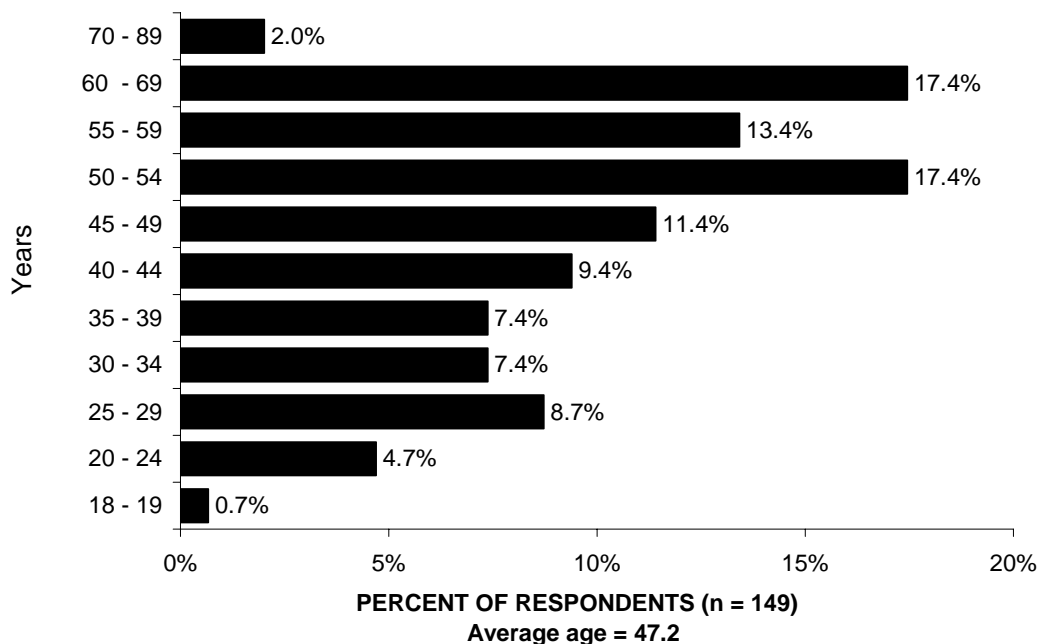


II. Visitor Profile

Visitors who sought information prior to their trip were significantly younger ($M = 42.7$) than visitors who did not seek information ($M = 47.2$), $F(1, 405) = 11.39$, $p = .001$. Figures 2.6 and 2.7 show the age distributions for these two groups.



**Figure 2.7. ROLA Lake User Survey, Contact Sheet Q-7
Age of Visitors Over Age 17 who Did Not Seek Information**



Sex

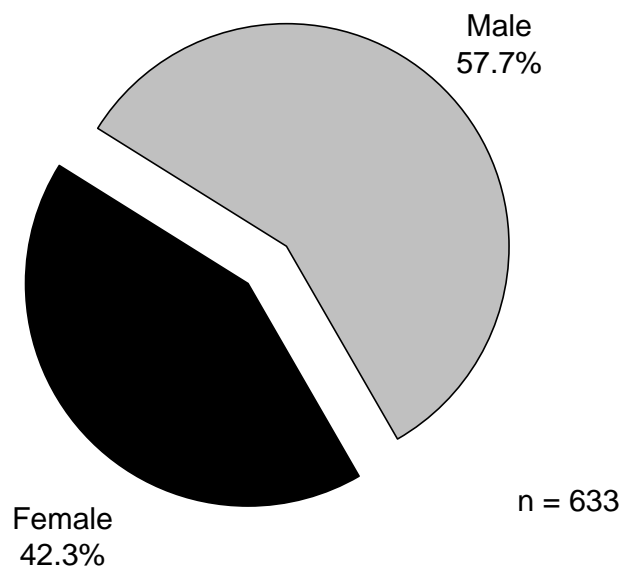
Contact sheet Q6 and Mail questionnaire Q17

Are you: ☐ FEMALE ☐ MALE

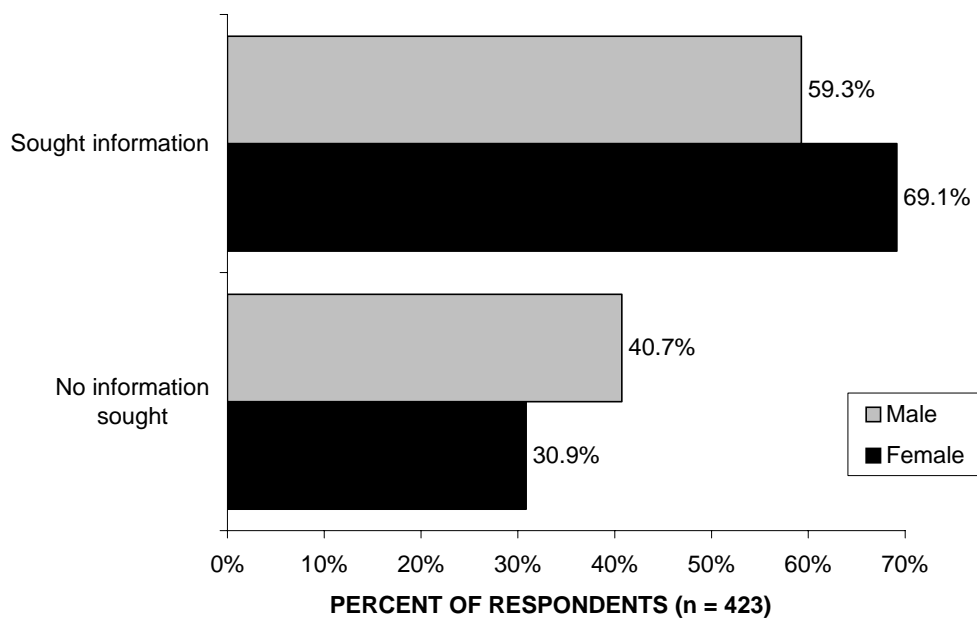
Visitors were asked their gender on the contact sheet and on the mail questionnaire. As can be seen in Figure 2.8, 57.7% of visitors who completed the contact sheet were male. Responses to the mail questionnaire indicated 56.9% were male. This difference resulted from fewer men responding to the mail survey than women, although non-response analyses indicated that men and women did not differ significantly in their response rates.

As can be seen in Figure 2.9, females were significantly more likely to seek information than males, $\chi^2(n = 423, 1) = 4.30, p = .038$.

**Figure 2.8: ROLA Lake User Survey, Contact Sheet Q-6
Gender of Visitors Over Age 17**



**Figure 2.9. ROLA Lake User Survey, Contact Sheet Q-6
Gender of Visitors Over 17 by Sought Information**



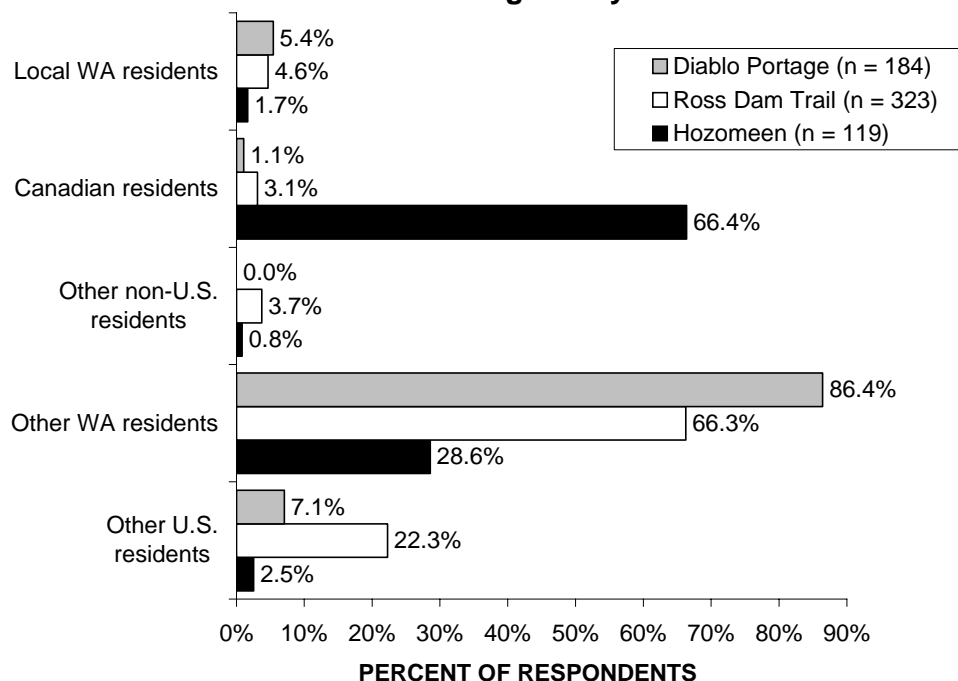
Residence

Contact sheet

8. What is your home Zip or Postal Code? *(If you live outside of the United States, please write the name of your country.)*

Respondents' home zip code was used to classify them as local Washington residents, other Washington residents, other U.S. residents, Canadian residents, and other non-U.S. residents. Local Washington residents were defined through discussion with park staff and included the following areas: Sedro Woolley, Mt Vernon, Rockport, Marblemount, Darrington, Concrete, Burlington, Winthrop, Twisp, and Methow. Residence of visitors over age 17 differed significantly by contact point, $\chi^2(n = 613, 6) = 341.65, p < .001$ (excludes Other non-U.S. residents to eliminate expected frequencies < 5). As can be seen in Figure 2.10, 66.4% of visitors contacted at Hozomeen were Canadian compared to less than 4% at the two U.S. contact sites. Furthermore, Ross Dam Trail had a greater percentage of Other U.S. residents than the other two contact points.

**Figure 2.10. ROLA Lake User Survey, Contact Sheet Q-7
Residence of Visitors Over Age 17 by Contact Point**



II. Visitor Profile

Education

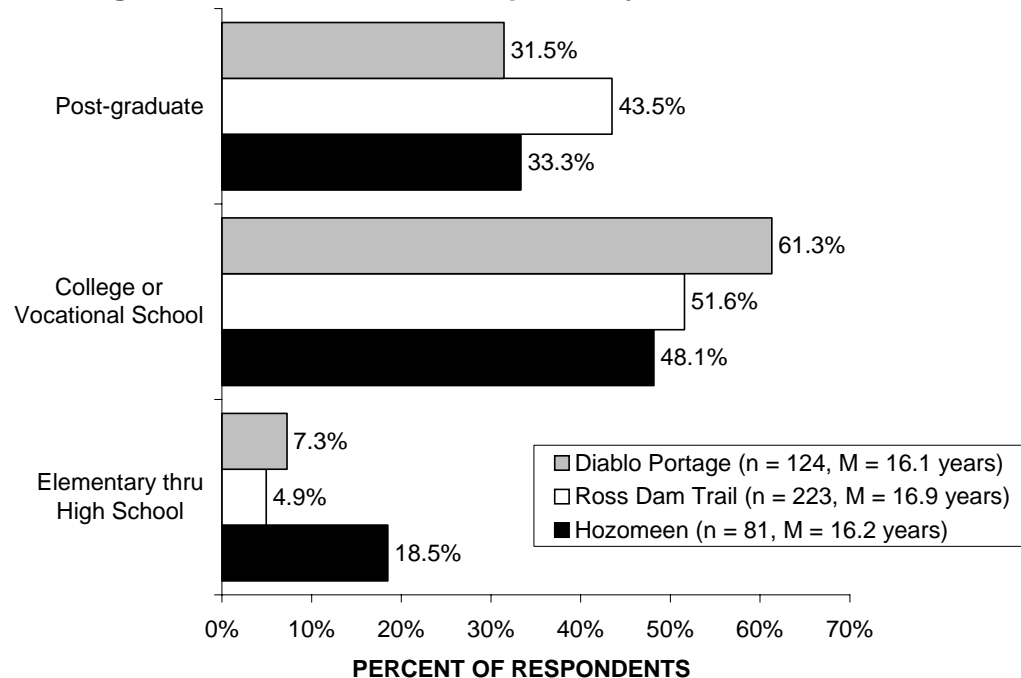
Mail questionnaire

19. 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)

Analyses revealed that highest education level achieved differed by contact point, $F(2, 425) = 3.94$, $p = .020$ (see Figure 2.11). Post Hoc Tukey Tests revealed that visitors contacted at Ross Dam Trail had significantly more years of education ($M = 16.9$) than visitors contacted at Diablo Portage ($M = 16.1$). No other differences between contact points were found.

**Figure 2.11. ROLA Lake User Survey, Mail Survey Q-19
Highest Education Level Completed by Contact Point**



Ethnicity and Race

Mail questionnaire

20. Are you Hispanic or Latino?

YES – Hispanic or Latino

NO – Not Hispanic or Latino

21. What is your race? (Check one or more races to indicate what you consider yourself to be)

American Indian or Alaska Native

Asian

Black or African American

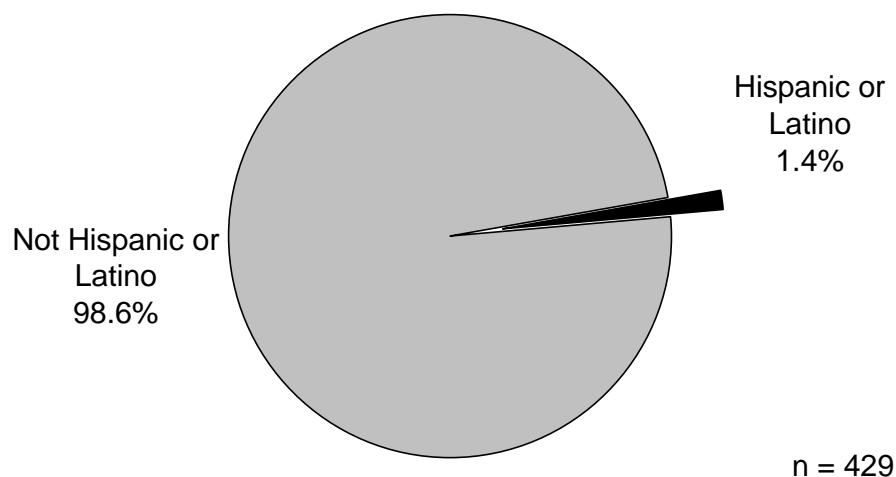
Native Hawaiian or other Pacific Islander

White

As can be seen in Figure 2.12, the vast majority of Ross Lake users were not Hispanic or Latino. In Q21, respondents were able to indicate more than one race. Figure 2.13 shows that only 1.9% of respondents indicated more than one race. The vast majority (94.1%) of respondents checked white as the single descriptor of their race.

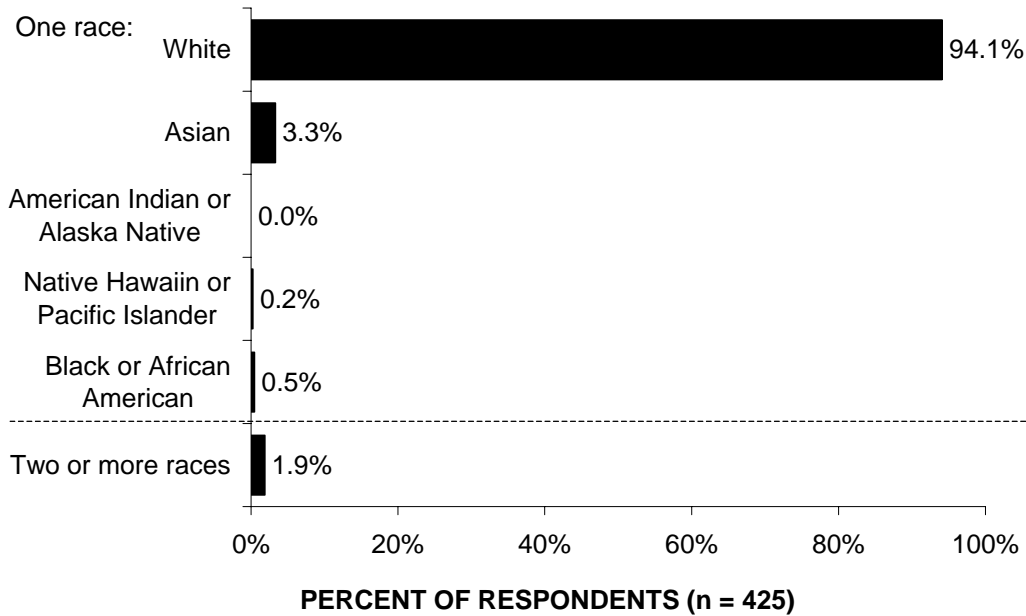
Respondents who checked Asian as one of their races were significantly more likely to seek information (87.5%) than those respondents who did not check Asian (62.7%), $\chi^2(n = 413, 1) = 4.08, p < .043$.

Figure 2.12: ROLA Lake User Survey, Mail Survey Q-20
Percent of Respondents Hispanic or Latino



II. Visitor Profile

**Figure 2.13. ROLA Lake User Survey, Q-21
Race of Mail Survey Respondents**



Number of trips in the past three years

Mail questionnaire

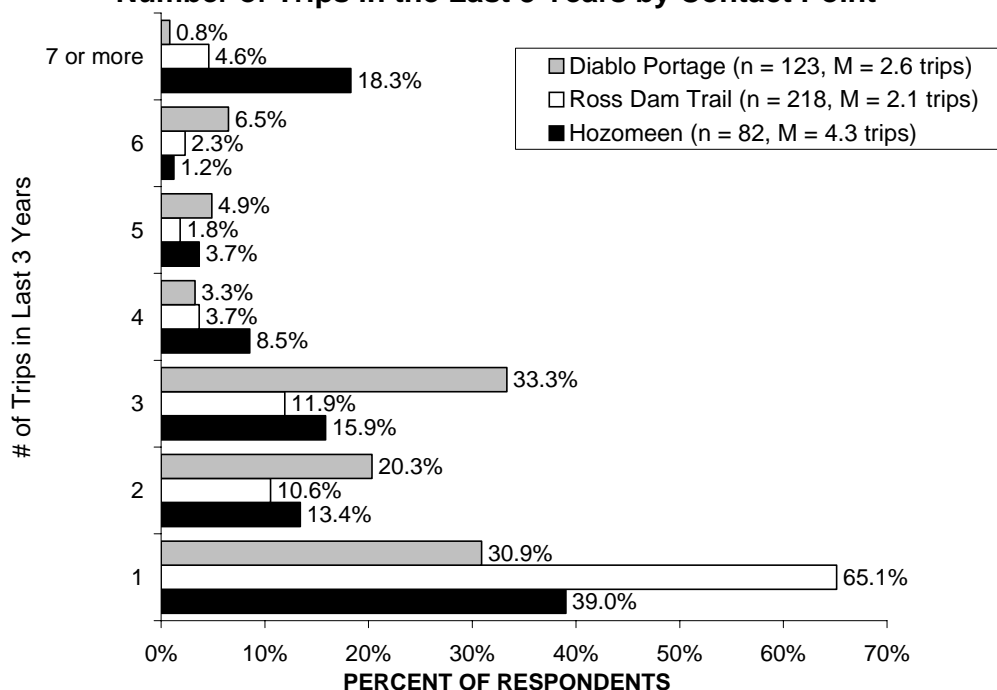
1. **INCLUDING THE TRIP DURING WHICH YOU WERE CONTACTED**, how many trips have you made to Ross Lake NRA in the last three years? *Recall that a trip is one in which you stopped at one or more sites, facilities, or trails within the recreation area.*

NUMBER OF TRIPS IN LAST 3 YEARS _____

Number of trips taken to Ross Lake NRA in the last three years varied significantly by contact point, $F(2, 420) = 13.11, p < .001$. Post Hoc Tukey Tests revealed that visitors contacted at Hozomeen had taken significantly more trips in the last three years ($M = 4.3$) than visitors contacted at Ross Dam Trail ($M = 2.1$) or Diablo Portage ($M = 2.6$). No other differences between contact points were found.

As can be seen in Figure 2.14, visitors contacted at Hozomeen were more likely to have made 7 or more trips in the last three years than visitors contacted at the other two locations (18.3% vs. 0.8% and 4.6%). Visitors contacted at Ross Dam Trail were more likely to be first time visitors than visitors contacted at the other locations (65.1% vs. 30.9% and 39.0%).

**Figure 2.14. ROLA Lake User Survey, Mail Survey Q-1
Number of Trips in the Last 3 Years by Contact Point**



Party Size

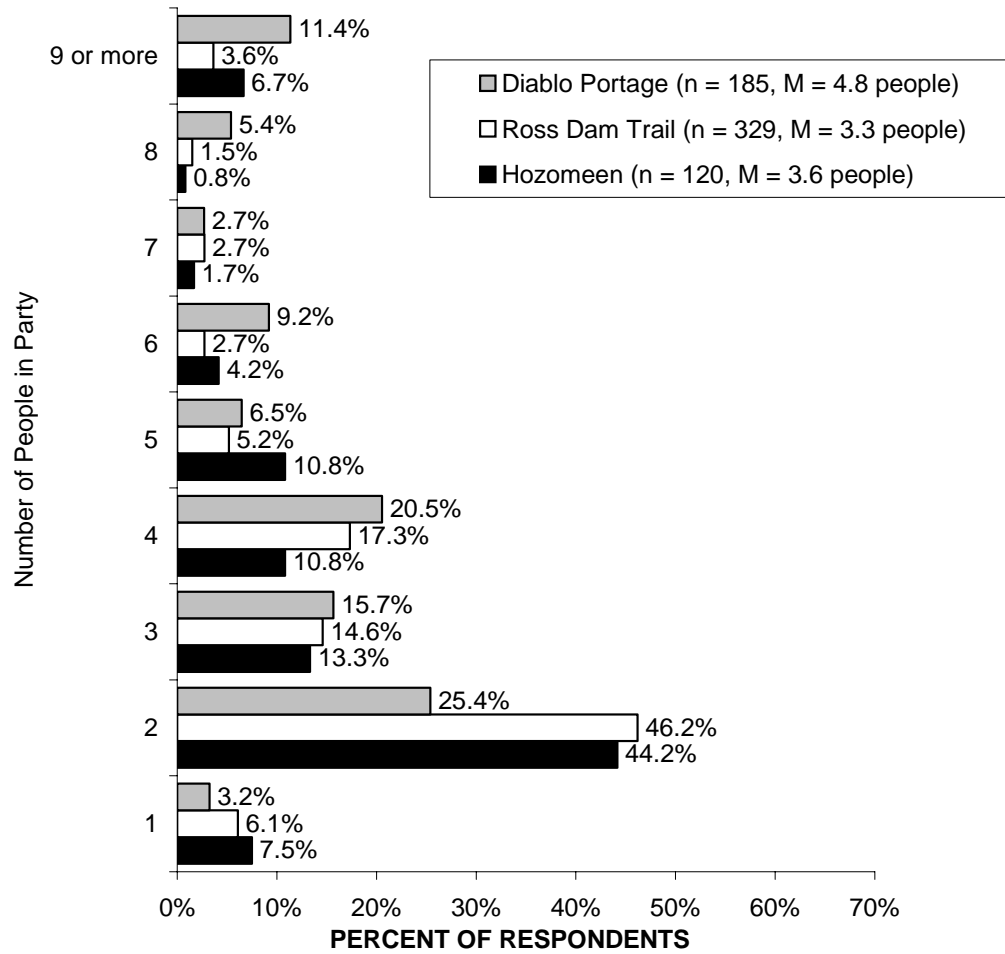
Contact Sheet

1. How many people are in your party today?

_____ Number of people

Party size differed significantly by contact point, $F(2, 631) = 18.32, p < .001$. Post Hoc Tukey Tests revealed that visitors contacted at Diablo Portage had significantly larger parties ($M = 4.8$) than visitors contacted at Ross Dam Trail ($M = 3.3$) or Hozomeen ($M = 3.6$). No other differences between contact points were found. As can be seen in Figure 2.15, visitors contacted at Diablo Portage were more likely to have larger parties (e.g., parties of size 6, 8, and 9 or more) than visitors contacted at the other two sites.

**Figure 2.15. ROLA Lake User Survey, Contact Sheet Q-1
Party Size by Contact Point**



Party Type

Contact Sheet

3. Please check the makeup of your personal group:

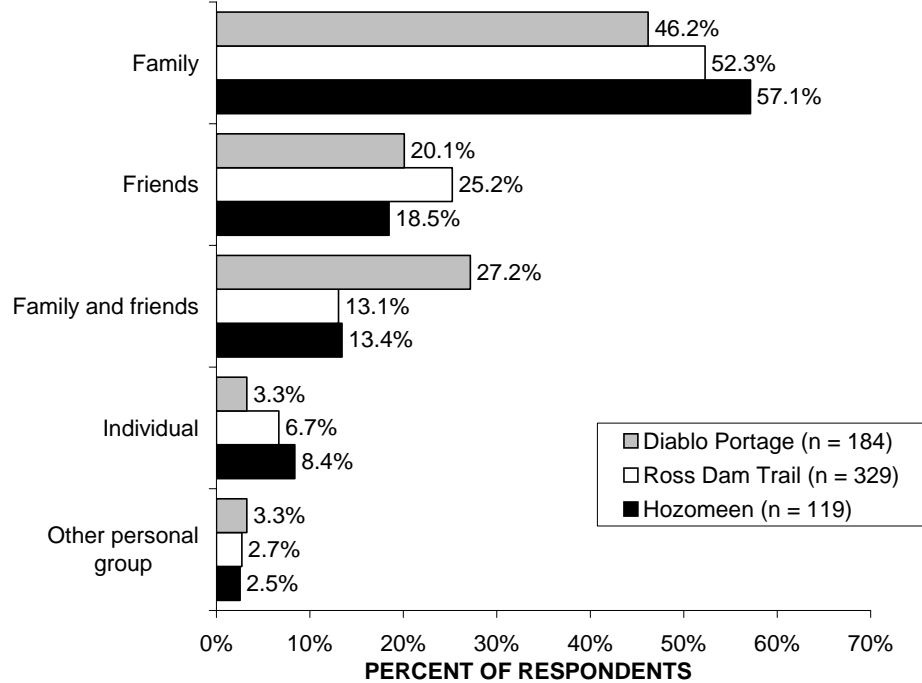
- ☐ Individual
- ☐ Family
- ☐ Friends
- ☐ Family and friends
- ☐ Other _____
(please specify)

3a. If your personal group is part of a larger group, please circle the makeup of the larger group:

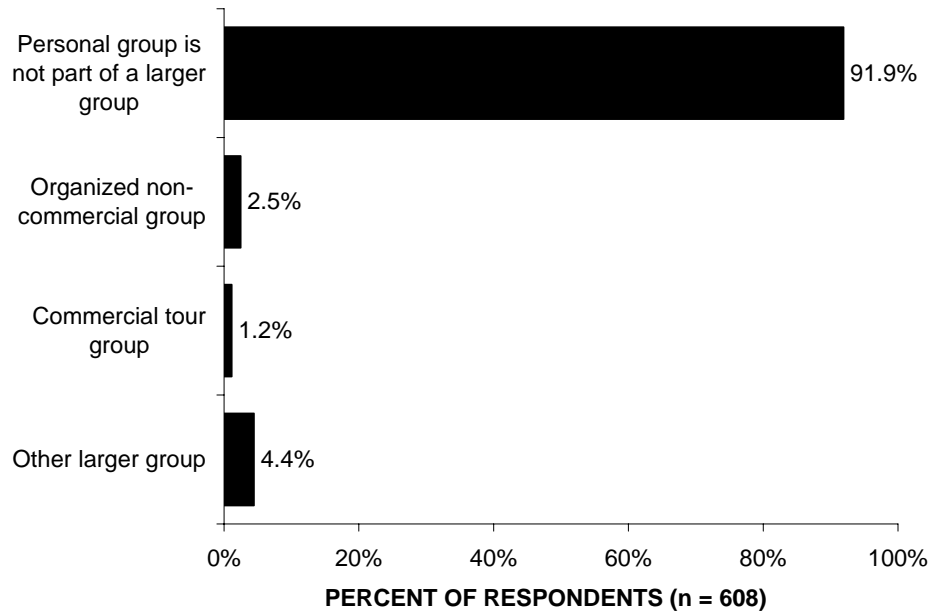
- ☐ Personal group is not part of a larger group
- ☐ Commercial tour group
- ☐ Organized non-commercial group _____
(please specify)
- ☐ Other _____
(please specify)

Type of personal group varied by contact point, $\chi^2(n = 614, 6) = 22.77, p = .001$ (excludes Other personal groups to eliminate expected frequencies < 5). As can be seen in Figure 2.16, visitors contacted at Diablo Portage were more likely to have groups comprised of family and friends than visitors contacted at the other two locations (27.2% vs. 13.1% and 13.4%).

**Figure 2.16. ROLA Lake User Survey, Contact Sheet Q-3
Type of Personal Group by Contact Point**



**Figure 2.17. ROLA Lake User Survey, Contact Sheet Q-3
Personal Group is Part of Larger Group**



Party members under the age of 18

Contact sheet

2. Are there any people in your party today under the age of 18?

☐ NO

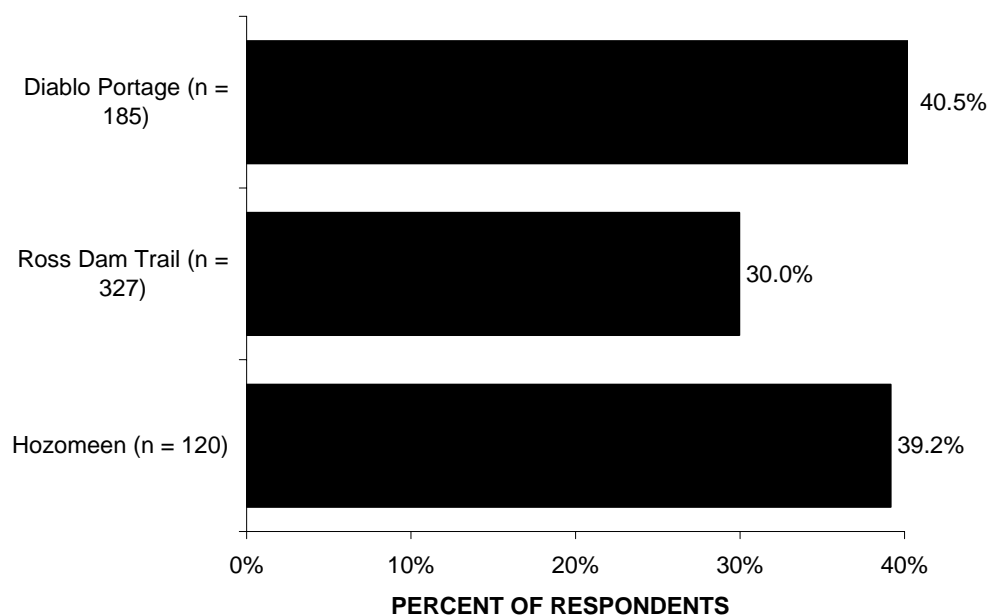
☐ YES



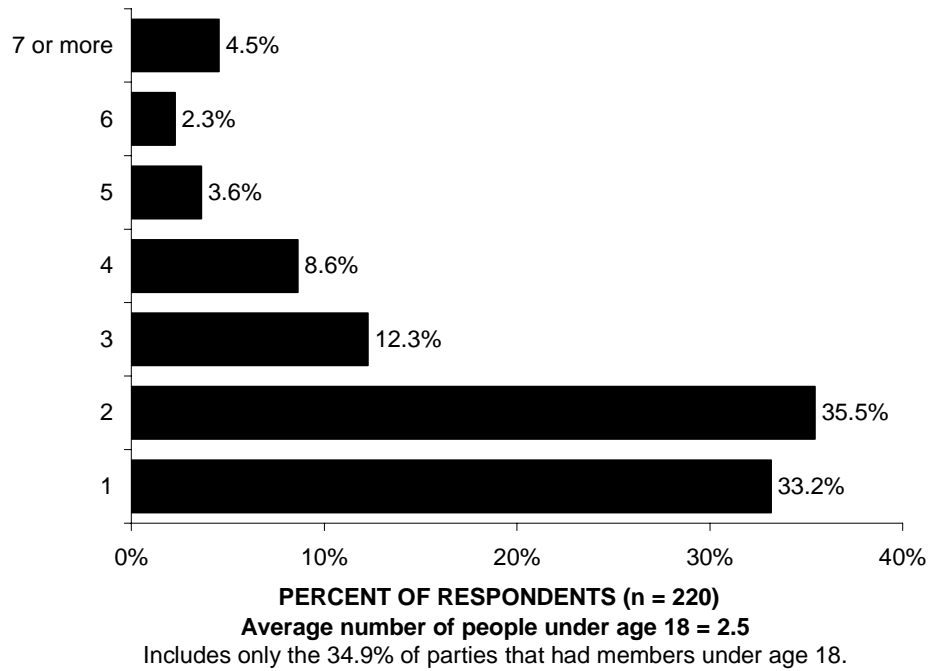
2.1 How many people are under 18? _____

The likelihood of a party having people under 18 varied by contact point, χ^2 ($n = 632$, 2) = 7.06, $p = .029$. As can be seen in Figure 2.18, visitors contacted at Ross Dam Trail were less likely to have party members under age 18 than visitors contacted at the other two locations. Although the likelihood of having people under age 18 in the party varied by contact point, the number of people under age 18 in the party did not differ by contact point. The average number of people under age 18 in a party was 2.5 and as seen in Figure 2.19, parties with people under age 18 were most likely to have 1 (33.2%) or 2 (35.5%).

Figure 2.18. ROLA Lake User Survey, Contact Sheet Q-2
Percent of Parties with Members Under Age 18



**Figure 2.19. ROLA Lake User Survey, Contact Sheet Q-2
Number of Party Members Under Age 18**



III. TRIP CHARACTERISTICS

Visitors participating in the Ross Lake NRA State Route 20 Corridor User Mail Survey were asked a variety of questions about their trip and the activities they engaged in. This section reports the data collected with these questions.


Sought information prior to trip

Mail questionnaire

2. PRIOR TO THE VISIT DURING WHICH YOU WERE CONTACTED, did you and your group seek information about Ross Lake National Recreation Area and/or the attractions that are found within its boundaries? *(Check one number.)*

NO → **GO TO QUESTION 3**

YES



2a. From which sources did you and your group seek to obtain information? *(Check as many boxes as apply.)*

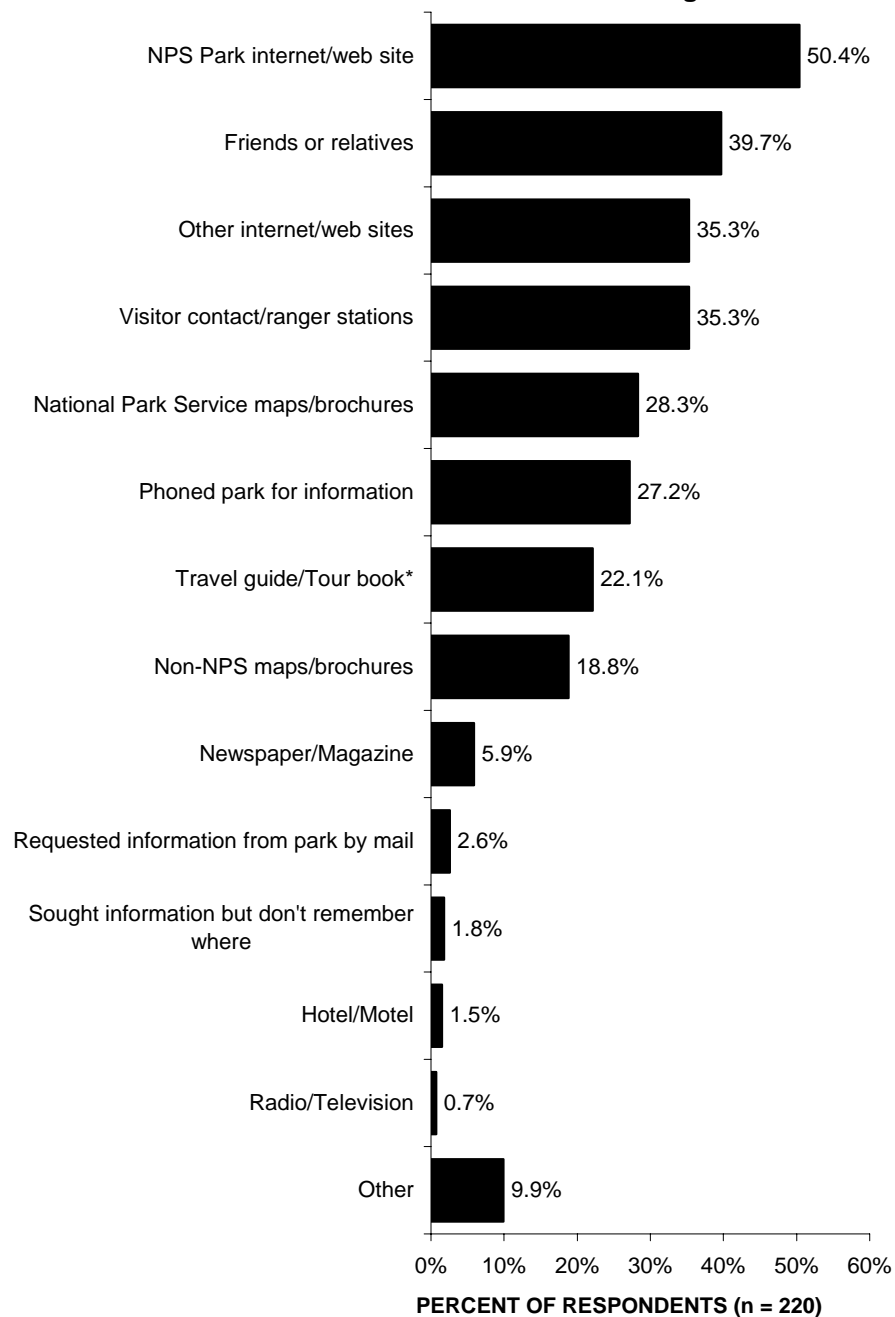
- Friends or relatives
- Travel guide/Tour book
- Newspaper/Magazine
- Phoned park for information
- Requested information from park by mail
- NPS maps/Brochures
- Non-NPS Maps/Brochures
- Radio/Television
- Hotel/Motel
- Visitor contact station/Ranger Stations
- NPS Park internet/web site (<http://www.nps.gov/rola/> or <http://www.nps.gov/noca/>)
- Other internet/web sites
- Other *(Please specify: _____)*
- Sought information but don't remember where

As reported in the Visitor Profile section, almost two-thirds (63.3%) of Ross Lake Users sought information prior to their trip, and people contacted at different locations differed in their likelihood of seeking information, $\chi^2(n = 425, 2) = 7.25, p = .027$. People contacted at Ross Dam Trail were the most likely to seek information prior to their trip (51.9%) whereas visitors contacted at Diablo Portage were less likely (29.2%) and those contacted at Hozomeen were the least likely (18.9%).

Visitors sought information from a variety of sources (see Figure 3.1). The likelihood of seeking information from travel guides/tour books varied by contact point, $\chi^2(n = 272, 2) = 15.70, p < .001$. As can be seen in Figure 3.2, visitors contacted at Ross Dam Trail were the most likely to seek information from travel guides/tour books.

III. Trip Characteristics

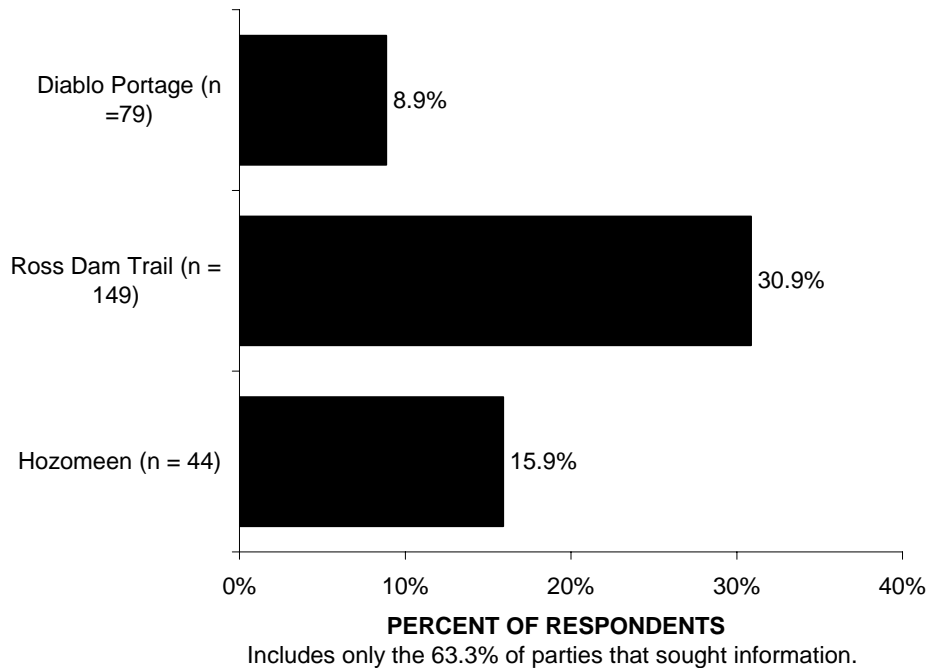
Figure 3.1. ROLA Lake User Survey, Mail Survey Q-2a
Sources from which Information was Sought



Includes only the 63.3% of visitors who sought information prior to their trip

*The likelihood of seeking information from this source varied by contact point.

**Figure 3.2. ROLA Lake User Survey, Mail Survey Q-2a
Sought information from Travel Guide/Tour Book by Contact Point**



Type of Trip

Contact sheet

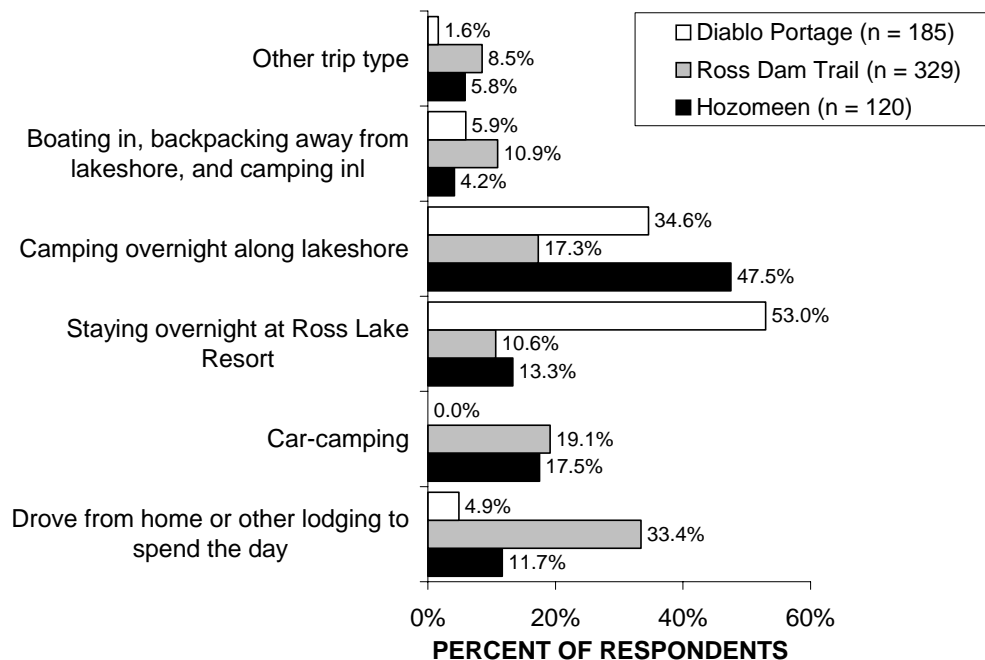
4. Which of the following best describes this trip for your party?

- ☐ Drove from home or other lodging to spend the day
- ☐ Car-camping
- ☐ Staying overnight at Ross Lake Resort
- ☐ Camping overnight along lakeshore
- ☐ Boating in, backpacking away from lakeshore, and camping inland
- ☐ Other (*please specify*) _____

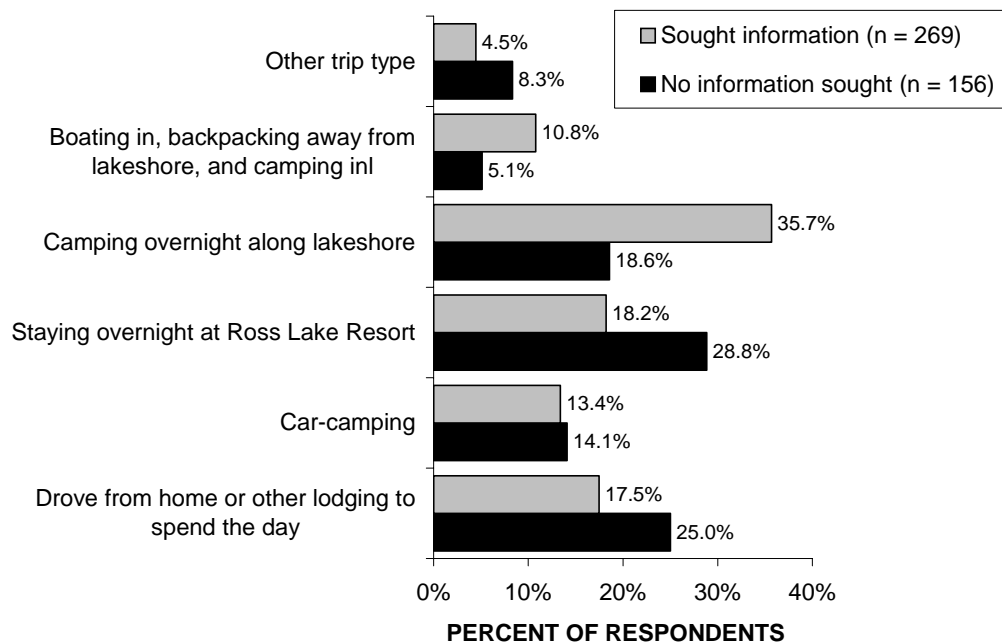
Separate analyses found that type of trip varied by contact point, $\chi^2(n = 634, 10) = 232.19, p < .001$, and by sought information, $\chi^2(n = 425, 5) = 23.80, p < .001$. There was no obvious statistical analysis that would include both contact point and sought information to determine their independent relationship with trip type. Because contact point and sought information were related, it is possible that effects observed for contact point when analyzed alone are due in part to the effect of sought information. The converse may be true as well; that effects observed for sought information when analyzed alone are due in part to the effect of contact point.

III. Trip Characteristics

**Figure 3.3. ROLA Lake User Survey, Contact Sheet Q-4
Trip Type by Contact Point**



**Figure 3.4. ROLA Lake User Survey, Contact Sheet Q-4
Trip Type by Sought Information**



Length of Stay

Mail questionnaire

3. On the trip during which you were contacted, did you stay overnight in the recreation area?

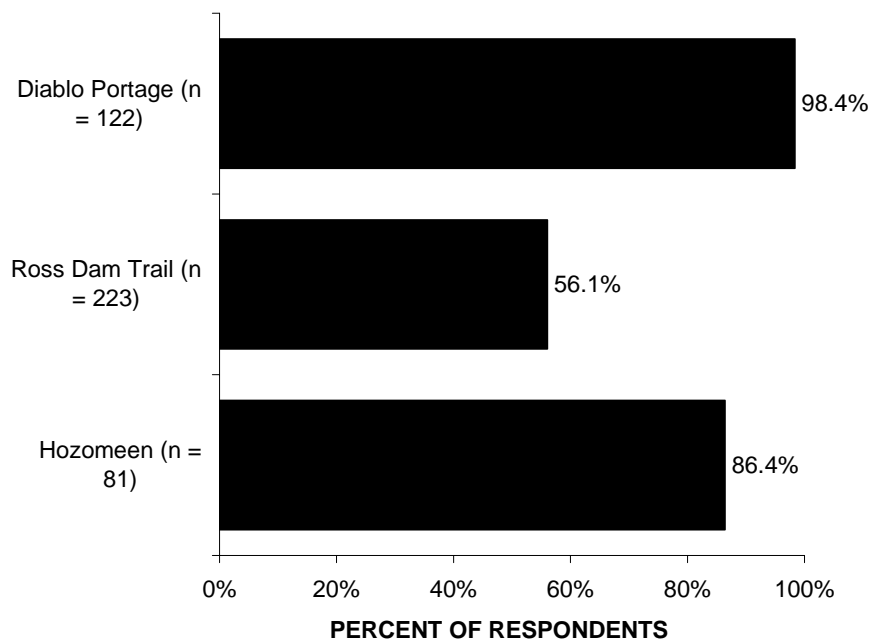
YES → How many nights did you spend? _____

NO → How many hours did you spend? _____

Don't remember

Separate analyses found the likelihood of staying overnight in Ross Lake NRA varied by contact point, $\chi^2(n = 426, 2) = 81.34, p < .001$, and by sought information, $\chi^2(n = 421, 1) = 13.66, p < .001$. Analyses combining contact point and sought information indicated that only contact point remained significant. As can be seen in Figure 3.5, almost all of visitors contacted at Diablo Portage stayed overnight in the park compared to 56.1% of visitors contacted at Ross Dam Trail.

**Figure 3.5. ROLA Lake User Survey, Mail Survey Q-3
Stayed Overnight in ROLA by Contact Point**

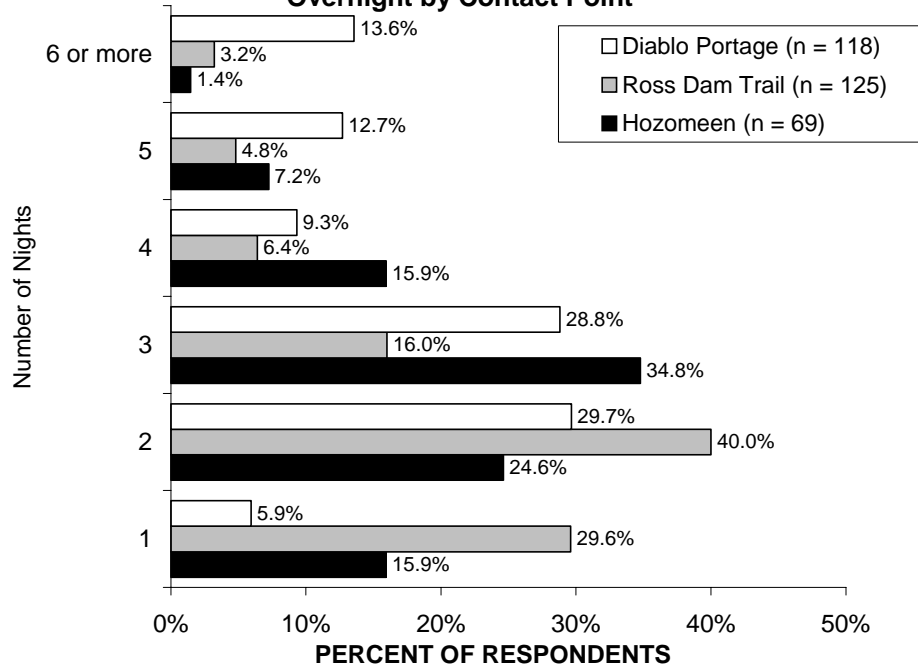


The number of nights people stayed overnight also varied by contact point, $F(2, 309) = 14.05, p < .001$. Post hoc Tukey tests revealed that visitors contacted at Diablo Portage who stayed overnight spent significantly more nights in ROLA ($M = 3.4$) than visitors contacted at Hozomeen ($M = 2.8$) or Ross Dam Trail ($M = 2.3$). No other significant differences were observed. Figure 3.6 shows the distribution of number of nights spent in ROLA for visitors who stayed overnight by contact point.

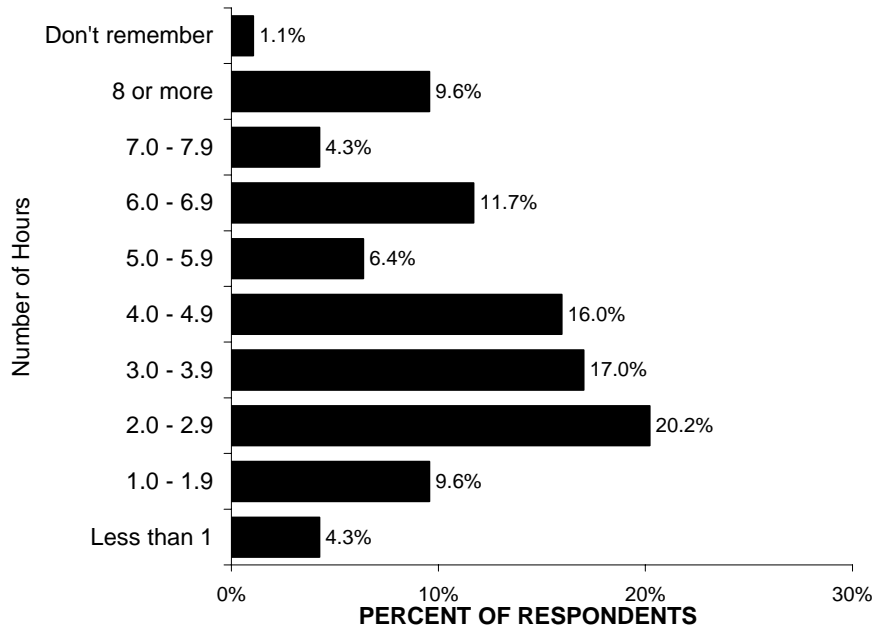
For visitors who did not stay overnight, the number of hours they spent in ROLA did not vary by contact point or whether they sought information.

III. Trip Characteristics

**Figure 3.6. ROLA Lake User Survey, Mail Survey Q-3
Number of Nights Spent in ROLA for Respondents Who Stayed Overnight by Contact Point**



**Figure 3.7. ROLA Lake User Survey, Mail Survey Q-3
Number of Hours Day Visitors Spent in ROLA**



Average number of hours spent = 4.1
Includes only the 26.1% of visitors that did not stay overnight.

Planned activities

Contact Sheet

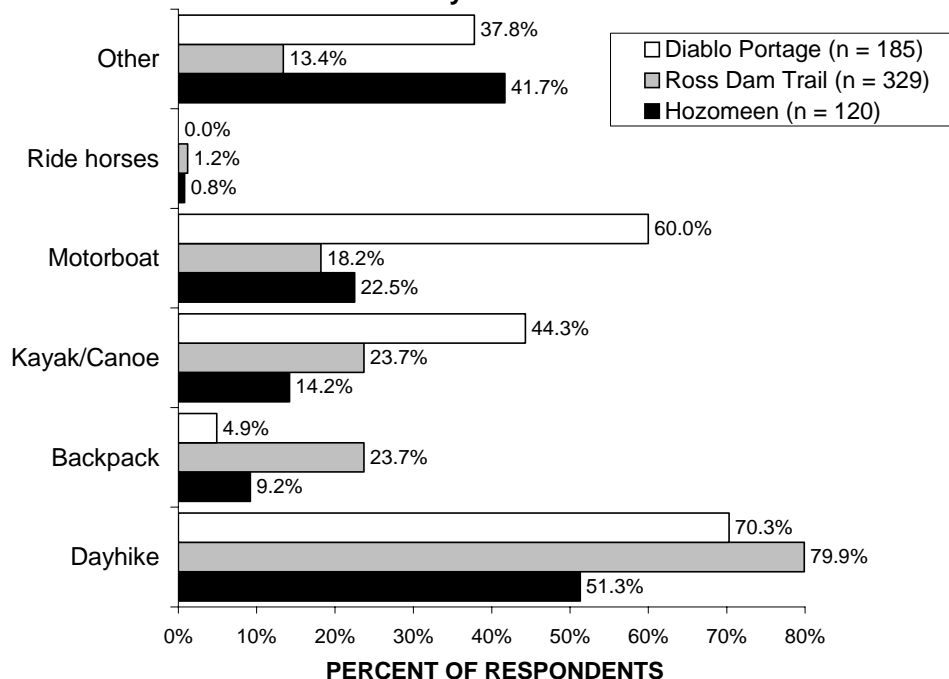
5. Which of the following activities do you plan to do on this trip? (Check all that apply.)

- ☐ Day hike
- ☐ Backpack
- ☐ Kayak/Canoe
- ☐ Motor boat
- ☐ Ride horses
- ☐ Other (please specify) _____

Planned activities differed by contact point for all but “Ride horses” (all p 's < .001). Figure 3.8 shows the percent of respondents for each contact point that planned to do each activity. Additionally, the likelihood of planning to kayak/canoe or to engage in an other activity differed by whether respondents sought information, $\chi^2(n = 425, 1) = 15.65, p < .001$ and $\chi^2(n = 425, 1) = 5.52, p = .019$, respectively.

Further review of the data for the other category indicated that of all respondents who indicated other activities, 65% specified fishing and 10% specified swimming.

Figure 3.8. ROLA Lake User Survey, Contact Sheet Q-5
Planned Activities by Contact Point



III. Trip Characteristics

General activities engaged in

Mail questionnaire

5. On the trip to Ross Lake NRA during which you were contacted for this survey, which of the following activities did you engage in? (*Circle as many numbers as apply.*)

- 1 Viewed wildlife
- 2 Viewed wildflowers/vegetation
- 3 Went bird-watching
- 4 Took photographs
- 5 Had a picnic
- 6 Went to visitor center
- 7 Viewed lakes
- 8 Drove around viewing scenery
- 9 Took walks or day-hiked
- 10 Backpacked
- 11 Camped overnight in backcountry away from lakeshore
- 12 Camped overnight at boat-in campsite
- 13 Camped overnight in car/drive-in campground
- 14 Rock or ice climbed using specialized equipment
- 15 Went kayaking or canoeing
- 16 Went motor-boating
- 17 Read educational displays and materials
- 18 Stayed at Ross Lake Resort
- 19 Went fishing
- 20 Went rafting
- 21 Went horseback riding
- 22 Visited historical sites
- 23 Attended a program led by a NPS interpretive ranger or volunteer
- 24 Other (*Please specify:* _____)

Answer this question for the trip during which you were contacted for this survey.

Of the 24 activities people were asked about performing during their trip, the likelihood of doing so varied by contact point. Table 3.1 summarizes the percentage of respondents contacted at each location who engaged in each activity. Those that differed significantly by contact point are in italics.

The three most frequently engaged in activities for each contact point differed. Visitors contacted at Hozomeen were most likely to 1) view wildlife (76.7%), 2) take photographs (73.3%), and 3) view lakes (62.8%). Those visitors contacted at Ross Dam Trail were most likely to 1) view lakes (85.9%), 2) take photographs (80.6%), and 3) take walks/day-hikes (85.9%). Visitors contacted at Diablo Portage were most likely to 1) take photographs (85.8%), 2) view wildlife (81.1%), and 3) view lakes and view wildflowers/vegetation (both 72.4%).

Table 3.1. Activities engaged in during trip by contact point

Activity Engaged in	Hozomeen	Ross Dam Trail	Diablo Portage
Viewed wildlife	76.7	70.5	81.1
Viewed wildflowers/vegetation	61.6	69.6	72.4
Went bird-watching	14.0	15.4	17.3
Took photographs	73.3	80.6	85.8
Had a picnic	47.7	44.5	53.5
<i>Went to visitor center</i>	<i>19.8</i>	<i>35.2</i>	<i>14.2</i>
<i>Viewed lakes</i>	<i>62.8</i>	<i>85.9</i>	<i>72.4</i>
<i>Drove around viewing scenery</i>	<i>36.0</i>	<i>48.9</i>	<i>15.7</i>
<i>Took walks or day-hiked</i>	<i>57.0</i>	<i>79.3</i>	<i>70.9</i>
<i>Backpacked</i>	<i>9.3</i>	<i>28.6</i>	<i>10.2</i>
<i>Camped overnight in backcountry away from lakeshore</i>	<i>4.7</i>	<i>12.3</i>	<i>2.4</i>
<i>Camped overnight at boat-in campsite</i>	<i>18.6</i>	<i>25.1</i>	<i>45.7</i>
<i>Camped overnight in car/drive-in campground</i>	<i>58.1</i>	<i>22.5</i>	<i>10.2</i>
Rock or ice-climbed using special equipment	1.2	1.8	0.8
<i>Went kayaking or canoeing</i>	<i>19.8</i>	<i>20.3</i>	<i>37.8</i>
<i>Went motor-boating</i>	<i>29.1</i>	<i>24.2</i>	<i>63.8</i>
<i>Read educational displays and materials</i>	<i>32.6</i>	<i>37.0</i>	<i>22.0</i>
<i>Stayed at Ross Lake Resort</i>	<i>7.0</i>	<i>14.1</i>	<i>55.1</i>
<i>Went fishing</i>	<i>44.2</i>	<i>18.5</i>	<i>58.3</i>
Went rafting	1.2	0.4	1.6
Went horseback riding	0.0	0.4	0.0
Visited historical sites	4.7	8.4	3.1
Attended a program led by a NPS interpretive ranger or volunteer	10.5	6.6	3.1
Other	17.4	13.7	14.2
Italics = Significant difference among contact points.			

Engaging in 8 of these 24 activities also differed by whether visitors sought information. Table 3.2 summarizes differences for sought information. For the five activities that also differed by contact point, analyses were done including both variables to determine their independent effects. For two of these activities, the effect of seek information was not significant when contact point was included, thus these activities are not noted as differing by seek information in Table 3.2 below.

One activity, fishing, had a significant interaction between contact point and seeking information. At Hozomeen and Ross Dam Trail, the likelihood of fishing did not differ on whether you sought information or not (48.8% vs. 42.9%, $p = .374$ and 13.7% vs. 21.6%, $p = .108$ respectively). However, at Diablo Portage, those who did not seek information were significantly more likely to fish (81.0%) than those who did not seek information (44.3%), $p < .001$.

As can be seen in Table 3.2, the most frequently engaged in activities by those who sought information were 1) taking photographs (85.1%), 2) viewing lakes (78.8%) and 3) viewing wildlife (78.4%). These same three activities were most frequently engaged in by people who did not seek information although to a lesser degree: 1) viewing lakes (74.4%), 2) taking photographs

III. Trip Characteristics

(73.1%) and 3) viewing wildlife (69.2%). Additionally compared to those who did not seek information, visitors who sought information were more likely to picnic, camp overnight at a boat-in campsite, and kayak/canoe, and they were less likely to go fishing.

Table 3.2. Activities engaged in during trip by whether sought information

Activity Engaged in	Did not seek information	Sought information
<i>Viewed wildlife</i>	69.2	78.4
Viewed wildflowers/vegetation	63.5	71.7
Went bird-watching	13.5	17.8
<i>Took photographs</i>	73.1	85.1
<i>Had a picnic</i>	37.2	54.3
Went to visitor center	19.9	30.5
Viewed lakes	74.4	78.8
Drove around viewing scenery	39.1	36.1
Took walks or day-hiked	67.9	74.7
Backpacked	12.8	23.4
Camped overnight in backcountry away from lakeshore	5.1	9.7
<i>Camped overnight at boat-in campsite</i>	13.5	38.3
Camped overnight in car/drive-in campground	24.4	27.9
Rock or ice-climbed using special equipment	1.3	1.5
<i>Went kayaking or canoeing</i>	12.2	32.3
Went motor-boating	38.5	34.9
Read educational displays and materials	31.4	32.7
Stayed at Ross Lake Resort	28.8	21.6
<i>Went fishing</i>	41.0	31.6
Went rafting	1.3	0.7
Went horseback riding	0.0	0.4
Visited historical sites	4.5	7.4
Attended a program led by a NPS interpretive ranger or volunteer	6.4	6.7
Other	17.3	13.0
Italics = Significant difference between sought information and did not seek information		

Most and second most important activity

Mail questionnaire

5a. If you circled 2 or more of the 24 ways of experiencing the park listed above, which was most important to your enjoyment of the park? (*Enter the appropriate number in each of the blanks.*)

_____ **MOST IMPORTANT** factor contributing to your enjoyment of the park

_____ **SECOND MOST IMPORTANT** factor contributing to your enjoyment of the park

Table 3.3. Most important factor contributing to enjoyment of park by contact point.

Most important activity	% of respondents		
	Hozomeen	Ross Dam Trail	Diablo Portage
Viewed wildlife	4.8	2.7	2.5
Viewed wildflowers/vegetation	1.2	2.2	0.8
Took photographs	1.2	1.3	0.8
Had a picnic	3.6	0.0	0.0
Viewed lakes	6.0	7.1	3.3
Drove around viewing scenery	2.4	4.9	0.8
Took walks or day-hiked	8.3	27.4	2.5
Backpacked	3.6	10.2	0.0
Camped overnight in backcountry away from lakeshore	0.0	0.9	0.0
Camped overnight in boat-in campsite	10.7	11.1	20.5
Camped overnight in car/drive-in campground	25.0	6.6	0.0
Rock or ice-climbed using special equipment	1.2	0.9	0.0
Went kayaking or canoeing	6.0	8.0	19.7
Went motor-boating	1.2	5.8	3.3
Stayed at Ross Lake Resort	1.2	5.3	28.7
Went fishing	17.9	0.9	13.1
Other	6.0	4.9	4.1
Bold = One of the three most common most important activities for that contact point.			

III. Trip Characteristics

Table 3.4. Second most important factor contributing to enjoyment of park by contact point.

Second most important activity	% of respondents		
	Hozomeen	Ross Dam Trail	Diablo Portage
Viewed wildlife	6.1	7.6	3.3
Viewed wildflowers/vegetation	1.2	8.4	0.8
Went bird-watching	2.4	0.9	0.0
Took photographs	7.3	5.8	2.5
Had a picnic	2.4	1.3	1.7
Viewed lakes	9.8	10.2	9.2
Drove around viewing scenery	4.9	8.4	2.5
Took walks or day-hiked	9.8	16.4	15.0
Backpacked	0.0	4.4	0.8
Camped overnight in backcountry away from lakeshore	2.4	4.0	1.7
Camped overnight in boat-in campsite	1.2	5.8	15.0
Camped overnight in car/drive-in campground	9.8	4.4	0.0
Rock or ice-climbed using special equipment	0.0	0.4	0.0
Went kayaking or canoeing	7.3	5.8	9.2
Went motor-boating	9.8	4.4	14.2
Read educational displays and materials	0.0	1.3	0.0
Stayed at Ross Lake Resort	1.2	2.7	10.8
Went fishing	15.9	4.0	11.7
Visited historical sites	0.0	0.0	0.8
Attended a program led by a NPS interpretive ranger or volunteer	3.7	0.4	0.0
Other	4.9	3.1	0.8

Low water levels

Mail questionnaire

11. DURING THE TRIP IN WHICH YOU WERE CONTACTED, did you experience low water levels in the lake that affected your use of the lake (e.g., ran aground, couldn't use a dock, etc.)?

NO → GO TO QUESTION 12

YES

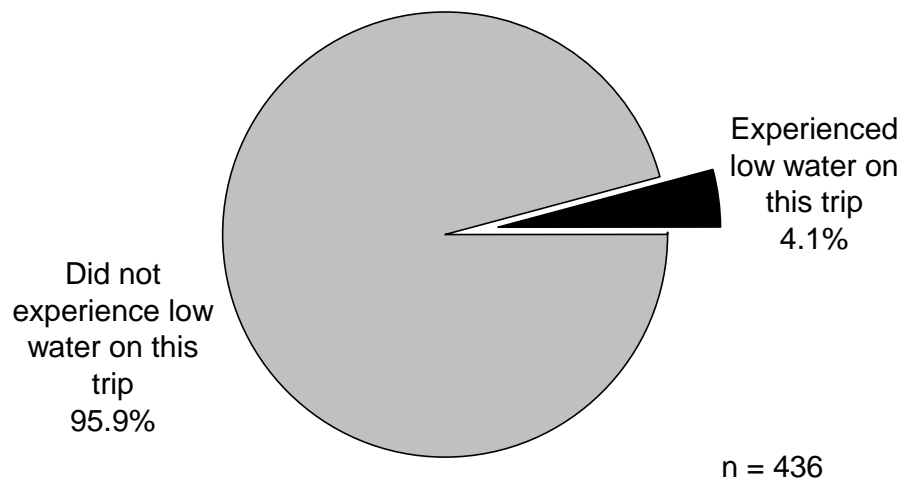
11a. How many times did you have this experience on each lake?

_____ Times on Ross Lake

_____ Times on Diablo Lake

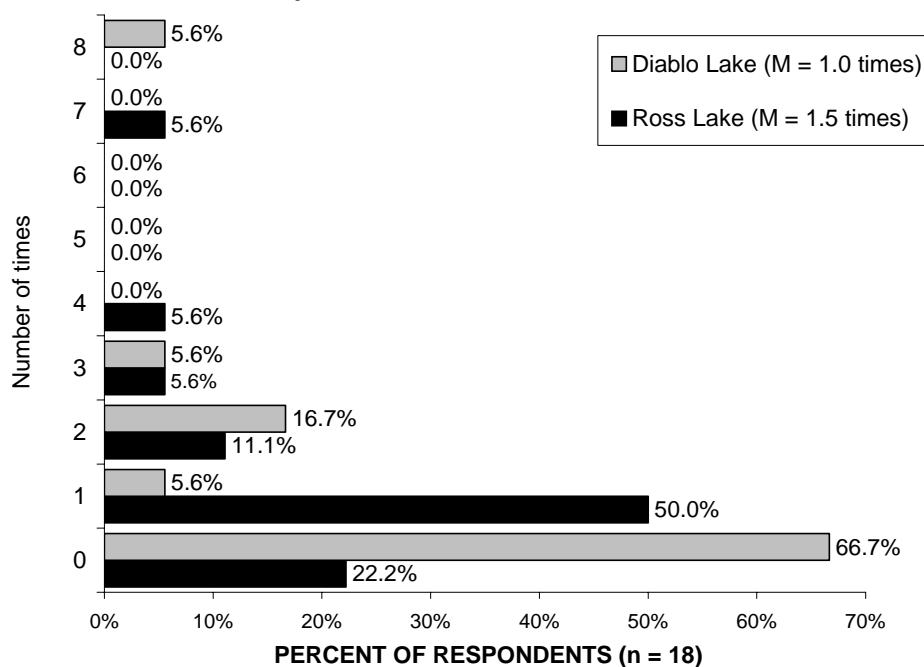
11b. Please describe what happened.

**Figure 3.9: ROLA Lake User Survey, Mail Survey Q-11
Experienced Low Water Levels that Affected Use of Lake**



III. Trip Characteristics

Figure 3.10. ROLA Lake User Survey, Mail Survey Q-11a
Number of Times Experienced Low Water Levels on Each Lake



Low water levels on prior trips

Mail questionnaire

12. ON PRIOR TRIPS TO ROSS LAKE NRA, did you experience low water levels in the lakes that affected your use of the lakes (e.g., ran aground, couldn't use a dock, hit a stump, etc.)?

NO, THIS IS MY FIRST TRIP. → GO TO QUESTION 13

NO → GO TO QUESTION 13

YES

12a. How many times did you have this experience on each lake?

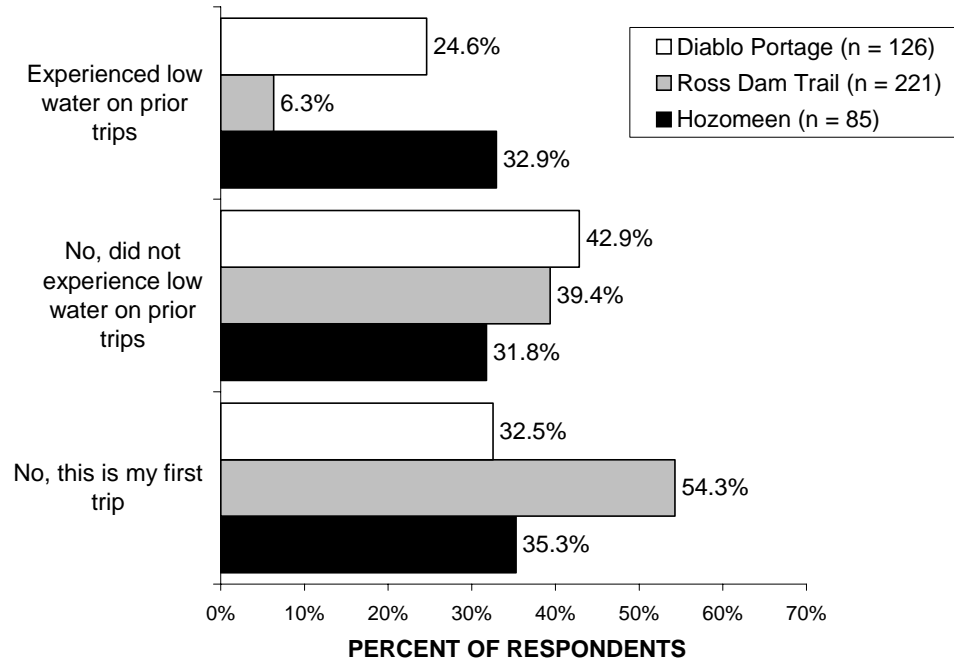
_____ Times on Ross Lake

_____ Times on Diablo Lake

Visitors experience with low water levels on prior trips to Ross Lake NRA varied by contact point, $\chi^2(n = 432, 4) = 44.10, p < .001$. Review of Figure 3.12 shows that visitors contacted at Ross Dam Trail were the least likely to have experienced low water levels on prior trips (6.3% vs.

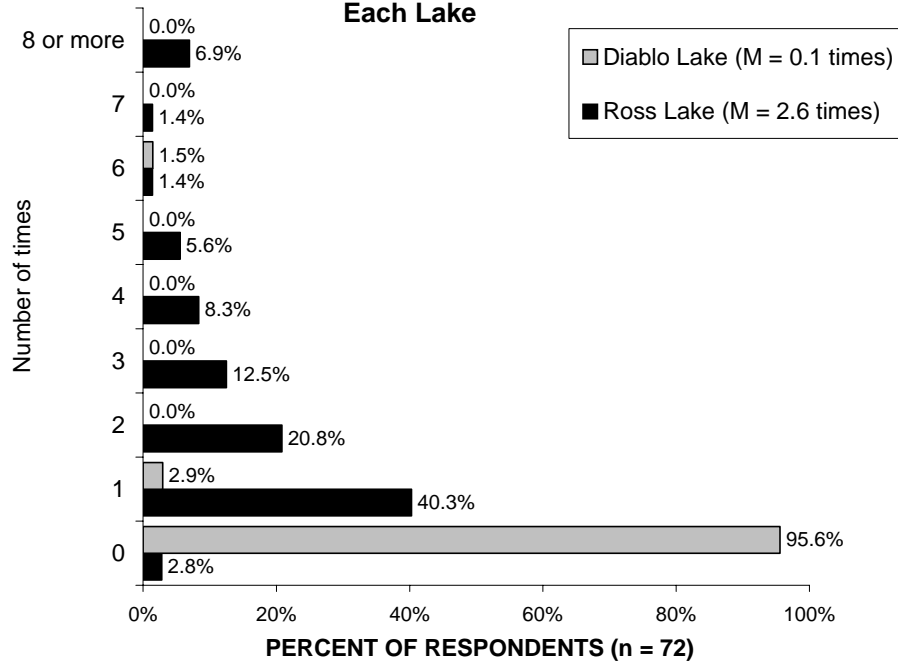
24.6% and 32.9%), and that this is primarily due to a greater proportion of them being on their first trip (54.3% vs. 32.5% and 35.3%).

**Figure 3.12. ROLA Lake User Survey, Mail Survey Q-12a
Experienced Low Water Levels on Prior Trips**



III. Trip Characteristics

Figure 3.13. ROLA Lake User Survey, Mail Survey Q-12a
Number of Times Experienced Low Water Levels on Prior Trips on Each Lake



Includes only the 16.9% of respondents who experienced low water levels.

Overall Trip Satisfaction

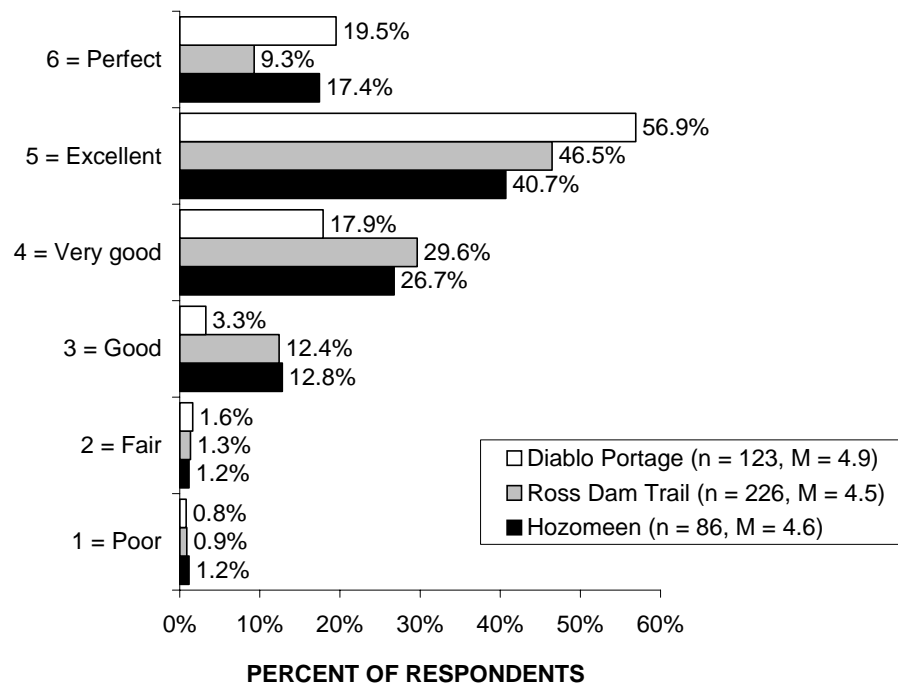
Mail questionnaire

13. Overall, how would you rate your experience on this trip to Ross Lake National Recreation Area?
(Check one box.)

Poor
Fair
Good
Very good
Excellent
Perfect

Overall trip satisfaction differed by contact point, $F(2, 432) = 7.17, p = .001$. Post hoc Tukey tests revealed that visitors contacted at Diablo Portage had significantly higher overall trip satisfaction ($M = 4.9$) than visitors contacted at Ross Dam Trail ($M = 4.5$). No other significant differences were observed. As can be seen in Figure 3.14, over half of visitors contacted at Diablo Portage rated their trip “excellent” and 19.5% rated it “perfect”. Compared to visitors contacted at Diablo Portage, visitors contacted at the other two locations were more likely to rate their trip “good” or “very good”.

Figure 3.14. ROLA Lake User Survey, Mail Survey Q-13
Overall Trip Satisfaction by Contact Point



IV. Trip Motivations

Respondents to the Ross Lake User Survey were asked a variety of questions to assess the relative importance of different reasons or motivations for their trip to Ross Lake NRA. This section reports the results of these questions.

Separate analyses examining differences in the importance of trip motivations for different contact points and whether respondents sought information found nine trip motivations whose importance ratings differed significantly by contact point and ten that differed significantly by whether visitors sought information prior to their trip. For the four variables that had significant effects of contact point and sought information, analyses that included both variables were done and found that both contact point and sought information remained significant and one trip motivation had a significant interaction of contact point and sought information.

Tables 4.1 – 4.3 summarize the frequency data and average importance rating for each trip motivation by contact point. Review of these tables reveal that the highest average trip motivation importance ratings for all visitors included 1) viewing scenery, 2) experience tranquility, 3) being close to nature, and 4) getting away from the usual demands of life. This order was what was observed for visitors contacted at Ross Dam Trail and Diablo Portage whereas at Hozomeen the order was 1) get away from the usual demands of life, 2) experience tranquility, 3) viewing scenery, and 4) being close to nature.

Tables 4.4 and 4.5 summarize the frequency data and average importance rating by whether visitors sought information or not. Review of these tables show that the same four trip motivations that emerged as the most important for the different contact points were also most important for visitors who sought information and for visitors who did not seek information. Although both groups of visitors rated viewing scenery as their most important trip motivation, the relative order of importance of the other three trip motivations varied by whether visitors sought information or not. The order of the next three highest trip motivations for visitors who sought information was being close to nature, experiencing tranquility and getting away from the usual demands of life. For visitors who did not seek information, this ordering was getting away from the usual demands of life, experience tranquility, and being close to nature.

Regardless of contact point or whether visitors sought information, the three least important trip motivations were 1) develop your skills and abilities, 2) talk to new and varied people, and 3) to feel your independence.

To get exercise was the only trip motivation for which a significant interaction between contact point and seeking information was observed, $F(2, 415) = 3.04$ $p = .049$. A review of the average importance ratings revealed that although people who sought information had on average higher importance ratings for “to get exercise” this difference was greatest for visitors contacted at Diablo Portage and smallest for visitors contacted at Ross Dam Trail.

Analyses also revealed that the larger the party a visitor was from the more important the trip motivation of being with friends was rated, $r(n = 435) = .283$, $p < .001$.

IV. Trip Motivations

Mail questionnaire

4. Some possible reasons why people visit recreation areas are listed below. How important to you was each of the following reasons for visiting Ross Lake NRA on **this trip**? (Check one response for each reason.)

If a reason is not applicable for this trip, please circle "not important".

How important was each reason for taking **this trip** to Ross Lake NRA?

	not important	slightly important	moderately important	very important	extremely important
A. DEVELOP YOUR SKILLS AND ABILITIES					
B. DO SOMETHING WITH YOUR FAMILY					
C. EXPERIENCE NEW AND DIFFERENT THINGS					
D. LEARN MORE ABOUT NATURE					
E. TO BE FREE TO MAKE YOUR OWN CHOICES					
F. GET AWAY FROM THE USUAL DEMANDS OF LIFE					
G. TALK TO NEW AND VARIED PEOPLE					
H. BE WITH FRIENDS					
I. EXPERIENCE TRANQUILITY					
J. EXPERIENCE SOLITUDE					
K. BEING CLOSE TO NATURE					
L. VIEWING SCENERY					
M. TO FEEL YOUR INDEPENDENCE					
N. TO GET EXERCISE					
O. TO ENJOY THE SOUNDS OF NATURE					

IV. Trip Motivations

Table 4.1 Trip motivation importance ratings for visitors contacted at Hozomeen

Trip Motivation	Differed by contact point	% rating trip motivation					Ave. rating	Rank
		1= Not important	2 = Slightly important	3 = Moderately important	4 = Very important	5 = Extremely important		
Develop your skills and abilities	No	52.5	16.3	22.5	6.3	2.5	1.9	15
Do something with your family	Yes	10.7	3.6	3.6	39.3	42.9	4.0	5
Experience new and different things	No	7.2	8.4	34.9	33.7	15.7	3.4	9
Learn more about nature	No	16.9	9.6	33.7	28.9	10.8	3.1	11
To be free to make your own choices	Yes	16.9	2.4	19.3	39.8	21.7	3.5	8
Get away from the usual demands of life	Yes	0.0	2.4	10.7	26.2	60.7	4.5	1
Talk to new and varied people	Yes	28.0	20.7	36.6	13.4	1.2	2.4	14
Be with friends	Yes	21.7	4.8	12.0	30.1	31.3	3.4	9
Experience tranquility	Yes	3.6	1.2	9.6	32.5	53.0	4.3	2
Experience solitude	Yes	9.6	6.0	20.5	27.7	36.1	3.7	6
Being close to nature	No	1.2	3.6	16.7	38.1	40.5	4.1	4
Viewing scenery	Yes	1.2	2.4	12.9	42.4	41.2	4.2	3
To feel your independence	No	22.0	18.3	25.6	15.9	18.3	2.9	13
To get exercise	Yes	13.1	17.9	34.5	25.0	9.5	3.0	12
To enjoy the sounds of nature	No	3.7	12.2	24.4	35.4	24.4	3.6	7

Table 4.2 Trip motivation importance ratings for visitors contacted at Ross Dam Trail

Trip Motivation	Differed by contact point	% rating trip motivation					Ave. rating	Rank
		1 = Not important	2 = Slightly important	3 = Moderately important	4 = Very important	5 = Extremely important		
Develop your skills and abilities	No	54.9	19.2	17.4	7.6	0.9	1.8	15
Do something with your family	Yes	22.7	2.2	9.3	30.7	35.1	3.5	9
Experience new and different things	No	4.5	5.8	25.9	42.9	21.0	3.7	6
Learn more about nature	No	8.9	16.1	36.6	27.2	11.2	3.2	10
To be free to make your own choices	Yes	23.2	8.9	25.9	27.7	14.3	3.0	11
Get away from the usual demands of life	Yes	5.8	3.1	12.4	39.8	38.9	4.0	4
Talk to new and varied people	Yes	43.1	29.3	18.2	7.6	1.8	2.0	14
Be with friends	Yes	34.7	4.9	9.3	27.1	24.0	3.0	11
Experience tranquility	Yes	2.2	4.9	14.7	37.3	40.9	4.1	2
Experience solitude	Yes	9.7	8.4	20.4	32.3	29.2	3.6	7
Being close to nature	No	3.6	1.8	13.3	42.7	38.7	4.1	2
Viewing scenery	Yes	1.3	0.9	7.5	39.8	50.4	4.4	1
To feel your independence	No	25.4	10.7	28.1	23.7	12.1	2.9	13
To get exercise	Yes	5.8	10.2	24.3	41.2	18.6	3.6	7
To enjoy the sounds of nature	No	4.4	7.6	22.7	37.3	28.0	3.8	5

IV. Trip Motivations

Table 4.3 Trip motivation importance ratings for visitors contacted at Diablo Portage

Trip Motivation	Differed by contact point	% rating trip motivation					Ave. rating	Rank
		1 = Not important	2 = Slightly important	3 = Moderately important	4 = Very important	5 = Extremely important		
Develop your skills and abilities	No	50.4	21.6	16.8	5.6	5.6	1.9	15
Do something with your family	Yes	16.5	0.8	4.7	29.1	48.8	3.9	6
Experience new and different things	No	7.1	7.9	22.8	44.9	17.3	3.6	8
Learn more about nature	No	11.8	18.1	35.4	30.7	3.9	3.0	12
To be free to make your own choices	Yes	15.0	15.0	20.5	27.6	22.0	3.3	10
Get away from the usual demands of life	Yes	1.6	1.6	12.6	28.3	55.9	4.4	2
Talk to new and varied people	Yes	33.9	26.0	29.9	8.7	1.6	2.2	14
Be with friends	Yes	19.7	5.5	9.4	29.1	36.2	3.6	8
Experience tranquility	Yes	0.0	2.4	13.4	30.7	53.5	4.4	2
Experience solitude	Yes	5.5	6.3	14.2	28.3	45.7	4.0	5
Being close to nature	No	0.0	5.5	13.4	29.1	52.0	4.3	4
Viewing scenery	Yes	0.8	0.0	5.5	32.3	61.4	4.5	1
To feel your independence	No	18.1	15.0	26.0	21.3	19.7	3.1	11
To get exercise	Yes	13.5	16.7	35.7	20.6	13.5	3.0	12
To enjoy the sounds of nature	No	2.4	7.1	20.6	39.7	30.2	3.9	6

Table 4.4 Trip motivation importance ratings for visitors who did not seek information

Trip Motivation	Differed by sought info	% rating trip motivation					Ave. rating	Rank
		1 = Not important	2 = Slightly important	3 = Moderately important	4 = Very important	5 = Extremely important		
Develop your skills and abilities	Yes	59.9	23.3	12.5	3.9	0.7	1.6	15
Do something with your family	No	15.5	2.6	9.7	36.1	36.1	3.7	5
Experience new and different things	Yes	11.8	8.5	26.8	43.1	9.8	3.3	8
Learn more about nature	Yes	17.0	16.3	36.6	24.2	5.9	2.9	12
To be free to make your own choices	No	23.0	10.5	20.4	32.2	13.8	3.0	10
Get away from the usual demands of life	No	3.9	4.5	13.0	35.1	43.5	4.1	2
Talk to new and varied people	No	37.3	26.8	26.1	8.5	1.3	2.1	14
Be with friends	No	27.9	6.5	13.0	27.3	25.3	3.2	9
Experience tranquility	Yes	3.9	5.2	19.0	27.5	44.4	4.0	3
Experience solitude	Yes	13.1	7.8	19.6	26.1	33.3	3.6	6
Being close to nature	Yes	3.9	4.5	21.4	37.7	32.5	3.9	4
Viewing scenery	Yes	2.6	1.3	11.6	36.1	48.4	4.3	1
To feel your independence	Yes	26.8	13.7	32.0	17.0	10.5	2.7	13
To get exercise	Yes	15.6	13.0	35.7	26.6	9.1	3.0	10
To enjoy the sounds of nature	Yes	7.2	11.2	24.3	36.8	20.4	3.5	7

IV. Trip Motivations

Table 4.5 Trip motivation importance ratings for visitors who sought information

Trip Motivation	Differed by sought info	% rating trip motivation					Ave. rating	Rank
		1 = Not important	2 = Slightly important	3 = Moderately important	4 = Very important	5 = Extremely important		
Develop your skills and abilities	Yes	49.6	16.4	21.8	8.4	3.8	2.0	15
Do something with your family	No	20.7	1.9	5.3	30.8	41.4	3.7	8
Experience new and different things	Yes	2.6	6.0	27.4	40.6	23.3	3.8	6
Learn more about nature	Yes	8.6	15.4	36.1	29.7	10.2	3.2	11
To be free to make your own choices	No	18.4	9.0	25.1	28.1	19.5	3.2	11
Get away from the usual demands of life	No	3.4	1.5	12.3	34.3	48.5	4.2	4
Talk to new and varied people	No	39.1	26.7	24.4	8.6	1.1	2.1	14
Be with friends	No	27.8	3.8	8.3	28.6	31.6	3.3	10
Experience tranquility	Yes	0.7	2.6	10.5	39.0	47.2	4.3	2
Experience solitude	Yes	6.3	7.5	17.5	32.8	35.8	3.8	6
Being close to nature	Yes	1.1	2.6	10.5	38.6	47.2	4.3	2
Viewing scenery	Yes	0.4	0.7	6.3	39.2	53.4	4.4	1
To feel your independence	Yes	20.0	14.0	24.5	23.4	18.1	3.1	13
To get exercise	Yes	6.0	14.6	25.5	34.8	19.1	3.5	9
To enjoy the sounds of nature	Yes	1.9	6.8	22.2	38.3	30.8	3.9	5

V. Impacts of Other Visitors

Ross Lake users were asked a variety of questions about impacts of other visitors on their experience and on park natural resources. The responses to those questions are reported here.


Number of other visitors seen on Ross Lake

Mail questionnaire

6. During your trip did you boat or spend time when you could view Ross Lake?

No → GO TO QUESTION 7

Yes



6a. How did the number of other people you saw on Ross Lake compare with the number you thought you would see? *(Please check one box even if you did not see other parties)*

A lot fewer than expected

Fewer than expected

As expected

More than expected

A lot more than expected

Had no expectations about the number to be seen

6b. How did the number of other people you saw on Ross Lake compare with the number you preferred to see? *(Please check one box even if you did not see other parties)*

A lot fewer than preferred

Fewer than preferred

As preferred

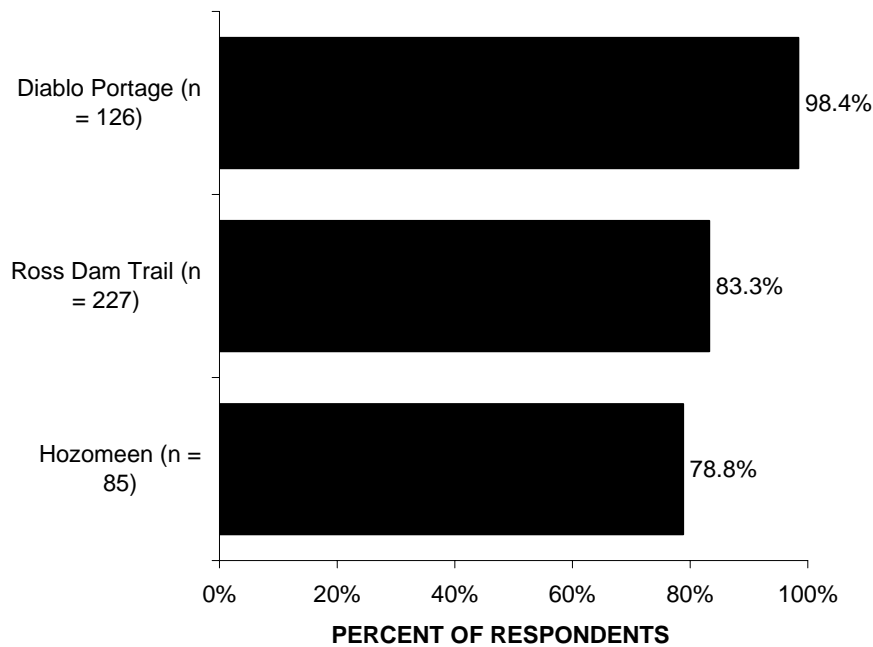
More than preferred

A lot more than preferred

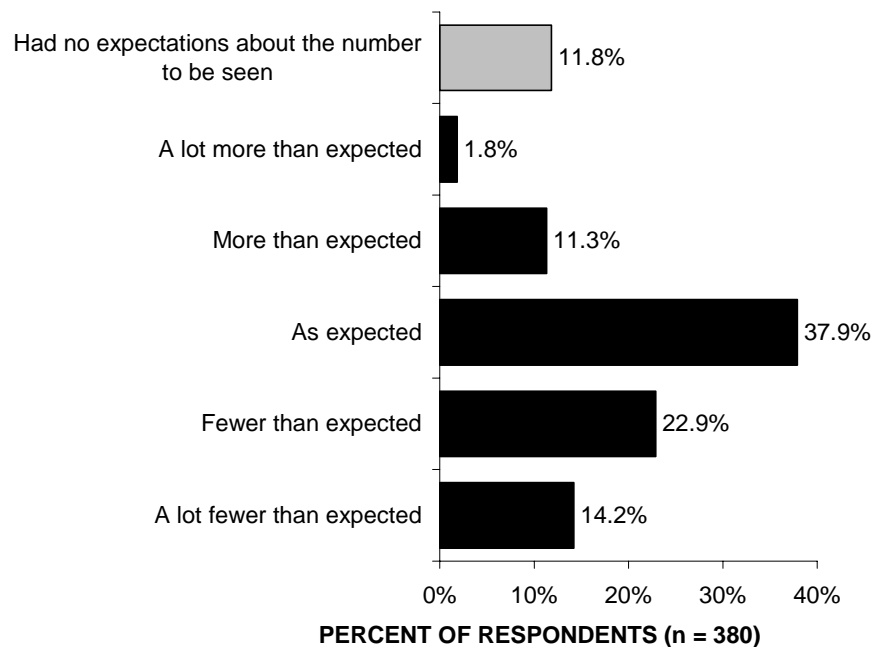
Had no preferences about the number to be seen

The percentage of respondents that spent time when they could view Ross Lake varied by contact point, $\chi^2(n = 438, 2) = 21.97, p < .001$. As can be seen in Figure 5.1, almost all (98.4%) of the visitors contacted at Diablo Portage spent time where they could view Ross Lake whereas 78.8% of visitors contacted at Hozomeen did so.

**Figure 5.1. ROLA Lake User Survey, Mail Survey Q-6
Spent Time When Could View Ross Lake by Contact Point**

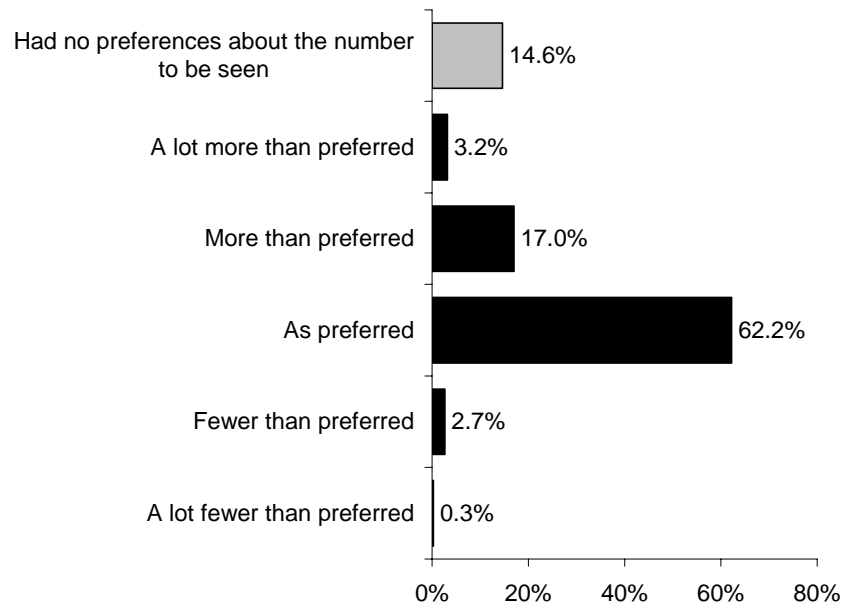


**Figure 5.2. ROLA Lake User Survey, Mail Survey Q-6a
Actual Versus Expected Number of People Seen on Lake**



Includes only the 86.8% of respondents who spent time when they could view the lake

**Figure 5.2. ROLA Lake User Survey, Mail Survey Q-6b
Actual Versus Preferred Number of People Seen on Lake**



PERCENT OF RESPONDENTS (n = 376)

Includes only the 86.8% of respondents who spent time when they could view the lake

Number of other visitors seen on inland trails

Mail questionnaire

7. During your trip did you hike inland on trails?

No → GO TO QUESTION 8

Yes

7a. How did the number of other people you saw when hiking inland on trails compare with the number you thought you would see? *(Please check one box even if you did not see other parties)*

A lot fewer than expected

Fewer than expected

As expected

More than expected

A lot more than expected

Had no expectations about the number to be seen

7b. How did the number of other people you saw when hiking inland on trails compare with the number you preferred to see? *(Please check one box even if you did not see other parties)*

A lot fewer than preferred

Fewer than preferred

As preferred

More than preferred

A lot more than preferred

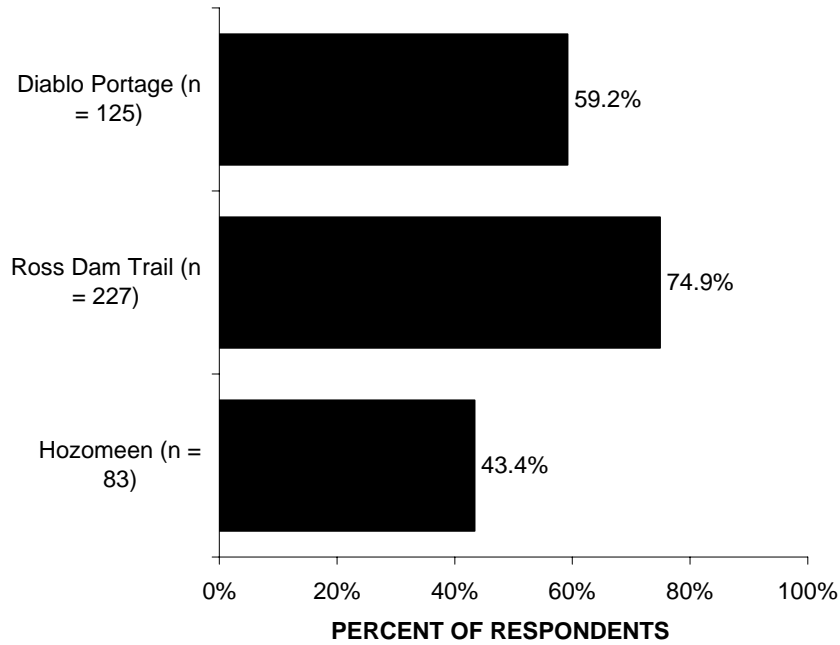
Had no preferences about the number to be seen

The percentage of respondents that spent time on inland trails varied by contact point, $\chi^2(n = 435, 2) = 28.36, p < .001$. As can be seen in Figure 5.4, visitors contacted at Hozomeen and Diablo Portage were less likely to hike on inland trails than visitors contacted at Ross Dam Trail.

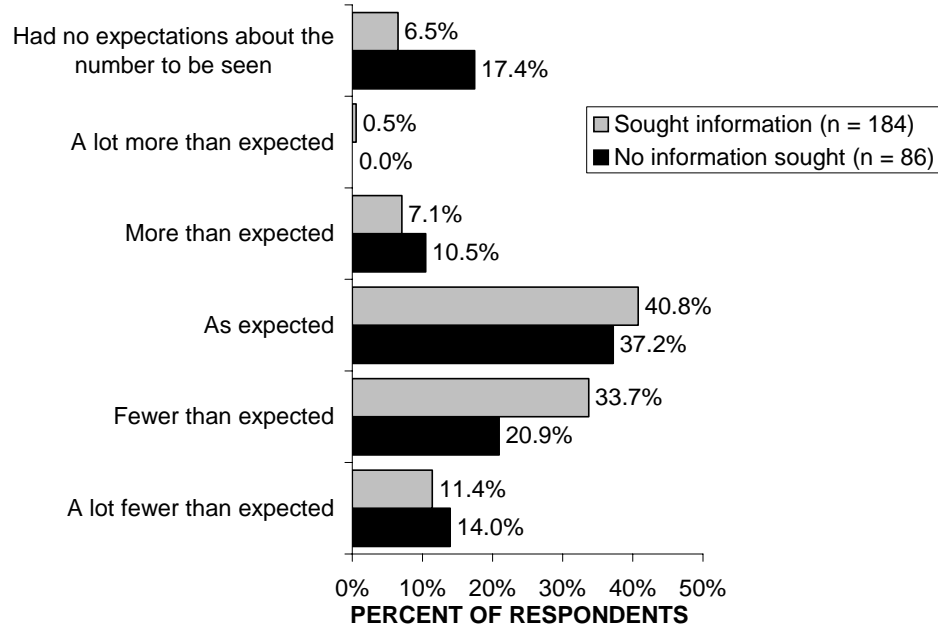
Of those visitors who spent time on inland trails, their ratings of actual versus expected number of people seen on inland trails varied by sought information, $\chi^2(n = 269, 4) = 11.52, p = .021$ (excludes “a lot more than expected” to eliminate expected frequencies less than 5). As can be seen in Figure 5.5, respondents who sought information were less likely to have no expectations (6.5% vs. 17.4%) and more likely to report seeing “fewer than expected” (33.7% vs. 20.9%).

Ratings of preferred versus actual number of people seen on inland trails also varied by whether information was sought, $\chi^2(n = 270, 1) = 9.23, p = .002$ (compared “had preferences” with “had no preferences” to eliminate expected frequencies less than 5). As can be seen in Figure 5.6, visitors who did not seek information were more than twice as likely to report having no preferences than visitors who sought information (26.7% vs. 12.0%).

**Figure 5.4. ROLA Lake User Survey, Mail Survey Q-7
Hiked Inland on Trails by Contact Point**

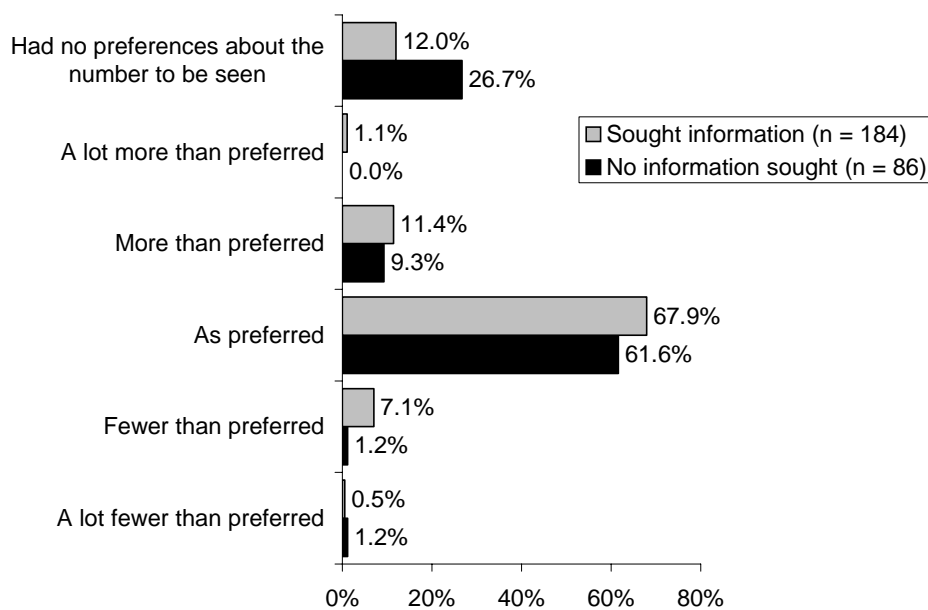


**Figure 5.5. ROLA Lake User Survey, Mail Survey Q-7a
Actual Versus Expected Number of People Seen on Inland Trails by
Sought Information**



Includes only the 64.4% of respondents who spent time on inland trails

**Figure 5.6. ROLA Lake User Survey, Mail Survey Q-7b
Actual Versus Preferred Number of People Seen on Inland Trails**



PERCENT OF RESPONDENTS
Includes only the 64.4% of respondents who spent time on inland trails

Other Parties' Behavior

Mail questionnaire

8. During your trip, were there one or more specific incidents when another party's behavior **detracted** from your experience?

No → GO TO QUESTION 9

Yes

Continue on next page

8a. Please indicate the number of incidents that occurred in the following situations. (*Complete as many as apply.*)

- ☐ Incidents occurred while we were boating on Ross Lake
- ☐ Incidents occurred while we were on the shore of Ross Lake
- ☐ Incidents occurred while we were hiking inland
- ☐ Don't remember when incidents occurred

8b. For the incident that had the largest impact, please indicate all the characteristics that describe the party whose behavior disturbed you. (*Check as many as apply.*)

- ☐ Party had 8 or more people in it.
- ☐ Party consisted mostly of individuals under age 18.
- ☐ Party was in a motorized boat.
- ☐ Party was in a non-motorized boat.
- ☐ Party was hiking.
- ☐ Party was on horseback or had stock animals (e.g., llamas).
- ☐ Party was from a non-profit organization or club.
- ☐ Party was a for-profit, commercial tour group.
- ☐ Other (*please specify*) _____
- ☐ Don't remember anything about the party

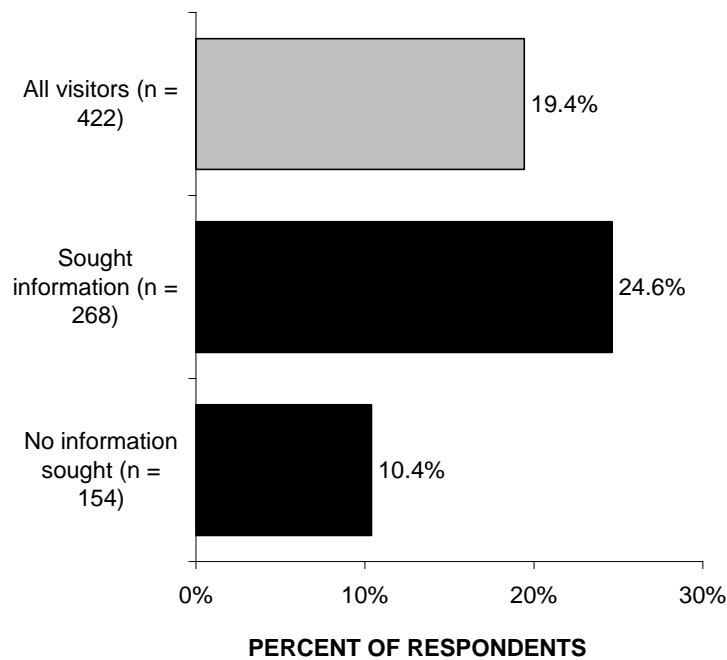
8c. For the incident that had the largest impact, to what extent did the other party's behavior detract from your overall experience? (Check one box)

- ☐ Detracted slightly
- ☐ Detracted moderately
- ☐ Detracted greatly

8d. For the incident that had the largest impact, please use the space below to describe what the party did that detracted from your experience.

Although 19.4% of respondents indicated that there were one or more specific incidents when another party's behavior detracted from their experience, the likelihood of another party's behavior detracting varied by whether people sought information, $\chi^2(n = 422, 1) = 12.66, p < .001$. As can be seen in Figure 5.7, people who sought information prior to their trip were more than twice as likely to report that another party's behavior detracted (24.6% vs. 10.4%).

**Figure 5.7. ROLA Lake User Survey, Mail Survey Q-8
Another Party's Behavior Detracted from Experience by Sought Information**



Respondents were asked to indicate the number of incidents that occurred when they were in different situations. Table 5.1 shows that people were more likely to be on the shore of Ross Lake when incidents concerning other party's detracting behavior occurred. Regardless of situation, the actual number of incidents that occurred are difficult to estimate as many respondents were unable to remember the number of incidents.

Table 5.1. Number of incidents that occurred in different situations

# of incidents	Where incidents occurred			
	Boating on Ross Lake	On shore of Ross Lake	Hiking inland	Don't remember where
0	74.7%	22.0%	95.2%	98.8%
1	6.0%	18.3%	0.0%	1.2%
2	1.2%	4.9%	0.0%	0.0%
3	0.0%	0.0%	0.0%	0.0%
4	0.0%	2.4%	0.0%	0.0%
Don't remember the number of incidents	18.1%	52.4%	4.8%	0.0%
Average # of incidents	0.10	0.79		

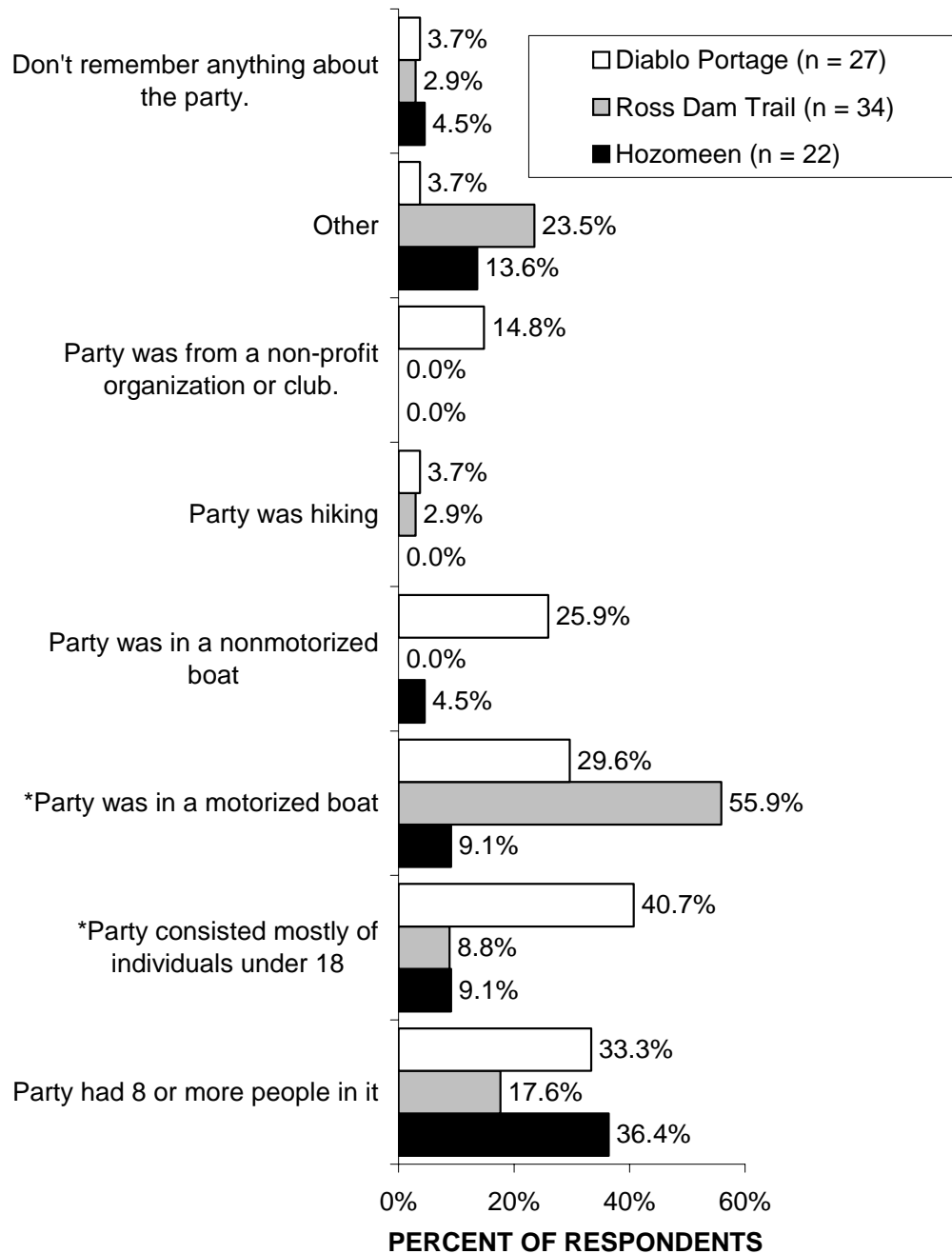
NOTE: Includes only the 19.4% of respondents who indicated another party's behavior detracted from their experience (n = 81).

Respondents were asked to indicate from a list of characteristics those that described the party whose behavior had the largest impact on them. Figure 5.8 summarizes the frequency of the

different party characteristics for each contact point as two of the characteristics differed significantly by contact point. It should be noted that 20.5% of all respondents did not select any of these characteristics as describing the parties whose behavior affected them suggesting that these parties were more likely typical parties. Overall, party's whose behavior detracted from others were more likely to be a party over 8 people in size, have members under age 18, and to be in motorized boats.

Further analyses allowed us to identify if there were party's with particular combinations of characteristics that were more likely to be the source of the detracting behavior. Results indicated that although there were parties described by multiple characteristics those with the greatest likelihood of occurring had a single characteristic describing them. For all visitors, parties in motorized boats affected 20.5% of respondents experience followed by parties with 8 or more members (12.0%). Visitors contacted at Hozomeen were most likely to describe the party that affected their experiences as having 8 or more party members (31.8%) whereas visitors contacted at Ross Dam Trail or Diablo Portage were most likely to describe the party that affected their experience as being in a motorized boat (29.4% and 18.5%, respectively).

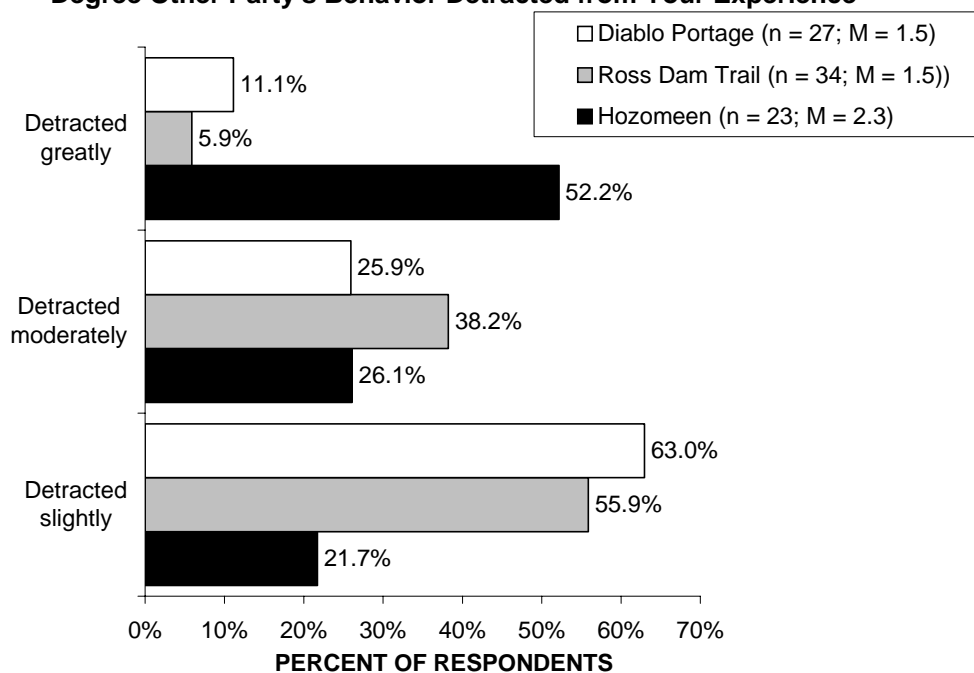
Figure 5.8. ROLA Lake User Survey, Mail Survey Q-8b
Characteristics of Party's whose Behavior Detracted by Contact Point



*These party characteristics differed significantly by contact point.

The degree to which this other party's behavior detracted from visitors experience varied by contact point, $F(2, 81) = 11.14, p < .001$. Visitors contacted at Hozomeen reported a greater degree of detraction ($M = 2.3$) than visitors contacted at Ross Dam Trail ($M = 1.5$) or Diablo Portage ($M = 1.5$). As can be seen in Figure 5.9, over half of visitors contacted at Hozomeen indicated that the behavior detracted greatly from their experience.

Figure 5.9. ROLA Lake User Survey, Mail Survey Q-8c
Degree Other Party's Behavior Detracted from Your Experience



Includes only the 19.4% of respondents who said another party's behavior detracted from their experience

Table 5.2 includes the coded descriptions of the incidents that had the largest effects on respondents by contact point. Review of the table indicates that loud behavior that often goes on late into the night and sometimes accompanied by alcohol was more prevalent at Hozomeen than at the other two contact points and may be the behavior that is driving the higher detraction ratings.

V. Impacts of Other Visitors

Table 5.2 Descriptions of incident with largest impact on respondent

Codes:	
a	Motorboat(s) went too fast and/or close to a nonmotorized boat
b	Park personnel
c	Motor boats (general)
d	Loud behavior (includes music and foul language)
e	Occurred late at night
f	Involved children
g	Left garbage or waste
h	Rude, generally unrespectful behavior
i	Involved dogs
j	Space issues
k	Miscellaneous
l	Damaging resources
m	Alcohol-related
HOZOMEEN	
c	Motor boat was very noisy and smelly - noise and air pollution. Even another party was bothered by these boaters who did not seem to care about the environment in any way. One was smoking a cigar.
d	Group of 4, aged 19-25, camped close to ours. Turned radio on and kept it on till past 1am. I walked over then and asked them to turn the music down. They did, but talked loud till 2:30am by fire.
d	People camping at Hozomeen lake defecating on the sides of the trail, littering everywhere
d	Playing music by the lake when we were expecting peace and quiet. We moved to a spot where we could no longer hear them.
d	They were very loud and used bad language
d, e	The group was extremely loud keeping myself and children up well after 1am even after being politely asked to be quiet.
d, e	Several groups that stayed up late (10-12pm) socializing noisily and keeping campers awake.
d, e	The party of young were there to swim and drink. They were loud and disturbing in the evening and night. They left a bonfire w/o attending it. There were no rangers around to assist or quiet them.
d, e	They were loud till 1am, they were swimming and yelling at 7am near our tent. My kids didn't sleep. We were all tired and grump and left 1 day early.
d, e	They were loud late at night
d, e	Stayed up very late at night and was quite loud
d, e	In Hozomeen Campground, large group of Canadians had loud music and talking (lots) till after 4:30am, 2 nites in a row. No rangers came to camp after 7pm to enforce 10:30pm quiet hours.
d, e, l	Noise until wee hours of the morning. Loud music/barking dogs/loud conversation/laughter
f, d, e	At night in the campground the adolescent children were up taking flash pictures at midnight. Their father, who appeared drunk, was profanely shouting at them. This continued until about 1pm.
i	Couple w/ dog. Parked motorbike in campground stall and then visited w/ friends in cabin at Hozomeen. Dog barked all afternoon and early evening.
j	There was confusion between parties as to who could claim the "group" campsite. Basically it was

V. Impacts of Other Visitors

	the first-come, first-served jockeying for campsites, got resolved nicely by the ranger.
j, l	A couple and their three dogs occupied the campsite we had already paid for and been at while we were on an interpretive hike with a park ranger. We had to ask them to move, which was uncomfortable.
k	Party of 4 arrived at Hozomeen campground with boat in tow. Up for the day only, the driver proceeded to park his truck and trailer in a campsite thus taking up one of the primes sites
k	Complained (again) about our children enjoying themselves on the dock
m, d, e	Party stayed up all night drinking, very loud, difficult for other people to sleep (wished rangers had stepped in and kept them quiet after 11pm)
m, d, e	Two men setting up camp. Later that day drinking began and more men joined the campsite. Music was turned on loudly and continued til 3:30 am. Was better next night, but following was loud again.
m, d, e	Eastern European group on Hozomeen campground drank hard liquor excessively, played extremely loud music, burned bright propane lamps and had loud animated conversations til 3am.
m, d, e	Drinking and swearing til 4am
ROSS DAM TRAIL	
a	Motoring too fast and too close to us (we were in a canoe and didn't appreciate their wake
a	While we were canoeing on Ross Lake we saw a number of motor boats. They were loud and smelled bad (for a long time after passing us the smell lingered). Also they left oily residue in the water
a	Zoomed by too close in a motor boat when we were already struggling to paddle in wind and waves
a, d	Motorboats speeding in to Cougar Island right by us (in our small kayaks) then running around the island, talking loudly & yelling (even through the area we were sitting/picnicking)
b	Saw more park personnel than expected - not a big deal
b	Two rangers with intimidating behaviors checked out our camp; asked questions; checked our paperwork; asked irrelevant questions
c	I disagree about the permission of motorized boats. Poor support of eco values, too noisy, and makes the lake too crowded
c	The use of engines in the NP seems at odds with a natural experience. Very noisy, very distracting. Why are they necessary?
c	Loud and stinky motor in flat water peaceful inlet
c, d, e	Zoomed around on a motorboat during otherwise quiet dusk hours. Took several sharp turns, hooting and yelling, driving the boat wildly just off camp-very loud and disruptive to our peace and quiet.
c, d, m	Loud party in motorboat w/ beer (lots). This was not terrible, but it did not seem to belong in such a beautiful place
d	Loud, big fires; everytime we lead trips on the lake with smaller groupos we are staffed into the group camp sites and end up dealing with boy scout groupos, or the motorboat that has set up a party
d	Foul language
d, a	Loud talk in afternoon. Motor boat(s) close to swimming and campsite.
d, c	Two motor boats from the resort were in a loud argument we could hear from campsite
d, g	Tents all over site at lightning creek-group was loud early and late, and they left garbage/clothing behind.
f	Family of 4 at next site - toddler crying for more than 15 minutes
f	Kid ran out of control screaming at people and trying to be a bear. Kid may have been about 6

V. Impacts of Other Visitors

f	Uncontrolled, loud children were part of the group camping next to us at Lightning Creek
h	Being slightly rude
i	Dogs running around campsite
i	The large pup was off leash and rummaged through our camp
j	Party occupied campsite that should be for larger group, resulted in our party had much less space to put up tent
j	Overbooked the Big Beaver campground. Group of 12 was loud at night, coming in from 7-10pm; made it hard to sleep.
j, d	I camped at Cougar island near the dock. Eleven people in a group came in three motor boats and used the dock for swimming. It was loud; so many people spoiled tranquility; felt like a drive-in campground
k	Party was packing a gun
k	LOUD motorcycles revving engines and zipping around vehicles on the park roads
k	We wanted to skinny dip, but too many people were around for this to be appropriate.
k	The party landed on 10 Mile Island, adjacent to our camp, and one member spent 15-30 minutes firing an automatic pistol at the lake shore
k	Loud noise from the dam work encroached upon the quiet and solitude of a portion of the hike.
k	We arrived Sunday afternoon, so the resort workers were very busy bringing other guests back to the shore. They made us wait a very long time before taking us to the resort, then longer to check in.
k	Several motorcycles were touring together on the highway and were very loud
l, h	Don't store food properly, messy people, not respectful of nature or the rules. Just an overall lack of camping common sense.
m, e, a	1.played drinking games late into night (1-2am) Brought to cat island by resort H2O taxi. 2.Motorized boat incident-park rangers cutting in front of kayaks at full speed within 25 ft.
DIABLO PORTAGE	
a	Water taxi and one other boat went too fast next to our canoes causing one of our canoes to almost swamp
a	Motorized boats made a lot of noise and failed to slow down while passing our kayaks, creating annoying wake
c	Noise of motor boats
c	Thought was rented skiff from resort, gunned outboard often, making excessive noise
d	Party of 13. They canoed around until 9:30 pm. Then chose a campsite next to ours at Rainbow Point. They were loud, walked through our site to the outhouse constantly.
d	When the groups took the group campsite at cat island they were quite noisy. Concerned that it would be a noisy night, but in fact was quiet.
d	The teenagers were LOUD (2 girls); their voices broke the solitude. They could be heard coming and going, then it was peaceful and we could hear the eagles again
d	Group of boy scouts. Nice but loud. Throwing large logs over our canoe. Noisy at first but quiet at night and next morning. Normal behavior for boys 12-17
d	1.Children/teens swimming in bay near Roland Point were very loud all day. 2.Motor boat almost ran into our canoe- was not paying attention.
d	They were very loud from the moment they got to camp until they went to bed--didn't have control of their volume and could be heard from all the campsites.

V. Impacts of Other Visitors

d	Playing music from their motorized boat
d, e	Did not respect quiet times, used the F bomb excessively, turned volume all the way up on boom box at 7am
d, e	Loud talking by cabins at night, hard to sleep.. Curfew would help.
d, f	A family with teenagers - very noisy-yelling to hear the echoes, jumping off cliffs into deep water and screaming
d, j	Noisy; used up dock space
g	Floated big beaver. Prior visitors camped on shore and left a mess.
h	Boated to Spencer Island campground-ran all around, used outhouse running around our camp and left
h	Rude
i	They woke up very early and their dogs barked a lot
j	We had our camp set up and had already stayed one night. This group came and said they needed this site as their group was bigger. They stated they thought they had reserved the whole camping area.
j	Group site ended up with 6 tents and 13 people. Possible remedy is to specify sites to be occupied
j, l	Kayakers in large party wanted to use our campsite even though we had a permit and reservation for it; they ended up camping in a site that was too small, sawing wood from trees, etc. No ranger came.
k	Peeing in the lake not 50' from me. I was totally distracted by this very natural occurrence in the male species
k	Water skiing
k	Used an adolescent to watch for ranger to alert people fishing illegally in Big Beaver Creek. Filleted and cleaned large rainbow trout in shallow area leaving guts and skeletons.
m, l	Drunken canoeist at midnight yelling, screaming, actually woke us up from a dead sleep. Had barking dog

Crowding

Mail questionnaire

10. Overall did you feel crowded during this trip? (*Check one box.*)

☐ Not at all Crowded → GO TO QUESTION 11
☐ Slightly Crowded
☐ Moderately Crowded
☐ Very Crowded
☐ Extremely Crowded

Continue on next page.

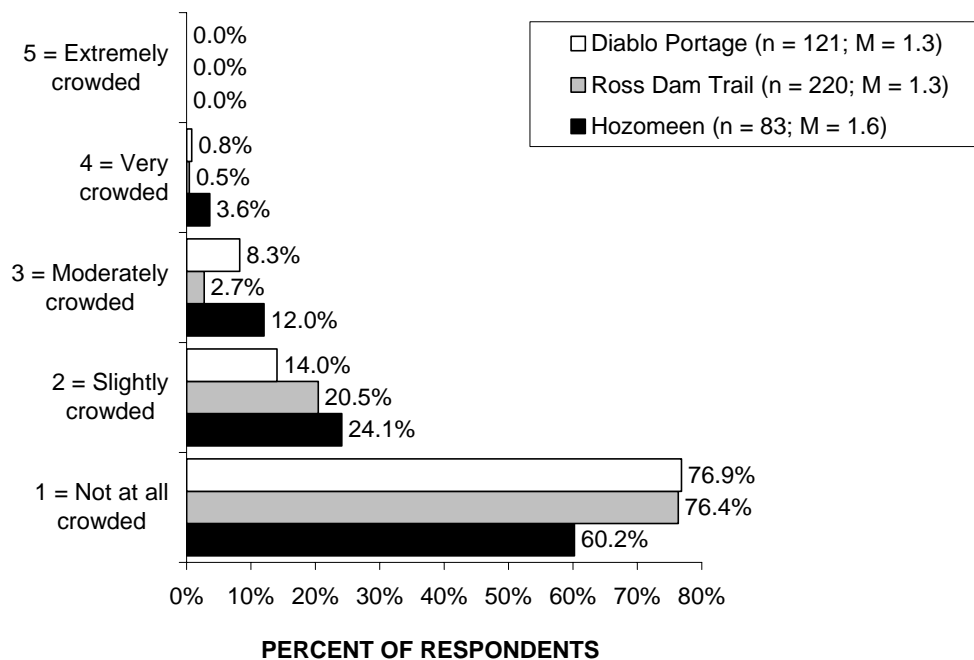
V. Impacts of Other Visitors

10a. **IF YOU FELT CROWDED AT ALL**, which of the following factors contributed to your feeling crowded? (Please circle one response for each factor.)

A. NUMBER OF <u>HIKING</u> PARTIES SEEN	Did not contribute	Contributed slightly	Contributed moderately	Contributed greatly	Don't Kno remember
B. NUMBER OF <u>BOATING</u> PARTIES SEEN	Did not contribute	Contributed slightly	Contributed moderately	Contributed greatly	Don't Kno remember
C. NUMBER OF PARTIES CAMPED IN SIGHT/SOUND	Did not contribute	Contributed slightly	Contributed moderately	Contributed greatly	Don't Kno remember
D. AMOUNT OF EVIDENCE OF HUMAN USE SEEN	Did not contribute	Contributed slightly	Contributed moderately	Contributed greatly	Don't Kno remember
E. TYPE OF EVIDENCE OF HUMAN USE SEEN	Did not contribute	Contributed slightly	Contributed moderately	Contributed greatly	Don't Kno remember
F. OTHER (SPECIFY: _____)	Did not contribute	Contributed slightly	Contributed moderately	Contributed greatly	Don't Kno remember

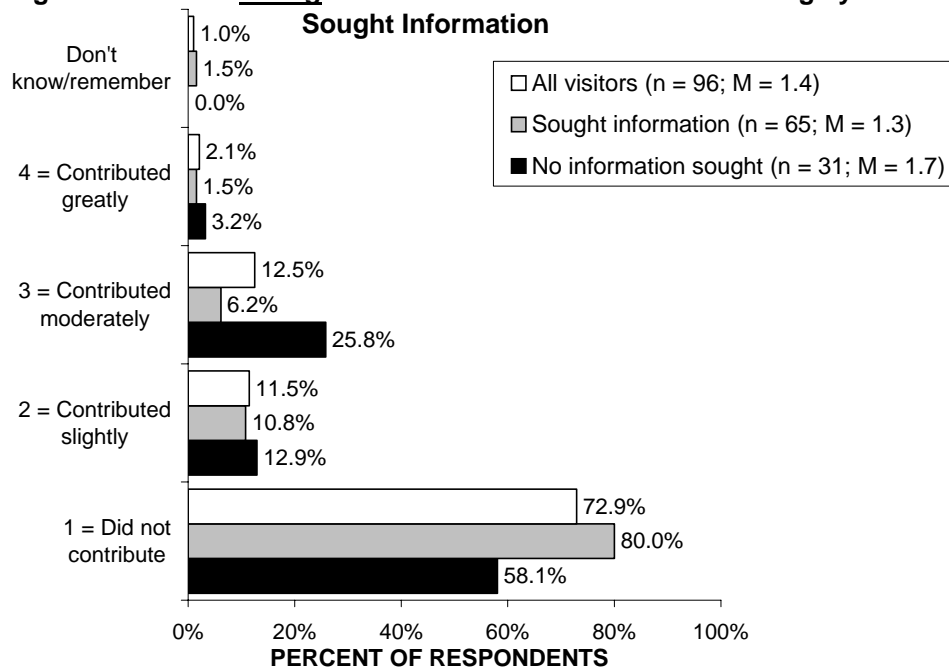
Respondents overall feeling of being crowded varied by contact point, $F(2, 421) = 7.51, p = .001$. Post hoc Tukey tests revealed that visitors contacted at Hozomeen felt more crowded ($M = 1.6$) than visitors contacted at Ross Dam Trail ($M = 1.3$) or Diablo Portage ($M = 1.3$). Consistent with average crowding ratings less than “slightly crowded”, Figure 5.10 shows that most respondents did not feel crowded at all.

Figure 5.10. ROLA Lake User Survey, Mail Survey Q-10
Overall Feelings of Crowding by Contact Point



The degree the number of hiking parties seen contributed to visitors feelings of being crowded varied by whether visitors sought information, $F(1, 93) = 7.51, p = .007$. As seen in Figure 5.11, visitors who did not seek information were more likely to indicate that the number of hiking parties seen contributed moderately to their feelings of being crowded whereas those who sought information were more likely to indicate that the number of hikers seen did not contribute.

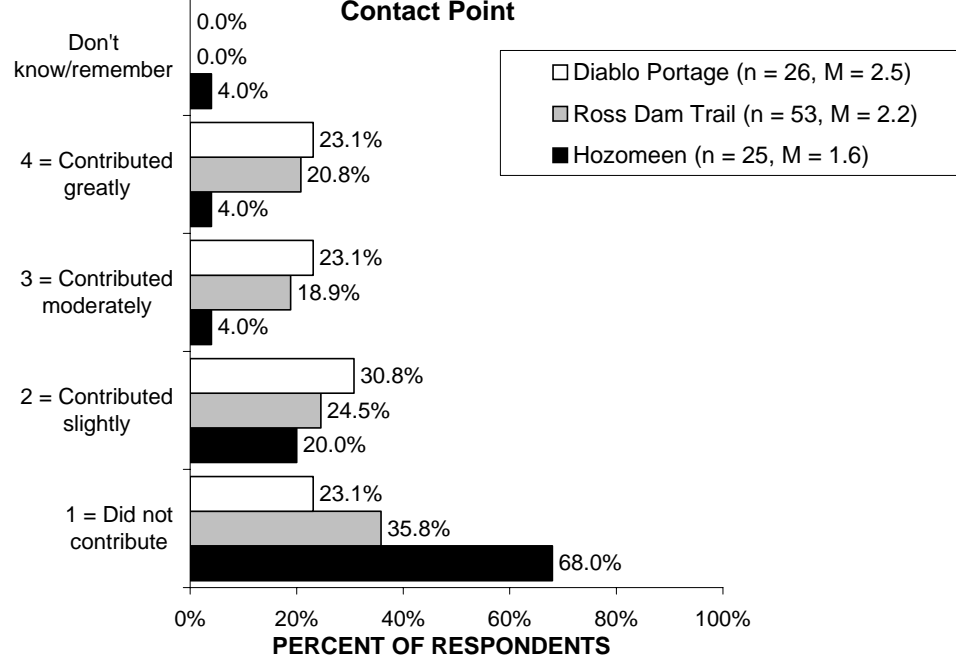
Figure 5.11. ROLA Lake User Survey, Mail Survey Q-10a
Degree Number of Hiking Parties Seen Contributed to Crowding by Sought Information



Includes only the 26.7% of respondents who indicated feeling crowded

The degree the number of boating parties seen contributed to visitors feelings of being crowded varied by contact point, $F(2, 101) = 4.67, p = .012$. Post hoc Tukey tests revealed that visitors contacted at Hozomeen rated number of boating parties seen as contributing significantly less to their feeling of being crowded ($M = 1.6$) than visitors contacted at Ross Dam Trail ($M = 2.2$) or Diablo Portage ($M = 2.5$). As seen in Figure 5.12, visitors contacted at Hozomeen were almost twice as likely to indicate that the number of boating parties seen did not contribute than visitors contacted at the other contact points.

Figure 5.12. ROLA Lake User Survey, Mail Survey Q-10a
Degree Number of Boating Parties Seen Contributed to Crowding by
Contact Point

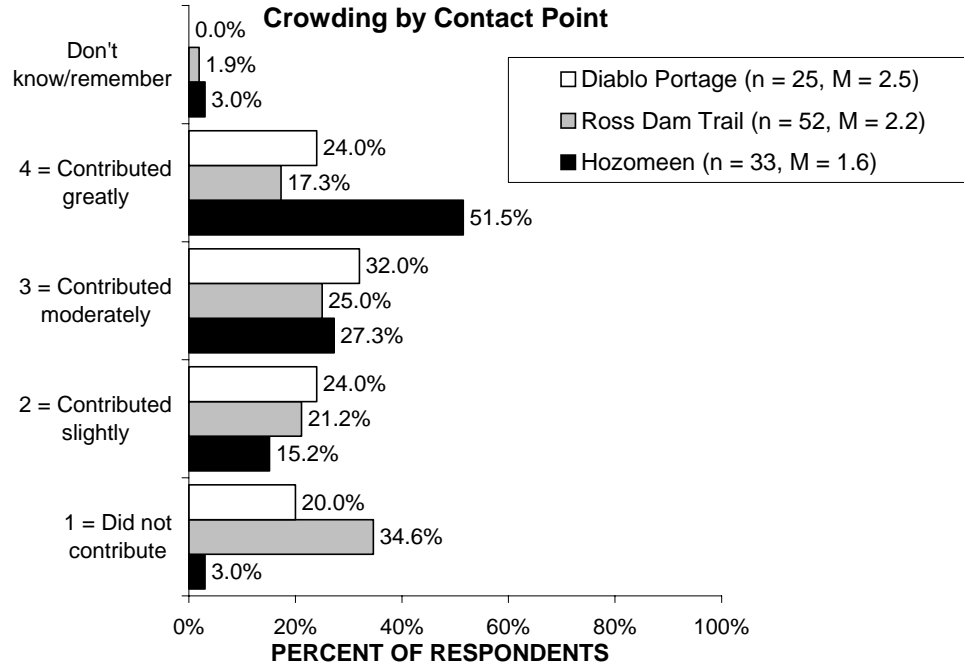


Includes only the 26.7% of respondents who indicated feeling crowded

Separate analyses found significant effects of contact point and sought information on the extent the number of parties camped in sight/sound contributed to feeling crowded. Both variables remained significant when included together, although the interaction between them was not significant. The degree to which number of parties camped within sight/sound contributed to feeling crowded varied by contact point, $F(2, 101) = 11.69, p < .001$. Post hoc Tukey tests revealed that visitors contacted at Hozomeen indicated that the number of parties camped in sight/sound contributed significantly more to their feeling crowded ($M = 3.3$) than visitors contacted at Ross Dam Trail ($M = 2.3$) or Diablo Portage ($M = 2.6$). Figure 5.13 shows that half of respondents contacted at Hozomeen said the number of parties camped in sight/sound contributed greatly to their feeling crowded compared to about half as many of visitors contacted at the other two sights.

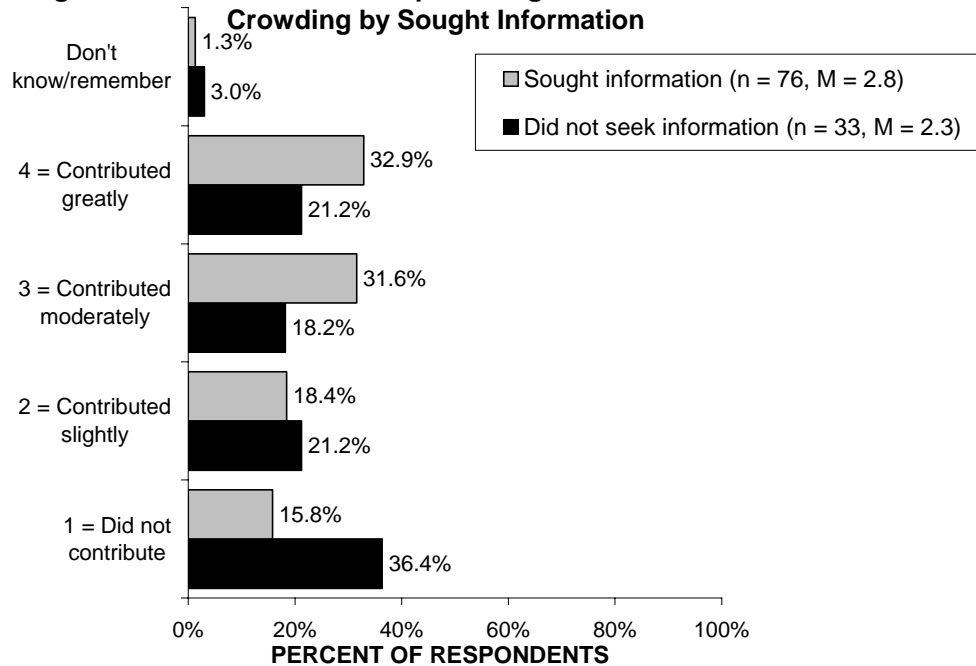
The degree to which the number of parties camped in sight/sound contributed to feeling crowded also varied by sought information, $F(1, 101) = 8.20, p = .005$. Visitors who sought information rated the number of parties camped in sight/sound as contributing more to their feeling crowded ($M = 2.8$) than visitors who did not seek information ($M = 2.3$). Figure 5.14 shows that visitors who sought information were about 1.5 times more likely to indicate that the number of parties camped nearby contributed moderately or greatly to their feeling crowded.

Figure 5.13. ROLA Lake User Survey, Mail Survey Q-10a
Degree Number of Parties Camped in Sight/Sound Contributed to Crowding by Contact Point



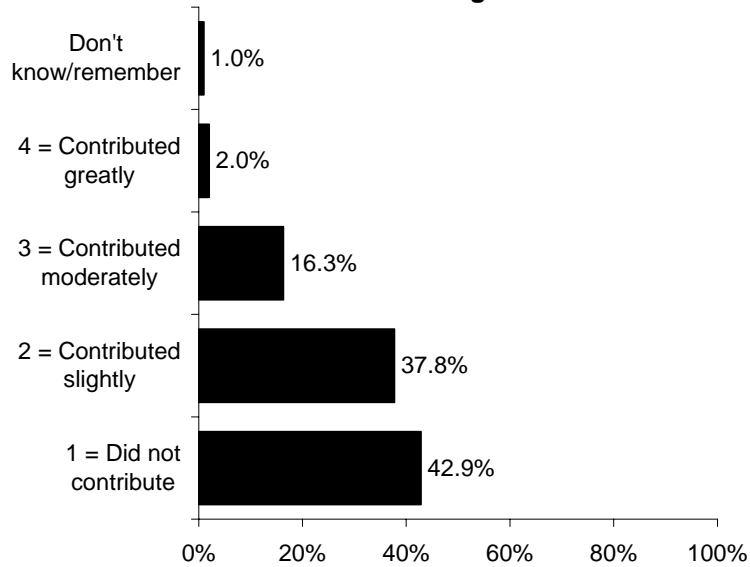
Includes only the 26.7% of respondents who indicated feeling crowded

Figure 5.14. ROLA Lake User Survey, Mail Survey Q-10a
Degree Number of Parties Camped in Sight/Sound Contributed to Crowding by Sought Information



Includes only the 26.7% of respondents who indicated feeling crowded

Figure 5.15. ROLA Lake User Survey, Mail Survey Q-10a
Degree Amount of Evidence of Human Use Seen Contributed to Crowding

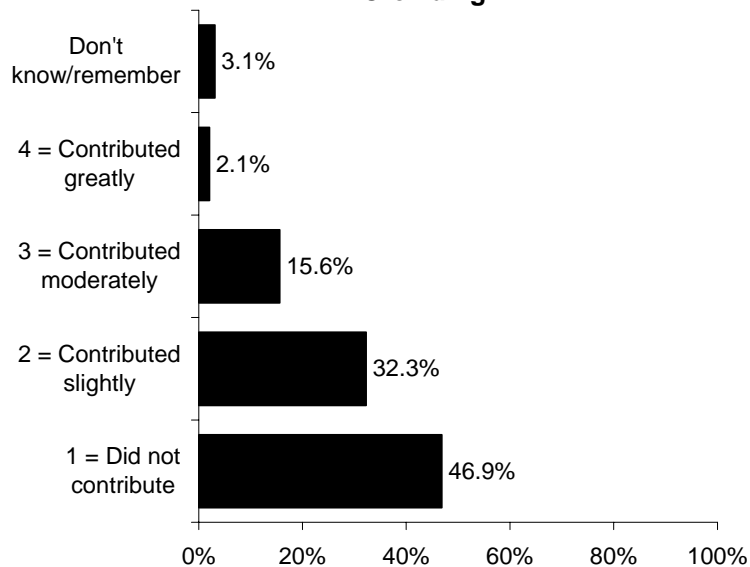


PERCENT OF RESPONDENTS (n = 98)

Average contribution rating = 1.8

Includes only the 26.7% of respondents who indicated feeling crowded

Figure 5.16. ROLA Lake User Survey, Mail Survey Q-10a
Degree Type of Evidence of Human Use Seen Contributed to Crowding

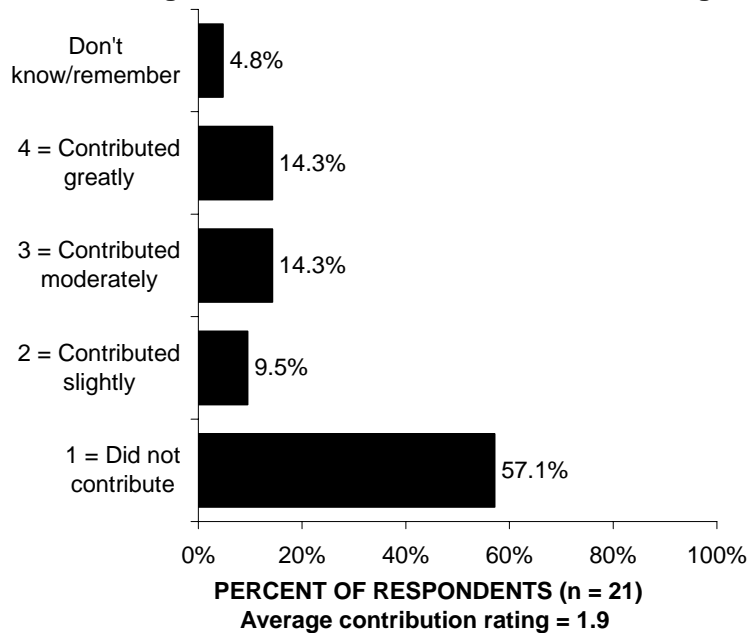


PERCENT OF RESPONDENTS (n = 96)

Average contribution rating = 1.7

Includes only the 26.7% of respondents who indicated feeling crowded

Figure 5.17. ROLA Lake User Survey, Mail Survey Q-10a
Degree Other Factor Contributed to Crowding



Includes only the 26.7% of respondents who indicated feeling crowded however there were a large number of these respondents who did not answer this question.

A large number of people who indicated they felt crowded did not respond to the degree that other factors contributed to their feeling crowded. It is likely that for many of these people there were no other factors contributing so they did not answer the question. Of the 21 who answered it, only nine specified the other factor: Five of them mentioned motorboats, two indicated that the cabins were close together, one indicated that the NPS had overbooked their campsite, and one indicated they had a short bed.

Impacts on natural resources

Mail questionnaire

9. In your opinion, did you see any evidence of human impacts on park natural resources during your trip to Ross Lake NRA? (*Circle one number.*)

NO → GO TO QUESTION 10

YES

↓

9a. Did the impacts you saw detract from your enjoyment of Ross Lake NRA? (*Check one number.*)

No, did not detract from experience

Yes, detracted slightly

Yes, detracted moderately

Yes, detracted greatly

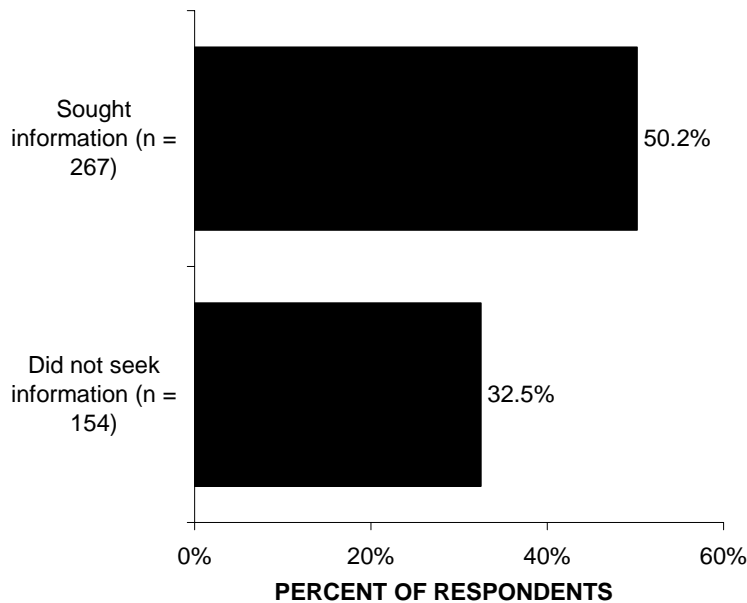
V. Impacts of Other Visitors

9b. What impacts did you see? (*Check as many as apply.*)

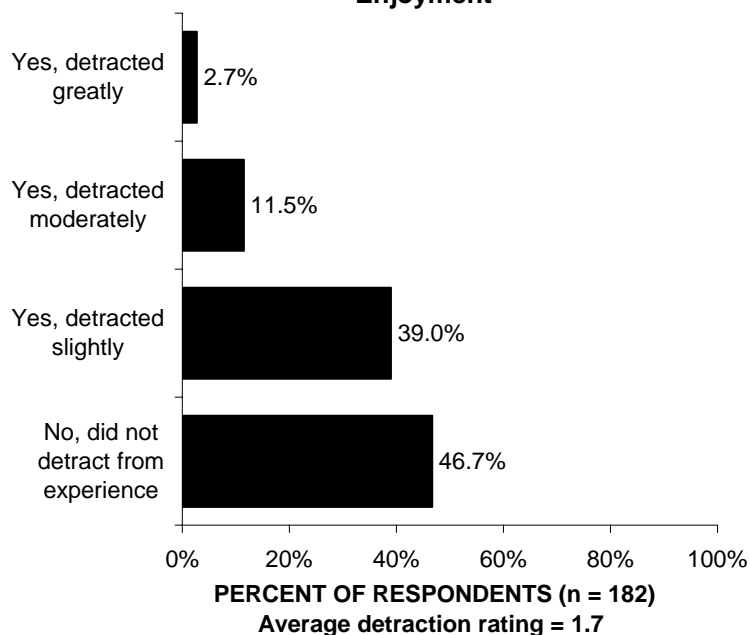
Shoreline erosion
Exotic or non-native plants
Hiker-made trails
Hiker-made campsites. (for example, soil compaction, vegetation trampling, moved rocks.)
Litter
Cut bushes or trees, axe marks in trees, etc
Human waste
Graffiti on trees, rocks, or facilities
Other (*please specify*) _____

The likelihood of seeing evidence of human impacts on park natural resources varied by sought information, $\chi^2(n = 421, 1) = 12.46, p < .001$. As can be seen in Figure 5.18, visitors who sought information were more likely to report seeing evidence of human impacts than visitors who did not seek information. The degree to which these impacts detracted from visitors' enjoyment did not vary by sought information or contact point (see Figure 5.19).

**Figure 5.18. ROLA Lake User Survey, Mail Survey Q-9
Saw Evidence of Human Impacts on Park Natural Resources by
Sought Information**

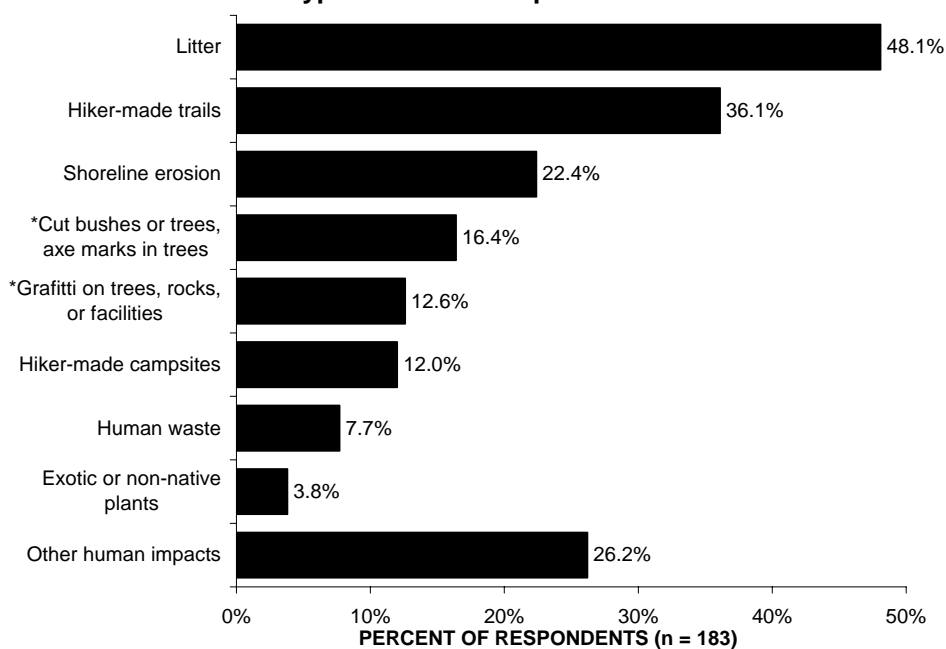


**Figure 5.19. ROLA Lake User Survey, Mail Survey Q-9a
Degree Human Impacts on Natural Resources Detracted from
Enjoyment**



Includes only the 43.7% of respondents who saw evidence of human impacts

**Figure 5.20. ROLA Lake User Survey, Mail Survey Q-9b
Types of Human Impacts Seen**



Includes only the 43.7% of respondents who saw evidence of human impacts

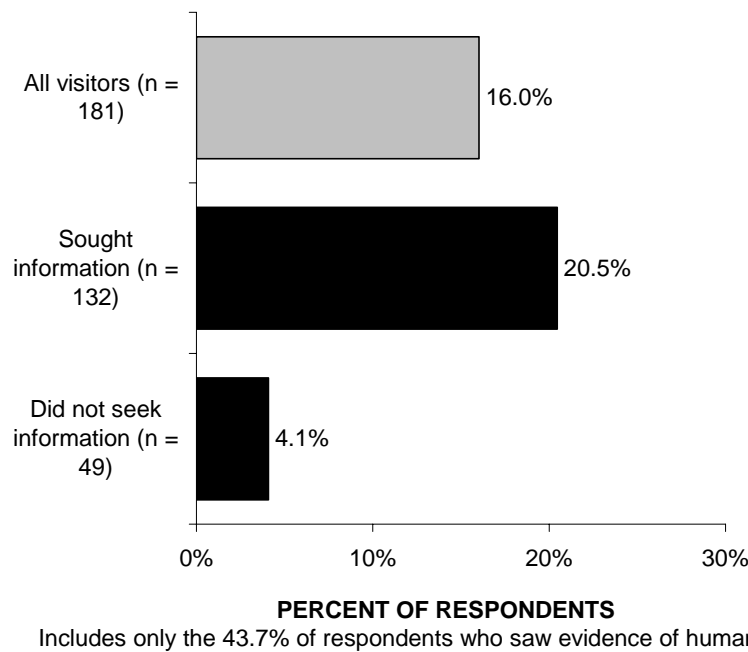
*The likelihood of seeing these types of impact varied by sought information.

V. Impacts of Other Visitors

Figure 5.20 shows the relative frequency of seeing the different types of human impacts. Litter was the most common form of impact seen followed by hiker-made trails. Other human impacts specified included the dam and dam-related items (e.g., power lines, road, maintenance equipment; 33.3%), other forms of garbage or waste (20.8%), motorboats and related noise or oil in lake (14.6%), and other facilities (e.g., developed campsites, resort, bathrooms, etc.; 12.5%).

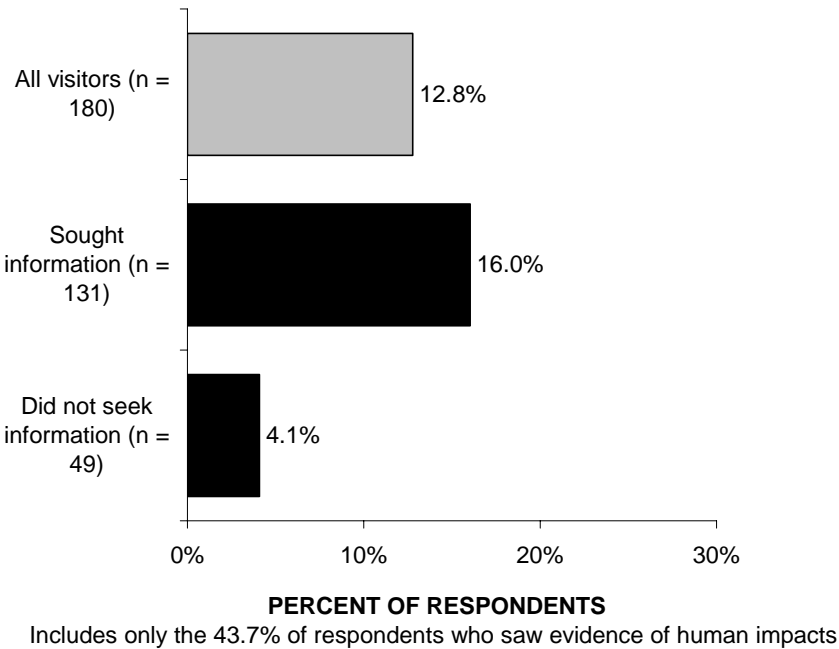
The likelihood of seeing cut bushes or trees differed by sought information, $\chi^2(n = 181, 1) = 7.12$, $p = .008$. As can be seen in Figure 5.21, people who sought information were about 5 times more likely to report seeing cut bushes or trees than people who did not seek information.

**Figure 5.21. ROLA Lake User Survey, Mail Survey Q-9b
Saw Cut Bushes or Trees, Axe Marks in Trees, Etc. by Sought
Information**



The likelihood of seeing graffiti also varied by sought information, $\chi^2(n = 181, 1) = 4.57$, $p = .033$. As can be seen in Figure 5.22, people who sought information were about 4 times more likely to see graffiti as people who did not seek information.

Figure 5.22. ROLA Lake User Survey, Mail Survey Q-9b
Saw Grafitti by Sought Information



VI. Potential Actions

Visitors were asked about three types of potential actions: 1) lower than normal water levels due to hydroelectric demands, 2) potential use fees, and 3) possible use rationing policies. This section reports the findings associated with these potential actions.

Impacts of lower lake levels

Mail questionnaire

14. The level of water in Ross Lake and Diablo Lake will sometimes be lower than normal due to hydroelectric demands (i.e., a drawdown) or low snowpack. Lower lake levels can have a variety of effects. For each potential effect below, please indicate the extent to which it would detract (if at all) from your trip experience.

		Extent to which possible effect of lower lake levels would affect your trip experience?			
		↓	↓	↓	↓
		Will not detract	Detract Slightly	Detract Moderately	Detract Greatly
A.	INCREASED LIKELIHOOD OF RUNNING AGROUND OR HITTING A STUMP				
B.	INABILITY TO USE A BOAT DOCK WITH A POWERBOAT				
C.	EXPOSED BARE SHORELINE AND TREE STUMPS DUE TO LOWER THAN NORMAL WATER LEVELS				

The degree the increased likelihood of running aground or hitting a stump would affect visitors' trip experience differed by contact point, $F(2, 410) = 11.16, p < .001$. Post hoc Tukey tests revealed that the increased likelihood of running aground or hitting a stump would detract less from experiences for visitors contacted at Ross Dam Trail than visitors contacted at the other two locations. Figure 6.1 shows the distribution of detraction ratings by contact point.

The degree the inability to use a boat dock with a powerboat would affect visitors' trip experience also differed by contact point, $F(2, 405) = 13.20, p < .001$. Post hoc Tukey tests revealed that the inability to use a boat dock with a powerboat would detract less from experiences for visitors contacted at Ross Dam Trail than visitors contacted at the other two locations. Figure 6.2 shows the distribution of detraction ratings by contact point.

Figure 6.1. ROLA Lake User Survey, Mail Survey Q-14
Degree Increased Likelihood of Running Aground or Hitting Stump
Will Detract by Contact Point

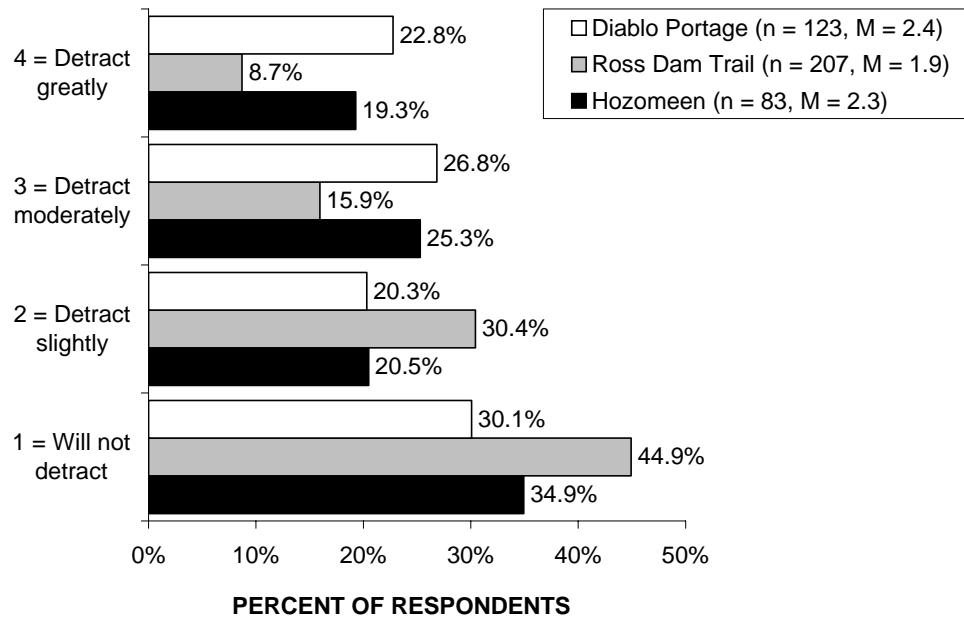


Figure 6.2. ROLA Lake User Survey, Mail Survey Q-14
Degree the Inability to Use a Boat Dock with a Powerboat Will Detract
by Contact Point

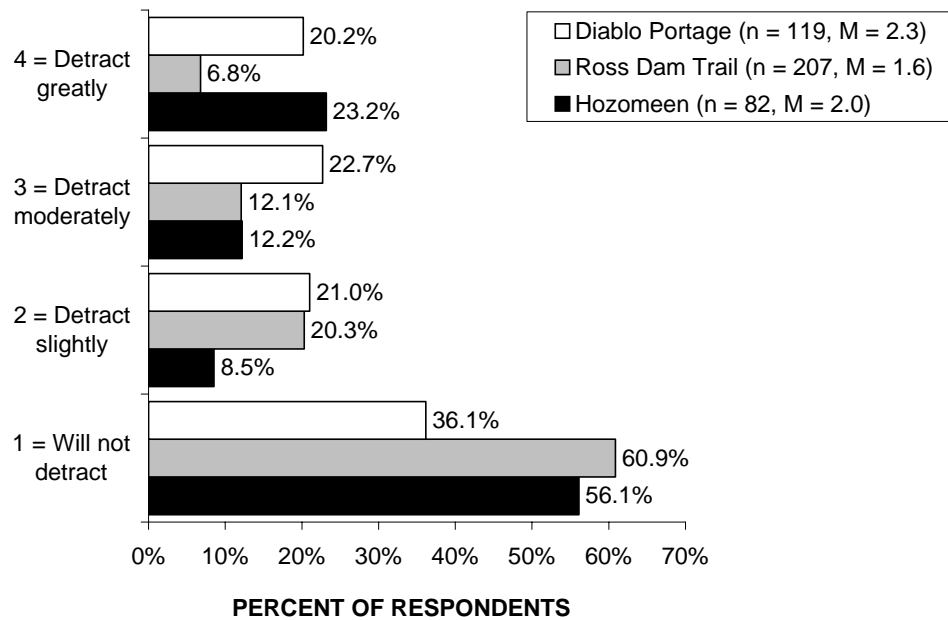
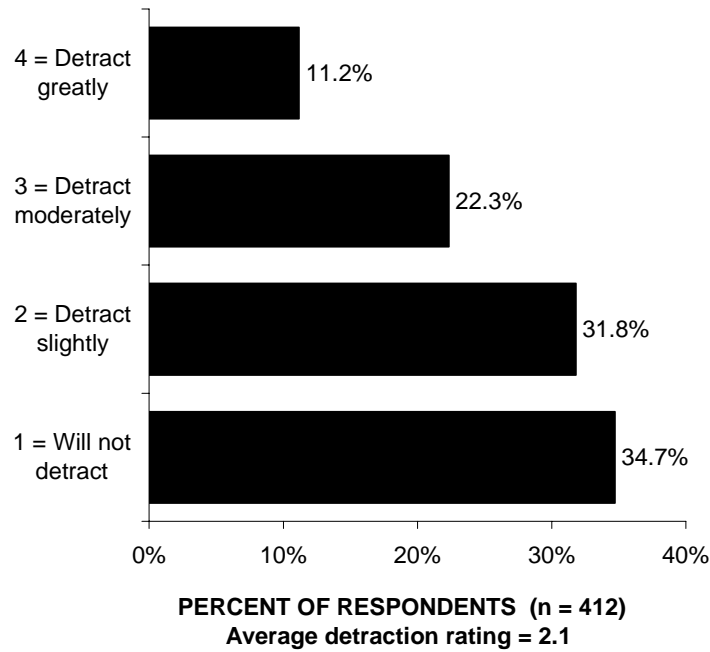


Figure 6.3. ROLA Lake User Survey, Mail Survey Q-14
Degree Exposed Bare Shoreline and Tree Stumps Will Detract



Support for possible use fees

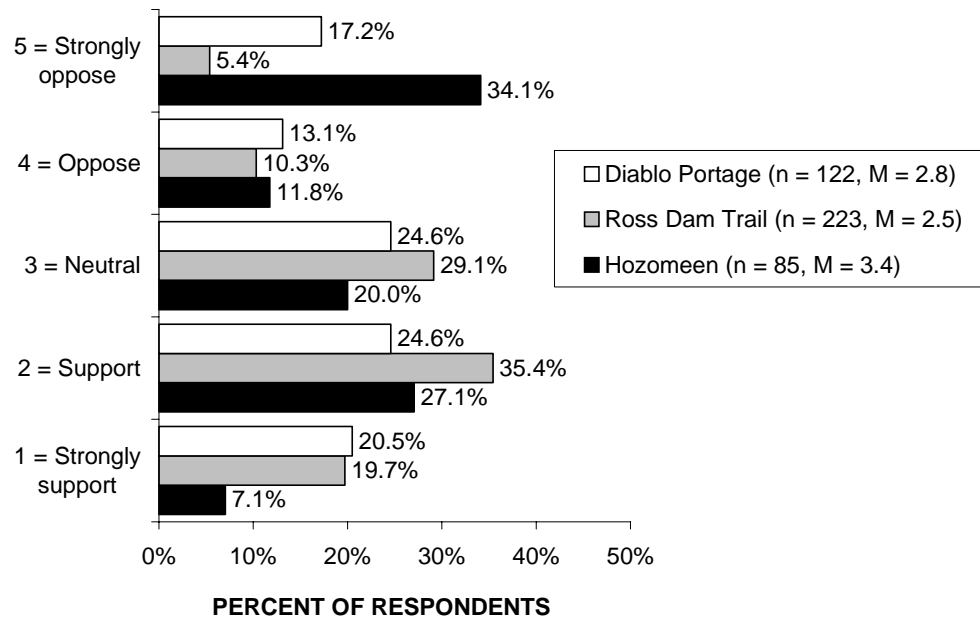
Mail questionnaire

15. Do you support or oppose each of the following possible use fees for Ross Lake NRA?						
		Do you support or oppose this possible fee?				
		↓	↓	↓	↓	↓
A.	A FEE OF \$10 PER WEEK TO LAUNCH A BOAT	Strongly support	Support	Neutral	Oppose	Strongly oppose
B.	A FEE OF \$5 TO USE AN RV DUMP STATION	Strongly support	Support	Neutral	Oppose	Strongly oppose
C.	A FEE OF \$20 PER TRIP FOR MOTORIZED BOATS LONGER THAN 15FT (16FT OR MORE)	Strongly support	Support	Neutral	Oppose	Strongly oppose
D.	A FEE OF \$10 PER CAMPSITE RESERVATION IN VEHICLE-ACCESSED CAMPGROUNDS	Strongly support	Support	Neutral	Oppose	Strongly oppose

Support for a fee of \$10 per week to launch a boat varied by contact point, $F(2, 427) = 17.71, p < .001$. Post hoc Tukey tests revealed that all differences among contact points were significant. As

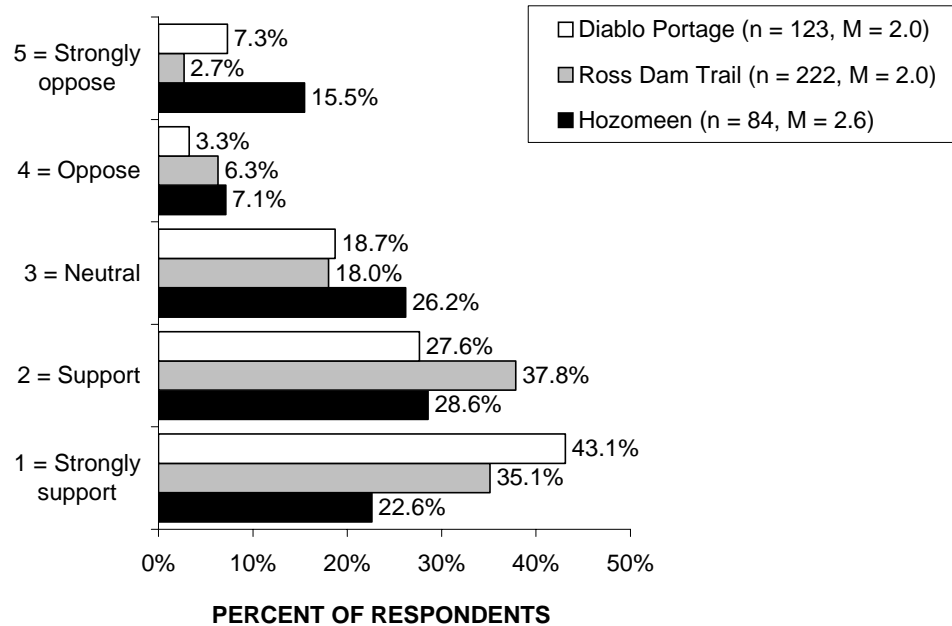
can be seen in Figure 6.4, visitors contacted at Hozomeen were the most likely to strongly oppose the fee and least likely to strongly support the fee. Visitors contacted on Ross Dam Trail were the most likely to be supportive of all the contact points. On average, visitors contacted at Hozomeen slightly opposed this fee ($M = 3.4$) whereas visitors contacted at Diablo Portage slightly supported the fee ($M = 2.8$) and those contacted at Ross Dam Trail were somewhat more supportive yet ($M = 2.5$)

Figure 6.4. ROLA Lake User Survey, Mail Survey Q-15
Support for a Fee of \$10 per Week to Launch a Boat by Contact Point



Support for a fee of \$5 to use an RV dump station varied by contact point, $F(2, 426) = 9.62$, $p < .001$. Post hoc Tukey tests revealed that visitors contacted at Hozomeen were significantly less supportive of this fee ($M = 2.6$) than visitors contacted at Ross Dam Trail ($M = 2.0$) or at Diablo Portage ($M = 2.0$). No other significant differences were observed. Figure 6.5 shows the distribution of responses for each contact point and reveals that visitors contacted at Hozomeen were two to five times more likely to strongly oppose this fee than visitors contacted at Diablo Portage or Ross Dam Trail, respectively.

Figure 6.5. ROLA Lake User Survey, Mail Survey Q-15
Support for a Fee of \$5 to Use an RV Dump Station by Contact Point



Support for a fee of \$20 per trip for motorized boats longer than 15ft varied by contact point, $F(2, 410) = 21.24, p < .001$. Visitors contacted at Ross Dam Trail were the most supportive ($M = 2.2$) followed by those contacted at Diablo Portage ($M = 2.6$) and at Hozomeen ($M = 3.2$). Support for a fee of \$20 per trip for motorized boats longer than 15ft also varied by sought information, $F(1, 410) = 4.50, p = .034$. Visitors who sought information were more supportive of this fee ($M = 2.4$) than visitors who did not seek information ($M = 2.4$). The effects of contact point and sought information depended on each other (i.e., the interaction), $F(2, 410) = 6.60, p = .015$. Further analyses revealed that the difference in support ratings between sought information and did not seek information was only significant for visitors contacted at Diablo Portage. Visitors contacted at Diablo Portage who sought information were slightly supportive of this fee ($M = 2.4$) whereas those visitors contacted at Diablo Portage who did not seek information were neutral ($M = 3.1$). Figures 6.6 to 6.8 show the distribution of support/oppose ratings by sought information for each contact point.

Figure 6.6. ROLA Lake User Survey, Mail Survey Q-15
Respondents Contacted at Hozomeen Support for a Fee of \$20 per
Trip for Motorized Boats Longer than 15 Feet by Sought Information

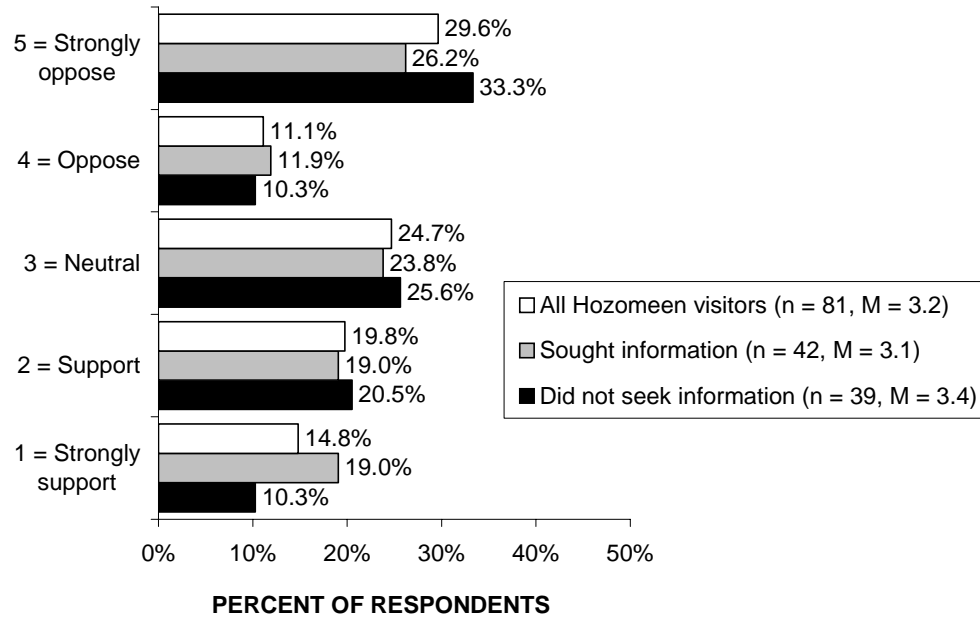


Figure 6.7. ROLA Lake User Survey, Mail Survey Q-15
Respondents Contacted at Ross Dam Trail Support for a Fee of \$20
per Trip for Motorized Boats Longer than 15 Feet by Sought
Information

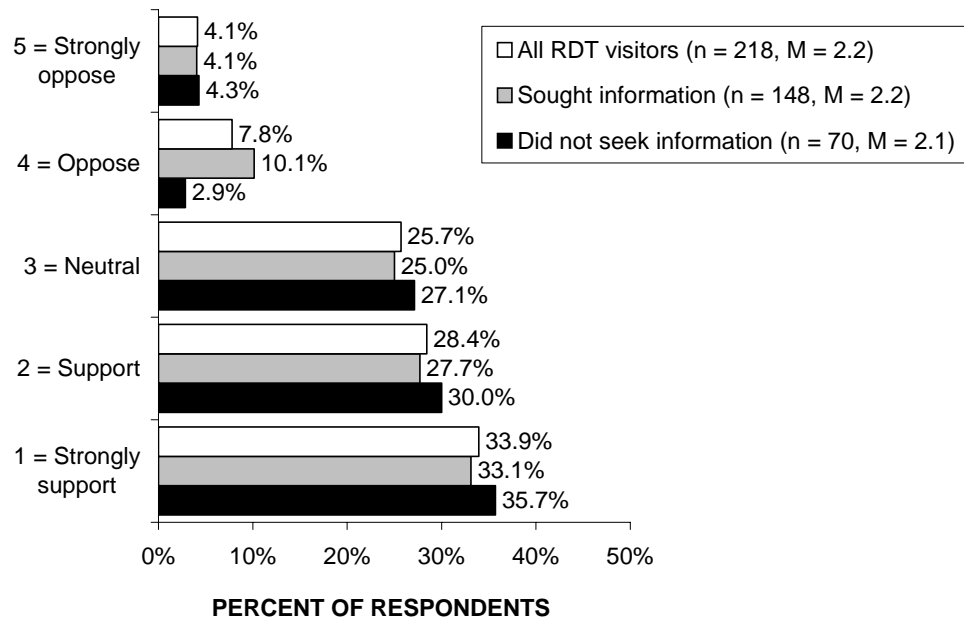
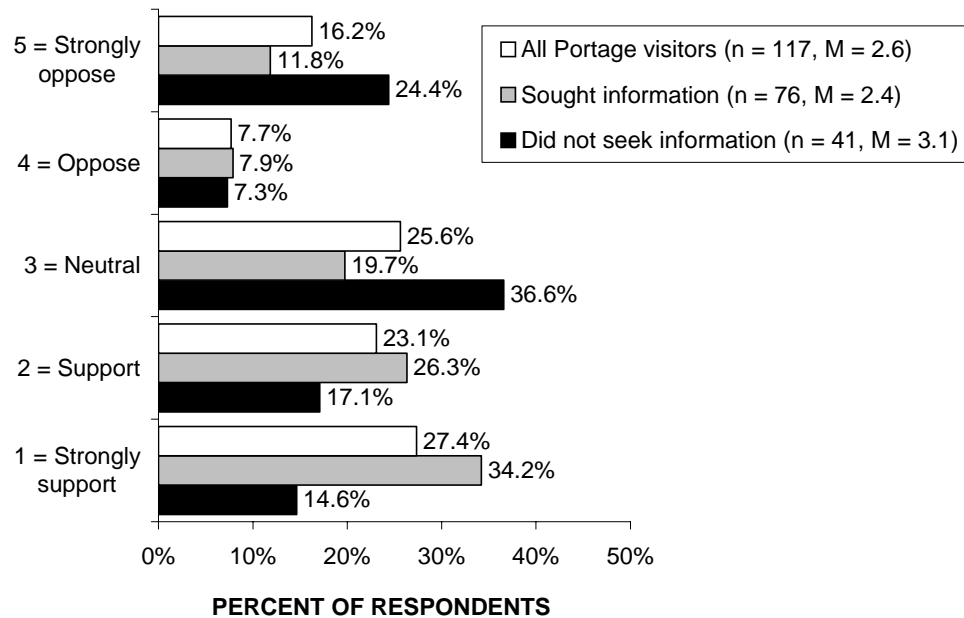
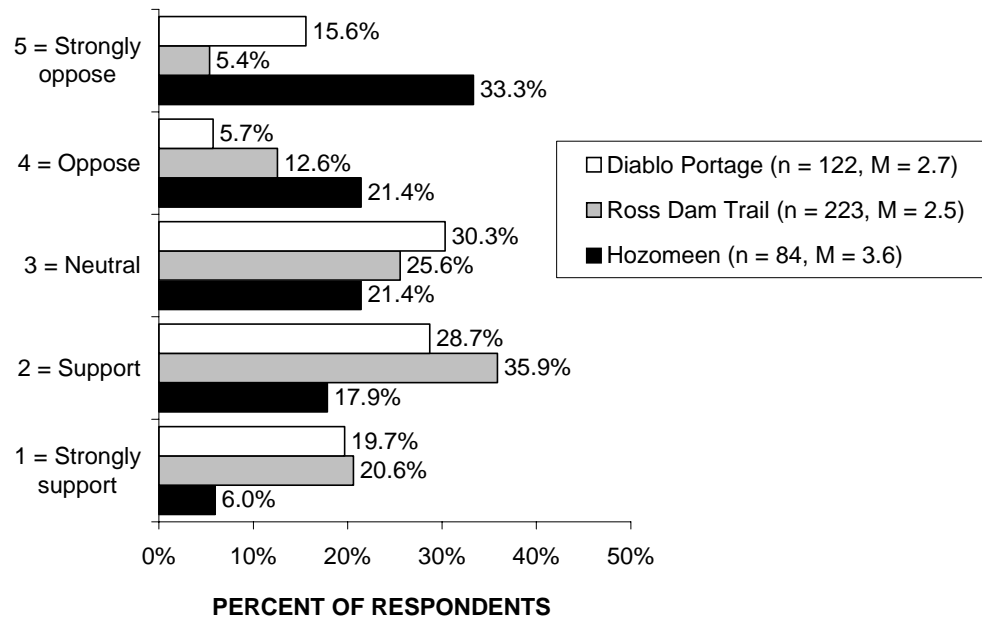


Figure 6.8. ROLA Lake User Survey, Mail Survey Q-15
Respondents Contacted at Diablo Portage Support for a Fee of \$20 per
Trip for Motorized Boats Longer than 15 Feet by Sought Information



Support for a fee of \$10 per campsite reservation in vehicle-accessed campgrounds varied by contact point, $F(2, 426) = 26.82, p < .001$. Post hoc Tukey tests revealed that visitors contacted at Hozomeen were significantly less supportive of this fee ($M = 3.6$) than visitors contacted at Ross Dam Trail ($M = 2.5$) or at Diablo Portage ($M = 2.7$). Figure 6.9 shows that over half of visitors contacted at Hozomeen opposed or strongly opposed this fee with one-third of them strongly opposing it. In contrast, 21.3% of visitors contacted at Diablo Portage and 18.0% of visitors contacted at Ross Dam Trail opposed or strongly opposed this fee. Compared to 23.9% of visitors contacted at Hozomeen, 48.4% of visitors contacted at Diablo Portage and 56.5% of visitors contacted at Ross Dam Trail supported or strongly supported this fee.

Figure 6.4. ROLA Lake User Survey, Mail Survey Q-15
Support for a Fee of \$10 per Campsite Reservation in Vehicle-
Accessed Campgrounds by Contact Point



Support for possible use rationing policies

Mail questionnaire

16. Do you support or oppose each of the following possible management policies for rationing use of Ross Lake? These policies would apply to all backcountry permits issued park-wide.

		Do you support or oppose this possible management policy?				
		↓	↓	↓	↓	↓
		Strongly support	Support	Neutral	Oppose	Strongly oppose
A.	ISSUE A LIMITED NUMBER OF PERMITS ON A FIRST-COME, FIRST-SERVED BASIS	Strongly support	Support	Neutral	Oppose	Strongly oppose
B.	ISSUE A LIMITED NUMBER OF PERMITS ON A DRAWING OR LOTTERY BASIS	Strongly support	Support	Neutral	Oppose	Strongly oppose
C.	ISSUE A LIMITED NUMBER OF PERMITS AT A COST OF \$20 PER PERMIT THROUGH AN ADVANCED RESERVATION SYSTEM	Strongly support	Support	Neutral	Oppose	Strongly oppose
D.	WALK-UP PERMITS ARE FREE AND CHARGE \$20 FOR ADVANCE RESERVATION PERMITS	Strongly support	Support	Neutral	Oppose	Strongly oppose
E.	CHARGE A USE FEE OF NO MORE THAN \$20 PER TRIP FOR PERMITS	Strongly support	Support	Neutral	Oppose	Strongly oppose
F.	CHARGE A FEE OF \$10 PER PERSON PER VISIT (REGARDLESS OF VISIT LENGTH)	Strongly support	Support	Neutral	Oppose	Strongly oppose
F.	ALLOW USE WITHOUT RATIONING (I.E., UNLIMITED USE)	Strongly support	Support	Neutral	Oppose	Strongly oppose

Support for issuing a limited number of permits on a first-come, first served basis varied by sought information, $F(1, 410) = 13.85, p < .001$. Visitors who sought information were more supportive of this policy ($m = 2.7$) than visitors who did not seek information ($M = 3.1$). Figure 6.10 shows the distribution of responses and indicates fairly bell-shaped curves for all groups.

Figure 6.10. ROLA Lake User Survey, Mail Survey Q-16
Support for Issue a Limited Number of Permits on a First-Come, First-Served Basis by Sought Information

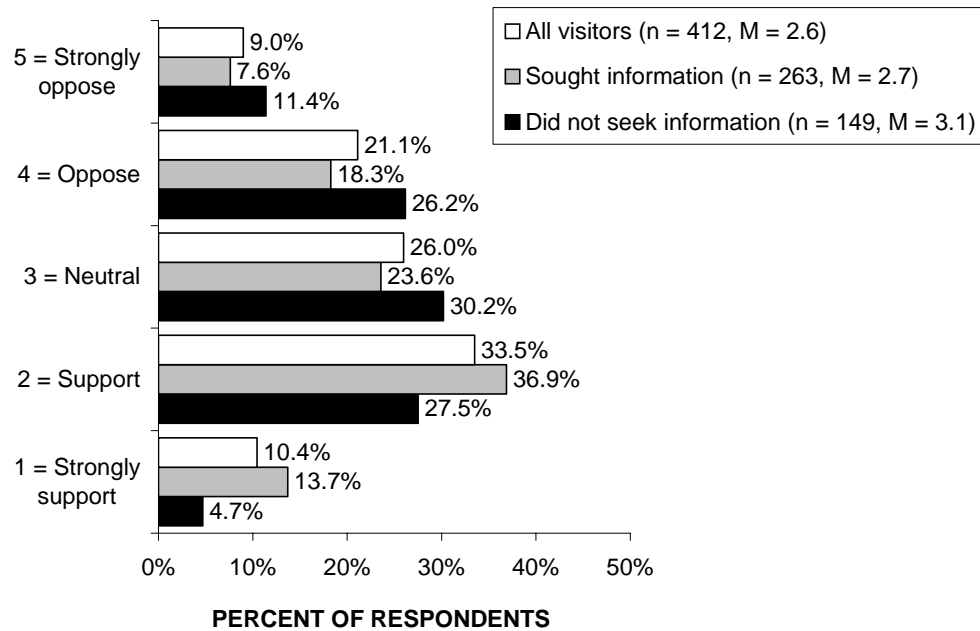


Figure 6.11. ROLA Lake User Survey, Mail Survey Q-16
Support for Issue a Limited Number of Permits on a Drawing or Lottery Basis

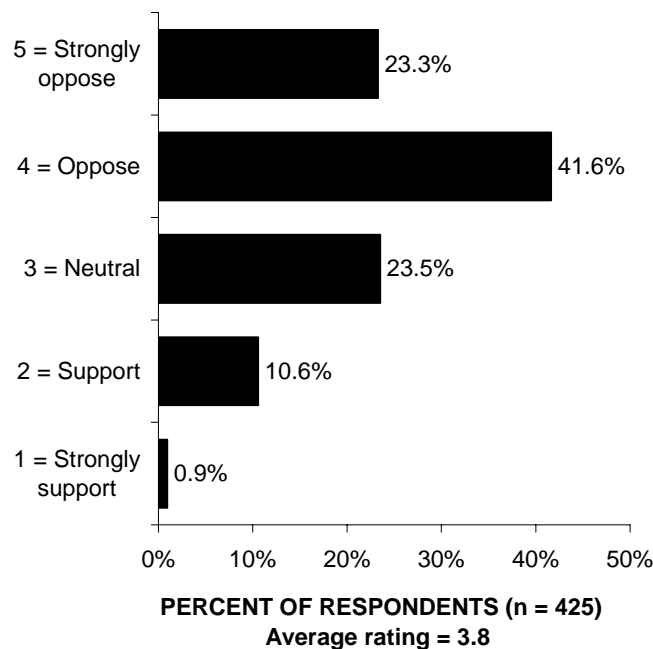


Figure 6.12. ROLA Lake User Survey, Mail Survey Q-16
Support for Issue a Limited Number of Permits at a Cost of \$20 per Permit through an Advanced Reservation System

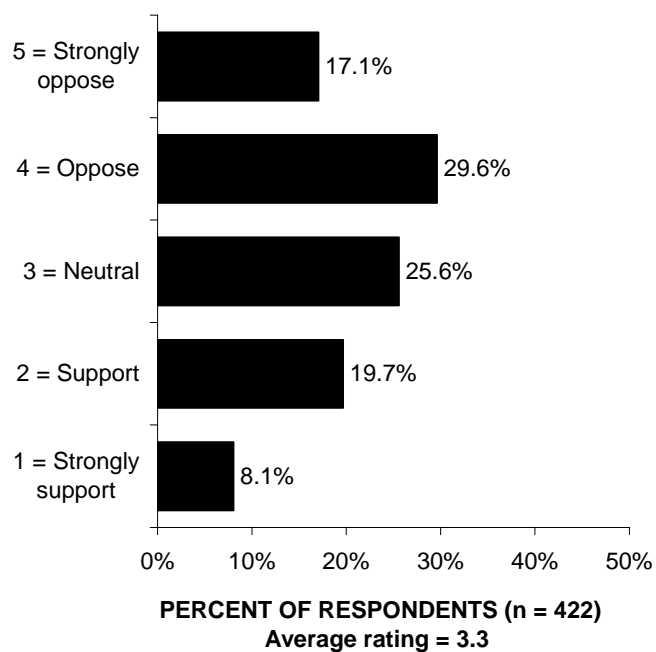
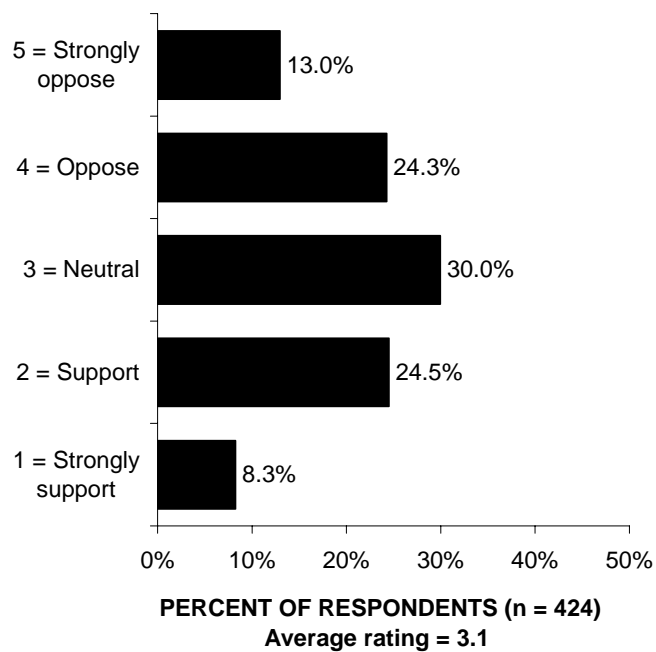
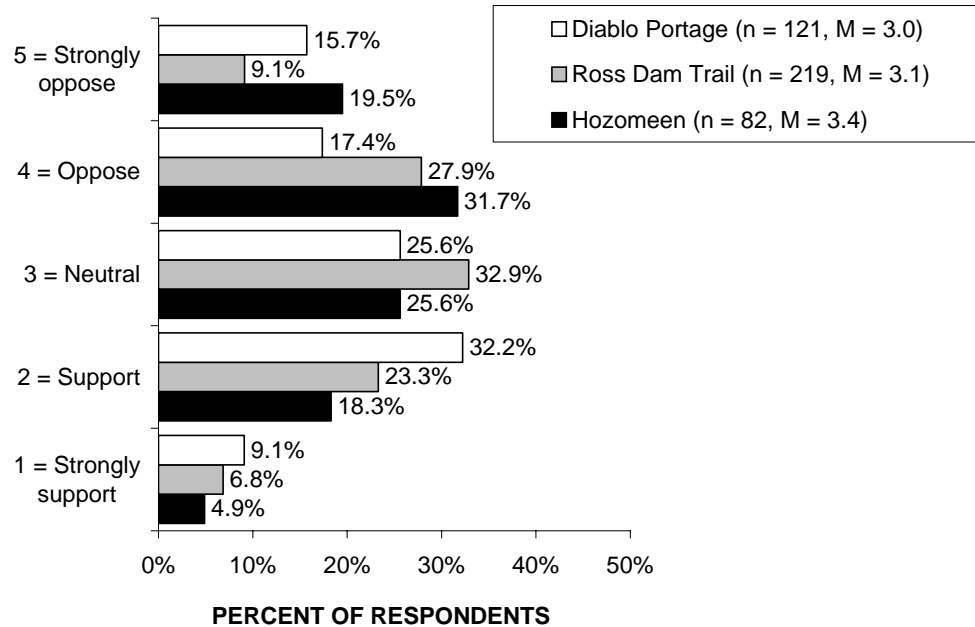


Figure 6.13. ROLA Lake User Survey, Mail Survey Q-16
Support for Walk-up Permits are Free and Charge \$20 for Advance Reservation Permits



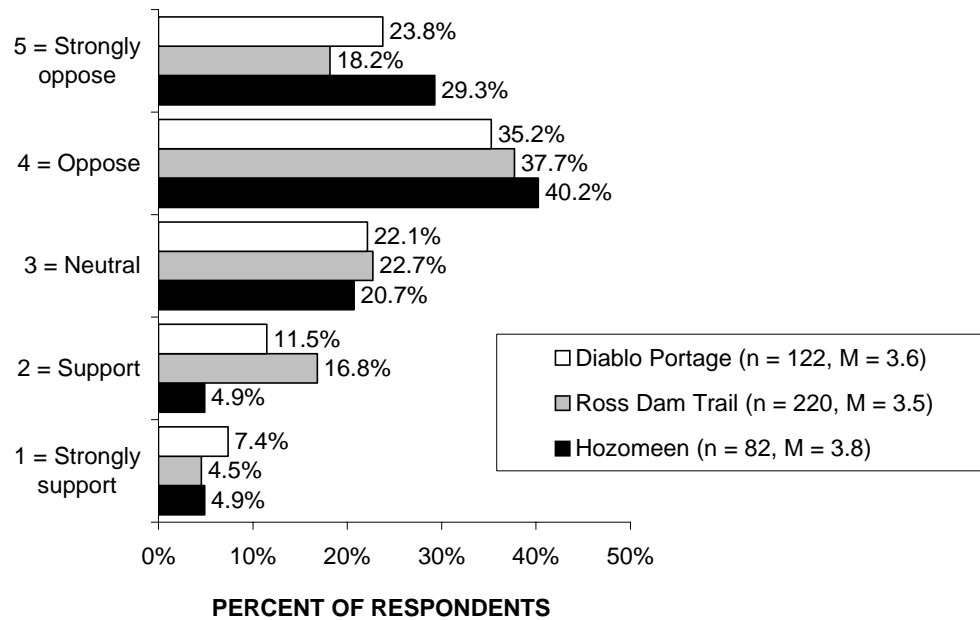
Support for charging a use fee of no more than \$20 per trip for permits varied by contact point, $F(2, 419) = 3.96, p = .020$. Post hoc Tukey test revealed that visitors contacted at Diablo Portage were significantly more supportive of this policy than visitors contacted at Hozomeen. No other significant differences were observed. Figure 6.14 shows that the distribution of responses for all contact points centered around neutral.

Figure 6.14. ROLA Lake User Survey, Mail Survey Q-16
Support for Charge a Use Fee of No More than \$20 per Trip for Permits
by Contact Point



Support for charging a fee of \$10 per person per visit (regardless of length of visit) varied by contact point, $F(2, 421) = 3.08, p = .047$. Post hoc Tukey test revealed that visitors contacted at Hozomeen were significantly more opposed to this policy ($M = 3.8$) than visitors contacted at Ross Dam Trail ($M = 3.5$). No other significant differences were observed. Figure 6.15 shows that for all three contact points most visitors opposed or strongly opposed this policy.

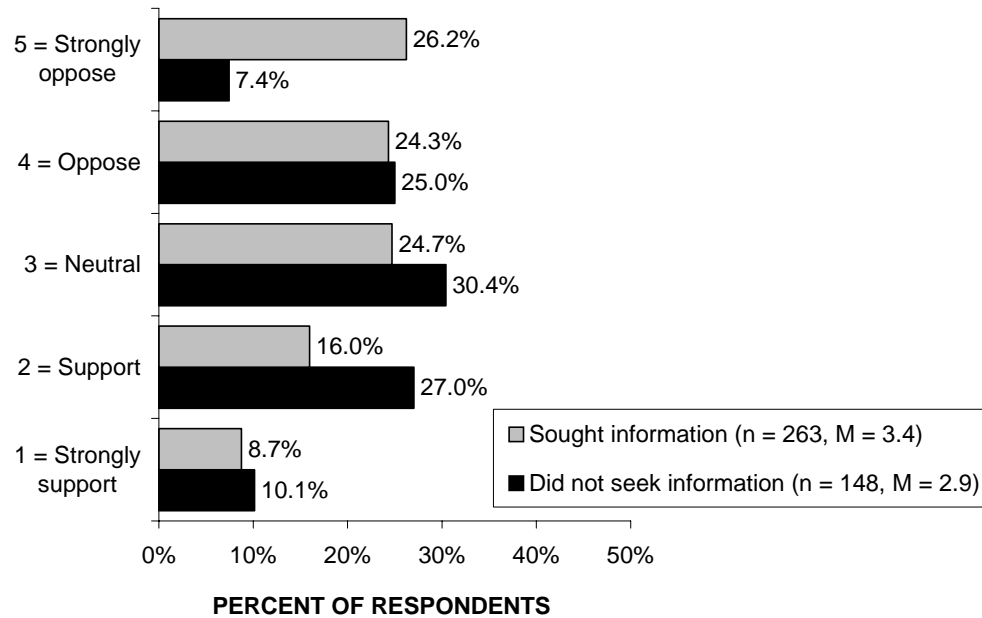
Figure 6.15. ROLA Lake User Survey, Mail Survey Q-16
Support for Charge a Fee of \$10 per Person per Visit (Regardless of
Length of Visit) by Contact Point



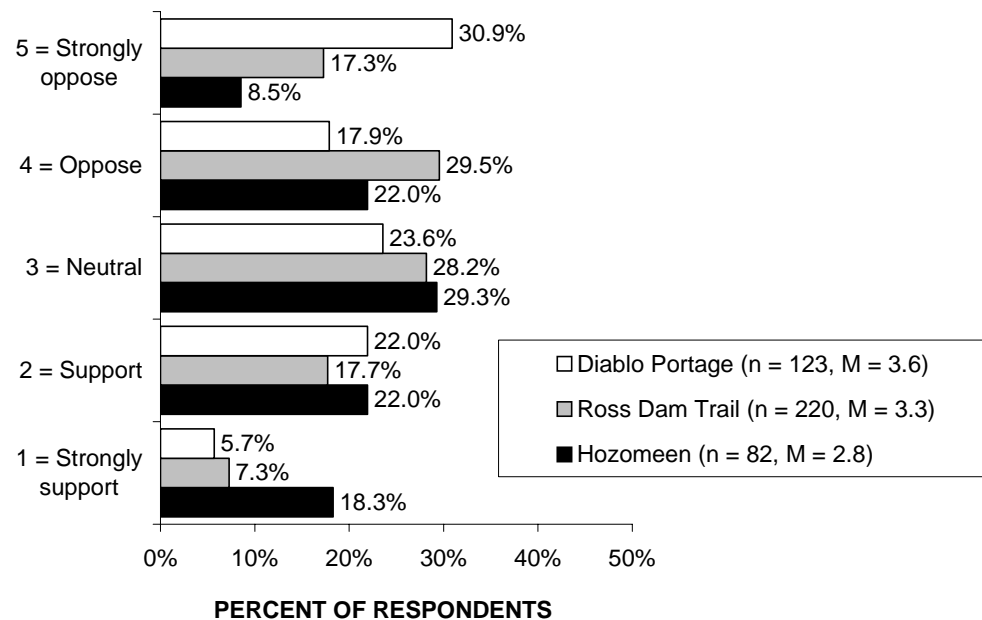
Support for allowing use without rationing (i.e., unlimited use) varied by contact point, $F(2, 422) = 7.75, p < .001$. Post hoc Tukey tests revealed that visitors contacted at Hozomeen were significantly more supportive of this policy ($M = 2.8$) than visitors contacted at Ross Dam Trail ($M = 3.3$) or at Diablo Portage ($M = 3.5$). Figure 6.16 shows that although approximately 47% - 49% of visitors contacted at Ross Dam Trail and Diablo Portage opposed or strongly opposed this policy, visitors contacted at Diablo Portage were almost twice as likely to strongly oppose this policy compared to visitors contacted at Ross Dam Trail (30.9% vs. 17.3%).

Support for allowing use without rationing (i.e., unlimited use) also varied by sought information, $F(1, 409) = 16.52, p < .001$. Visitors who sought information were more opposed to this policy ($M = 3.4$) than visitors who did not seek information ($M = 2.9$). Figure 6.17 shows the distribution of responses for those who sought and did not seek information.

**Figure 6.17. ROLA Lake User Survey, Mail Survey Q-16
Support for Allow Use Without Rationing (i.e. Unlimited Use) by
Sought Information**



**Figure 6.16. ROLA Lake User Survey, Mail Survey Q-16
Support for Allow Use Without Rationing (i.e. Unlimited Use) by
Contact Point**



VII. Map Diary Data

Respondents were asked to complete a map diary during their trip. The diary collected information about where people stopped and what they did at each stop. This diary was located at the beginning of the mail survey that was distributed on-site. The packet of survey supplies included a pencil to ensure that all parties had a means to complete the diary during their trip. The instructions were detailed and included an example to make it clear how to complete the diary. In retrospect this detail may have made it appear that completing the diary would be time consuming or complicated, when in reality it would take most people only a few minutes a day to complete.

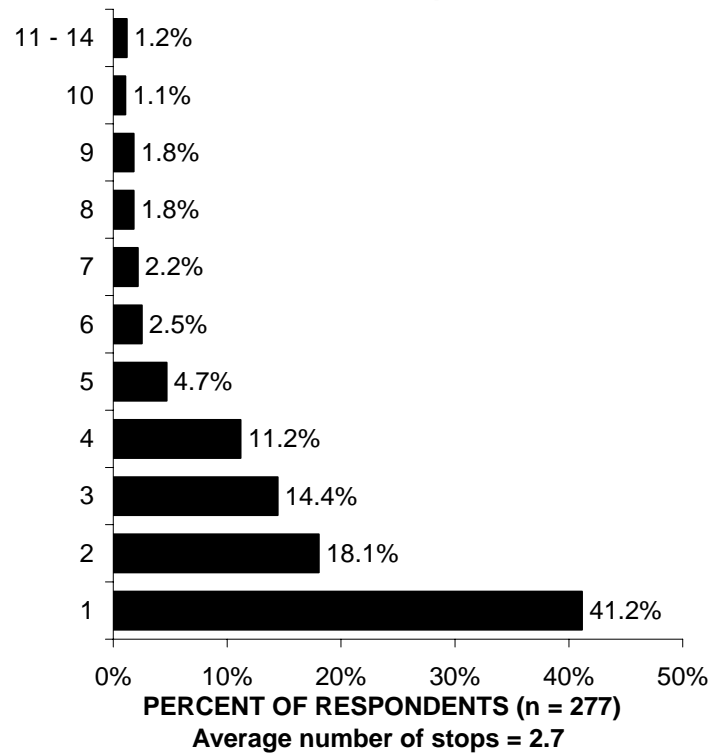
It was noted during the data collection period that a fair number of surveys were returned without the map diary completed. When early response rates were lower than expected, a shortened version of the mail survey was produced that excluded the map diary to include in the second follow-up mailing. A note was included to indicate that people wishing to provide map diary data who no longer had their original survey could include a note with the shortened mail survey they returned and they would be sent the map diary question to complete. No one did so. However, response rates for the mail survey improved and the overall response rate was comparable to the Corridor User Survey.

Nonetheless, response rates for the map diary were low. Of the 451 surveys returned, 380 were the original long version that included the map diary. Of these 380 surveys, 284 completed the map diary to some extent. Because of the low response to this question, the data reported in this section may not be representative of all Ross Lake visitors.

Figure 7.1 shows that the number of stops people indicated making ranged from one to fourteen with an average of 2.7. The most common number of stops was one (41.2%). Of the different campsites and water taxi stops, the most frequently stopped at location was Big Beaver & Pumpkin Mountain (31.9%) followed by Hozomeen (27.4%) and Devil's Creek area camps (26.2%; see Figure 7.2). All the stops were visited by at least one person in our sample.

Table 7.1 shows the percentage of visitors at each stop that indicated what activities they did at the stop. As can be seen in Column B, the percent of people who stopped at a site that reported what they did at the site varied dramatically and many respondents did not provide this information. Columns C through G show the percentages of people who did specific activities at a stop (as a percentage of people who indicated what they did). The possibility that these percentages are not reflective of all visitors to a stop depends on how many of the visitors to a stop indicated what they did. Thus, the higher the percentage of people who visited a stop that indicated what they did at a stop (Column B), the less likely these numbers are distorted.

Figure 7.1. ROLA Lake User Survey, Mail Survey Map Diary
Number of Stops



**Figure 7.2. ROLA Lake User Survey, Mail Survey Map Diary
Percent of People Stopping at Each Location**

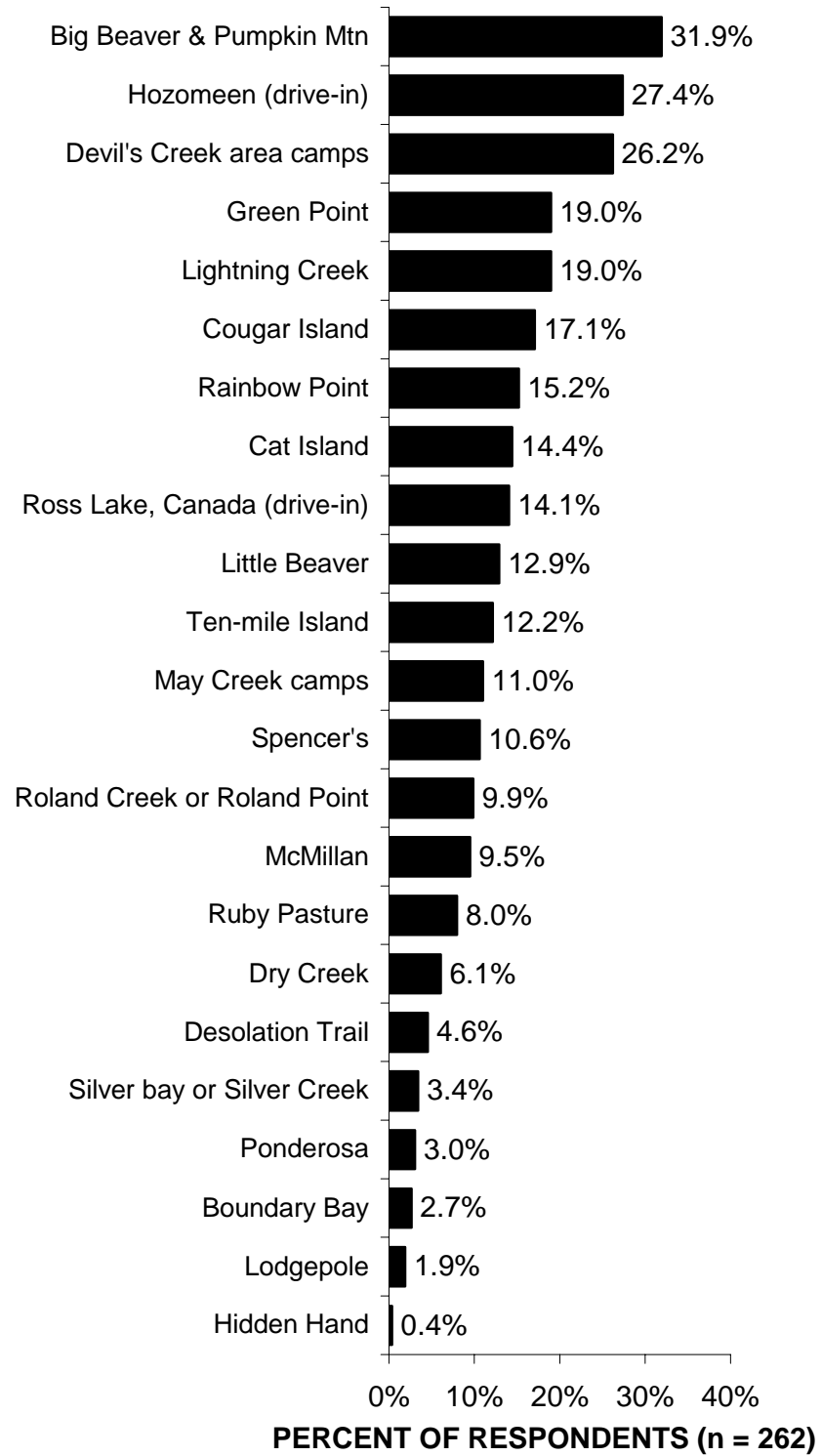


Table 7.1. Percent of people at each stop that engaged in activities and the specific activities they did.

Camp Site/Water Taxi Stop	Total # of people who stopped at site	% of total # of people who stopped that indicated what they did ^a	% of those respondents who indicated what they did at stop that ...				
			Camped at stop	Hiked at stop	Stop was starting point for loop hike	Stop was end point for loop hike	Picnicked or rested at stop
			A	B	C	D	E
Ross Lake Canada (drive-in)	37	62.2	21.7	13.0	4.3	8.7	52.2
Hozomeen (drive-in)	72	44.4	31.3	6.3	9.4	15.6	37.5
Silver Bay or Silver Creek	9	88.9	50.0	12.5	0.0	0.0	37.5
Boundary Bay	7	71.4	40.0	0.0	0.0	0.0	60.0
Little Beaver	34	82.4	32.1	7.1	10.7	3.6	46.4
Desolation Trail	12	8.3	0.0	0.0	0.0	0.0	100.0
Cat Island	38	84.2	40.6	0.0	0.0	0.0	59.4
Lightning Creek area camps	50	78.0	33.3	5.1	7.7	2.6	51.3
Lodgepole	5	80.0	50.0	0.0	0.0	0.0	50.0
Ponderosa	8	87.5	42.9	0.0	0.0	0.0	57.1
Dry Creek	16	75.0	58.3	8.3	0.0	0.0	33.3
Ten-mile Island	32	65.6	33.3	0.0	0.0	0.0	66.7
Devil's Creek area camps (boat, hiker, or stock)	69	85.5	11.9	0.0	3.4	3.4	81.4
Rainbow Point	40	85.0	23.5	2.9	0.0	2.9	70.6
May Creek camps (boat or stock)	29	69.0	15.0	5.0	0.0	0.0	80.0
Big Beaver (boat or stock) & Pumpkin Mountain	84	61.9	28.8	3.8	17.3	1.9	48.1
Spencer's	28	75.0	28.6	4.8	0.0	0.0	66.7
Roland Creek or Roland Point	26	100.0	42.3	7.7	7.7	7.7	34.6
McMillan	25	80.0	40.0	5.0	0.0	0.0	55.0
Cougar Island	45	91.1	24.4	0.0	0.0	0.0	75.6
Hidden Hand	1	0.0	0.0	0.0	0.0	0.0	0.0
Ruby Pasture	21	57.1	8.3	0.0	0.0	16.7	75.0
Green Point	50	54.0	48.1	7.4	0.0	7.4	37.0
^a The higher the percentage in this column the more representative the percentages for the different activities are of all people who stopped at a particular site.							

VIII. Local Users

People who live locally and are able to make a day-visit to the park are of interest because 1) they often differ in meaningful ways from people who live further away in terms of use, experience, and support for different management policies, and 2) a demographic comparison of local park users and local residents (based on census data) provides information on whether current local park users represent local residents in terms of ethnicity/race, education, gender, and age. Analyses were planned to examine how local ROLA visitors compared to the population and how they compared to visitors who lived further away.

Comparison of local visitors with local residents using census data

Through discussion with park staff, the following towns were defined as being local to ROLA: Sedro Woolley, Mount Vernon, Rockport, Marblemount, Darrington, Concrete, Burlington, Winthrop, Twisp, and Methow. General demographic data from the 2000 U.S. Census were gathered using the zip codes for these towns and then aggregated to provide results for the designated local area as a whole.

Table 8.1 summarizes demographic data for local residents per the 2000 Census and for local Ross Lake visitors to ROLA. The same demographic information is presented for the United States Census and for two other groups of survey visitors: Regional WA visitors and Other visitors (each group is mutually exclusive and does not include local users). It should be noted that the Ross Lake User Survey sample included 27 local visitors who were contacted and 19 of them returned the mail survey. Analyses comparing the values from the sample of local visitors with the values from the census found one significant difference between the sample of local visitors and the population of local residents. Local park visitors were more likely to have a bachelors degree or higher (66.7%) than the general local population (18.0%), $z = 4.91$, $p < .001$. Although some of the other differences seem large enough to be considered as practically meaningful, caution should be used as the small number of visitors in the local sample makes those estimates less reliable estimates of the true population values.

Comparison of local to non-local park users

The same definition of local park users was to be the basis for these analyses. However, the small number of local users in the sample ($n = 27$) and particularly who returned the mail survey ($n = 19$) would not provide reliable results when comparing local park users to other users. Thus, these analyses were not done.

Table 8.1. Summary and comparison of demographic data for local residents and local park visitors.

	2000 Census Data		2005 Corridor Survey Data		
	U.S.	Local	Local visitors	Regional WA visitors	Other visitors
Total n (population or sample)	281,421,906	84,268	19-27	251-345	175-255
% male	49.1	49.7	66.7	54.1	61.4
18 –24 years	13.01	12.6	3.7	5.9	7.4
25 – 64 years	70.3	69.7	96.3	90.5	87.7
65 years and over	16.7	17.7	0.0	3.6	4.9
One race	97.6	97.6	93.8	97.0	100.0
White	75.1	85.9	100.0	95.7	95.8
Black or African-American	12.3	0.5	0.0	0.9	0.0
American Indian and Alaska Native	0.9	1.4	0.0	0.0	0.0
Asian	3.6	1.4	0.0	3.0	4.2
Native Hawaii & Other Pacific Islander	0.1	0.2	0.0	0.4	0.0
Some other race	5.5	8.3	0.0	0.0	0.0
Two or more races	2.4	2.4	6.3	3.0	0.0
Hispanic or Latino	12.5	12.8	11.8	1.3	0.6
Education Percentages are Percent of people 25 years or more					
High school grad or higher	80.4	82.0	100.0	100.0	97.4
Bachelor's degree or higher	24.4	18.0	66.7*	75.0	68.4
*The difference between local park users and the U.S. census data was significant.					

IX. Visitor Distribution Data

Visitor count data were not systematically collected at the Lake User Survey contact locations. Because early in July the sampling plan was adjusted to contact every person during the sampling period, it was possible to generate visitor entry distributions for the different locations. Entry distributions provide information on how use is distributed across the day, when periods of concentrated use occur, when peak demand for a site occurs, and differences in weekend and weekday use. This information is useful when making staffing decisions and can be useful in the development of sample plans for future visitor research.

Method

Because collecting this visitor count data was secondary to the project's objective, specific data collection methods for visitor count data were not established for the Lake User Survey. However, survey workers kept a contact log that included among other information location, date, and time. At Hozomeen, the sampling plan always required that all visitors be contacted during the times survey workers were sampling at Hozomeen. At Ross Dam Trail and at Diablo Portage, starting July 13th the sampling plan was modified to require all visitors be contacted during the times survey workers were sampling at these locations. Thus, the contact log information could be used to determine the number of visitors that arrived over the course of the day at each location. Specifically, bins corresponding to every half-hour starting on the hour (e.g., 9:00 to 9:30, 9:30 to 10:00, etc.) were established and then all parties that entered during a bin were tallied and recorded. Visitors during the shoulder season (prior to July 1 and after Sept 4) were tallied separate from visitors during the peak season.

The contact log information for Hozomeen was complete, had clear start and end times, and thus was easy to convert to the bin format. Converting the contact log information for Ross Dam Trail and Diablo Portage was more complicated because one person covered both locations over the course of the day. Generally, the survey worker met the morning (approximately 9:00-9:30) and afternoon ferry (approximately 3:00-3:30) at Diablo Portage and spent the rest of the day at Ross Dam Trail. However, it was not always clear when a survey worker was at the portage or when he/she started or ended the day. Although best efforts were made to accurately convert the data for Ross Dam Trail and Diablo Portage, the distributions for these locations should be viewed as preliminary and interpreted with caution.

Given the secondary nature of this data collection, not all bin periods at all locations ended up with the same number of observation periods. As can be seen in Figures 9.1 to 9.5, the number of observation periods was overall highest at Hozomeen during peak season followed by Ross Dam Trail during peak season and Diablo Portage during peak season. Observations during the shoulder season were considerably fewer (about half) and thus, the party entry distributions for the shoulder season are less reliable.

Figure 9.1 ROLA Lake Survey, Visitor Count Data
Number of Observation Periods for Each Time Period:
Hozomeen Peak Season

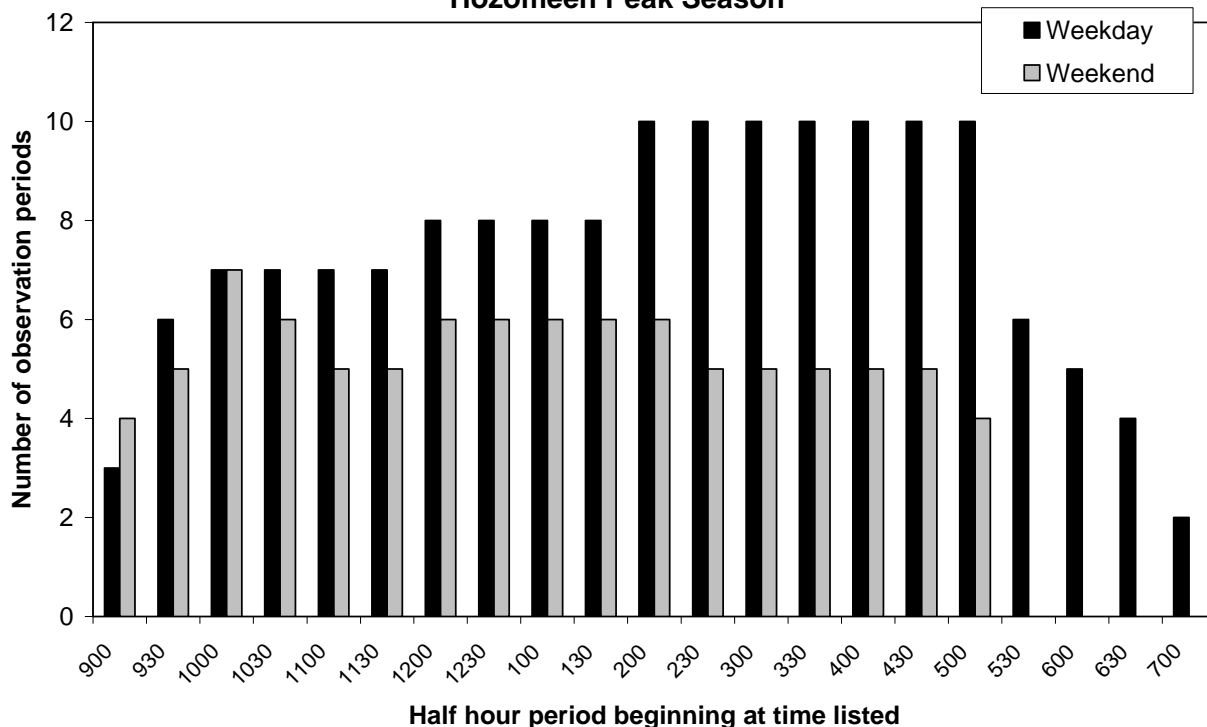


Figure 9.2 ROLA Lake User Survey, Visitor Count Data
Number of Observation Periods for Each Time Period: Ross Dam Trail
during Peak Season

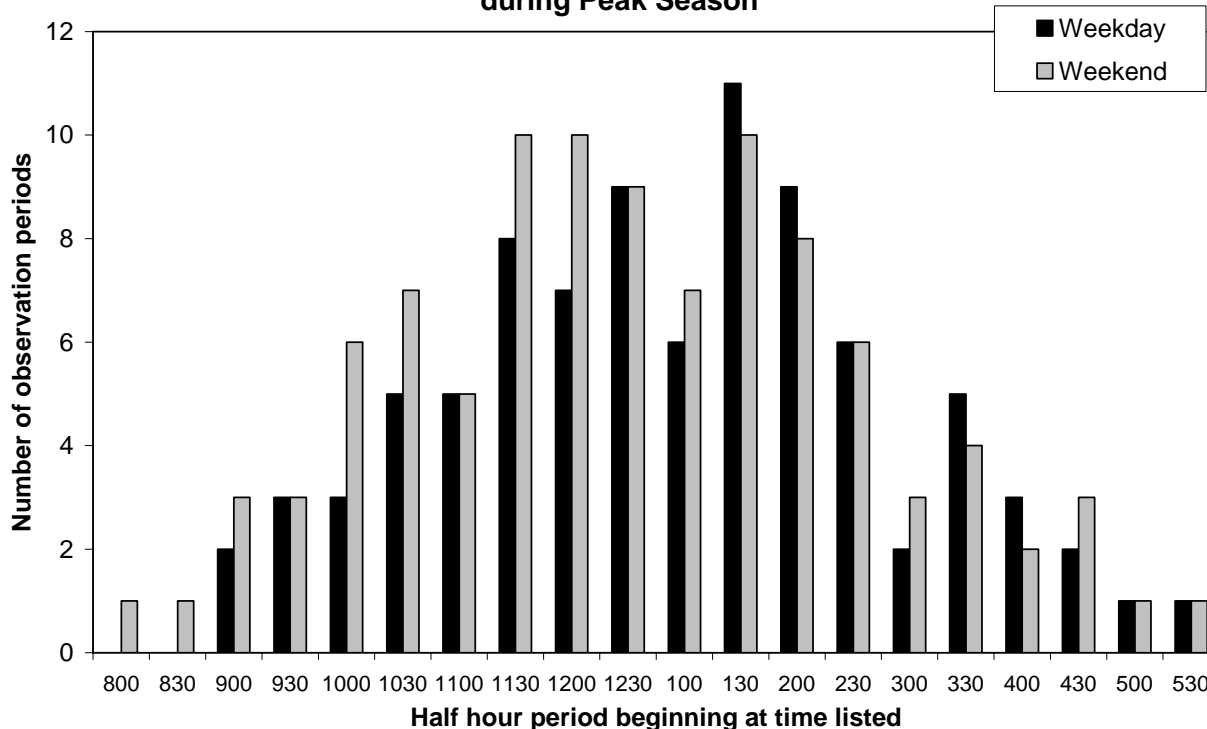


Figure 9.3 ROLA Lake User Survey, Visitor Count Data
Number of Observation Periods for Each Time Period: Ross Dam Trail
during Shoulder Season

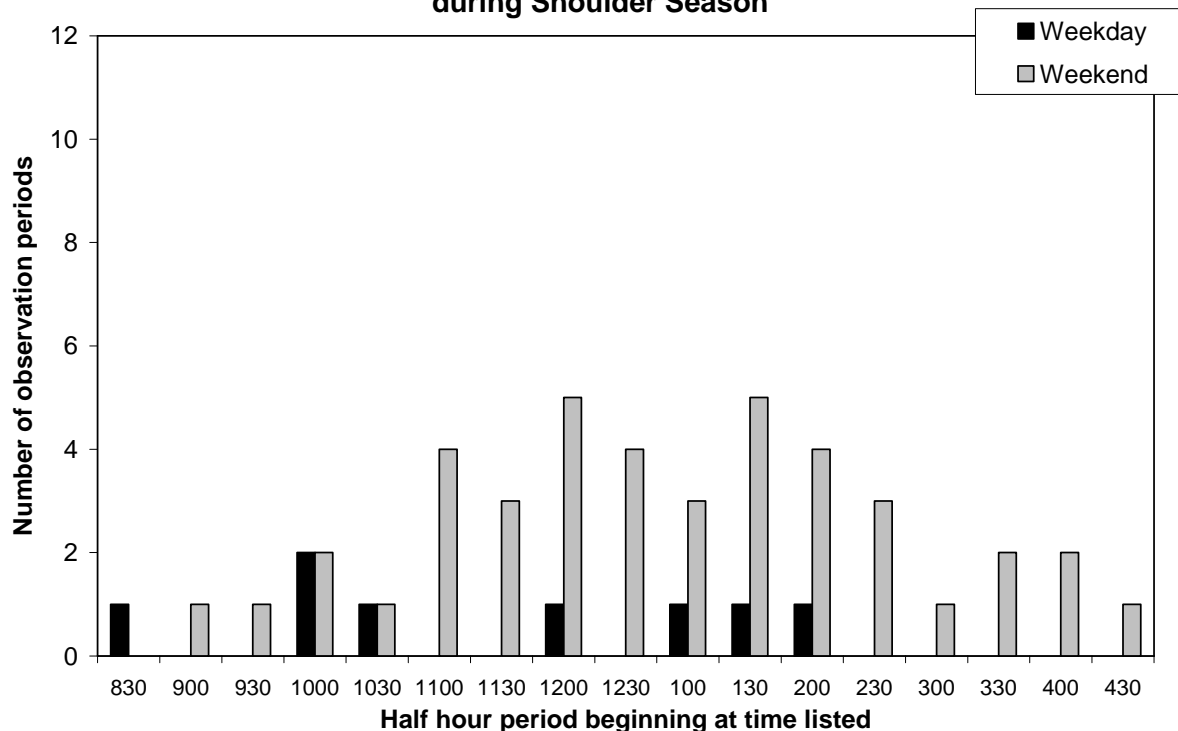


Figure 9.4 ROLA Corridor Survey, Visitor Count Data
Number of Observation Periods for Each Time Period: Diablo Portage
during Peak Season

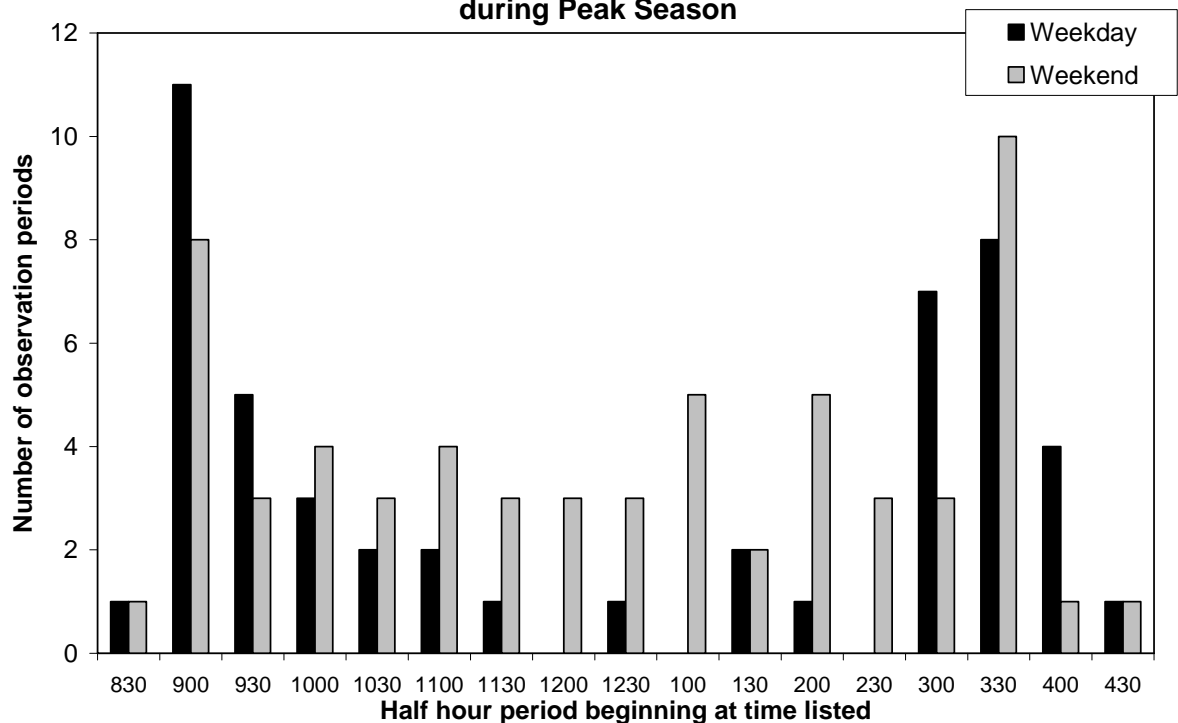
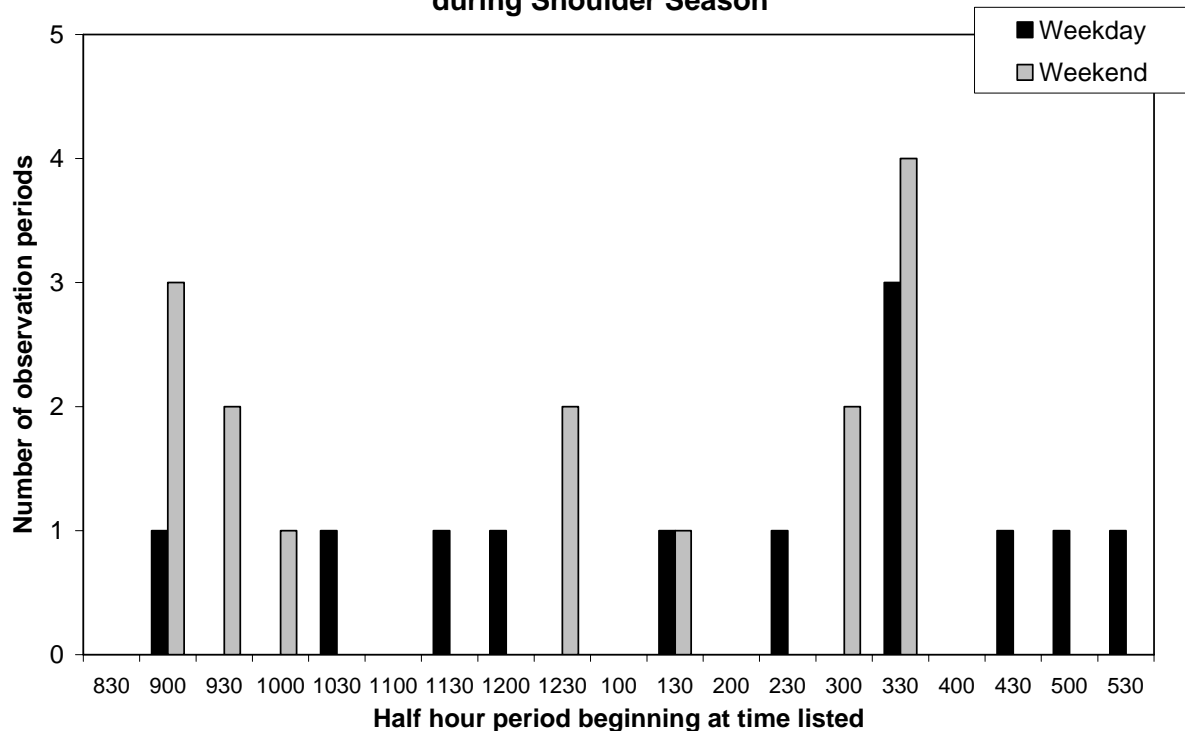


Figure 9.5 ROLA Lake User Survey, Visitor Count Data
Number of Observation Periods for Each Time Period: Diablo Portage
during Shoulder Season



Results

Visitor count data were aggregated to provide a distribution of visitor party entries on weekdays and weekend days during the peak and shoulder seasons. The best estimate of the number of parties entering for a half-hour period was the average number of parties contacted during the different observation periods. Thus, averages based on more observation periods would be expected to be more reliable and reflective of the true number of visitor party entries for that time period. Figures 9.6 to 9.10 show the visitor party entry distributions for the different locations and seasons.

The distribution of party entries at Hozomeen during the peak season shows different patterns for weekdays and weekend days (see Figure 9.6). On weekend days, visitors were more likely to enter between 10:00 and 1:00 whereas on weekdays visitors were more likely to enter between 2:30 and 4:00. Figure 9.6 also suggests that more parties enter from 6:00 pm on, however there were only a few observation periods during these times. Future research may want to focus more on these times as it would be likely that people may arrive in the early evening to set up camp for the night.

Figure 9.6 ROLA Lake User Survey, Visitor Count Data
Distribution of Party Entries at Hozomeen during Peak Season

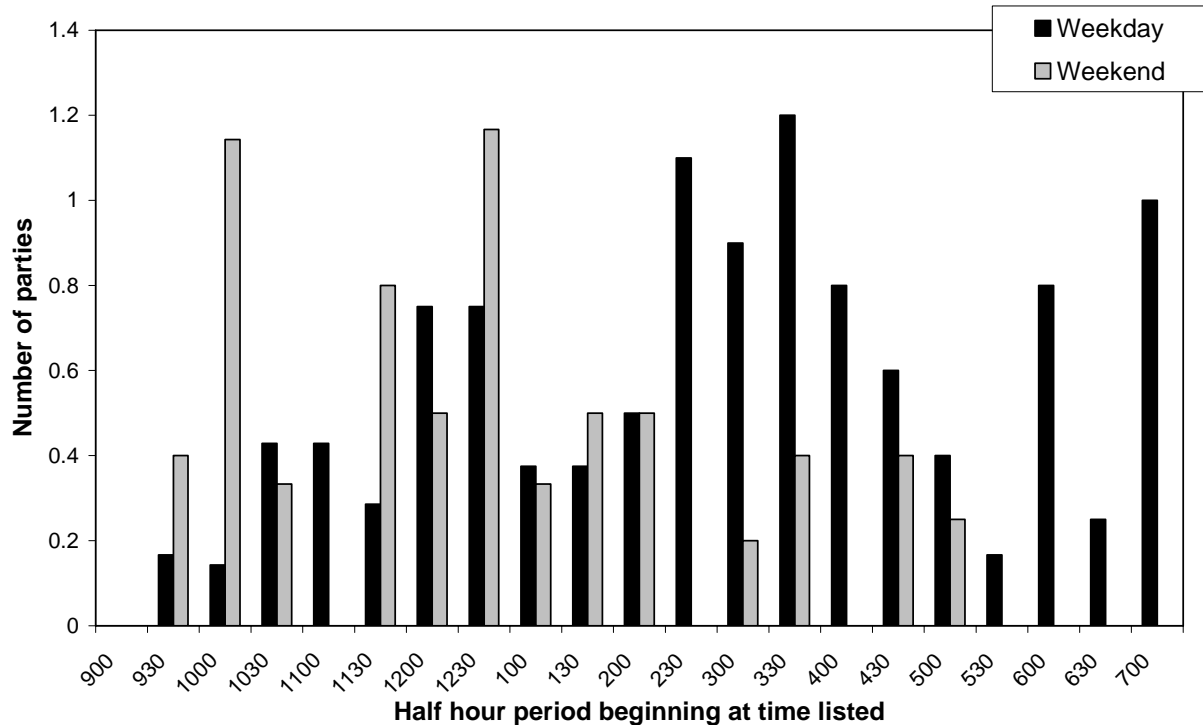


Figure 9.7 shows fairly steady visitor entries throughout the day at Ross Dam Trail during the peak season regardless of day of week. More parties used the trail on weekends than weekdays and entries on weekends were predominantly higher at 10:00 a.m. and from 12:30 p.m. to 2:30 p.m. During the shoulder season (see Figure 9.8), the distribution of visitor party entries for the weekend was primarily flat from 9:00 a.m. to 3:00 p.m. and it jumped up at 3:30 p.m. and peaked at 4:00 p.m. The weekday distribution consisted of one or two observations per observation period and thus, the distribution is very preliminary.

Figure 9.7 ROLA Lake User Survey, Visitor Count Data
Distribution of Party Entries at Ross Dam Trail during Peak Season

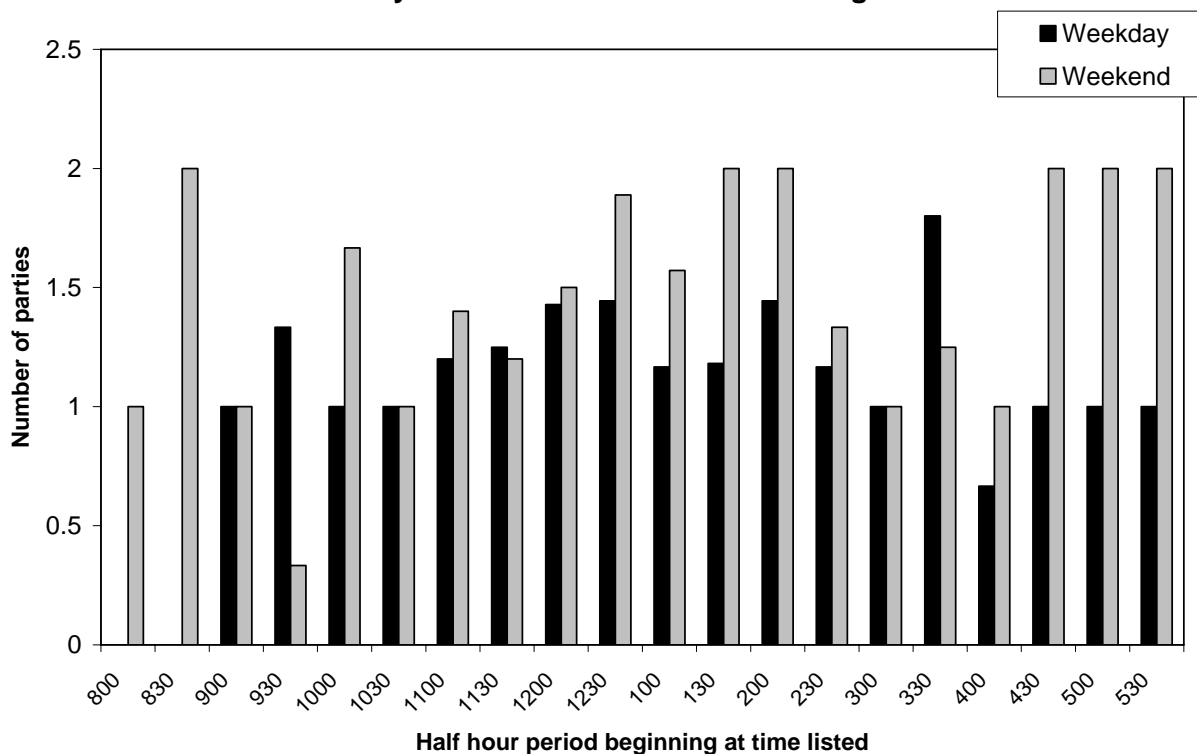
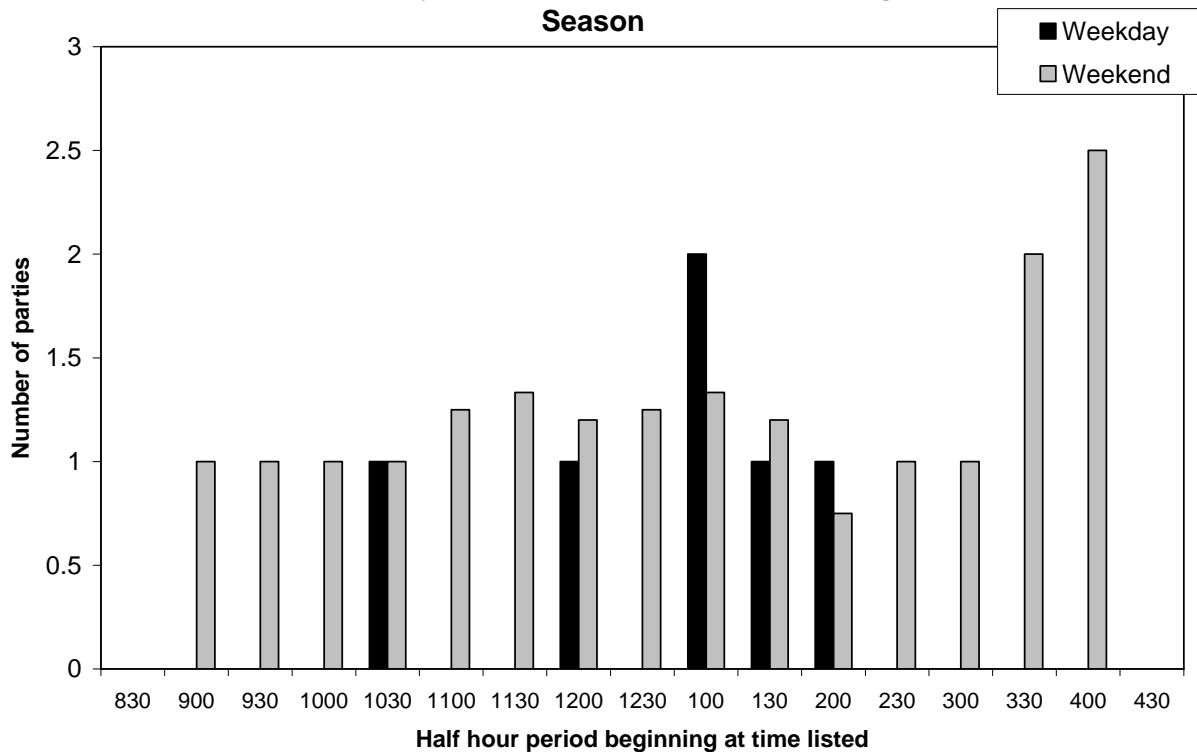


Figure 9.8 ROLA Lake User Survey, Visitor Count Data
Distribution of Party Entries at Ross Dam Trail during Shoulder Season



The entry distributions for Diablo Portage are the most limited of the three locations, primarily because contacts (and thus, observations) were primarily focused on the morning and afternoon ferries (see Figures 9.4 and 9.5). Thus, in Figures 9.9 and 9.10 the number of parties entering between 9:00 a.m. and 10:00 a.m. and between 3:00 p.m. and 4:00 p.m. are the most reliable. The general shape of the distribution of entries regardless of day of week shows peak periods that correspond to the arrival of the ferry. The distributions however indicate that there are other parties that use the Diablo Portage throughout the day.

Figure 9.9 ROLA Lake User Survey, Visitor Count Data
Distribution of Party Entries at Diabale Portage during Peak Season

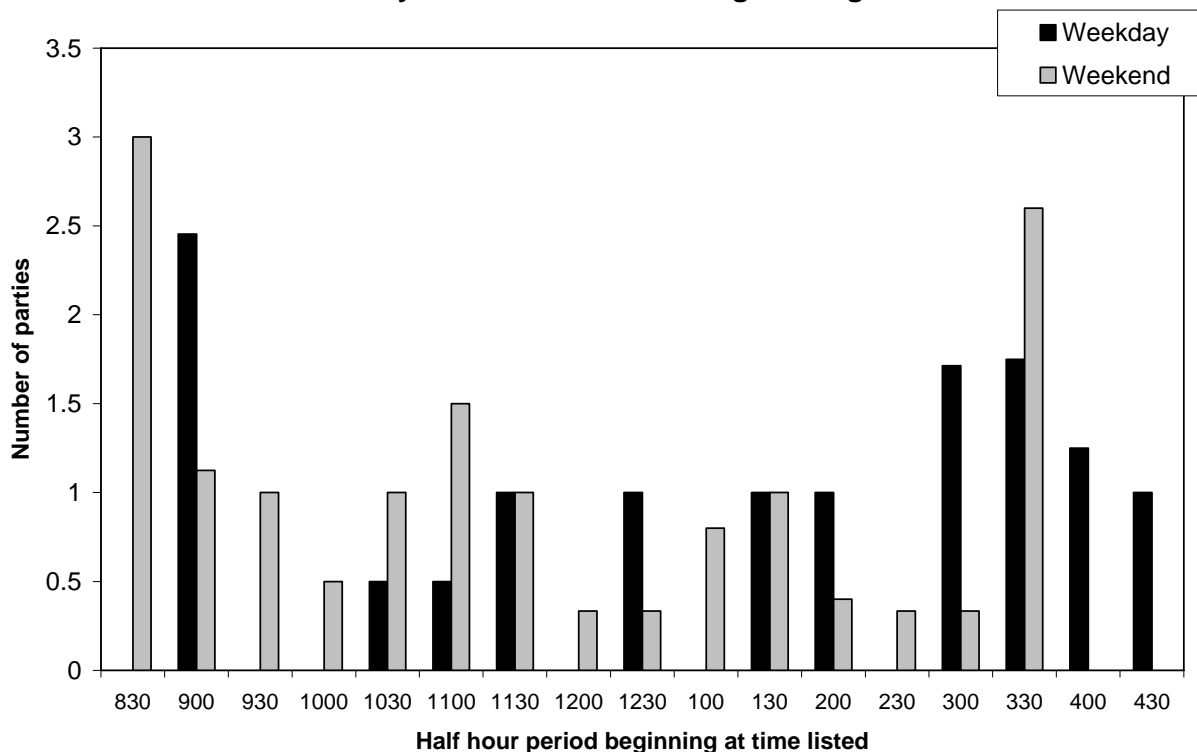
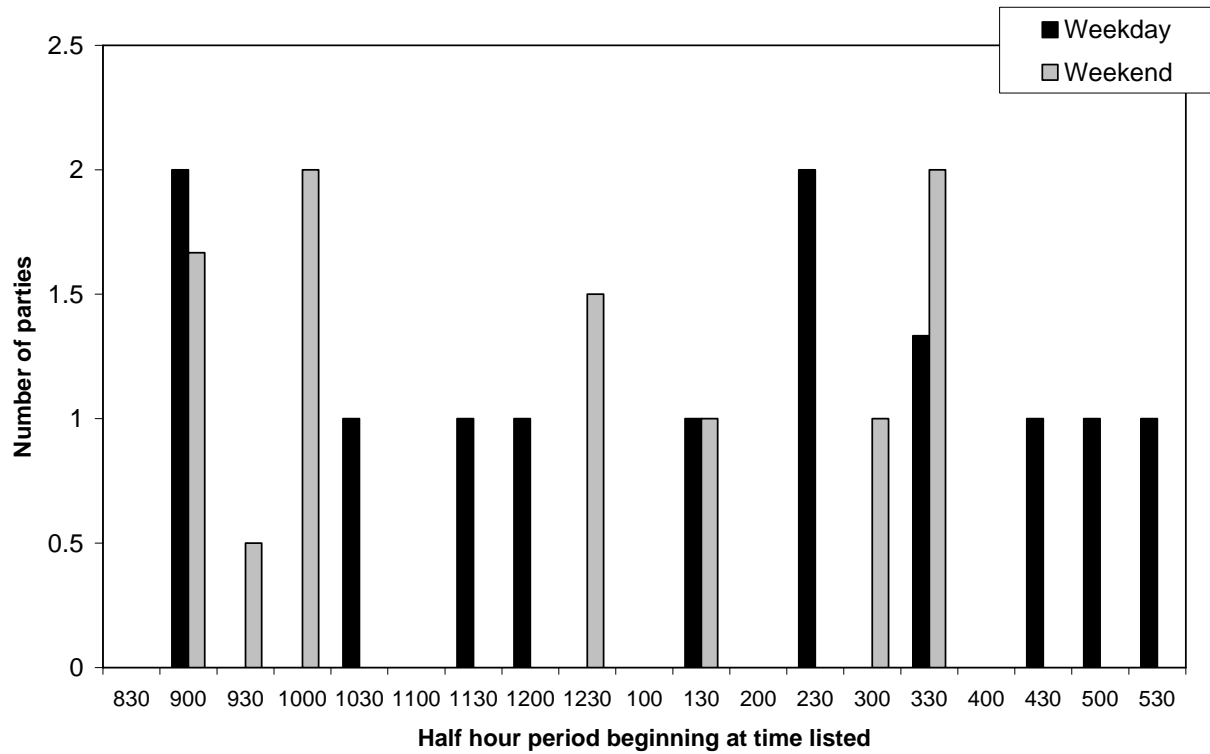


Figure 9.10 ROLA Lake User Survey, Visitor Count Data
Distribution of Party Entries at Diable Portage during Shoulder Season



RECOMMENDATIONS FOR THE FUTURE

Two types of recommendations for the future emerge from this research: 1) recommendations associated with the logistics of research and 2) recommendations associated with future research topics.

Recommendations associated with the logistics of research

1. There is no park entrance gate or comparable point where all cars entering NOCA must stop, and stopping cars on SR 20 for survey research purposes is challenging and potentially dangerous. Consequently, obtaining a representative sample of NOCA visitors is difficult. Future researchers are advised to use care in designing their sampling plans to ensure that representative samples of target populations are obtained. For example, in the Corridor User Survey, visitors were contacted at multiple sites along SR 20. These were either: 1) sites at which many park visitors stopped (based on visitation data collected by traffic counters), or 2) sites with a facility that the park wanted feedback on. Although this sample does not represent all park visitors, it is composed of sub-populations of visitors that were of primary interest to management at the time of the research. Visitor count data (either manually or with traffic counters) can provide the necessary information for weighting to provide aggregated data that represents the true relative proportions of visitors at the different sites (rather than the proportion contacted or who returned their mail survey).
2. Local park users were a very small percentage of the Corridor and Ross Lake sample. (See discussion on pages 153 and 267.) Future researchers who want to compare these visitors with other park users will need to over-sample to obtain sufficient numbers of local respondents for statistical purposes
3. Both the Corridor User Survey and the Ross Lake User Survey contained items requesting that respondents complete a map of their stops during their NOCA trip. The Ross Lake User Survey included a map diary that respondents were asked to complete at the end of each day. Although this request involved little time, many people did not do it. Many others completed the map diary incorrectly, suggesting that they did not read the instructions, or the instructions were not clear. The Corridor User Survey map was considerably simpler and yet, a fair number of respondents did not complete it according to the instructions. Pre-testing these types of questions with an emphasis on clarity, comprehensibility, and willingness to respond should help future researchers avoid similar problems.
4. Most applied social science research targeting visitors in national parks uses quantitative survey research methods. This approach involves self-administered questionnaires frequently delivered by mail, and sometimes face-to-face on-site interviews. Questions are typically closed ended and responses are intended to lend themselves to quantification and ultimately to statistical inference. Conversely, qualitative approaches to the study of park visitors and park visitation emphasize building holistic and complex descriptions that are constructed with words derived from detailed and often lengthy interviews. Questions are open-ended; data are expressed and analyzed as text. The emphasis is upon understanding social phenomena of interest from the viewpoints of interviewees. Increasingly, knowledgeable social researchers recognize that earlier views juxtaposing these approaches and conceptualizing single studies as being either one or the other is counter-productive. Depending upon the information desired, it is frequently advantageous in applied social science to adopt mixed method approaches that triangulate on topics of interest and in which analysis is both statistical and textual. Properly conducted, mixed method approaches lead to richer more complex and

complete knowledge of the subject being studied. Some future NOCA social science research projects will either be quantitative or qualitative depending upon needs for information. Nonetheless, researchers and managers would be wise to consider the advantages of mixed method studies whenever feasible.

Recommendations associated with future research topics

1. Regular collection of visitor distribution data (how visitors are distributed in time and space) can be very useful. This is particularly true as visitation levels rise and more intensive management is contemplated or if issues of visitor capacity are present. Some preliminary visitor entry distributions were collected in the course of this research project. Although we collected the visitor count data manually, in many locations it would be possible to use trail or vehicle counters. To be effective, the trail or vehicle counters would need the option of collecting in bins (e.g., every hour), the counters must be calibrated regularly, and the data must be downloaded regularly. Compared to survey research, visitor count data is usually less expensive to collect and analyze.
2. Information describing park visitors' perceive perception of problems and opinions regarding well-defined park management issues is frequently helpful. Some of these issues are likely to reflect effects that other visitors have on visitors' experiences or effects that other visitors have on biological resources that are inherent in Visitor Experience Resource Protection (VERP) exercises.
3. It may be important to understand the degree to which NOCA, or specific sites therein, are perceived by visitors to provide unique experiences. This information is important from multiple perspectives but is especially pertinent to the issue of displacement. That is, is there another place that visitors can go that is, in their opinion, comparable to a trip to NOCA? With increasing visitation demands on park natural resources, displacement is likely to occur both within the park (e.g., different locations or different times) and outside the park (e.g., go to MORA, Forest Service land). If NOCA is perceived as offering a unique experience, displacement outside the park may be unacceptable to some park visitors. In addition, understanding NOCA recreation destinations and activities in relation to the system of recreation opportunities in the region is helpful in almost all planning efforts, and almost always such information is of interest to agencies managing surrounding lands.
4. Western Washington has experienced steady population growth over the last 20 years and this growth is expected to continue at least through 2025. Many of the areas experiencing relatively high population growth are within a day's drive of NOCA and thus, the park is likely to experience increases in visitation. Additionally, the NPS is committed to serving all Americans and increasing the diversity among park visitors. Similar to other National Parks, 94% of ROLA visitors (in both surveys) checked "white" as the single descriptor of their race indicating there is room to broaden visitor diversity. Knowledge of demographic trends in the parks market area and how these trends affect park visitation will be important in future park management and planning.
5. Information on emerging or new types of recreation (e.g., geocaching, ice climbing) that may occur at NOCA may allow managers to be proactive in managing and preparing for shifts in demands for recreation opportunities. This would include research early on in the demand cycle impact to biological, cultural, and social resources.

Appendix A: Corridor Survey Instruments

PACKET # _____

OMB Approval 1024-0224 (NPS #05-033)

Expiration date: 4/30/2006

Location _____

CORRIDOR USER SURVEY CONTACT SHEET**1. How many people are in your party today?**

_____ Number of people

2. Are there any people in your party today under the age of 18?☐ NO☐ YES**2.1 How many people are under 18?** _____**3. Please check the makeup of your personal group:**☐ Individual☐ Family☐ Friends☐ Family and friends☐ Other _____*(please specify)***3a. If your personal group is part of a larger group, please circle the makeup of the larger group:**☐ Personal group is not part of a larger group☐ Commercial tour group☐ Organized non-commercial group☐ _____
(please specify)☐ Other _____
*(please specify)***4. Please check your mode of transportation:**☐ AUTO☐ BUS☐ AUTO W/TRAILER☐ MOTOR HOME☐ PICKUP/VAN/JEEP☐ MOTORCYCLE☐ PICKUP W/CAMPER☐ BICYCLE☐ PICKUP W/TRAILER☐ PEDESTRIAN*PLEASE CONTINUE AT THE TOP OF THE NEXT COLUMN.***→ Please use the map provided by the survey worker when answering the following questions.****5. Where did you start today's trip?**☐ East of this stop☐ West of this stop**6. Where will you end today's trip?**☐ East of this stop☐ West of this stop**7. What direction were you heading when you pulled into this stop?**☐ Eastbound☐ Westbound**8. What direction will you head when you leave this stop?**☐ Eastbound☐ Westbound☐ Haven't decided**9. In terms of destinations on your overall trip itinerary (from the time you left home until you returned home), which of the descriptions below best fits your party during this visit?(Circle one number)**☐ Visiting Ross Lake NRA/North Cascades National Park Service Complex was the primary reason for our trip.☐ Visiting Ross Lake NRA/North Cascades National Park Service Complex was one of several reasons for our trip.☐ Although we stopped, visiting Ross Lake NRA/North Cascades National Park Service Complex was not a reason for our trip.***PLEASE TURN THE PAPER OVER AND COMPLETE THE OTHER SIDE.***

10. Are you: ☐ FEMALE ☐ MALE

11. What year were you born? 19 ____

12. What is your home Zip or Postal Code? *(If you live outside of the United States, please write the name of your country.)*

We would like to send you a brief questionnaire that asks about your experiences during this trip in the Ross Lake area and your feelings about possible changes in park policy. It is estimated to take on average 20 minutes to complete. If you would like to participate in this second part of the survey, please provide your name and address so that we can send you that questionnaire. This information will not be used for any purposes other than this survey.

First Name

Last Name

Street Address

City

State

Zip or Postal Code

Country, if not USA

OMB Approval 1024-0224 (NPS #05-033)
Expiration date: 4/30/2006

**State Route 20 Corridor User Mail Survey
Ross Lake National Recreation Area**



PRIVACY ACT and PAPERWORK REDUCTION ACT Statement:

16 U.S.C. 1a-7 authorizes collection of this information. This information will be used by park managers to better serve the public. Response to this request is voluntary. No action may be taken against you for refusing to supply the information requested. Please do not put your name or that of any member of your group on the questionnaire. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Burden estimate statement:

Public reporting burden for completing the mail-back questionnaire is estimated to take an average of 20 minutes. Direct comments regarding the burden estimate or any other aspect of this form to the Office of Information and Regulatory Affairs of OMB, Attention Desk Officer for the Interior Department, Office of Management and Budget, Washington, D.C. 20503; and to the Information Collection Clearance Officer, WASO Administrative Program Center, National Park Service, 1849 C Street, N.W., Washington, D.C. 20240.

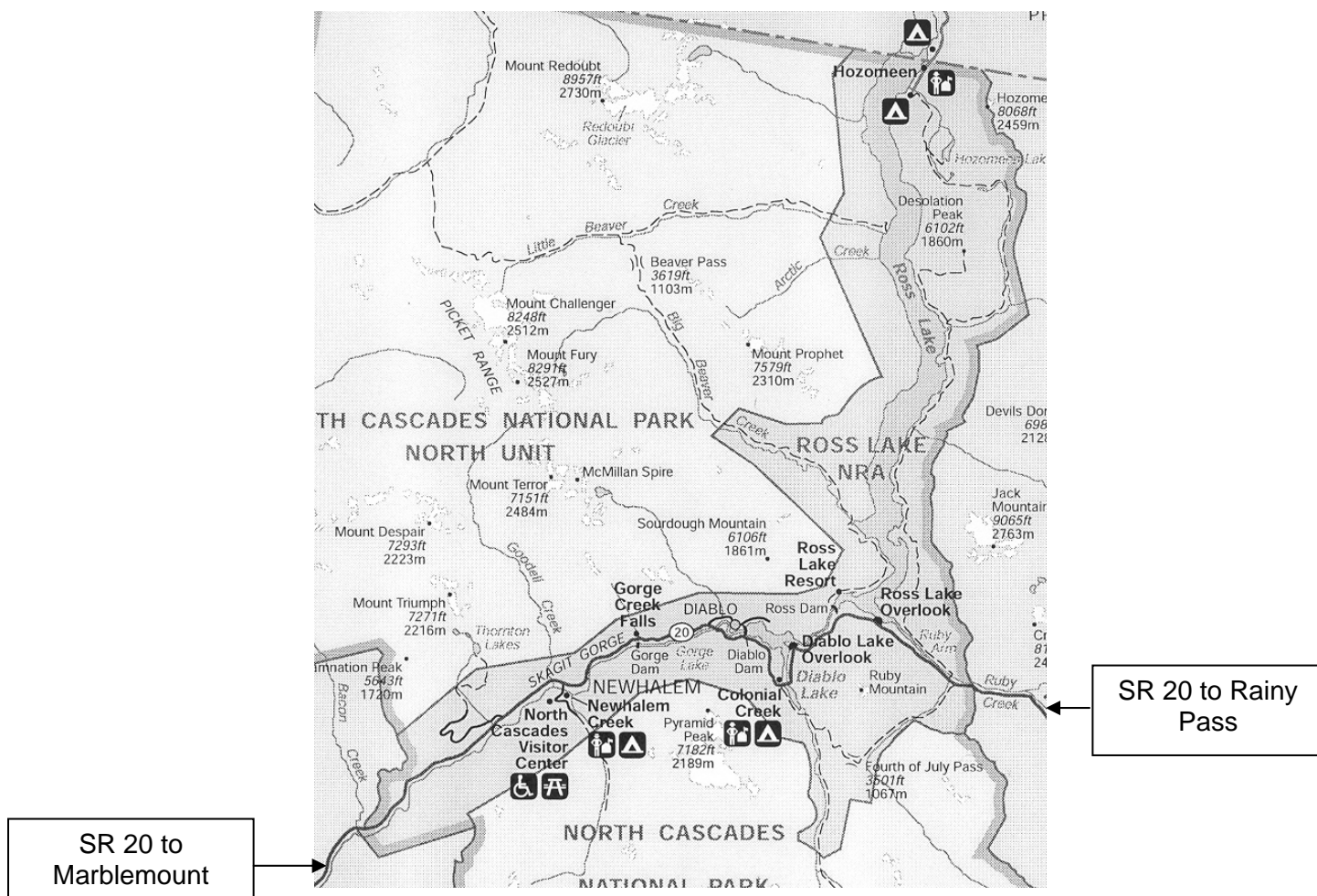
Printed on Recycled Paper.

[INSERT SIGNED COPY OF LETTER FROM SUPERINTENDENT HERE]

BEGIN HERE:

Recently, you visited Ross Lake National Recreation Area. For purposes of this survey, a trip to Ross Lake NRA is one where you stopped within the recreation area boundaries as indicated on the map below. While you were in the area, you were contacted by a survey worker and agreed to complete this mail questionnaire about your experiences during the trip. Thank you for your cooperation.

Please note that this questionnaire focuses only on the trip to the Ross Lake area when you were contacted for this survey. Also, please be sure to read each question carefully before answering it.



1. **INCLUDING THE TRIP DURING WHICH YOU WERE CONTACTED**, how many trips have you made to Ross Lake NRA in the last three years? Recall that a trip is one in which you stopped at one or more sites, facilities, or trails within the recreation area.

NUMBER OF TRIPS IN LAST 3 YEARS _____

2. **PRIOR TO THE VISIT DURING WHICH YOU WERE CONTACTED**, did you and your group seek information about Ross Lake National Recreation Area and/or the attractions that are found within its boundaries? (*Check one number.*)

NO → GO TO QUESTION 3
YES



- 2a. From which sources did you and your group seek to obtain information? (*Check as many boxes as apply.*)

Friends or relatives
Travel guide/Tour book
Newspaper/Magazine
Phoned park for information
Requested information from park by mail
National Park Service (NPS) maps/Brochures
Non-NPS Maps/Brochures
Radio/Television
Hotel/Motel
Visitor contact station/Ranger Stations
NPS Park internet/web site (<http://www.nps.gov/rola/> or <http://www.nps.gov/noca/>)
Other internet/web sites
Other (*Please specify:* _____)
Sought information but don't remember where

3. On the trip during which you were contacted, did you stay overnight in the recreation area?

YES → How many nights did you spend? _____

NO → How many hours did you spend? _____

Don't remember

Appendix A: Corridor Survey Instruments

4. Some possible reasons why people visit recreation areas are listed below. How important to you was each of the following reasons for visiting Ross Lake NRA on **this trip**? (*Check one response for each reason.*)

If a reason is not applicable for this trip, please circle "not important".		How important was each reason for taking this trip to Ross Lake NRA?				
		not important	slightly important	moderately important	very important	extremely important
A.	DEVELOP YOUR SKILLS AND ABILITIES					
B.	DO SOMETHING WITH YOUR FAMILY					
C.	EXPERIENCE NEW AND DIFFERENT THINGS					
D.	LEARN MORE ABOUT NATURE					
E.	TO BE FREE TO MAKE YOUR OWN CHOICES					
F.	GET AWAY FROM THE USUAL DEMANDS OF LIFE					
G.	TALK TO NEW AND VARIED PEOPLE					
H.	BE WITH FRIENDS					
I.	EXPERIENCE TRANQUILITY					
J.	EXPERIENCE SOLITUDE					
K.	BEING CLOSE TO NATURE					
L.	VIEWING SCENERY					
M.	LEARNING WHAT YOU ARE CAPABLE OF					
N.	TO FEEL YOUR INDEPENDENCE					
O.	TO GET EXERCISE					

5. Which of the following facilities and programs did you know about before entering Ross Lake NRA on the trip during which you were contacted? (*Check all that apply.*)

Seattle City Light Information Center in Newhalem
 North Cascades National Park Visitor Center
 Environmental Learning Center
 Group campsites at Goodell Creek Campground
 Group campsites at Newhalem Creek Campground
 Thunder Knob Trail
 Happy Creek Forest Walk
 Happy-Panther Trail
 Gorge Overlook Trail
 Handicap-accessible dock at Colonial Creek Campground
 Interpretive signs/Ranger led programs at Diablo Overlook
 Restrooms at Diablo Overlook

6. On the trip to Ross Lake NRA during which you were contacted for this survey, which of the following activities did you engage in? (*Circle as many numbers as apply.*)

- 1 Viewed wildlife
- 2 Viewed wildflowers/vegetation
- 3 Went bird-watching
- 4 Took photographs
- 5 Had a picnic
- 6 Went to visitor center
- 7 Viewed lakes
- 8 Drove around viewing scenery
- 9 Took walks or day-hiked
- 10 Backpacked
- 11 Camped overnight in backcountry away from lakeshore
- 12 Camped overnight at boat-in campsite
- 13 Camped overnight in car/drive-in campground
- 14 Rock or ice climbed using specialized equipment
- 15 Went kayaking or canoeing
- 16 Went motor-boating
- 17 Read educational displays and materials
- 18 Stayed at Ross Lake Resort
- 19 Went fishing
- 20 Went rafting
- 21 Went horseback riding
- 22 Visited historical sites
- 23 Attended a program led by a NPS interpretive ranger or volunteer
- 24 Other (*Please specify:* _____)

Answer this question for the trip during which you were contacted for this survey.

- 6a. If you circled 2 or more of the 24 ways of experiencing the park listed above, which was most important to your enjoyment of the park? (*Enter the appropriate number in each of the blanks.*)

_____ MOST IMPORTANT factor contributing to your enjoyment of the park

_____ SECOND MOST IMPORTANT factor contributing to your enjoyment of the park

7. Are you aware that there are Environmental Education Programs for children and adults offered by North Cascades Institute?

Appendix A: Corridor Survey Instruments

YES

NO

8. Would you be interested in participating in any of the programs offered by North Cascades Institute? North Cascades Institute offers educational programs including seminars and retreats, school and summer youth programs, teacher education and internships, volunteer stewardship programs, graduate program in environmental education and custom programs.

Not at all interested

Slightly interested

Moderately interested

Very interested

9. For each of the following types of ranger activities, please indicate 1) how interested you would be in participating in one, and 2) whether you did participate in one on the trip during which you were contacted.

		How interested are you in participating in this type of ranger activity?					Check (✓) if participated <u>this trip</u>
		↓	↓	↓	↓	↓	
A.	EVENING CAMPGROUND PROGRAMS	not interested	slightly interested	moderately interested	very interested	extremely interested	_____
B.	DAYTIME PROGRAMS THROUGHOUT PARK	not interested	slightly interested	moderately interested	very interested	extremely interested	_____
C.	GUIDED WALKS	not interested	slightly interested	moderately interested	very interested	extremely interested	_____
D.	INFORMAL CONTACT WITH RANGERS	not interested	slightly interested	moderately interested	very interested	extremely interested	_____

10. Did you take one or more walks or hikes in Ross Lake NRA on the trip during which you were contacted for this survey?

NO -> **GO TO QUESTION 11**

YES

10a. How many walks or hikes did you take? _____

10b. **On your longest walk or hike:**

...where did you begin your walk or hike? _____
(Please be as specific as possible.)

...about how many miles did you walk? _____ miles
(Round trip. Use fractions for distances under 1 mile)

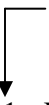
...about how long did the walk or hike take? _____ Hrs _____ Min
(Round trip.)

11a. The map on the next page shows the North Cascades Highway Corridor through Ross Lake NRA. Marked on this map are sites and facilities where you might have stopped and gotten out of your vehicle. Park management is interested in whether you stopped at these sites.

Please review the map, recalling the DAY during which you were contacted for this survey. **At the first site where you stopped, write the number "1" in that site's box. At the second site, write "2". Continue until you have written numbers in the boxes for all the places you visited that day at Ross Lake NRA.**

11b. During your trip, did you use this map?

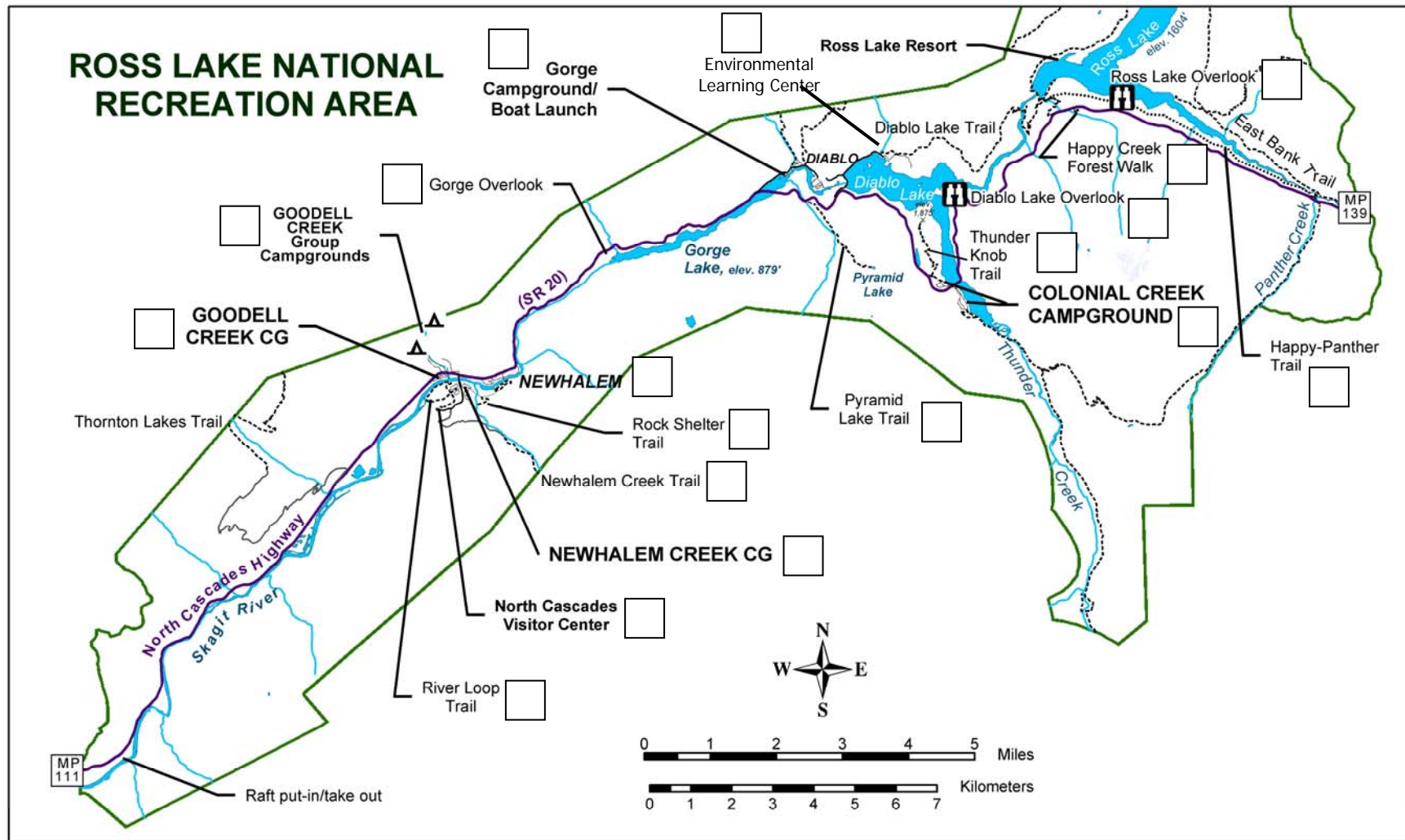
NO -> **GO TO QUESTION 11d.**
YES


11c. Did the map affect where you stopped?

NO
YES

11d. During your trip, did you use a different map that showed park facilities and attractions?

NO
YES



12. Below are some facilities you may have visited or programs you participated in during the trip in which you were contacted. Please indicate with a check (✓) each place you visited and then indicate how satisfied you were with that facility or program (*circle one response for each facility or program you did*).

		Check (✓) if visited	How satisfied were you with this facility or program?			
			↓	↓	↓	↓
			Not satisfied	Slightly satisfied	Moderately satisfied	Very satisfied
A.	NORTH CASCADES VISITOR CENTER	_____	Not satisfied	Slightly satisfied	Moderately satisfied	Very satisfied
B.	ENVIRONMENTAL LEARNING CENTER	_____	Not satisfied	Slightly satisfied	Moderately satisfied	Very satisfied
C.	GROUP CAMPSITES AT GOODELL CREEK CAMPGROUND	_____	Not satisfied	Slightly satisfied	Moderately satisfied	Very satisfied
D.	THUNDER KNOB TRAIL	_____	Not satisfied	Slightly satisfied	Moderately satisfied	Very satisfied
E.	HAPPY CREEK FOREST WALK	_____	Not satisfied	Slightly satisfied	Moderately satisfied	Very satisfied
F.	HAPPY-PANTHER TRAIL	_____	Not satisfied	Slightly satisfied	Moderately satisfied	Very satisfied
G.	GORGE OVERLOOK TRAIL	_____	Not satisfied	Slightly satisfied	Moderately satisfied	Very satisfied
H.	HANDICAP-ACCESSIBLE DOCK AT COLONIAL CREEK CAMPGROUND	_____	Not satisfied	Slightly satisfied	Moderately satisfied	Very satisfied
I.	INTERPRETIVE SIGNS/RANGER-LED TALKS AT DIABLO OVERLOOK	_____	Not satisfied	Slightly satisfied	Moderately satisfied	Very satisfied
J.	RESTROOMS AT DIABLO OVERLOOK	_____	Not satisfied	Slightly satisfied	Moderately satisfied	Very satisfied
K.	GOODELL GREEK PICNIC SHELTER	_____	Not satisfied	Slightly satisfied	Moderately satisfied	Very satisfied
L.	NEWHALEM AREA TRAILS (River Loop, Rock Shelter, etc.)	_____	Not satisfied	Slightly satisfied	Moderately satisfied	Very satisfied

Appendix A: Corridor Survey Instruments

13. Overall, how would you rate your experience on this trip to Ross Lake National Recreation Area? (*Check one box.*)

Poor
Fair
Good
Very good
Excellent
Perfect

14. Are you: (*Check one box.*)

Female
Male

15. What year were you born?

19 ____

16. 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)

17. Are you Hispanic or Latino?

YES – Hispanic or Latino
NO – Not Hispanic or Latino

18. What is your race? (Check one or more races to indicate what you consider yourself to be)

American Indian or Alaska Native
Asian
Black or African American
Native Hawaiian or other Pacific Islander
White

19. Please use the space below to write any other comments you care to make about the positive or negative aspects of your trip to Ross Lake National Recreation Area or about National Park Service management of the area.

Appendix B: Corridor Survey—Visitor Comments

The last question of the mail questionnaire provided respondents with an opportunity to comment on anything that had not been addressed in the questionnaire. All of these comments were coded to reflect the main themes of the comments and it is not uncommon for a comment to have multiple codes. If a comment had multiple codes, the first code represents either the main theme (if one stood out) or the first theme (if no main theme was apparent). Below we present these general comments sorted by the first code (e.g., main theme).

Code Legend

a	Will visit again	t	Need to re-open facilities that have been closed
b	Beauty of area/views/scenery	u	Group camp sites
c	Enjoyed visit	v	Visitor center
d	Driving through / didn't spend much time	w	Wildlife
e	Bicycle/motorcycle	x	Campground(s) + positive
f	Fireworks	y	Campground(s) – negative
g	Rangers/park employees/staff + positive comment/experience	z	Reservations/permit system
h	Rangers/park employees/staff – negative comment/experience	1	Comment about Survey
i	Need more info available on NRA/Resort	2	Weather
j	Road access is too limited	3	Seattle City Light center/tour
k	Maintenance/cleaning needed	4	Not visiting Ross Lake/NRA
L	Clean / well-maintained	5	Dogs/pets in NRA
m	Miscellaneous	6	Signage on trails/roadways
n	Facilities (miscellaneous)	7	Accessibility (for handicap/impaired users)
o	Trails	8	Appreciate solitude / peacefulness / tranquility
p	Evening/Ranger/interpretive program/activity	9	Crowded
q	Restrooms / outhouses + positive	&	Human impacts on nature/wildness of area
r	Restrooms / outhouses – negative	%	Management of parks/NRA
s	Showers (or lack of)	\$	Traffic
		#	Visitor Center video

code	Comment
#	At the visitor center, found the video insipid, vacuous, and overall hokey beyond belief. The entire 25 minutes were filled with background shots of woods and flowing water, while quotations, printed in the foreground, were read in a whispering voice by a mystical-sounding woman. The film was devoid of interesting tidbits of history or geography. For reference, the video at Bryce Canyon NP is worthy of emulation.
#n6ca	[re: question 12, film at visitor center:] The film seemed to be about the earth being our mother and crows or whatever – we wanted FACTS, history, biology, etc. Very satisfied with NC Visitor Center, except with the film, which gave no information for first five minutes, after which we left to go to the lookout area. [re: question 19, comments:] It's a great place to visit. Wish I had read more about it before I got there. Very pleasant, friendly, and helpful Park Service Guides. Wish we could have spent a week or more. We (all four in party) want to

return, two of us to camp at Colonial Creek Campground, where we had a very enjoyable picnic by the lake today. The only thing I would change (if I were in charge!) would be the film, which might be good for visitors wanting to fall asleep, but to people I traveled with today and yesterday were all wanting information! See previous comments. I have not seen the Ross Lake NRA written up in the Seattle Times Travel Section. I may have missed it. More people would go there if they knew about it, I'm sure. One thing that was not indicated on road signs as far as we could see was the presence of picnic tables – where they were present, if they were. We heard about the ones at Colonial Creek from a Park Service Guide. Were there any at the windy place – Diablo? Do all campgrounds have them?

- #vba0 The park, to the extent we had time to visit it, was lovely and the scenery breathtaking. We will come back if we ever can. However a visit to a park always, in our minds, includes and/or starts with a visit to the Visitor's Center. The movie presentation was good, albeit much too overdone on the breathy female, but not I think what the average walk in the door visitor needs. Don't get me wrong, it was beautiful and poetic and should be shown... BUT, do not underestimate the need for a good orienting video/film/slide show of the park, its history, wildlife, and what to do there. That video did not meet the need. Seattle City Light was delightful. They could water the garden and fix the lights at the waterfall. Those trails need PR – they were wonderful (short but wonderful)!
- \$ People drive like effin maniacs. No wonder there are crashes around here. We almost saw two today.
- \$ Our intention was to also visit the Diablo Lake area, but decided not to because of the construction delays on Highway 20.
- \$ba Actually, we were originally headed to Marblemount to visit a craftsperson. She turned out not to be there, so we drove to Newhalem so I could show my sister the Gorge area – she's from Alabama. Unfortunately, delays due to construction caused us to turn back from exploring any further, but the day and trip were still beautiful. I'm a long-time supporter of N. Cascades Institute and I know I'll be back. Thanks for this opportunity to participate.
- \$k I would use North Cascade Highway more often if Hwy 20 was in better condition, and easier to pass slower vehicles.
- % Please don't charge to park at the trailheads – I hiked in these hills starting in 1964. To have access to the wilderness is one of my pleasures of citizenship. It just feels wrong to charge.
- % Have used the Ross Lake area extensively over the years, including camping, hiking, fishing, and site-seeing. Do not need additional intrusive control from Park Service. Just be the caretakers.
- %1 It is good to see a concern about how to manage these places for the best use for all.
- %m Our National Parks are inspiring and necessary for the physical and mental health of the nation. I encourage our president to spend more on parks and less on stealing other nations' oil through invasion. I am adamantly opposed to privatizing our national resources. Our government is supposed to protect our heritage, not prostitute it.
- %obm The only negative aspect of my experience at North Cascades National Park (NCNP) was the frustration of dealing with trailhead access issues on the USFS land immediately surrounding the park (i.e. "Pay to Park" fees, or RAT, or fee-demo, or whatever they're calling it now). When I inquired at the NCNP Visitor Center about "moderate" day hikes, the park staff was obliged to make suggestions from a rather short list. The Thunder & nob and River Loop trails were two that lay wholly within the NCNP/RLNRA area. Also suggested however were the Blue Lake, Rainy Lake, and Lake Ann trails which are administered by the USFS and thus subject to the extra hassle and expense of obtaining permission to park at their trailheads. These trails (Blue Lake, Rainy Lake, Lake Ann) are all along the SR20 corridor east of the park and in an area that, while managed by the USFS, is very much within the "scope" of NCNP as far as the typical park visitor is concerned. As you approach the park from the east

(via Mazama) and drive up the valley toward Washington Pass where you first see Liberty Bell and the Early Winter Spires, you certainly believe that you must be in the North Cascades! In fact, it seems as though the view of Liberty Bell and the Early Winter Spires is one of the primary icons of the North Cascades. How could the not be in the North Cascades? Since this area is so intimately related to the NCNP/RLNRA complex, not only proximally and scenically but in terms of recreation opportunities as well, it would make perfect sense to transfer administration of this area to the NPS. I believe NPS would be the appropriate steward of this area and would be best suited to care for its unique scenic, natural, and recreational values. The area in question fairly defines itself when one looks at a map. It is hemmed-in on three sides by the Ross Lake NRA, North Cascades NP (south unit), Lake Chelan Sawtooth WA, and the Pasayten WA. Except for the road to Harts Pass and SR20 itself, it is essentially roadless. It takes very little effort for the eye to trace out a new boundary running from the northernmost tip of the Lake Chelan Sawtooth WA along &angaroo Ridge, to Silver Star Mountain, and tying in to the southern extent of the Pasayten WA somewhere in the vicinity of Last Chance Point or Scramble Point. This would append to NCNP the SR 20 corridor including Liberty Bell and the Early Winter Spires; Washington Pass, Rainy Pass and the aforementioned trails; as well as the roadless area between SR 20 and Harts Pass and all the trails therein. In order to simplify administration and trail access, it would be preferable to also include the Robinson Creek and Methow River trailheads inside the new NPS area, whereas Driveway Butte and the Driveway Butte Trail may well be left outside the area and remain under USFS administration. You asked me to comment, and my input is that ALL the North Cascades should be brought under the umbrella of the NPS as a part of NCNP. I realize that there would be tremendous political opposition to such a change, but nevertheless, please bring this suggestion to the attention of a Park Service administrator who would be interested in such a proposal and also have the authority to promote and/or act upon this idea.

- %v#g We were very pleased to visit this area. It seems very well managed. The Newhalem Visitor's Center and the film we viewed were excellent. Very impressed. The Rangers and volunteer were very friendly and helpful. Thanks for the memories.
- %y It would be nice to see Rangers walking campground and visiting. Saw numerous violations, like firewood gathering, which could be prevented by Ranger walks. The host program is great, but the Ranger visit is much more informative.
- & The constant sight of power lines in the park takes away from the "national park atmosphere."
- &3 Seattle City Light and the relevant facilities have ruined the whole Skagit River Valley.
- 1 This is the first question mail survey I have received.
- 1 Some of the possible reasons why I returned the survey: A. [circled] cute survey guy (Diablo Lake) – very important; B. I already have this stamp on my passport; C. Didn't want to litter; D. My husband, PhD guy, made me.
- 1 Please send me a copy of your conclusions based on this questionnaire.
- 1 Had a very nice talk to the girl who gave me this survey, she is doing a good job.
- 1% To [name listed] and all staff – It is encouraging and gratifying to have these types of feedback solicited from visitors to the recreational area! In this era of diminishing consciousness as to how meaningful and valuable a resource such as Diablo and Ross Lake are to individuals and groups for retreats to nature, resourcing direct feedback as to how best to allocate budgets is essential. Please help keep up the good work. Thanks!
- 1b Beautiful country. Felt pressured by the approach of the man conducting the survey who approached us as soon as we got out of our vehicle. When one leaves one's normal life to take a trip, holiday, or time out, it is a pity to have it intruded upon before one even has a chance to see the view. Thank you. PS – I understand the need for such research, but I think

- the researcher could use a little more tact.
- 2 Our main purpose for this trip was to head east to find some sunshine and warm weather. We found it and were very happy not to be in cool, rainy weather.
- 23g The day we took the bus/boat tour of the lakes it was raining heavily, so we expect to see and visit again. The City Light tour was well done and the Park Rangers did a good job. The Diablo and Ross dams are impressive structures.
- 2a We couldn't enjoy it fully because it was raining on us and we weren't prepared for it. We hope to come back in the future when it's not raining. Other than the rain it was beautiful and we love that there were so many great overlooks of the lakes. Thank you.
- 2b We decided not to stop at some areas because of the weather. It was really windy and our little girl couldn't be out for long. It was kind of hard to enjoy. But overall the sites we did see were beautiful.
- 3vo I went on the Seattle City Light sponsored Diablo Lake tour. Enjoyed it very much. Always wanted to do the North Cascade Loop, had minimal information, picked up more at the Visitor's Center. Will definitely do some more sightseeing and hiking on the trails in the near future.
- 4 We should not have this survey because we are not going to Ross Lake. This was given to us in North Cascades / Newhalem. I began acting as if it was this park we are in.
- 5b The North Cascades National Park is a stunning drive, with many opportunities available to stop at overlooks. The frustration I experienced here limited the time I was able to spend at this area. I'm a pet owner, specifically a dog-owner, and wish facilities existed for my pet. I understand the necessity of protecting the environs of the National Parks and have no quarrel with the rules pertaining to trails, etc. However, I would like to see pet facilities created near visitor's centers that would "babysit" pets while the owners engage in the variety of activities available at parks. For a nominal fee, a person could house their pet at a simple facility that provided water. It is my belief that such a facility would prove popular, and possibly contribute revenue to the National Parks. Admittedly, we pet owners could provide for our lower-mammal friends at off-site facilities, or simply not bring our friends along on trips at all. But, many of us do bring them, as part of a trip that includes National Park stops, many times as a lark. For these unexpected times, it would be nice to have nearby accommodations that could prove profitable to your park.
- 5cbx Dogs shouldn't be allowed in campgrounds. Rangers are friendly and knowledgeable about the park and area. No crowds – plenty of open campsites always at Newhalem. Clean campsites always. Plenty of activities – hiking, biking, campfire programs, dam and store exploration. Newhalem is one of our family's favorite campgrounds. We have recommended it to ALL our family and friends. Absolutely beautiful here!
- 6 We wanted to see the Diablo Dam and the Ross Lake overlook. The Dam signage came a little too quickly and we missed it. The Ross Lake overlook sign, if there was one, was too obscure for us, who were looking for it, to see.
- 6ojn During the trail walks, Happy Creek for example, the signs used to educate need to be updated a bit. Some of the trees they referred to were gone or not clearly pointed out due to growth and forest changes. The Gorge Overlook was fantastic. However, we were disappointed that we no longer could go at night and that two of the ponds were not working. It would also be helpful if there were some informative plaques to tell us of the history and how it came to be along the trail. It was after we passed Newhalem that we realized we had missed the turn to the trail of the cedars. It was just as frustrating when we had to turn around for the scenic Gorge Trail. Better highway signs to the entrances would have been nice. In addition, the Rock Shelter Trail was missed by us due to the lack of signage on the Trail of the Cedars. It would have been great to be able to drive along trails into the mountains. A lot of the day hikes were too long for us due to disabilities. However, our Jeep would have had a

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- blast if there were trails or forest service roads that were accessible to us. Bummer that we were there on a Wednesday when none of the guided tours were available. We would have loved to go on the Ross Lake boating and Lake Diablo trips.
- 6p Missed the Ross Lake Overlook – not well identified on the Park Map (no signs on the road either). Ranger hike around River Loop Trail didn't begin until the next day (Sunday). Why not start it on the weekend (Saturday)? Trail signs were very good. We enjoyed our time.
- 7 Traveled with my wife who is having a mobility impairment (MS patient). For this reason, we would welcome more accessible trails, viewpoints, etc.
- 7n Great place! Need more drive accessible camp sites! Would like to access Ross Lake – current climb is too steep for older people and bad backs.
- 8%n1 I loved the remoteness of the Park and the lack of visitors. I appreciate the level of services – enough to serve my needs as a visitor, but not overly ornate, organized, regimented, or “polished,” if you follow me. Wilderness should be wilderness, not packaged, and Ross Lake NRA is still wild. Leave it that way, please. I was also impressed by the young man who was conducting the survey. He was polite, knowledgeable, and friendly; an asset to your project. Thanks for the chance to put in my 2 cents.
- 8a1 The whole area is one of the last remaining pristine spots left. I thank you all for your efforts. I hope to be able to visit again sometime. Thanks again. The survey is very good.
- 8ba This is a beautiful area – the lack of people is one of the main reasons we come. We've camped at Goodall and Colonial Creek and hiked some of the trails. Expect to continue to come every year. We travel between Florida and Washington every summer and always take Route 20 at least one way, and spend some time each year.
- 8c Very pristine, lush, and not crowded. We thoroughly enjoyed our visit.
- 8x My husband and I are 79 and not too active now. We enjoyed the quiet and tranquility of the campground facilities.
- a This was our first trip into the state of Washington and we look forward to a return visit very soon.
- a Will return often. Thanks!
- a I will be back.
- a It was all very nice and I realized that I would really like to spend more time in the Northern Cascades.
- a5 We have enjoyed our weekend very much and will be back. We also are glad that our dog is welcome and can go for long walks.
- ar I will return to this park. My only complaint was the lack of paper towels and flat surfaces in the bathrooms. I have a great time.
- b Beautiful area.
- b Beautiful lakes – enjoyed the ride.
- b\$ It's a beautiful trip through the mountains of which not much was said. I realize most mountains are outside of the Ross Lake Park. It is a very unique trip but also a highway for moving traffic, not a place for people to park in the roadway. More turnouts would be nice.
- b% This is one of the most spectacular scenic mountain highways in North America. Please preserve and enhance its facilities. Thank you!
- b&% It is such a beautiful area and a wonderful park. Hopefully it will continue to function as well as it is now, and will not be overrun with people or commercial ventures.

- ba North Cascades has a lot to offer in terms of education, beauty, and diversity. We will return to enjoy this beautiful place again and again.
- ba I look forward to returning with my family to show them how majestic this piece of paradise is that is in our backyard – hope to see you soon.
- ba What a gorgeous place! I will be back in a few weeks to explore more!
- ba It is a very beautiful place. I plan to camp there very regularly.
- bam Beautiful area – would like to return and camp along Diablo Lake and kayak sometime (probably won't be for 5 years or so). Thank you.
- bc I was traveling from the Western part of Washington to Spokane and chose this route as a scenic route to follow. I enjoyed the curving route as a driving experience, though some beautiful scenery.
- bd% Beautiful area. The overlooks were good places to get a great view. They were well maintained and had ample parking spaces. Just made a day trip (back and forth) to this area. I had never heard of it before. Maybe more public advertising in other states would make more people aware of these type of areas. More public awareness may translate into more public support and more budget money. (That may be a dream, considering Congress' attitude towards funding worthwhile projects).
- bm A beautiful place that really caters to all levels of campers.
- bm I really enjoyed the scenery. Of the photographs taken, I enlarged to 8x10 a view of Diablo Lake toward the south and west. Someone actually thought the original picture was a postcard. Thank you for helping to maintain a natural piece of America!
- bm Enjoyed our day-long trip through the park. Due to physical limitations we did not hike – but we 'ate up' the scenery – the vegetation and written info. Hope we have many 'pics' to re-enjoy our visit.
- bn Beautiful scenery. Disappointed that there were no souvenir/gift shops.
- bs1 We really enjoyed our trip to the park. We had no idea how beautiful it was. The people were very friendly and full of interesting and useful information. The services were good too. I would have liked to see more public showers that did not cost 25 cents. It was nice to get cleaned up once in a while and a 50-degree-F river isn't what I'm looking for. Other than that the trip was excellent. I apologize for taking so long to complete this survey. I misplaced it twice and then found it just before I was sent a new one. I hope my response helps. Sorry for the inconvenience. Sincerely, [name signed]
- bt3w It's a beautiful area. We have been to and camped at Newhalem a lot. Have done the Seattle City Light tour twice. We've been to the Gorge Powerhouse when you could go across the bridge and hike over the falls. Ross Lake is beautiful. We have hiked to Blue Lake several times. Newhalem used to have deer. They need to keep Loop A open more at the Newhalem Campground. It is our favorite.
- c Wonderful experience, always. Thanks for asking!
- c#va We enjoyed our visit – the NC Visitor Center needed more postcards – quantity and variety was very limited. The movie was good but would have liked a little information on the geological formation of the area, the exploration of area, the development of the park (e.g. who was President of US at the time the area was designated as a National Park). We have seen this type of video at other parks and they help us to appreciate the parks even more. We have a motor home and travel and always visit the National Parks. The Ross Lake area was beautiful and we might come back when we have more time to spend.
- c2 Very nice. Enjoyable day. Great weather. Wished we had more time so we could have

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- hiked.
- c8g Visiting Washington was part of a 3.5-month trip I was making, camping out in a tent by myself. I wanted peace and [illegible] and some education and I found it all in the National Parks of eleven states and two in Canada. I turned 70 this year, so this trip was a birthday present to myself – all 10,000 miles of it. I've had a wonderful time, thanks to the National Parks systems, and not one negative aspect, only positive. I talked to dozens of Rangers and found them all considerate and very knowledgeable. Thank you all for being who you are and for what you do. [name signed]
- ca We loved our trip. We drove the road to the Rainy Lake area. Long hike. Wonderful day. My first drive on the Cascades Highway North. Look forward to a return trip. Thank you for helping make this a most delightful destination.
- cab RLNRA was our first step on our way from Portland to Saint Louis via Glacier National Park. When I ask my daughters their favorite part, they always say the North Cascades. We found the ranger staff to be friendly and helpful, giving the feeling of a small town as opposed to larger places like Glacier or Yellowstone, which can seem like mini police states or open air malls with a view. We look forward to returning next summer and feel fortunate to have stumbled upon such a gem so near our home (less than 4 hours, I believe?) Thanks!
- cao Outstanding wilderness area! Do not commercialize it – leave it the way it is! This was my 2nd visit and I plan to return soon. Great hiking trails! Met lots of neat people!
- cb I feel that my help is greatly limited by my confusion of the name of the various overlooks, views, trails, walks. We were quite satisfied with both of our stops, and especially enjoyed the walk down to the dam from the highway.
- cb8 I live in the Redmond area and although the NRA is 125 miles from my home, I enjoy the tranquility, solitude, scenery, and exercise that I experience while there on my one day excursion from city life. [name + address listed]
- cbd We enjoyed the amazing scenery and excellent road. We were en route between Vancouver, BC, and Osoyoos, BC, taking your scenic route. This was not essentially a visit/destination trip to RLNRA, but we would plan to set aside more time on the next trip.
- cg We have always enjoyed this trip. We don't travel this way very often as relatives in Oroville have gone to be with the Lord. It appears the roads and facilities have greatly improved over the years. The Rangers in the area(s) are a great bunch.
- cg We like this area very much. We have been going there with our children for about ten years. We have always found the staff/Rangers to be very nice and very helpful. Thank you for this wonderful outdoor area.
- ct It was great! We have camped and hiked in the area a number of times. This was not exactly a typical trip for us. We usually hike a lot more (down to Ross Dam, Thunder Knob, etc) and usually go to visitor centers and ranger shows in the campground. The friends we were with didn't hike and we visited the main NP visitor center on our last trip. We did not see a Ranger at any time on this weekend campout. We really hope restoration of the north side of Colonial Creek Campground will happen. What devastation! Nice job keeping the Thunder Knob trail accessible. (We walked all through the North Campground out of curiosity as to what happened. Wow!)
- cxn My experience here has been very satisfying. I stayed in the park campground for one week. Noticed many drive-thru potential campers, but few if any stayed. The Newhalem Campground provides adequate space for large RV's, again, most did not stay. The mountains are beautiful, but this apparently isn't enough to keep many people around. Maybe they may be looking for Disney-type attractions. I certainly hope not. -Florida resident.
- d We only stopped to use the restrooms and visit viewing spot, then drove through, past

Washington Pass.

- d I've lived in Washington for only 5 years. I had yet to drive across 20 when it was open, so I worked the drive into a round trip I had to make from Bellingham to Pullman. I hope to spend more time some day with experienced outdoorsmen.
- d My parents and I drove to Sun Mt. and took the scenic drive to get there.
- d Spending time (several days) backpacking, hiking, and camping in the recreational area could have been very enjoyable but was traveling through at this time with time already scheduled to be spent in the San Juan/Whitney Island area.
- d Really we were only "driving through" on trip between Seattle and Winthrop.
- d There were a lot of activities we would have liked to have participated in had we the time. We would like to have stayed overnight in a campground and hiked.
- d We had planned to stay overnight at Newhalem Campground on the way to Lone Fir Campground and the Washington Pass area in the Okanogan National Forest, but we were early and so chose to skip Newhalem and drive that day to Lone Fir. There, we stayed for a week and had a wonderful time hiking and birdwatching and camping. (Sorry to not have contributed much feedback on the Ross Lake National Recreation Area).
- d We stopped at Diablo Overlook to stretch, use the restroom, and take in the beauty. We were gone in less than 30 minutes.
- d1 Your interviewer should ask if the visitor was using Ross Lake area or just passing thru to or from, so you could get a good response. Took many pictures going thru and some on the way back. Thanks.
- da I did not have time to spend doing any of the activities available. I hope to come again and camp and hike in this beautiful area.
- dab Only had time to drive from I-5 to the visitor center on Route 20. Beautiful area. Look forward to returning when we can.
- dabi This was our first visit. We were driving the North Cascade loop back to Seattle. We didn't notice anything about Ross Lake NRA in guidebooks we used. We may come back to this beautiful area. More information about hiking alternatives would be useful.
- db Please forgive me if part of questionnaire is not complete. This was a driving trip. We have been through this route several times. Beautiful trip. [name signed]
- db My wife and I traveled through the Cascades National Park and we moved on to even the Rockies in Canada. We were very impressed with the view that we witnessed going through the Cascades. Some of these questions were hard to answer as we were not on that type of vacation, and it was just a drive through the area.
- db Beautiful area. I was only driving from the Methow Valley to Seattle.
- db Our primary destination was Okanogan National Forest, Rainey and Washington Passes, but we enjoyed and took advantage of the overlooks and sights in the Recreation Area on the way, coming and going.
- db We were traveling through and used the rest area, we just moved to WA this past year and we're going to Spokane to visit friends and had heard it was a scenic drive, and it was.
- db On this trip we were just passing through! We took Highway 20 as an alternate route to Montana (Kalispell) from Bellingham for the scenery.
- db [re: question 10b, length of walk/hike:] We very hurriedly went through Ross Lake NRA – cannot remember specifics, however we took several walks, went through the visitor's center, enjoyed immensely the scenery, the walks, etc. A very beautiful place, and would love to

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- have had more time – maybe one day. [re: question 12, facilities visited:] We stopped at as many overlooks, walked as many trails as time permitted and was awed at the beautiful things we saw – we were there in early August and cannot remember each place visited. Sorry. [re: question 19, comments:] I wish we had had more time. Maybe one day we will be able to spend time there and not feel as if we had literally flown through.
- db My family flew out to visit me and we just drove through the park to get to the Olympic Peninsula. It was very beautiful and I would like to spend some more time there.
- dba The park was lovely. We were in something of a hurry to make our connection with the Anacortes Ferry. (We were on a transcontinental road trip from North Carolina with not a lot of time to just stay places that we discovered – there was an element of “maybe next time!”) My guess is that you have info online. I come to Seattle fairly frequently to visit friends and will try to get up again! (And will do homework better to prepare now that I have a better idea of what’s there).
- dba My wife and I are Canadian. We travel 10-12 times a year to Osoyoos from Vancouver, BC. For a change we drove through Oroville and over Highway 20 to experience a change of route home. The trip was well worth the extra drive. The park is well signed and easy to follow. Although on this trip we did not have enough time to view all of the facilities, we have decided to spend a few days next year viewing the same trip.
- dban Although on this trip I was mostly just passing through on my way with the family to Winthrop, I have used the park in the past. I love the lake views, restrooms, Newhalem, all the overlook sites. The short hikes like the Rainy Pass, Newhalem Creek, and Rock Shelter trails are just wonderful ways to take a nice break from the drive over the pass or just a nice way to spend the day. I haven’t been to the new Cascade Center that was just completed, but look forward to making a visit soon. I live in Skagit Valley so the North Cascade Park is one that I use often and enjoy and feel so fortunate to have near home.
- dc We were just passing through and were not aware of the Park’s facilities. It was a peasant surprise and we wished that we had more time to spend there, but we had confirmed hotel reservations in Omak and had to continue our drive.
- dL I only stopped to use the restrooms, on a trip to Eastern Washington. The facilities were well maintained.
- dn We stopped to enjoy the view on our way back from a canoeing trip on the Methow River. Enjoyed the information boards at the viewpoint.
- dna Stopped at Ross Lake Overlook to use the restroom and to take pictures. Stayed for 15minutes to enjoy the view. Left to go to Winthrop. Will have to come back to go on a day hike or camping.
- dnt We make the trip from Burlington to Winthrop several times a year. When we have people with us who’ve never driven Hwy 20, we usually stop at Colonial Creek Campground, Ross Lake Overlook, and Washington Pass (sometimes Newhalem, too). I love the improvements to the overlook (restrooms) and the campground for day use, but I don’t know why the north side is closed right now. I hope you’re not changing how it is, as it’s my favorite side to camp at.
- do We were driving through on our way to Winthrop but always stop to enjoy the beautiful scenery. Newhalem is a great place to stop for a picnic. We also hiked through the Washington Pass Overlook Trail – I didn’t see that on the map. That is a beautiful hike.
- dv We passed the Northern Cascades headed for Winthrop. The Center at Newhalem is excellent – needs more signs / publicity.
- dviwa We drove through the park from east to west. We didn’t see the walking trail maps until we got to North Cascades Visitor Center. We would have hiked the shorter of the walks if I’d

- been aware of them. The drive through was incredible. So many different landscapes and incredibly beautiful sights. We saw elk, deer, tiny wildflowers and lots of birds. I think I saw an eagle but couldn't get a picture. All the lakes were so beautiful. I'd like to come back and spend more time. Thanks for a great trip.
- e Thanks for adding all the bike signage along the road. Anything that can be done to make roads more bike-friendly is very much appreciated. How about an RV tax?
- e Love the place! The roads are very well surfaced for cycling.
- e I ride a motorcycle through this area several times a year. I don't use the facilities but it is a beautiful area and should be maintained as is.
- ea I have only traveled on Highway 20 in the Ross Lake area twice. The first outing was with a group to Winthrop. This recent visit was to discover more about Ross Lake area. Upon the return home I did some internet research, and plan to return for additional exploring. I do most of my weekend travel on a motorcycle and enjoy photography.
- eb Beautiful road for the motorcycle ride! Very, very nice place!
- ebg We enjoyed our trip through the Ross Lake National Recreation Area. The views were beautiful and the facilities excellent. Your staff was very friendly and helpful. Thank you.
- ec Very great ride, very good motorcycle trip.
- ed Great area to stop and rest while traveling through on my motorcycle.
- ed I was on a motorcycle trip from Edmonton to Vancouver and decided to go through the Cascades. The scenery was beautiful but the intent of the trip was not to stop but rather travel through.
- ek As a cyclist I was dismayed at the amount of broken bottle glass on the road shoulder. It's the worst I've seen in years of riding this road and it's dangerous to cyclists as well as obnoxious litter. There is also more litter at the side of the road than ever before – mostly empty cans of cheap beer and plastic water/soda bottles – but also used diapers, tire treads, shoes (never a pair). Riding a bicycle slowly uphill provides a unique opportunity to do a trash survey! This is a rant against people who would foul their own nest. They should stay home!
- en We had very fun in the trip and we are satisfied with all the facilities throughout our trip. We would love to visit the Cascades one more time.
- f8 Having no fireworks allowed or tolerated was the inspiration for the latest trip. Ross Lake – in fact the entire North Cascades – provide the majority of my household's outdoor activities. Understanding also that it's near to where I live. It's a wonderful, quiet, peaceful, natural place. Thanks, to NPS, etc.
- g [Name listed], the [Park employee position], was very informative and welcoming. Cheers!
- g Great Park Service personnel.
- g5j [re: question 5 – facilities visited] I wanted to visit a National Park that I haven't seen. Each National Park has a visitors center and campsites. [re: question 10 – hikes] Walked around campsites with my dogs. Dogs aren't allowed on trails and I wouldn't take them on a trail even if they were allowed. [comments:] The Rangers were helpful and nice. The area is very pretty but access is limited except on foot. The road is OK but to go north I had to go out the same way. I just got home from my trip to Alaska. I would have turned this in sooner. Thank you.
- ga I was very impressed with Rangers in visitors center – friendly, informative, plenty of smiles and sense of humor. Young man outside who was doing the survey was also informative and friendly. A very refreshing experience, will definitely expand my next visit to include more stops in the area. Thanks so much for all you do to keep this beautiful area for all of us and

the future generations.

- gcmv6 I was surprised there was no admission fee. The Services, Staff, and facilities are first class and I would have been happy to pay for them. The 5 Rangers knocked themselves out trying to answer my questions. When they couldn't identify a plant they kept trying. Eventually one said, let's try the noxious weed reference guide – his didn't cover it but mine did! It was hypericum! We never did figure out what the avalanche [sp?] lily does to generate heat. They said they'd send me the answer. I got an education in Grizzlies – excellent. The negatives are all mine. As a single woman traveling alone with no camping experience but a tent, sleeping bag, inflatable ground cover, lantern, mosquito sticks, a week's worth of food, 24 plastic bottles of water, firestarters, compass, etc, etc, etc (in my trunk) I just can't seem to break the ? fear barrier and start camping. Don't know why. Would you ever consider giving a class on camping? I'm sure it sounds idiotic but when you grow up in New York City you don't learn how to drive until you leave. For me that was in medical school, 3rd year. In the City you can't afford to keep a car unless you are wealthy and you go everywhere by bus, subway, or cab. I also didn't allow enough time for my first pass through the park – west to east – but writing this I've decided to drive back through east to west and find the Environmental Learning Center. I'll have to get another color pen to fill out today's comments. Thanks for the opportunity to comment. 7/13/05. Unlike yesterday's more or less 6 hours – today I spent 10 hours in the Park. I must say talking with the Park Rangers and asking all my elementary questions is wonderful. They are unfailingly positive and are always a highlight of any trip. I spent a lot of time stopping along the side of the road – studying the wildflowers, butterflies, and took 2 hikes outside Ross Lake NRA. The birding was fabulous. By the time I got back into RLNRA it must have been about 4pm so I found myself stopping by the roadside and at the restrooms and the scenic overlooks and for photos. It felt quite different traveling from East to West on the same corridor. I got a lot more out of it listening to the CD I heard a man request from the Ranger at Majama [?sp]. So I got one and it enhanced the trip. I didn't know much about avalanches but on the way south I did part of the Mountain Loop east of Granite [?sp] WA and hiked near Big Four. There was an area of cleared forest in the path of an avalanche there that illustrated many of the points made on the CD. The things I find most helpful in the parks are the educational markers (e.g. re: the different types of rock or effects of glaciation on sites), talking to knowledgeable people, the film at the Visitor's Center, the exhibit under the topo map on geology of the North Cascades. A suggestion... a printed list of "If I only had ____ hours, days, etc to spend in the park," what would be the best thing(s) to do...? A suggestion – would you consider having Ranger talks at the edges of the park, alternating East and West, so that non-camping guests could realistically participate without driving long distances to the center of the park? Thanks – a great trip. 7/14/05 & 7/17/05.
- gen% Very friendly staff. 2. Why is it not possible to get the Golden Age Card for non-nationals? We traveled to Norway and all reductions they had there could be used by all nationals being guest and tourist in Norway. 3. Way back there was a deal called "Hiker and Biker" campsites – you shared the place with other hikers and bicyclists, separated from cars and big campers. Does it still exist in some parts of the USA? 4. For hikers and bikers it would be handy to have bear-safe food boxes, like they have in Canadian National and Provincial Parks. 5. In the washrooms to use the water tap you need 3 hands to use it. You will know if you try it yourself.
- gox All the Rangers we met were particularly friendly and helpful, particularly [name listed] at Cascade Pass on [date listed]. Trails in very good condition. Also campground at Newhalem facilities were excellent.
- gqca July 20, 2005. We found it beautiful, and really enjoyed our short visit. The people at the information center were very helpful and friendly. The washrooms were very clean. We plan on coming back and spending more time. We have already shared our experience with our friends. Look forward to being back as your guests! [Name + address signed – Vernon, BC, Canada]

- gqLsw Rangers were very nice. Had a good time – clean campground and restrooms. Would like showers (even pay) at restrooms. Would like to see more wildlife. We will probably return next year. Thanks
- gxm The Ranger (lady) who gave the evening presentation was informative, interesting, and genuinely seemed to enjoy her job. We also were impressed with the elderly gentleman that was at the Ranger station at the entrance. He was knowledgeable and helpful in giving information and directions. A clean, well run campground at Colonial Creek. PS – Offering church services on Sunday is a wonderful addition to the Park program. Even though we normally don't participate in church activities, it's a nice thing to have.
- gy Good relationship with Newhalem CG hosts [names listed] – very helpful when one of our systems malfunctioned. Good effort to welcome and assist by [name listed] at Ranger house / gate house. At your "best" and "cleanest" campground – Newhalem Campground – it would be gratifying if you would install electric and/or water access at each site. Those of us in our 70's and 80's would greatly appreciate this addition. We have been returning here for 13 years annually.
- h A Ranger sent us on a trail that I don't think he had ever been on. Great trail, but harder than he let on. It's a good thing my wife's a trooper and has done hard backpacking before.
- i2v Not much published info on hikes. Required purchase of guidebooks. Poor weather made views limited. Spent more time in car than would have liked. Visitor Center exhibits are well done.
- i6 Visitor information guide is very good, gives interesting information and a good overlook about the activities. Use more pictograms, especially for people who don't read English perfectly. Maps from the parks are good. The description of hiking trail for the Newhalem isn't really good. More information on the Internet, in English and in other languages. Now in German: [several sentences were written in German, I can't decipher handwriting well enough to even transcribe...] All people in NP were really friendly. Thanks for that.
- iba I have found it difficult to find info on the internet about Ross Lake Resort – how to rent cabins, for example, and how to catch the water taxi there. The Ross Lake NRA is gorgeous. I plan to return to hike and kayak. (We were passing through en route to Mazama and Winthrop). PS – The National Parks are the glory of this country. I have tried to fill my son's childhood with the beauty of hiking in them, staying in them, and driving through them.
- j Vehicle access site must be increased.
- j I was disappointed that it was not yet possible to drive (at least a little way) into the Cascades National Park either north or south to experience the beauty.
- j&v There was little or no access to the Cascades NP, unless you were biking in. We came with the intention of visiting the Cascades and didn't really have any interest in the NRA. In our experience, the NRA's have been disappointing in general. Our goal is to see natural wonders, not manmade dams, lakes, etc. The visitor's center was very nice. The exhibits were very well done and parking at it was adequate.
- k Diablo overlook is overgrown with weeds – a minor amount of landscaping would enhance the new, attractive facility.
- kbn We were disappointed in how overgrown the plants and trees were at Diablo Lake Overlook. We were in a motorhome and on the curved entrance, a couple of trees really need trimming, but we had to brush up against them. The grass and weeds are swallowing up some of the benches and signs. Some major maintenance and trimming needs to be done there. We're full-time RV'ers originally from Everett, WA, and we were returning to Puget Sound via the North Cascades Highway. Our main goal on this trip was to enjoy the scenery and overlooks. The road was in good condition (first time we've driven it in an RV). The scenery was spectacular, as usual.

Appendix B: Corridor Survey – Visitor Comments

- L Very clean and well kept.
- L Colonial Creek Campground is attractive and well maintained. Thunder Knob Trail is very well maintained and passed through a variety of environments. The scenic overlooks were excellent.
- L2g The road was well maintained, with many viewpoints. The weather was perfect and the scenery absolutely amazing. The staff at North Cascades Visitor Center were very helpful and recommended excellent hikes (but they were outside Ross Lake NRA and inside North Cascades NP).
- L3bia POSITIVE: It is extremely beautiful and breathtaking; you have kept the roads very well maintained; I saw your ad on the TV; the folks at the Seattle City Light are very friendly and helpful. NEGATIVE: The boating trip is overrated and over-hyped. It wasn't what I expected and I will not recommend it to my friends. The boat moved so slowly; I was expecting a faster ride. You should market the Ross Lake Resort a little more. I would love to see the pictures of the rooms and learn more about its facilities. OVERALL, great place to visit – I look forward to coming again with my family.
- L6 Clean, well kept, informative signs.
- Locb# The area was very well maintained. The trails were great. We enjoyed it very much. The scenery – lakes and mountains – was spectacular. The film at the North Cascades Visitor Center was kind of hokey (the lady whispering phrases). The photography of the film was very enjoyable. I prefer straight information. I'm not very artsy, so the whispering lady was a little too much for me.
- m Like the wooded area.
- m Well done!
- m I love and use this area, but when I think of this area I include the park and surrounding National Forests. I especially like the Rainy Pass area for hikes.
- m In 1968 I and two of my buddies crossed over the road from Colonial base to over to Winthrop, on 3 Honda XR 90 trail bikes. Staying over at Penguin Lake and come back the next day. The road was all crushed rock except for two (?) miles of cat road; it was very rough. A true experience.
- m Thank you for caring for this beautiful park. Keep up the good work.
- m It had been about 18 years since our last visit to the Area. We were very pleased that not much had changed. It has all been kept, very good job! We plan to do the "Dam Tour" one day soon. Thanks again for the great job.
- m I do not own a cell phone. As I was traveling alone, I would have liked to call my wife from the Diablo Lake overview on the way home. A cup of coffee would also have been very helpful. Safe driving!
- m Our trip through Ross Lake National Recreation Center was part of a 3-day minivacation around the Cascade Loop. We started from Tacoma, spent one night in Leavenworth, day two visited the Grand Coulee dam, spent night 2 in Mazama and day 3 drove through the N. Cascades, then back to Tacoma.
- m Sorry for the delay.
- m I have visited and hiked in this park numerous times. I can find no faults at present with management or facilities.
- m Good work!
- m Sorry so slow.

- m Visitor Information Guide – North Cascades Challenger – was very informative.
- m Thanks.
- m I wish I lived closer and could visit more often.
- m In 1940, when I was a sophomore in Pateros, four of us high school boys hiked from the where Early Winter Creek runs into the Methow River before there was any roads up Early Winters. There was a trail up Early Winters. We hiked up to Lone Fir Tree the first afternoon. There was a stacked rock fireplace made by deer hunters. We got up Monday morning, dropped our packs where the Washington Pass Trail crossed Cutthroat Creek and up Cutthroat to Cutthroat Lake. Cutthroat were plentiful in lake, but small. We appreciated the mountains all around Cutthroat Lake. There were huckleberries near the trail crossing Cutthroat Creek. We had huckleberry hot cakes. Next morning we hiked over Washington Pass, then down to where Bridge Creek forks and caught all the small rainbows we wanted for lunch at creek crossing. Hiked up to Rainy Lake and caught many 10" Rainbows where the falls fell into Rainy Lake. Hiked up to Lake Ann – the trout were smaller in Lake Ann than in Rainy Lake – very good to eat though. We hiked over Heather Pass and down to a lake surrounded by yellow lady slipper flowers. The most I have seen anywhere. That lake had not been planted yet. We hiked from there down Bridge Creek to the east fork of Bridge, up over Bowen Pass and down to Rainbow Lake five miles from the head of Lake Chelan. We then north east cross country to McAlister Lake through mountain meadows. Looked like a park. Then we went through South Creek Pass above McAlister Lake. Thence down south creek to Twist River. We love those beautiful mountains. We hiked 90 miles in 8 days carrying Trapper Nelsons with 45-50# packs. Three of the four high school buddies are 81 to 83 years old. One passed on. Going by foot with packs through those saw tooth mountains was great – I [illegible] going over Washington pass by highway since it was built. Next best to hiking, which we can't do. Those crossing the North Cross State Route Aug. 15th – Aug. 22nd, 1940: [names listed]. I hope to continue this annual auto drive over Washington and Rainy Pass a few more years. [name signed]
- m# We were unable to hike/backpack on this trip due to health reasons. We're unsure how difficult it is to get a trail pass. We were glad to be able to buy a NW Forest Pass at the Visitor's Center. Thank you.
- m& Please continue to preserve climbing access and manage the Ross Lake NRA to be as wild as possible.
- mn Just wanted to thank you for your good work. (If possible, restrooms with running water will be great.)
- mpca We went to Colonial Creek Campground to fish but that was no good. We thoroughly enjoyed just being in the park and "getting away from it all." The ranger talks at the amphitheater were very interesting and enjoyable. We will definitely return for a longer stay and more activities.
- mrB The day we were contacted we did very little as we came sort of late. The next 2 days we did TONS and loved every minute – hikes, viewing, etc. Wish you had hand soap in the bathrooms. We spent a lot of time both east and west and north of the specified area as well – gorgeous!
- n Not having firewood at Colonial Creek Campground was TERRIBLE. There used to be wood and it made camping there so much more enjoyable. Having to drive BACK into Newhalem to get wet wood that wouldn't burn definitely put a damper on our trip.
- n The Diablo Lake overlook is outstanding.
- n I was disappointed that there was only one picnic site near the water at Colonial Creek. That table was sandwiched between several campsites.
- n Positive trip – very nice facilities. We do wish there was somewhere to eat while traveling

Appendix B: Corridor Survey – Visitor Comments

- over the North Cascades Highway. Thanks!
- n There was not any place we could find to stop for a bite to eat, eg. Vending, grocery store, diner, etc.
- n6%g We liked the campground and the [illegible] very much! We didn't like the bureaucracy with the parking permissions! Absolutely NOT acceptable! We came from the east! To go to the visitor center and go back to the trails is just not working! We didn't like that the gate was going to close at 4:30pm at Diablo Road / before the trail. That was NOWHERE written and is not reasonable! A good idea would be to be clear about times and gates on the map! Better have no restrictions! Parking permissions: Ranger stations up hill should give them also!
- nc Due to the blasting of rocks, it would have been great to be able to purchase wood at the Ranger's station versus going into Newhalem, which it took 1.5 hours to complete my task. (I was not aware of the firewood policy) Other than that, the trip was wonderful. Thank you for keeping our parks beautiful. [name signed]
- nce We spent a family weekend. Thought the barbeque fire pits were very close to foliage and could start a fire. We just went to relax and enjoy just visiting with family. Did a little bike riding and walking. My daughter loves it there and that's how we got there. The questions really don't relate to us. Was a very lovely park.
- nk Your potable water at the dump station at Diablo was full of green slime which cost \$80 to repair.
- ns I would like to have a covering/shelter built over the amphitheater at Colonial Creek Campground to protect from rain and shade from sun (but not completely enclosed). Having a shower facility available at the campgrounds would be nice. I would also like to see a public gas station and laundry facilities at Newhalem.
- nsgm It would be nice if there were showers at each campground or at least at Colonial Creek or Newhalem. Also, we were very disappointed that the store in Newhalem wasn't open regular hours. We easily spend \$100+ at the Newhalem store during a week stay. Also, [names listed], Colonial Creek campground hosts are very nice and seem so responsible for the care and well-being of the campground and campers too. We sure miss the north campground and would be willing to donate money (not thousands though) to help offset the cost of reconstruction. We are almost retired but might be able to assist/volunteer with specific tasks (not too hard) that you need help with, ie raking, planting, etc. Please contact us [name and address listed]. PS The ranger that gave us this survey was very kind and helpful.
- nv For people entering from the west, have an info station on a small scale. The park was beautiful and unique. The visitor center was very pleasant and the educational area of the center very peaceful and appealing to all senses. Thank you.
- nv#6 Was very satisfied with the Liberty Bell Mountain viewpoint and the picnic area near the visitor center [responses to question 12]. Would like to see visitor's centers at park entrances – east and west. Film at visitor's center could be more informative. More restrooms. Entrance and exit into and out of park needs to be better identified.
- o% Would like to see focus maintained on non-motorized recreation, eg trails.
- o9 There need to be more easily accessed roadside hikes. Real hikes. Mountaintop hikes. If you're not boating, backpacking, or have kids/handicaps, there are few reasons/ways to enjoy the park. Long hikes, lots of water, and short, flat trails are all that seem to exist off the highway. Diversify if you want to attract a different crowd or please the longer day hike demographic. This goes for the National park and local national forests as well. Blue Lake, Rainy Pass, Jack Mt., Thunder & nob, Pyramid, Stetattle, Thornton Lakes, Monogram and Lookout, Hidden Lake, and the Cascade River Fork trails are all there is. 10 trails to dayhike. They're all crowded. Always. A half dozen more would help spread the burden of crowds and increase users in the NRA.

oxn	Positive: all the trails and campground facilities. Negative: no place to get breakfast (except Marblemount); general store hours – can't buy anything anymore getting back from a hike after 5pm.
pc	We had a wonderful time. I think the informative programs are a great idea. Thank you.
pg	The Park Rangers were very helpful and positive. We went on a walk led by Ranger [name listed]. We were very impressed with how genuine and attentive he was with our two boys, aged 9 and 11. He made their Junior Ranger experience very positive. Also, we really enjoyed the "hidden birds" on the boardwalk behind the visitor center.
pk&\$e	Campfire programs should feature animals and behavior for children. History of National Parks is not really appropriate. Dumpsters need to be emptied and washed out more frequently. Pave a bike trail from Newhalem to campground so kids don't have to be on Highway 20 – it is too dangerous. Please put up signs discouraging use of generators – loud and smelly! Quiet times should be posted in large numbers on bathrooms.
pqzy	My son loved the junior ranger program. Our family and group of families enjoyed the "family fun pack". Bathrooms were clean. Appreciated being able to reserve group campsite at Newhalem. We wish more camping sites on Loops A & B at Newhalem could accommodate large tents (they seem to cater to RV-type vehicles).
q	Excessively good facility – good restrooms.
qq	We greatly appreciated the condition of the bathrooms at Diablo Overlook. They were very clean and waterless hand sanitizer was awesome! The Ranger at Diablo Overlook, [name listed], was very friendly and knowledgeable. He was able to answer all the questions we had and was most engaging. You should employ more Rangers like him. And I think he deserves a raise.
qt	Facilities at Colonial Creek were good – restrooms clean, trash picked up. Would be nice to have water damaged loop at this campground repaired. I know this is in the works – I'm sure it's a big job.
re\$	Toilets at gorge overview were dirty and smelly. The road needs more passing areas. We were riding motorcycles and were constantly behind slow RV's.
s	We would have stayed longer if there were showers. After two nights we were headed home.
sa	The only negative thing is it would have been nice to have showers in the Newhalem Campground restrooms. I have traveled over the North Cascades Highway to a family cabin outside of Winthrop and have never stopped to camp in this area. I have been missing out on beautiful trails and country. I plan on coming back to hike more of the trails and camp out. Thank you, [name signed]
to	Reopen the trail up Ruby Mountain. A superb 1-day hike to the best easil accessible viewpoint in the Park!
ty	I would like to see some sites at Colonial Creek Campground recovered. Without camping access on west side of Highway 20, the campground on the east gets very crowded.
uiwb	Stayed at Newhalem group sites (both A and B) with groups that gets together every couple years. We enjoyed ourselves very much. We especially liked the shelters at the group site. I would definitely like to come back. One of the non-Ross Lake highlights was the Buffalo Run steaks we cooked at the campsite. The group site is advertised as accommodating way more than it actually can (only 3 tent pads per site). I only knew that I needed both group sites because I called. This should be corrected at the reservation site. The other great thing we did was take the road out of Marblemount (22 miles) to the trailhead with fantastic views of glaciers and waterfalls. Number of large mammals was disappointing. The grizzly bear should be returned to the area!

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- v Information given to us at the visitor center was very helpful in choosing day hikes at the right level for us.
- v The visitor center is by far the best I've ever encountered in a National Park.
- v Visitor Center was one of the cleanest and most attractive Centers we have visited in the National Park system.
- v We just stopped at the North Cascade Visitor Center to show our family what a beautiful place it was and to use the restrooms.
- v Didn't know about how nice the visitor's center is. I will definitely bring my kids someday.
- vda We enjoyed the visitor center (Learning Center). We were on our way home from Winthrop so we didn't get to spend enough time at the recreation area. Our whole family was very impressed with the entire area and would like to come back and explore it further.
- vg We have traveled throughout Washington State on two previous trips and always loved stopping at visitor centers. We always learn new things about the specific area and travel back to an earlier time through the films, displays, and books. Always the staff have been extremely helpful and they have made the trip that much better.
- vm I stopped at the North Cascades Visitor Center to get recommendations for day hikes. This was my first trip to Washington State, so I stopped at numerous overlooks along Highway 20 as well, taking photographs. Day hikes were performed in North Cascades National Park.
- vo We had a wonderful visit to the Visitor's Center and nearby trails. We wish we had more time to explore the area further. Another trip!
- vo# We did get very good information at the visitor center about trails, nature and the movie was really excellent.
- vqo My husband and I drive the Cascade Loop regularly. We always stop at the visitor's center to go to the restrooms (which are always clean!) and to walk in the woods. We like it very much. Thanks!
- wip It would be nice to have more postings about biting fly/bug conditions at different areas. We especially enjoyed the evening programs that were oriented towards adults.
- xa A wonderful campsite, looking forward to visiting the North Cascades again, and will stay at Diablo Lake again.
- xa We really appreciated the campground – it had lots of private sites and was really beautiful. We will return to North Cascade NP.
- xbgp Very clean campground at Newhalem. Incredible, amazing scenery. Friendly rangers, great evening program, enjoyable and entertaining.
- xca We really enjoyed our time at the Newhalem Campground. We plan on coming back a few more times before summer ends. It is a family-friendly environment and our kids had a great time.
- xgqr We visit the Newhalem campground several times a year and enjoy it very much. The campground hosts have become friends. We do three generation camping using several campsites and enjoying our children and grandchildren. The restrooms are always well maintained and the area generally quiet and peaceful. Goodell campground is lovely except it needs decent bathrooms. I find pit toilets offensive. My children and grandchildren (part of them) climb Sourdough Mountain every year (tradition). Thank you, [name signed]
- xgv North Cascades area was recommended by a kayak tour guide on San Juan Island. Stopped at Goodell as campground was accessible by car – very nice location at riverside. Staff at visitor center was very helpful and friendly.

- xLpvf The Newhalem Creek Campground was very well maintained. Our site was clean. The Ranger talk was entertaining as well as informative. We enjoyed the visitor center. When we lived in Washington state 30 years ago, the road didn't go across the mountains. The drive was a real treat. The only negative thing was fireworks and noise on July 3rd from the Seattle power facility. We thought the noise was from campers in the campground.
- xn8p We feel that the campgrounds we have visited (Newhalem Creek and Colonial Creek) are some of the nicer dry camp facilities in Washington State. The only thing that might be nice is the addition of possibly electricity and/or water hookups. But we also love the solitude of Newhalem, so maybe we'd better leave it alone. Another nice thing might be more variation with the evening programs. Maybe guest speakers (ie, UW astronomers/zoologists) on subjects not directly related to National Parks would be nice. Thanks for taking care of MY park!
- xo We've just really enjoyed our stay at Newhalem. It seems you can go there at any time and still find a virtually empty campsite. We love that as opposed to making reservations. We also find the campsites really nice. There are many campgrounds (especially state camp facilities) which seem to be very open with a lot of pavement. The sites at Newhalem are relatively private and somewhat secluded from each other (for example – Colonial Creek is not our cup of tea!). The trails there and at Newhalem itself are great. The prices are also very reasonable (once again – state campgrounds are much more and it kills me that you have to pay for 2nd vehicles!).
- xonm Our primary reason for camping is that we thoroughly enjoy it. My wife and I have been camping together for 45 years. We love the Newhalem camp sites because of the fresh water clean restrooms, good water, and excellent camp sites. But we are never around our camp during the day because we hike. Our latest hike was to Cutthroat Pass (near Rainy Pass). We also took my sister-in-law to the Rainy Pass walks, which she thoroughly enjoyed. (She is currently a candidate for a kidney transplant). The class of people that camp at Newhalem is first class. No noisy groups after dark, no loud radios, etc. Overall we love the Newhalem camping facility. Here's a problem – we would like to see another campsite on Highway 20 nearer to Rainy Pass. PS – I wrote this standing up on the center aisle and my handwriting became nearly unreadable.
- xopa Beautiful natural campground and great hiking trails – also enjoyed the evening campfire programs – will return!
- xos My husband and I have been bringing our 3 daughters to this area for camping and picnics for the last 10 years or more. We enjoy the area very much. The trails and campgrounds are a lot of fun for the whole family. The only improvement I can think of is someplace to shower would be great. If I had a place to shower I would never leave.
- xovn We thoroughly enjoyed our stay at the Newhalem Campground! Not only is it remarkably beautiful, but the easily accessed trails, Visitor's Center, and Family Fun Pack were all factors that made this quick trip so wonderful. I loved having those activities a small hike from our campsite. Our only complaint: no hook-ups for our trailer! With it being 96 degrees and our battery dying quickly, I would have gladly paid more than \$12/night for hook-ups.
- xp It was a great experience. The campsites were perfect. The campground needs an outdoor program.
- xy&pt Overall our stay at Colonial Creek Campground was great. We were frustrated though that our neighbors who had an RV used a very loud generator for hours at a time. We also had a hard time leveling our little RV in the provided space. On our hike we were disappointed that we couldn't go far because a bridge had been washed out years ago, and had never been fixed. I thoroughly enjoyed the ranger's talk about plants one evening. It's great that that program is provided. It was fun to sit with fellow campers and laugh together.
- y Tent sites don't accommodate large families well. We are a family of nine and either need a

Appendix B: Corridor Survey – Visitor Comments

- really large tent, or 2 tents. Also, there weren't many sites good for groups. We went with another family of 6. It was difficult to find a suitable site.
- yk We are not very happy with the brush that has been put in the campsites at Newhalem Creek Campground. We feel it creates a fire hazard. Should be cleared out.
- yxnov Newhalem is 110 miles from my home and is my favorite camping location, using a 27' 5th wheel trailer. I love the quiet location, the camping sites are fairly minimum maintenance (for the staff) and are appreciated by everyone I come in contact with. I would like to see just one of the three loops at Newhalem provided with power and water for those who might desire to stay for up to 5-10 days. I have camped at Newhalem almost every year for past 15 or more years for usually 4-5 days. These sites are mostly accessible for most RV's. This is NOT the case at Colonial Creek where I have camped at only 2 times and for strictly one night. The trails around Newhalem are moderately easy walking, well marked, and nicely varied. The Visitor Center is one of the best in the National Parks system and I've traveled to scores of them throughout the US.
- z7 I appreciated that we could reserve campsites so that our group could have adjoining sites for the four nights. I was disappointed that Thunder Creek Bridge was not replaced yet and that Stetattle Creek Trail was not usable and that the road to Thornton Lakes Trailhead was in such poor shape that we couldn't drive to the trail. I enjoyed the new trail, Happy Panther. Now that I am older it is hard to find easier trails in this area to fit my abilities. I have been on so many of the hikes in the area already, it's nice to have a new one.
- zin The facilities and visitor services are first-rate. But – when I reserved my campsite online, I was led to believe that the chosen site would accommodate a 10'x20' tent. Upon arrival I discovered the camping area was paved. Although large enough, there was no place to erect a tent requiring pegs. I was able to find a suitable site, but would have preferred to have been able to discern online the sites that would have accommodated my equipment.
- zx I like the fact that the Newhalem campground is first come, first served. Reserving campground space up to 9 months in advance is unfair and hinders my spontaneity. All Washington State Parks should be first come, first served.
- zxy We appreciate being able to come to the campground without having booked a place. Campsite was good. Needs more tenting facilities – i.e. the sites seem more geared towards RV's.

Appendix C: Ross Lake User Survey Instruments

ROSS LAKE USER SURVEY CONTACT SHEET

1. How many people are in your party today?

_____ Number of people

2. Are there any people in your party today under the age of 18?

☐ NO

☐ YES



2.1 How many people are under 18? _____

3. Please check the makeup of your personal group:

☐ Individual

☐ Family

☐ Friends

☐ Family and friends

☐ Other _____
(please specify)

3a. If your personal group is part of a larger group, please circle the makeup of the larger group:

☐ Personal group is not part of a larger group

☐ Commercial tour group

☐ Organized non-commercial group _____
(please specify)

☐ Other _____
(please specify)

4. Which of the following best describes this trip for your party?

☐ Drove from home or other lodging to spend the day

☐ Car-camping

☐ Staying overnight at Ross Lake Resort

☐ Camping overnight along lakeshore

☐ Boating in, backpacking away from lakeshore, and camping inland

☐ Other (please specify) _____

PLEASE COMPLETE BOTH SIDES OF THIS QUESTIONNAIRE

5. Which of the following activities do you plan to do on this trip? (*Check all that apply.*)

- ☐ Day hike
- ☐ Backpack
- ☐ Kayak/Canoe
- ☐ Motor boat
- ☐ Ride horses
- ☐ Other (*please specify*) _____

6. Are you: ☐ FEMALE ☐ MALE

7. What year were you born? 19 ____ ____

8. What is your home Zip or Postal Code? (*If you live outside of the United States, please write the name of your country.*)

We would like to give you a brief questionnaire that asks about your experiences during this trip in the Ross Lake area and your feelings about possible changes in park policy. The first question of the mail questionnaire asks you to record each day where you stopped—this should take you about a minute to do each day. It is estimated that the rest of the questionnaire will take on average 25 minutes. If you would like to participate in this second part of the survey, please provide your name and address so that we can send you that questionnaire. This information will not be used for any purposes other than this survey.

First Name Last Name

Street Address

City State Zip or Postal Code

Country, if not USA

OMB Approval 1024-0224 (NPS #05-033)
Expiration date: 4/30/2006

Ross Lake User Mail Survey
Ross Lake National Recreation Area



PRIVACY ACT and PAPERWORK REDUCTION ACT Statement:

16 U.S.C. 1a-7 authorizes collection of this information. This information will be used by park managers to better serve the public. Response to this request is voluntary. No action may be taken against you for refusing to supply the information requested. Please do not put your name or that of any member of your group on the questionnaire. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

Burden estimate statement:

Public reporting burden for completing the mail-back questionnaire is estimated to take an average of 25 minutes. Direct comments regarding the burden estimate or any other aspect of this form to the Office of Information and Regulatory Affairs of OMB, Attention Desk Officer for the Interior Department, Office of Management and Budget, Washington, D.C. 20503; and to the Information Collection Clearance Officer, WASO Administrative Program Center, National Park Service, 1849 C Street, N.W., Washington, D.C. 20240.

Printed on Recycled Paper.

[INSERT SIGNED COPY OF LETTER FROM SUPERINTENDENT HERE]

BEGIN HERE:

While you were visiting Ross Lake National Recreation Area, you were contacted by a survey worker and agreed to complete this mail questionnaire about your experiences during the trip. Thank you for your cooperation.

MAP DIARY—TO BE COMPLETED DURING YOUR TRIP

We are interested in what parts of the lake you visit and what you do at those sites. Please record this information on a daily basis. A map of Ross Lake in Ross Lake NRA is shown on the next page. Marked on this map are campsites and water taxi drop-off sites where you might camp overnight, begin a hike, or stop to rest or picnic.

Part 1. AT THE START OF YOUR TRIP, indicate your start or put-in location. For example, if you took the water taxi, please write “Ross Lake Resort” for your start/put-in location.

Part 2. AT THE END OF EACH DAY, please record where you stopped and what you did at those locations in the table. Because during your trip you may stop at the same location more than once, there is a set of columns for your first stop at a site on your trip and a set of columns for your second stop at the site.

1. **Record what stop number this stop is for your trip as a whole.** At the first site where you stopped, write the number "1" in the first box. At the second site, write "2". Continue until you have written numbers in the boxes for all the places you stopped during your trip at Ross Lake NRA.
2. **For each site where you stopped, please indicate what activities you did there and for how long** using the following codes:

C = Camped overnight for ___ number of nights. Please indicate number of nights camped at that location.
H = Did an out-and-back hike for a total of ___ miles. Please indicate in miles the length of the longest hike you did from that location.
BP = Began a point-to-point hike from this location. If you leave the area included in the map, please complete Part 3 of the map diary.
EP = Ended a point-to-point hike at this location.
S = Stopped to rest or picnic but did not hike or camp.

Part 3. If your trip took you outside the range of the map below, please briefly describe your trip in the space below, indicating where you went and the length of the trip (e.g., Hiked Big Beaver Trail to the Picket's for four days or Hiked Big Beaver to Little Beaver for three days).

Part 4. AT THE END OF YOUR TRIP,

A) Indicate your ending or take-out location. For example, if you used the portage operation to take your boat down to Diablo Lake, write “Portage” in the take-out location.

B) During this trip, I was a ... (Please check all that apply).

Backpacker
 Dayhiker
 Water taxi user

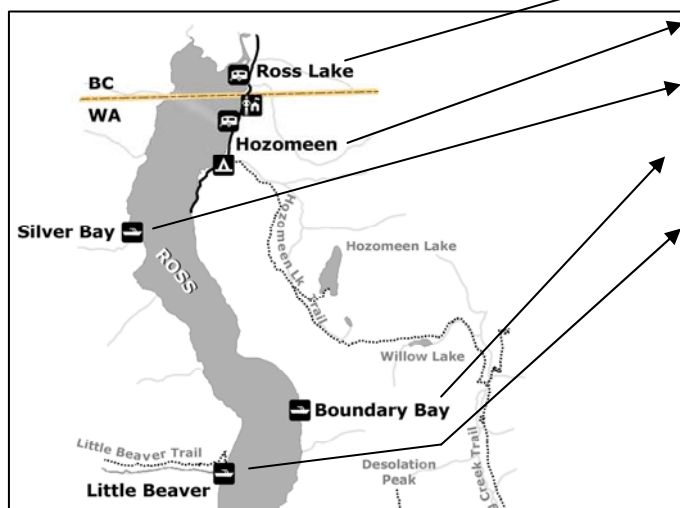
Boater (kayak, canoe, or motor)

Appendix C: Ross Lake User Survey Instruments

EXAMPLE: Suppose you took a four day trip beginning and ending at Hozomeen Campground. First, write Hozomeen for your “Start/Put in Location” and “End/Take out Location” responses. On Day 1, you went to Silver Creek campsite and camped 2 nights. As seen below, you write “1” in the Stop # box and “C2” in the Did What? box. On Day 3, you went to Little Beaver campsite where you camped one night and took a three mile hike. This information is recorded as a “2” in Stop # box and “C1H3” in the Did what? box. On Day 4, you stopped at Boundary Bay to rest (Stop #3, Did what? = S) and then headed to Silver Creek to camp overnight (Stop #4, C1). Because this was your second stop at Silver Creek, this information was recorded in the second set of boxes. On Day 5, you returned to Hozomeen and ended your trip.

Start/Put in Location Hozomeen

End/Take out Location Hozomeen



Camp Site	1 st Stop at Site on Trip		2 nd Stop at Site on Trip	
	Stop # of trip	Did what?	Stop # of trip	Did what?
Ross Lake, Canada (drive-in)				
Hozomeen (drive-in)				
Silver Bay or Silver Creek	1	C2	4	C1
Boundary Bay	3	S		
Little Beaver	2	C1H3		

CODES FOR COMPLETING MAP DIARY TABLE ON NEXT PAGE

C = Camped overnight for __ number of nights. Please indicate number of nights camped at that location.

H = Did an out-and-back hike for a total of __ miles. Please indicate in miles the length of the longest hike you did from that location.

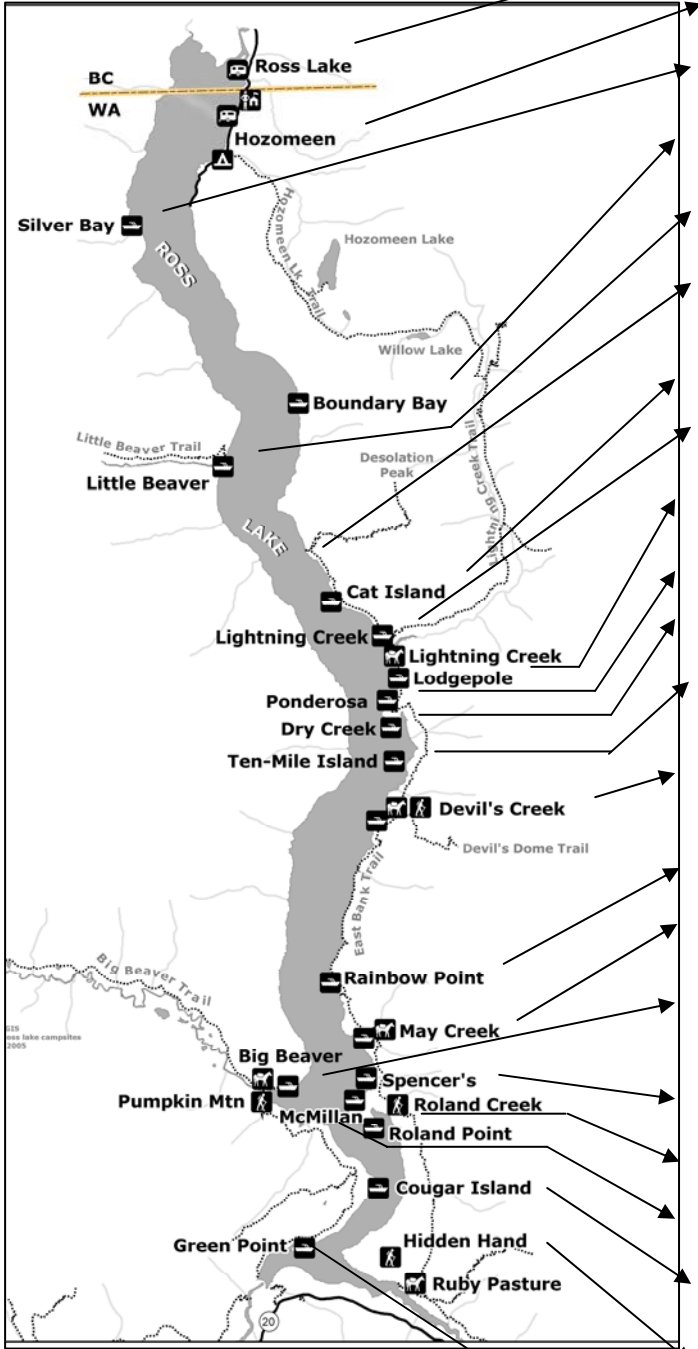
BP = Began a point-to-point hike from this location. If you leave the area included in the map, please complete Part 3 of the map diary.

EP = Ended a point-to-point hike at this location.

S = Stopped to rest or picnic but did not hike or camp.

Start/Put-in Location _____

End/Take out Location _____

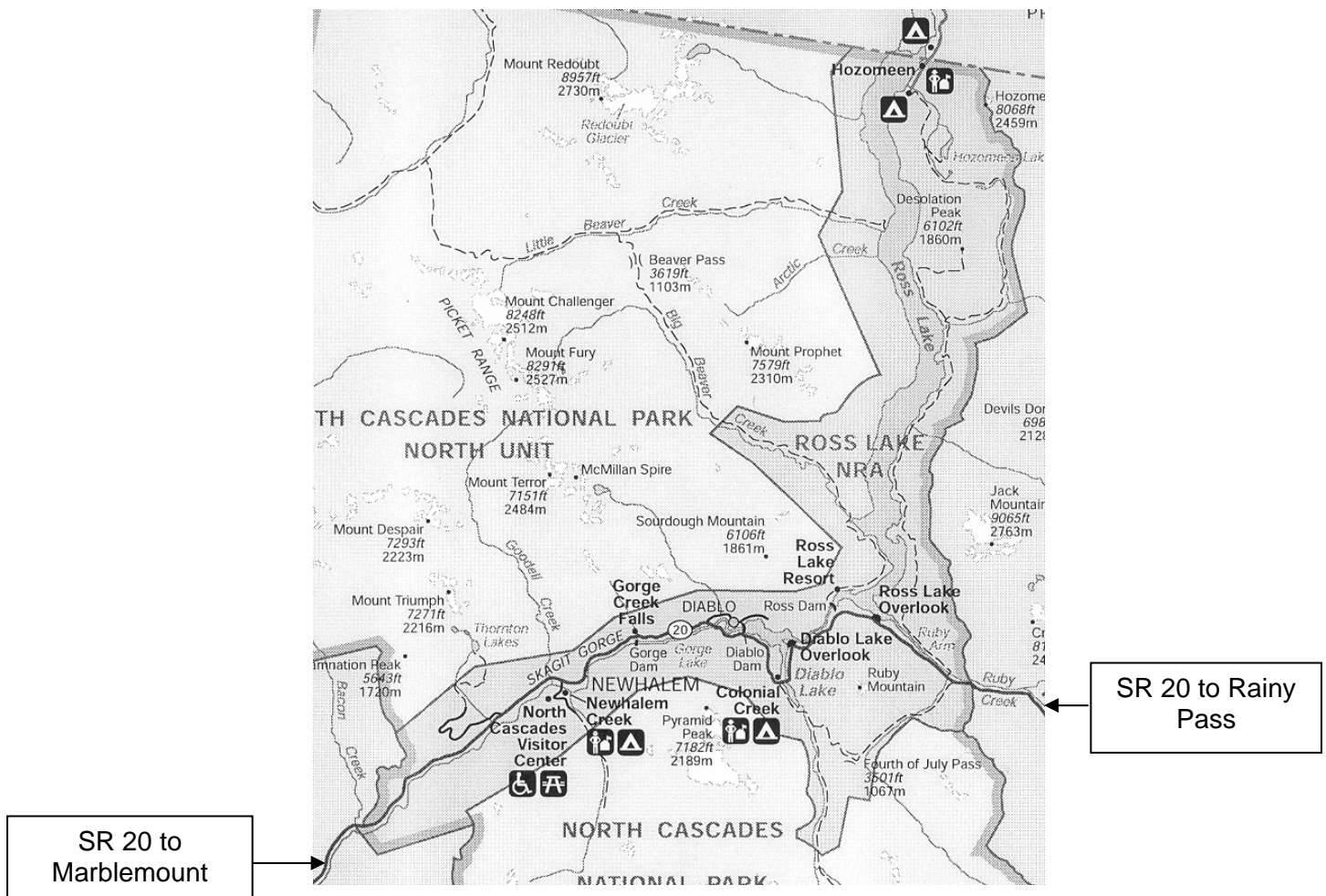


Camp Site/Water Taxi Stop	1 st Stop at Site on Trip		2 nd Stop at Site on Trip	
	Stop # of trip	Did what?	Stop # of trip	Did what?
Ross Lake, Canada (drive-in)				
Hozomeen (drive-in)				
Silver Bay or Silver Creek				
Boundary Bay				
Little Beaver				
Desolation Trail				
Cat Island				
Lightning Creek area camps				
Lodgepole				
Ponderosa				
Dry Creek				
Ten-mile Island				
Devil's Creek area camps (boat, hiker, or stock)				
Rainbow Point				
May Creek camps (boat or stock)				
Big Beaver (boat or stock) & Pumpkin Mtn				
Spencer's				
Roland Creek or Roland Point				
McMillan				
Cougar Island				
Hidden Hand				
Ruby Pasture				
Green Point				

POST-TRIP QUESTIONNAIRE—TO BE COMPLETED AT THE END OF YOUR TRIP

Recently, you visited Ross Lake National Recreation Area. For purposes of this survey, a trip to Ross Lake NRA is one where you stopped within the recreation area boundaries as indicated on the map below. While you were in the area, you were contacted by a survey worker and agreed to complete this mail questionnaire about your experiences during the trip. Thank you for your cooperation.

Please note that this questionnaire focuses only on the trip to the Ross Lake area when you were contacted for this survey. Also, please be sure to read each question carefully before answering it.



1. **INCLUDING THE TRIP DURING WHICH YOU WERE CONTACTED**, how many trips have you made to Ross Lake NRA in the last three years? *Recall that a trip is one in which you stopped at one or more sites, facilities, or trails within the recreation area.*

NUMBER OF TRIPS IN LAST 3 YEARS _____

2. **PRIOR TO THE VISIT DURING WHICH YOU WERE CONTACTED**, did you and your group seek information about Ross Lake National Recreation Area and/or the attractions that are found within its boundaries? (*Check one number.*)

NO → **GO TO QUESTION 3**

YES

- 2a. From which sources did you and your group seek to obtain information? (*Check as many boxes as apply.*)

Friends or relatives
 Travel guide/Tour book
 Newspaper/Magazine
 Phoned park for information
 Requested information from park by mail
 NPS maps/Brochures
 Non-NPS Maps/Brochures
 Radio/Television
 Hotel/Motel
 Visitor contact station/Ranger Stations
 NPS Park internet/web site (<http://www.nps.gov/rola/> or <http://www.nps.gov/noca/>)
 Other internet/web sites
 Other (*Please specify:* _____)
 Sought information but don't remember where

3. On the trip during which you were contacted, did you stay overnight in the recreation area?

YES → How many nights did you spend? _____

NO → How many hours did you spend? _____

Don't remember

Appendix C: Lake Survey Instruments

4. Some possible reasons why people visit recreation areas are listed below. How important to you was each of the following reasons for visiting Ross Lake NRA on **this trip**? (*Check one response for each reason.*)

		How important was each reason for taking this trip to Ross Lake NRA?				
		not important	slightly important	moderately important	very important	extremely important
A.	DEVELOP YOUR SKILLS AND ABILITIES					
B.	DO SOMETHING WITH YOUR FAMILY					
C.	EXPERIENCE NEW AND DIFFERENT THINGS					
D.	LEARN MORE ABOUT NATURE					
E.	TO BE FREE TO MAKE YOUR OWN CHOICES					
F.	GET AWAY FROM THE USUAL DEMANDS OF LIFE					
G.	TALK TO NEW AND VARIED PEOPLE					
H.	BE WITH FRIENDS					
I.	EXPERIENCE TRANQUILITY					
J.	EXPERIENCE SOLITUDE					
K.	BEING CLOSE TO NATURE					
L.	VIEWING SCENERY					
M.	TO FEEL YOUR INDEPENDENCE					
N.	TO GET EXERCISE					
O.	TO ENJOY THE SOUNDS OF NATURE					

5. On the trip to Ross Lake NRA during which you were contacted for this survey, which of the following activities did you engage in? (*Circle as many numbers as apply.*)

- 1 Viewed wildlife
- 2 Viewed wildflowers/vegetation
- 3 Went bird-watching
- 4 Took photographs
- 5 Had a picnic
- 6 Went to visitor center
- 7 Viewed lakes
- 8 Drove around viewing scenery
- 9 Took walks or day-hiked
- 10 Backpacked
- 11 Camped overnight in backcountry away from lakeshore
- 12 Camped overnight at boat-in campsite
- 13 Camped overnight in car/drive-in campground
- 14 Rock or ice climbed using specialized equipment
- 15 Went kayaking or canoeing
- 16 Went motor-boating
- 17 Read educational displays and materials
- 18 Stayed at Ross Lake Resort
- 19 Went fishing
- 20 Went rafting
- 21 Went horseback riding
- 22 Visited historical sites
- 23 Attended a program led by a NPS interpretive ranger or volunteer
- 24 Other (*Please specify:* _____)

Answer this question for the trip during which you were contacted for this survey.

5a. If you circled 2 or more of the 24 ways of experiencing the park listed above, which was most important to your enjoyment of the park? (*Enter the appropriate number in each of the blanks.*)

_____ MOST IMPORTANT factor contributing to your enjoyment of the park
 _____ SECOND MOST IMPORTANT factor contributing to your enjoyment of the park

6. During your trip did you boat or spend time when you could view Ross Lake?

No → GO TO QUESTION 7

Yes
 ↓

6a. How did the number of other people you saw on Ross Lake compare with the number you thought you would see? (*Please check one box even if you did not see other parties*)

- A lot fewer than expected
- Fewer than expected
- As expected
- More than expected
- A lot more than expected

Had no expectations about the number to be seen

6b. How did the number of other people you saw on Ross Lake compare with the number you preferred to see? (*Please check one box even if you did not see other parties*)

Appendix C: Lake Survey Instruments

A lot fewer than preferred
Fewer than preferred
As preferred
More than preferred
A lot more than preferred

Had no preferences about the number to be seen

7. During your trip did you hike inland on trails?

No → GO TO QUESTION 8
Yes



7a. How did the number of other people you saw when hiking inland on trails compare with the number you thought you would see? *(Please check one box even if you did not see other parties)*

A lot fewer than expected
Fewer than expected
As expected
More than expected
A lot more than expected

Had no expectations about the number to be seen

7b. How did the number of other people you saw when hiking inland on trails compare with the number you preferred to see? *(Please check one box even if you did not see other parties)*

A lot fewer than preferred
Fewer than preferred
As preferred
More than preferred
A lot more than preferred

Had no preferences about the number to be seen

8. During your trip, were there one or more specific incidents when another party's behavior **detracted** from your experience?

No → GO TO QUESTION 9
Yes



Continue on next page

8a. Please indicate the number of incidents that occurred in the following situations. (*Complete as many as apply.*)

- ☐ Incidents occurred while we were boating on Ross Lake
- ☐ Incidents occurred while we were on the shore of Ross Lake
- ☐ Incidents occurred while we were hiking inland
- ☐ Don't remember when incidents occurred

8b. For the incident that had the largest impact, please indicate all the characteristics that describe the party whose behavior disturbed you. (*Check as many as apply.*)

- ☐ Party had 8 or more people in it.
- ☐ Party consisted mostly of individuals under age 18.
- ☐ Party was in a motorized boat.
- ☐ Party was in a non-motorized boat.
- ☐ Party was hiking.
- ☐ Party was on horseback or had stock animals (e.g., llamas).
- ☐ Party was from a non-profit organization or club.
- ☐ Party was a for-profit, commercial tour group.
- ☐ Other (*please specify*) _____
- ☐ Don't remember anything about the party

8c. For the incident that had the largest impact, to what extent did the other party's behavior detract from your overall experience? (Check one box)

- ☐ Detracted slightly
- ☐ Detracted moderately
- ☐ Detracted greatly

8d. For the incident that had the largest impact, please use the space below to describe what the party did that detracted from your experience.

Appendix C: Lake Survey Instruments

9. In your opinion, did you see any evidence of human impacts on park natural resources during your trip to Ross Lake NRA? *(Circle one number.)*

NO → GO TO QUESTION 10

YES



- 9a. Did the impacts you saw detract from your enjoyment of Ross Lake NRA? *(Check one number.)*

No, did not detract from experience

Yes, detracted slightly

Yes, detracted moderately

Yes, detracted greatly

- 9b. What impacts did you see? *(Check as many as apply.)*

Shoreline erosion

Exotic or non-native plants

Hiker-made trails

Hiker-made campsites. (for example, soil compaction, vegetation trampling, moved rocks.)

Litter

Cut bushes or trees, axe marks in trees, etc

Human waste

Graffiti on trees, rocks, or facilities

Other *(please specify)* _____

10. Overall did you feel crowded during this trip? *(Check one box.)*

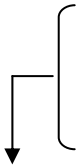
Not at all Crowded → GO TO QUESTION 11

Slightly Crowded

Moderately Crowded

Very Crowded

Extremely Crowded



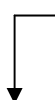
Continue on next page.

10a. IF YOU FELT CROWDED AT ALL, which of the following factors contributed to your feeling crowded? (*Please circle one response for each factor.*)

A. NUMBER OF <u>HIKING</u> PARTIES SEEN	Did not contribute	Contributed slightly	Contributed moderately	Contributed greatly	Don't Know/ remember
B. NUMBER OF <u>BOATING</u> PARTIES SEEN	Did not contribute	Contributed slightly	Contributed moderately	Contributed greatly	Don't Know/ remember
C. NUMBER OF PARTIES CAMPED IN SIGHT/SOUND	Did not contribute	Contributed slightly	Contributed moderately	Contributed greatly	Don't Know/ remember
D. AMOUNT OF EVIDENCE OF HUMAN USE SEEN	Did not contribute	Contributed slightly	Contributed moderately	Contributed greatly	Don't Know/ remember
E. TYPE OF EVIDENCE OF HUMAN USE SEEN	Did not contribute	Contributed slightly	Contributed moderately	Contributed greatly	Don't Know/ remember
F. OTHER (<i>SPECIFY:</i> _____)	Did not contribute	Contributed slightly	Contributed moderately	Contributed greatly	Don't Know/ remember

11. DURING THE TRIP IN WHICH YOUR WERE CONTACTED, did you experience low water levels in the lake that affected your use of the lake (e.g., ran aground, couldn't use a dock, etc.)?

NO → GO TO QUESTION 12
YES



11a. How many times did you have this experience on each lake?

_____ Times on Ross Lake

_____ Times on Diablo Lake

11b. Please describe what happened.

Appendix C: Lake Survey Instruments

12. ON PRIOR TRIPS TO ROSS LAKE NRA, did you experience low water levels in the lakes that affected your use of the lakes (e.g., ran aground, couldn't use a dock, hit a stump, etc.)?

NO, THIS IS MY FIRST TRIP. → GO TO QUESTION 13

NO → GO TO QUESTION 13

YES

- 12a. How many times did you have this experience on each lake?

_____ Times on Ross Lake

_____ Times on Diablo Lake

13. Overall, how would you rate your experience on this trip to Ross Lake National Recreation Area? (*Check one box.*)

Poor

Fair

Good

Very good

Excellent

Perfect

14. The level of water in Ross Lake and Diablo Lake will sometimes be lower than normal due to hydroelectric demands (i.e., a drawdown) or low snowpack. Lower lake levels can have a variety of effects. For each potential effect below, please indicate the extent to which it would detract (if at all) from your trip experience.

		Extent to which possible effect of lower lake levels would affect your trip experience?			
		↓	↓	↓	↓
		Will not detract	Detract Slightly	Detract Moderately	Detract Greatly
A.	INCREASED LIKELIHOOD OF RUNNING AGROUND OR HITTING A STUMP				
B.	INABILITY TO USE A BOAT DOCK WITH A POWERBOAT				
C.	EXPOSED BARE SHORELINE AND TREE STUMPS DUE TO LOWER THAN NORMAL WATER LEVELS				

15. Do you support or oppose each of the following possible use fees for Ross Lake NRA?

		Do you support or oppose this possible fee?				
		↓	↓	↓	↓	↓
A.	A FEE OF \$10 PER WEEK TO USE LAUNCH A BOAT	Strongly support	Support	Neutral	Oppose	Strongly oppose
B.	A FEE OF \$5 TO USE AN RV DUMP STATION	Strongly support	Support	Neutral	Oppose	Strongly oppose
C.	A FEE OF \$20 PER TRIP FOR MOTORIZED BOATS LONGER THAN 15FT (16FT OR MORE)	Strongly support	Support	Neutral	Oppose	Strongly oppose
D.	A FEE OF \$10 PER CAMPSITE RESERVATION IN VEHICLE-ACCESSED CAMPGROUNDS	Strongly support	Support	Neutral	Oppose	Strongly oppose

16. Do you support or oppose each of the following possible management policies for rationing use of Ross Lake? These policies would apply to all backcountry permits issued park-wide.

		Do you support or oppose this possible management policy?				
		↓	↓	↓	↓	↓
A.	ISSUE A LIMITED NUMBER OF PERMITS ON A FIRST-COME, FIRST-SERVED BASIS	Strongly support	Support	Neutral	Oppose	Strongly oppose
B.	ISSUE A LIMITED NUMBER OF PERMITS ON A DRAWING OR LOTTERY BASIS	Strongly support	Support	Neutral	Oppose	Strongly oppose
C.	ISSUE A LIMITED NUMBER OF PERMITS AT A COST OF \$20 PER PERMIT THROUGH AN ADVANCED RESERVATION SYSTEM	Strongly support	Support	Neutral	Oppose	Strongly oppose
D.	WALK-UP PERMITS ARE FREE AND CHARGE \$20 FOR ADVANCE RESERVATION PERMITS	Strongly support	Support	Neutral	Oppose	Strongly oppose
E.	CHARGE A USE FEE OF NO MORE THAN \$20 PER TRIP FOR PERMITS	Strongly support	Support	Neutral	Oppose	Strongly oppose
F.	CHARGE A FEE OF \$10 PER PERSON PER VISIT (REGARDLESS OF VISIT LENGTH)	Strongly support	Support	Neutral	Oppose	Strongly oppose
F.	ALLOW USE WITHOUT RATIONING (I.E., UNLIMITED USE)	Strongly support	Support	Neutral	Oppose	Strongly oppose

Appendix C: Lake Survey Instruments

17. Are you: (*Check one box.*)

Female

Male

18. What year were you born?

19 ____

19. 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
(Elementary thru High School)

13 14 15 16
(College/Vocational)

17 18 19 20 21 22 23 24+
(Graduate/Professional)

20. Are you Hispanic or Latino?

YES – Hispanic or Latino

NO – Not Hispanic or Latino

21. What is your race?: (*Check one or more races to indicate what you consider yourself to be*)

American Indian or Alaska Native

Asian

Black or African American

Native Hawaiian or other Pacific Islander

White

22. Please use the space below to write any other comments you care to make about the positive or negative aspects of your trip to Ross Lake National Recreation Area or about National Park Service management of the area.

Appendix D: Ross Lake User Survey – Visitor Comments

The last question of the mail questionnaire provided respondents with an opportunity to comment on anything that had not been addressed in the questionnaire. All of these comments were coded to reflect the main themes of the comments and it is not uncommon for a comment to have multiple codes. If a comment had multiple codes, the first code represents either the main theme (if one stood out) or the first theme (if no main theme was apparent). Below we present these general comments sorted by the first code (e.g., main theme).

Code Legend

a	Will visit again	A	Outhouses/restrooms + positive
b	Beauty of area/views/scenery	B	Outhouses/restrooms – negative
c	Children/family	C	Campsites + positive
d	Crowded	D	Campsites – negative
e	NOT Crowded/solitude	E	Reservations/permit system + positive or no changes
f	Fishing	F	Reservations/permit system – negative (eg, overbooked) or recommendation
g	General positive	G	Rangers/Park Employees + positive
h	Hozomeen	H	Rangers/Park Employees – negative
i	Wildlife	J	Resort + positive
j	Comment about Survey	K	Resort – negative
k	Used kayaks/canoes	L	RLR staff + positive
m	Management (NPS)	M	RLR staff - negative
n	Noise from other users	N	Interpretive/educational programs
o	Hiking/backpacking/trails	O	Signage/brochures/maps
p	Rude/bothersome groups	P	Need more info available on NRA/Resort
q	Trash	Q	Quietness/tranquility of area
r	Park/Resort fees	R	Water level
s	Boy Scouts	S	Limited access to lake/facilities is good
t	Motorboats + positive	T	Improve access to lake
u	Motorboats – negative/noisy/should reduce or prohibit	U	Canadian portion of park
v	Accessibility (for disabled/impaired)	V	Visitor center related
w	Weather	X	Dogs / pets
x	Human impacts on nature/wildness of area		
y	No changes/leave it alone		
z	Miscellaneous		

Codes	Comments
a P	This was my first trip to R.L. and I didn't know what to expect. I look forward to returning, renting a boat from the RL Resort, and doing some back-country camping. The only negative was at 5:30pm on Sat. – we drove from our camp at Colonial Creek to Newhalem to find a payphone and some s'mores fixins. The store was closed and we didn't find a payphone. It would be nice if they sold some firewood in the campground. Luckily, I saw on the web page that it was byo wood.
A C h n G	Toilets at Hozomeen are clean and well cared for. Ranger who walked the campsites in daytime was courteous and pleasant. I've been to Ross Lake almost every year for 49 years – over the dam for a few years till the

- Canadian road opened up. It's a great place to take the family and friends. There were 17 people in our group this year. We swim, boat, fish, hike to Hozomeen Lake, etc. We really enjoy the camping, but this year, as well as several years in the past, drinking parties that go all night can spoil the trip. Maybe a Ranger could make a night check. The fishing is very poor due to disease – not overfishing. The fish in the Skagit River on the Canadian side are healthy, but the lake fish die young, have poor color, and are skinny. But we still love Ross Lake.
- A g U The area was clean and well kept, a joy to be at. Beautiful lake, new restrooms better. Canadian end looks like a garbage dump – what a mess. 40 mile road well kept, going into Dilver Skagit Road. It's always a pleasure to visit Ross Lake, our children and grandchildren love to come every year. It's our family vacation spot. Thanks for your concern. [name & address listed]
- A G g a We were surprised to see “running” water taps! And sound and tidy bathrooms! We wondered if wood was free for fires or did you charge? Your Rangers were polite and a delight to talk to. No complaints. We'll be back with family and friends!
- A Nice pit toilet at Ross Dam. Thanks!
- b a G j We heard how beautiful your lake was so planned to drive that route with our trailer on our return to Port Angeles. It was beautiful. I enjoyed the two hours we spent there and would do it again. The rangers taking the survey were very friendly and informational. We told many people about it that boat and hike. Sorry I took so long to fill out. Your persistence hurried me along with it. [smiley face]
- b C w Weather was great! I've been coming to Ross at least twice a year since 1972. It's as beautiful as the first time I camped. I do like the improvement at the campsites (i.e. bear box, fire pits, tent beds, etc.).
- b g What an incredibly gorgeous area! We loved visiting, sightseeing, and hiking in the North Cascades!
- b J Beautiful scenery... would like to come visit Ross Lake Resort again, for more than one night. Thank you.
- b m Greatly preserved. Beautiful nature that needs to be protected at any means/cost.
- b Q r y a I really enjoyed my overnight trip to Ross Lake NRA. It was my first trip here and I was surprised how beautiful and peaceful it was. Key points that added to enjoyment: Quiet; Tranquil; Beautiful; Few people; Good road access; Free camping; Fantastic lake to swim in; Many nice places to picnic; Sunshine; Scenery. Had a fantastic trip. Please don't change anything! I will definitely come back for a longer trip and explore the trails and backpacking next time.
- b Q Fantastic scenery, we'll come back – perhaps to the resort sometime. We most enjoyed the quiet, the LACK of bashy-bagooks with power boats, motorcycles, generators, etc. [initialed]
- b V N H P We enjoyed the natural beauty of the park very much. The movie at the visitor's center was very inspiring. Tried to book a tour (Seattle City Light) but it was all sold out for the next 3 days. The park ranger at the visitor center was kind enough to make the call since we had no reception on our cell phone. He knew we were disappointed that all tours

Appendix D: Ross Lake User Survey – Visitor Comments

- were sold out but did NOT suggest the boat taxi so we can enjoy the lake. Luckily before leaving we noticed on our map the words “boat taxi” and started to inquire. ONLY THEN did we receive information! We also feel that at least \$10 entry fee for the National Park should be charged. Our visit was in July 2005.
- B f We stopped at several campsites on our fishing outings and used the “camp facilities.” Yes, it’s the end of the summer season but they were just deplorable. Does anyone check on them or come by to clean or restock t.p.? It looked like these had been neglected for a long time!
- B No toilet paper in outhouse
- B Better bathroom facilities for families – i.e., more than one toilet in each washroom, and sink and light fixture!
- C A r I did not expect campgrounds with tent pads, picnic tables, docks, and bear boxes. All were very clean and in good repair, even the outhouses (we stayed at McMillan). It was one of the cleanest and neatest boat-in sites I have ever seen. All of us would have paid a campground fee or lake fee without complaint.
- C e r The established campsites at Ross Lake are excellent. The facilities are well maintained. The bear boxes are particularly amazing. Ross Lake is a great place to experience solitude (after Labor Day). I would support fees if I could be assured that the number of users was limited.
- C G b a This was our first trip to Ross Lake and will not be our last. Everything about this trip was excellent. The lake was beautiful and our campsite was far better than I expected. Everyone we dealt with from the people at the sedro-woolley and marblemount ranger stations to the rangers we met on the lake, were extremely friendly and helpful. In short, we loved it!
- C G Have enjoyed this campground for years. Appreciate how the park rangers supervise the area.
- C m R Campsites are good. Bear lockers are a great idea! Be clear on how you want wastewater disposed of... on ground/vegetation, or do you support the notion of “pollution solution is dilution” = put it in the lake? Food bits in dish water can attract animals (bears) and undesirable insects (yellow jackets) when dispersed on land. Found the outhouse on 10-Mile Island to be OK, but others smelled quite badly – i.e. Cat Island – what’s up with that? Saw that you were attempting to restore vegetation on 10-Mile Island. Water bucket helped me to do that. Problem is that the campsites tend to become so trampled and devoid of vegetation that re-establishing greenery/shrubs/plants can be very difficult to soil’s inability to retain water runoff. Here’s a suggestion: at the close of the season bring a small wood chipper to the campsite. Reduce the light fuels loading in immediate vicinity of campsites and use the woodchips as cover for barren ground in heavy foot travel areas of sites. High concentrations of pine pole slash on 10-Mile Island could destroy suitability of island in event of man-caused fire. Suggest you reduce fire hazard immediately adjacent to sites by above method and use chips as mulch/ground cover in trampled campsite areas to keep dust down and help plants establish themselves. I know this idea may offend the purists, but I believe the end results will justify the human intervention. I can see that a large insect defoliation/infestation is occurring on hillsides. Much fire history evident in area. What plans, if any, do you have to re-introduce fire to the NRA? Any prescription burns planned? Need to do

- something as area is primed for conflagration. Suggest stump lowering during low water levels in high boat use areas. Suggest leaving wood in campsites so campers don't denude surrounding environs. Thanks, [name & address listed]
- C Q It's extremely pleasant to find a campsite that is as nice as Ross Lake. For example: has different opportunities for camping; swimming/boating/fishing are good; apart from parts of Winnebago flats, you are not squeezed in, and you can be somewhat isolated if desired; NO ROWDIES; Pleasant/helpful staff; able to have campfires, and plenty of firewood.
- C r o Campsites at Lightning Creek were great. In general I am strongly opposed to all backcountry-related fees, however charging a nominal fee for camping at improve sites such as this would be less onerous than the trailhead parking passes now required by the USFS. The number of overnight camping sites available to hikers seemed fairly limited when compared to what was available to boaters. Trails were in excellent condition with only minor deadfall.
- C u G This was my first trip. I camped Cougar Island and could hear and see a lot of motorboat traffic. I would hate to see a no motor boat policy but my next trip I will select campsites away from the resort. The campsites are well used and people before us pick up after themselves. The "bear box," fire grate, picnic table, and outhouse are nice to have and a bit unusual for a backcountry area. The Ranger stopped and visited, sharing park guidelines. Nice guy and gal. I enjoyed knowing they are not far away.
- C V O Positive: I like the first-come, first-serve for the drive-in campsites and I think the pricing is very fair. The learning center is lovely and informative... and info about the NRA is easily accessible via the net – great feature. Negative: I'd love the challenger to show mile-marker #'s individually for the different sites listed. The signs at the top of the Ross Lake Dam / Resort trailhead are a little confusing – I thought we needed a permit to park at all.
- d a Had a great trip – except last night of overcrowded camping and noise. Will return for a kayak/backpack trip next year.
- D o It seems to me that if you are backpacking the NPS will not give you a camping spot on the lake! Boaters see the lake all day – backpackers deserve to camp on the lake!
- e C u Q k This was our 3rd trip to Ross Lake. We love to sea kayak here for the scenery, swimming, wildlife, and birds. We would like to do more fishing. We thought it would be less crowded because we started on a Wednesday night, but were surprised to find so many of the campsites already taken. I was pleased to see containers added for bear-proofing sites. The campsites were well maintained and most people were very quiet and considerate. It felt over-crowded on Cat Island with all the sites full. One of the truly special things about Ross Lake is the amazing quiet. We heard a fair number of motor boats. Too many more boats could really detract from the experience. We were very pleased to see and hear loons, which are quite rare in Washington state.
- e f L We have been going to Ross Lake Resort for 15+ years. We always go with friends and/or family. We enjoy the scenery and the camaraderie. It's never too crowded. The trip is not detracted from by the lake level or no fish. We even went one year in a forest fire and had a good time. Our

- annual trip to Ross Lake is the only time and place I go fishing. I like the fact the lake is not stocked but an all natural population. For my money there is no more peaceful, serene, beautiful place to be than Ross Lake. I consider the people who run the resort as friends. They do everything they can to make your stay a pleasant one. Their respect for their surroundings and their care of it are second to none.
- e g m I didn't understand this issue [of management policies referred to in question 16]. It didn't seem crowded to me. I do support the Park System and want the facilities to be in good order. I've always thought the facilities at Ross Lake were well cared for. Ross Lake is fabulous – a real treasure. I've only been to the lake, staying at the resort, boating, and hiking. Not too many people there, and there already are fees as far as taking the Seattle City Light tugboat and the Ross Lake boat. The upkeep of the Ross Lake trails and campsites is very good. Keep up the good work!
- e g Day use of the lake from the Ross Lake Resort is uncrowded and accessible. Campsites around lake do appear heavily used based on trails and compaction. Kayak use does appear to be increasing. Ross Lake is a wonderful recreation resource.
- e j b a We went to the lake on 23 July 05 in what I thought would be a really busy time of year and what was surprised to see so few people. Compared to parks like Yosemite, where the crowds can equal what you would see in a big city (with smog as well), it was really refreshing and not at all clear the Ross Lake RA has an overuse problem (maybe and under-use problem?) as some survey questions may suggest. This is a really beautiful area (some areas/views rival what mountain/lake views could be seen anywhere in the US) and we definitely look forward to going back.
- e m It is interesting to learn of the concern for environmental impact on the Ross Lake system. Rationing seems like a way of dealing with a serious problem of overuse. I have been staying at Ross Lake Resort, fishing, camping, and hiking for a week in August every summer for almost 20 years. In all this time I have never felt crowded or that the system wasn't properly dealing with those who chose to use it. Occasionally I have experienced full campsites but aside from that I have never longed for more regulation. It seems that, as it is now, it is a well used yet well cared for resource and I hope this continues as I would like to share it with my children in the future.
- e m I did not find the lake to be overcrowded. Is the lake so overcrowded in summer that changes in permitting need to be made? Who would suffer from the changes? Who would benefit? The national recreation area should be open to all, not just those with money or position. And thanks for the pencil.

- e s p o b Ross Lake is absolutely beautiful and I was really pleased to see so few people on the lake. I was part of a Boy Scouts troop which canoed and backpacked for 8 days. The only time it seemed rather crowded was on Friday and Saturday between Luna Camp and the parking lot. There were rude groups of people on the last section of trail between the dam and the parking lot who did not seem to know trail etiquette. They did not move over for uphill hikers and were setting their large coolers on the trail to readjust their loads. Other than that and the thoughtless boaters, we had a wonderful time. Our other group (we were split into 2 groups) encountered someone rather rude who said he was the park superintendent. This person bragged horribly about the "important people" he was sailing with and ordered our group to move their canoes away from the dock so they could put their sailboats there. The people from our group were really astonished at the arrogance of this person. The young man who handed out this survey was very nice. Please try to continue to limit the number of people using the lake. Great campsites! Thanks for a great time!
- e u S We visited past the peak season, which made the experience better than I think it would otherwise be. We had no neighbor campers, which was appreciated. Bear boxes, designated campsites, outhouses, and well-posted campground signs facilitated localized use in campgrounds (and not on more "wild" areas). I would prefer motorized use of the lake to be minimized or kept to boats with small/slow motors. I appreciate the lack of jet-skis and large boats. The Marblemount NPS station has been useful for us – this trip and in the past, in confiding info and issuing permits. We hauled our canoe 1 mile down the Ross Lake Dam Trail from Hwy 20 and found it to be a difficult though rewarding task. I believe the lack of access for boats is a VERY GOOD think to keep it emptier.
- E J f Great trip. Off site permit locations helpful. Ross Lake Resort services and facilities a MUST for a safe and proper trip. Enhance fishing. Thanks.
- E r g We love camping there. We go because it is free and there is lots to do. Keep it that way please.
- E r y The first-come, first-serve permits that are now used at Ross Lake work well for us. It would cost money and add complications to do advance permitting and there is no reason to change. Please don't change anything about Ross Lake. We have visited and camped every summer now for 7 years. We don't mind paying some fee as long as it is put toward maintaining trails, dock sites, and ranger salary. We can afford to pay some fee, however others cannot and their use may be restricted. I do not want to pay a fee so a company can make a profit! There is NO need to privatize Ross Lake reservation or maintenance.
- E r Please do NOT start allowing advance reservations for campsites along the shore. This is one of the very few locations where parties may show up and get a camping permit without an advance reservation. It does mean parties must be flexible in their itinerary, but it puts all groups on an equal basis for access to the recreational opportunities in the RLNRA. This is also true for use in the North Cascades Park. As far as user fees: this area does not need the bureaucracy of permit fees. It is a fantastic recreational and natural resource and along with the park, this area ranks among the best scenic and wilderness areas in the world.
- E Spent whole summer planning this canoe trip. If permit would not have

- been available it would have been a disaster. Advanced reservations are a must at any cost! Thanks, [name signed]
- f B m e Some type of fee system would be good assuming the money collected goes back to the park. I'd be happy to pay something for improved maintenance, etc. For example, the outhouses could use repair (broken toilet seats that pinch your butt – OUCH!) and more frequent cleaning (maggots crawling on the floor are not a necessary part of my wilderness experience). While a number of the permit systems suggested in question 16 sound OK, here is what I think would make an ideal system: 1. Fees should not be limited only to those that camp in the backcountry. Much of the use appears to be by those coming from or renting boats at Ross Lake Resort. Maybe the resort already pays fees that cover these users, but somehow I doubt it. Since these people appear to make up a majority of the users of the lake, I think if others are paying a fee then these users should pay a fee also – even for day use. 2. It would be nice to have a registration system so people with fixed vacation times can assure they can visit the lake. It would also be nice to have free access for those with limited budgets, like high school or college students. But as I noted above, more funds for maintenance of the park would obviously be good. This makes the 16-D option seem the best compromise to me. 3. In the three visits I've made to the lake (all about one week long visits) I have not felt the lake was overcrowded. While there may be more day-use fishermen than I prefer, it is a RECREATION area after all, so their use is reasonable. Since the lake hasn't seemed crowded to me, unlimited use (16-F) might be reasonable. But, from the other questions in this questionnaire, it appears others feel the Ross Lake is overcrowded. Thus, I would not be opposed to a rationing system. But, it seems to me that a lot of the users that "clutter" the lake are people renting boats out of the Ross Lake Resort. I think any rationing system should ration these users too, even if they are only day-users.
- f z I'm too old to expect any worthwhile changes in the fishing laws in my lifetime. The season is so short and yet fishing has so many restrictions at Ross Lake. The five-year plan of 13 inches so the fish can grow isn't working out. This completes my 50th year of fishing and enjoying the beauty of Ross Lake. Our trip consists of ten men who once a year enjoy getting together at Ross Lake. Our take home catch from last year (2004) was thirty-five fish for 3 days. This year it was 16 fish for 3 days. If it was solely for the fishing, we'd go over to Canada, but the beauty of the place draws us back each year. [This respondent also included two page-long poems, one entitled "Ross Lake 1955 – 2005," the other "My Typical Day at Ross Lake"]
- f Didn't catch any fish. Not even one bite.
- f I would like fishing to be better.
- f 13-inch limit on legal trout seemed difficult. We caught all sizes beneath that size limit. I'm not inclined to fish Ross Lake anytime soon.
- F e Perhaps restrictions (such as advanced registration, etc) should be set for peak months, such as July and August. We were there the last week of June and did not experience overcrowding. It is probably very different once fishing season opens.
- F g u Overall, I was impressed with the conditions at Ross Lake. Well maintained trails, no sign of human impact anywhere. The permit

- process seems a little difficult. We missed the Ranger station by 15 minutes and were unable to obtain a permit for the first part of our planned trip. Although, I do see the permit process as being fair even if it can be risky. I would be disappointed if a party reserved a spot and never made it, allowing a space to go unused. Also a couple more backcountry spots to camp would be nice. I also wish there weren't so many LOUD motor boats. Minor distractions though – I'd go back to Ross Lake anytime!
- F g Since there are 2 entry ports into the Ross Lake area, we have experienced a problem with the Backcountry Permit system. We enter at Hozomeen and self register, but have no access to a Ranger to verify boat-in campsite availability. There needs to be a better system in place to prevent "over-booking" in boat-in sites. In the past, there has been a Ranger stationed at Hozomeen to verify space availability through Marblemount Ranger Station. Now, the Ranger personnel has been cut and spread thin. Several years ago, the park went to an advance registration system, but experienced "no shows". Was this so bad? Less impact on the campsites! Is there a possibility for retired host RVers to handle the check-in for the Hozomeen entries? It is an inconvenience and expense to drive to Marblemount RS to acquire a permit the day before, then drive 3 hours through Canada to enter at Hozomeen. In this day of computers and such, there must be a solution. We've been going to Ross Lake since the 1970's and plan to continue to use this beautiful area.
- F m h Ranger staffing is too low in the park for effective control/education of visitors. Campsite registration procedures based on "sites" do not match the layout of the campsites on the lake, i.e. one or 2 tent pads per site. The campgrounds are laid out with 1 or 2 tent pads per fire pit, table, and bear box. Party size, in terms of tents, doesn't always match. In high use periods this leads to confusion and potential conflicts. Better registration information would help, like maps of the site or pad numbers, lack of central reservation at Hozomeen also contributes to campsite overloading. Having a ranger at Hozomeen and daily patrol of the lake would be an improvement. Otherwise the physical condition of the sites was excellent. PS – this survey was completed on the Hozomeen road. Please excuse the wobbles in the handwriting.
- F P Wish we could print out a campsite permit online, even if it cost a little. Wish we could find out ahead of time on a website if there was a burn ban in effect. Wish there was a web cam in place to see the lake and conditions there. Wish we could see the actual real-time weather conditions and forecast for rain, temp, and wind.
- F I would recommend that when you reserve a campsite, you get a specific site #. Also, it would be helpful to be able to make campsite reservations by phone.
- F My friends and I go to Ross Lake every year for Labor Day weekend. We have a wonderful time swimming, kayaking, canoeing, and enjoying the spectacular scenery. We love getting away from Seattle for three days of pure fun. The only frustrating thing about our visits is that it's difficult to include all our friends and not break the rules. We usually have more than 12 in our party (14 last year, 16 this year). The current permit system makes it tough for us to camp all together. If a reservation or special permit system were in place for groups that would be great. I'm willing to bet that this group of happy campers would be willing to pay for

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- a better system that allows us to continue getting out to Ross Lake every year without breaking the rules.
- F After completing planning trip and acquiring the appropriate permit, we were later contacted and told the site we were going to would be full. Apparently the reservation for that site had already been made, but that info was not relayed to the person that we were contacted by in the first place, thus changing our plans after beginning our trip.
- g b a The trip was outstanding. Scenery beautiful. Information from Park Service good. Will return.
- g b t E Ross Lake is a beautiful place to experience. I would agree with the notion of protecting this area. I would strongly disagree with any limitation on the use of motorized boats on the lake. Having to drive up from Hope, B.C. limits the numbers of people who are willing to go through the time it takes to get to Hozomeen to put your boat in the lake. We have been going to Ross Lake for over 10 years. My children look forward to this trip every year and want to be able to take their children there. We have never had a negative experience, except for some mechanical issues with the boat, which has influenced our love for the lake. It would be nice to have the ability to reserve a spot on the lake as it would make the planning and coordinating of the trip much easier. We have been driving up to Marblemount to get our permit the day before we plan to go to Ross Lake. We have a number of people coming and going during our stay so it's important for us to make sure we have adequate space for the number of people who may be there at any one time. We like to stay at one location so we don't have to constantly be packing and unpacking our equipment and gear.
- g b Ross Lake Resort is awesome and very unique. The scenery in the National Park is breathtaking.
- g c a Excellent facility. Will use again over the coming years. Great for adults and kids. Thanks
- g c Another awesome trip to Ross Lake. How could you spend a better 3 days with your kids and grandkids than camping, hiking, boating, and fishing in Ross Lake. Been going there for over 50 years.
- g C G n m Overall this was a great trip. Water quality was high. Camp sites were well equipped and clean. NPS rangers at Marblemount Station were very helpful and knowledgeable. Would prefer to see more remote campsites reserved for campers that get there on their own. Dropping off college party groups disrupts the experience. Thank you. [Name & phone listed]
- g e F H The Ross Lake National Recreation Area is our favorite location to camp and backpack because it is less crowded and there are more opportunities to interact with nature than other locations in Washington. The limited access is not a problem, and helps limit the impact to the wildlife and Ross Lake. The National Park Service management, specifically the Marble Mount and Hozomeen Ranger stations don't seem to have firsthand experience with the Ross Lake campsites. Since specific campsite numbers are now being issued, more attention must be given that they are not double issued between the sites. Double issuing can cause disagreements between campers as some sites are more desirable.
- g E I have had only really good times at Ross Lake and think it is a wonderful

- place. I am thankful that I don't have to pay to go hiking or worry about reserving a place beforehand.
- g G r I have visited the Ross Lake NRA for many years and have enjoyed every visit. The Rangers and Park staff are always friendly and helpful. The park maintenance is great. The fact that there currently are no fees is very important. There should not be fees for the public to enjoy nature as we all have our claim to its ownership and therefore should also share in the responsibilities that come with that ownership.
- g G My friends and I drove in from Vancouver, BC to spend the day at Ross Lake. It was our first visit and we had a great day. It was quiet and the swimming was great. We will definitely be coming back for another visit, hopefully to camp. Also, the lady who asked us to do this survey was very welcoming and friendly, and she was able to answer any questions that we had. Enjoy your summer!
- g G It was a great trip. Rangers were helpful.
- g i I like the park the way it is now, with the one exception. It would be good to get rid of the mosquitoes.
- g k I liked the short time there and think about boating or canoeing in the future.
- g m K Loved the experience. Was surprised to see people putting up tents in unmarked areas. Thought Cougar Island should be off-limits until vegetation has a chance to come back. Was surprised that no newcomers can ever get into the Resort.
- g m r Enjoy Ross Lake immensely and support resources required to maintain and operate NPS. OK with human impacts, i.e. the dam and water level fluctuations. OK/Support user fees.
- g m Overall trip was great – the National Park Service management of the area seems very well maintained.
- g m I appreciate and respect efforts to preserve and protect the wilderness aspects of these northern Cascades while sensibly and conservatively harnessing nature's opportunities in support of human life and advancement. A good balance has been struck here including the seasonal access to a wilderness entered only via inclined and narrowgauge railroads and boats as recent as 60 years ago.
- g m We had a party of 12 people. The experience was great. This is our 12th year here and we enjoy and look forward to the peace and quiet. The area is managed very good and we appreciate your efforts.
- g n Wonderful trip. Only distraction was loud party of campers next to us, which Rangers made every effort to stop before they descended upon us. And they only troubled us for 2.5 hours of a 3-day trip.
- g N R We have been visiting the Ross Lake area each summer for the past 25 years. We have enjoyed our trips each time except for the year of extremely low water. It has been a family and friends gathering place. We enjoy swimming, boating, camping, and star gazing. We began bringing our children and now they are bringing their children. We have enjoyed the various programs held by the Park Service, and the Ranger this year was very friendly and informative. The improvements over the years (bathrooms, docks, fire pits, storage boxes) have been well

	received. A trailer dump station would be a welcome addition. However anything more would hurt the atmosphere and natural surroundings. We have met many friendly people. We have really never experienced any huge difficulties. People who visit an area like Ross Lake know we have a duty to respect its beauty and therefore are generally respectful of others. We hope to continue and enjoy visiting this wonderful area.
g o G	Excellent experience for all of us. We all had a great time. Trails in great condition. Area is beautiful. Met Ranger on trail who was very nice and took time to talk to use and provided water and info. He was very good at his job and quite friendly and pleasant.
g o	Very nice – we recommend to friends the hike from Hwy 20, across dam, to resort, boat back, hike back to parking.
g Q r	After I filled out this questionnaire, we were thinking of a place to camp so went to Ross Lake and found it to be exceptional. Very clean, well kept, and quiet. Better than any place I've been to in BC. I wouldn't change a thing. I believe if you charged a fee people would not help clean up after themselves. As they would feel they are paying for someone to clean up after them, as some people are really pigs. Thank you, A Satisfied Visitor. Your hospitality was greatly appreciated.
g Q	This was our first trip to Ross Lake. We loved our vacation and would highly recommend it to our friends. It is very peaceful and relaxing. Thank you for a fabulous time.
g r f	We drove to Ross Lake to see what the camping facilities were like. I think it is a wonderful area for people with boats and who like to fish! We noticed a lot of day use areas – we didn't know they existed. Our family is grown and on their own, so we are in the relaxing stage of life. I hope that all these areas remain affordable for young families!
g r w T	A great recreation area. We came on a rainy weekend. Still serene and beautiful. Wonder what sunshine and peak season is like, because we loved the quiet and having the place relatively to ourselves. Boat rentals (canoes, kayaks, etc.) are quite expensive, even in the off-season. Wish there were just as accessible ways to put a personal boat down or hike to some of the trails and campsites if we didn't want to pay for rentals. Will definitely come back and actually do some long hikes in and out of the Recreation Area.
g r x q	I really like this area. Would be good to have ranger station on [Hwy.] 20 – waiting for stop lights is a little odd. Lake is very beautiful. Too bad the dam is there, and big power lines (detracts from natural beauty). Keep this area laid back and natural. Campsites need less broken glass and litter in bushes, but otherwise nice. I'd like to know more about boat-in campsites – they sound great. Love the color of the water, mountains, flowers, and all the glaciers! Heaven! Tours on the lake are way too expensive. I might take my son if it were cheaper. Seattle City Light coupon is nice but is still way too expensive, especially with dinner. Thanks for a wonderful park!
g r	We had a wonderful trip. Let's keep America free so everyone can enjoy its beauty whenever we want to.
g r	This was our first camping trip to Ross Lake. We visited for the day before (both times Canadian side). It was an incredible camp spot, we had a lot of choices in which we could set up camp and the scenery was

incredible. We plan to come up again before the end of summer, with different friends. The popularity of this park will only grow, so I think as it does, fees must be applied to certain activities, boating.

g s We have been coming to Ross Lake annually for about 16 years – with both family, friends, and the Boy Scouts. It's a wonderful recreation area and we'll probably continue coming back for many more years.

g w R It was a beautiful trip. We stayed at Little Beaver and had a great view of Mt. Jack. Weather was great and the water level was fine.

g X Positive: beautiful country; great job taking care of the area. Negative: no dogs allowed at lake area.

g y R i I love Ross Lake. This is my 3rd year up here and I hope to make it an annual trip for many years to come. The water was higher this year. There seemed to be more wildlife this year. This year more than any other time it really hit me that this is a place very few people in the world get to come and it is a blessing to be able to spend time here. Keep it just as is!

g y Love the park. Keep it clean, keep it quiet, keep it remote! Thanks!

g z This was an abnormal trip for us to Ross, since we just needed to pick up some gear from the Resort. Normally, we stay at the resort or camp for 3-7 days on our time at Ross. We consider Ross the greatest place in the state of Washington. Let's all protect it.

g z We go for a week of backpacking in mountains 3rd week of September for last 15 years to various sites in USA, usually 6 of us. This area is one of the top 3 we have done. I was wanting a cloth patch saying North Cascades but all your visitor center had was Mt. Baker patch. Please send me a patch or 5. [name + address listed]

g z Great! Service is good as well! Maybe a little more picnic areas will be nice, especially the areas close to popular hiking trails. I remember we tried to find a table and chairs to cut our watermelon before and after we went hiking. But we couldn't. Neither could we find a trash can, so we just cut it inside our SUV and brought the trash back home. Thanks for all your work! We will go there again!

g Do not change a thing!

g Great trip!

g We loved our visit.

g Very nice – let's keep it this way!

g very enjoyable

g Excellent trip! [smiley face]

g Our use was limited to brief walk/hike to dam from Highway. NR was attractive and inviting. Could see us visiting again and going up lake to stay.

g Our trip to Ross Lake was short, but very pleasant.

g [Duplicate subject ID#] We had a great trip. Thanks for caring about the outdoors.

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g	Loved it.
g	We had a great day and the scenery was beautiful. I would highly recommend it to my family and friends.
g	I have been going to Ross Lake since early 90's. My spouse joined me in 1996. I've camped out several times but have mostly stayed at Ross Lake Resort. We love the area and the Resort.
g	I love it up there!
g	Have enjoyed going to Ross Lake since 1959, 2-4 times a year.
G A C i r	Friendly park worker; Terrible, vicious mosquitoes! It was a wonderful experience to be able to take the whole family to such a lovely place. Facilities were great for my 4-year-old and for my 76-year-old invalid mother. We were pleasantly surprised that the grounds and bathroom were so clean and cared for, yet no fee was charged. Thank you!
G e Q	All of the park rangers we met were uniformly friendly, informative, and helpful. I commend them all highly for their attitudes and helping to make our stay a very enjoyable experience. I was actually quite surprised at how under-utilized the drive-in campground was at Hozomeen. We were there on a beautiful weekend of great weather and on Saturday night there were only 4 campsites being occupied. I was also pleasantly surprised at how few motorized boats were on the northern part of the lake. This made for a very relaxing 2 days of kayaking for me and my wife.
G g b	We camped at Newhalem with its impressive visitor center, and Colonial Creek. We want to compliment and thank the local rangers for their prompt response and caring attitude when one of our hiking party became temporarily separated from our group. Unfortunately I did not get the ranger's name. The young lady, [name excluded]? was very helpful. No negative! Beautiful scenery.
G N	The day hikes were very enjoyable with the Rangers. I also enjoyed the two nighttime slide shows and the antler class.
G O r	The rangers at Marblemount and on the lakes have always been very friendly and helpful with an interest to meet our needs. The brochures and other information are of the highest quality regarding information, print, and paper. A user fee of some amount seems appropriate to me.
G	The Ranger on duty that first day was very pleasant and informative. More people like him should be employed by the Park Service.
h C U m	Just like to say how much I have enjoyed staying at Hozomeen Campground. The camp facilities are first rate and very clean. British Columbia once had a similar first-rate provincial park system but years of cutbacks, and "economics" associated with user-pay concepts have seriously eroded park maintenance, ranger patrol, and public education, not to mention park facility maintenance. Humbly, I submit that you should not let this happen to your parks system. Parks are to be cherished, and they should not have to "show a profit" or even "break even." They are not corporations, rather part of a national identity. Your decision makers should refer to President T. Roosevelt if they need some inspiration on what national recreational areas and parks mean to a national identity. From this Canadian, I say keep up the good work. We haven't up here, north of the 49 th Parallel.

h G m A C r I appreciate how well the facilities are maintained at Hozomeen Campground. The maintenance crew makes sure the bathrooms are clean and well supplied. (The new bathrooms are nice!) The fire pits and campsites are clean because the guys clean them daily. We like the nice boat launch and the docks to tie your boat up at. We always bring our boat and go fishing so we also appreciate how the Seattle City Light crew cleans up the dead-heads on the lake. This makes the lake much safer for all boaters. We have come to Ross Lake for many years and have noticed a decline due to the lack of a full-time ranger on site 24/7. We have experienced an increase of incidences like I noted on question 8d [group at campground being loud at night and disturbing others]. We have no one to go to when these situations escalate. We feel a Ranger's presence is a deterrent to potential problems. Also with no Ranger on site we have left our border unprotected. In this time of emphasis on "Homeland Security" this seems to be a bit vulnerable. There is a major hydroelectric dam at the other end of this lake, you could easily access this by boat. If you stop and think about it, there are many bad scenarios that could be played out. Fifteen years ago there was a Ranger and a border patrol that met you when you came in. Now in this heightened state of security you have no one? We've seen visibly less and less support over the years. What if there were a major accident or fire? This campground is remote. No phones are available. The kids that come up here from Canada to party know that no one will check on them. They can do what they want. A full-time Ranger is needed! Also you could implement the campground host program to assist him. We would sign up to do it. Also the Ranger programs at night and for the kids are a nice improvement. Concerning question 15: I suggest that all motorized boats pay a fee regardless of length. I strongly support this idea.

h o g This backpacking trip to Hozomeen Lake was one of the most enjoyable experiences I have had in 30+ years of backpacking. The trails were easy to hike, very few campers, the outdoor privy was a major plus, fire rings with metal grates were fantastic for cooking with pack stove, enjoyed seeing and hearing the loons on Lake Hozomeen, enjoyed the panoramic views and even caught some fish, which made our day. The most enjoyable aspect of this 3-day trip was sharing it with my 31-year-old daughter who weeks before became engaged with a 2006 summer wedding plan on one of the San Juan Islands. This was my 2nd backpacking trip to the North Cascades – last year at Mount Baker area, and both have been fantastic experiences. I'm from Colorado and we also have beautiful country and many wilderness areas I have packed into over the past 30 years. My congratulations to the WDOF for all their efforts in making the state rec. areas so accessible and enjoyable.

h r Too many Canadians are camping at Hozomeen when they have their own campground. The only reason that they are there is the free camping... I feel that if you are not a citizen of the US there should be a fee for all non citizens.

H F The 3 of us had never been to Ross Lake before. This made it difficult for us to know our exact destinations, so the Park Service asked us for our itinerary we picked Green Point, Big Beaver, Cat Island, and Little Beaver. These destinations seemed reasonable and spread out, so we could see the whole lake. We mostly stuck to that plan except that we didn't stay on Cat Island because one of our party wasn't comfortable on an island. Even he didn't know that he would have that reaction until he saw how small Cat Island was and as soon as we landed he began to

sense an increasing anxiety. So we extended our stay at Little Beaver, our favorite camp of the trip at #5, I believe, on a rocky area right on the shore with a beautiful panorama of the lake to the south. We stayed there for three days, a fairly obvious campsite I would think. When we got back to Big Beaver, the Ranger came by and scolded us for not adhering to the schedule. We came up here in part to get away from schedules and this ranger made us all feel like we were punching HIS time card, WORKING on HIS lake. He said if we were going to change our itinerary we needed to flag him down and my buddy who signed us in said that that was mentioned to him. Well, we were off hiking Hozomeen and Desolation, etc., so we never saw the ranger after our first day until the last day. It kind of ruined the trip for us. There needs to be more room for someone who has never been to Ross Lake to explore and find his OWN itinerary in the woods, without having to worry about notifying the boss! We always stayed in official campsites because we (all 3 of us) are veterans of the "Bear Wars" and appreciate the lockers. We took out more trash than we, ourselves generated and tried to leave only our footprints behind. Next time we'll bring a flare gun and if we decide to explore an area that looks interesting that we didn't see in our "crystal ball" and so hadn't told the ranger about, we will forgo all the activities that we want to be doing and sit on the shore and scan the lake with binoculars in search of the Ranger, so that when we do see him speeding by, we will have some way of attracting his attention.

H m

Since you asked – First, we are environmentalists without the pendulum swing and believe that common sense is more valuable than plus or minus extremes. The more liberal and out of focus the view becomes, the more normal it appears to those who make the decisions. This is why the abnormal becomes acceptable and appears as normal. Then decisions are made on what appears normal. Example: "Balance" – One day we witnessed a man at Diablo Lake area being demoralized by a park employee for picking up trash and wood and using it for his campfire, claiming he was destroying bug habitat. All the while we destroy thousands of human embryos. He left out the part about the forest service selling firewood provided by private contractors. Cleaning up all downed debris helps eliminate fire danger. With all due respect this upset us the most because of the way he was treated and nor was he told he could purchase firewood. The park person also gave us erroneous info about fishing above the dam area.

H

Me and my friends, we're visiting the Ross Lake for year. The last trip to the lake was not very pleasant for us. There is a new Park Ranger named [name listed] who is very unpolite, not only for adults but also for the kids. It was Friday, September 1, 2005, when me, my husband, two children, and our friend arrived at Ross Lake. We were sitting at the picnic table when the Park Ranger named [name listed] came to us and with all his manners he welcomed us on the Ross Lake. We had a chat for a while, he wished us pleasure with camping, and he left. After two hours, the other park ranger came. The first words from him were, "This car needs to be moved" – not good afternoon, no hi, not even "hello." When we asked him why, he raised his voice and said: "If you wanna argue with me, you're gonna leave right now." As an assistant and park inspector in Canada, I think this person has not interpersonal skills at all. As we know "customers" or "visitors" come first, does not matter what? He was very unpolite for all the days we stayed at Ross Lake. I'm very positive that you'll get more complaints about this person. He treated us

- adults like children. It sounds like he is the owner of the camp and he can do it, whatever he wants to. Myself, as a person working in the same field, it is not acceptable to me to deal with the public the way he did. I think this person is totally immature and not ready to perform that kind of job. The other Park Ranger [name listed] – I think he deserves all the pluses we can name! Me and my party, we wrote a special letter to the management of Ross Lake and we hope this matter will be discussed with [Ranger's name listed]. Other than that, everything went well. If you wish, please feel free to contact me at: [name and phone listed]
- i E e t Surprise blueberries on Big Beaver trail near 39 mile. 4 loons on the cove at Spencer Camp. Deer in camp two mornings – watched her eat tree roots where we had peed. 2 eagle sightings crossing Ross Lake below Spencer Camp and Pumpkin Mtn. Nesting loon pair and chick on Hozomeen Lake. Osprey passed thru Spencer's Cove. Saw a satellite Sunday night – clear sky. 2 of 4 loons calling as they swam around Spencer Island Sunday night. 2 deer came back to camp Sunday night... seemed to be begging while we ate (just like our 12-yr-old lab). All these comments are impossible to note on heavily used lakes. Keep this one special by limiting access via permit system in place. Full use of lake and trails requires a motorboat – rentals at RLR make this possible to enjoy a 4 day long weekend.
- i f r m I have been coming to Ross Lake for over 40 years and two things have made an impression on me. 1. The dying of the trees (either spray) or cut down the dead trees. 2. The charge of the boat ride is absolutely crazy. I will not make another reservation for early summer and I might cancel my September reservation, for fishing is not good anymore. (I would cut back on the size of fish you can keep for a couple of years, until you thin out the population, then raise back up to the size limit). The cost to come up fishing (mainly the tug, \$10 each way is crazy) is going up, so I feel we will probably go other places.
- j m These surveys mean very little, as you can make the statistics read any way you want them to, for any purpose desired. Whatever you do, don't build any roads from the US side. If you do, it will be ruined for certain.
- j r f y L z My group has been spending at least 1 long weekend in the late summer/fall since the early 80's; I personally have done it since 1987. We always stay at the resort and some years we may also spend a long weekend or 2 camping. We like to go up there just to drink beer/booze, smoke, bark at the moon, burp loudly, wear funny hats; all without being hassled by the wife, kids and "The Man" – This is hard to frame an answer to in your question #5. If the REI guys find this stuff offensive – tuff, "Yuppie scum, go back to Yosemite" is a saying I have heard up there many times by many Ross Lakers both resort & campers. Ref Question #8. Fishing is the excuse we use to go, and a good, valid one it is, but the years without good fishing are still very good. Occupationally we are for the most part Boeing Engineers. The matrix on page 3 is somewhat confusing, if I filled it out wrong please change it, this is what we did: Day 1: From resort, motor boat to Devils, & Lightning stopping at different places along the way, On the way back we stopped at Big Beaver and hiked to Pierce Falls. Some in party troll the lake for fish. Day 2: From resort, motor boat to Big Beaver, Hike to various ponds & lakes up trail approx 4 miles (1 direction) fish. Most years we float back down Big Beaver to lake, we did not this year due to cloudy skies. Day 3: From resort, motor boat up Ruby, Stop and tell lies about the fish we

- caught the day before. Questions 15 & 16 does not state where the \$\$ will be used. If it will be used for upkeep of Ross Lake, I would be in favor of many of them, if it will be used for grants to UW students working on their PhD's thinking up confusing surveys – much less so. If money will be used by the Parks Dept. to put up little signs stating "The Rainbow trout is a happy fish who lived in harmony with Mr. Salmon, until Puget Sound Energy put a dam in his stream," forget it. Your data may show different but in my estimation, human pressure was much heavier in the early-mid-90's, when a lot of software types were moving into the Seattle area, I don't see them as much anymore. Ross Lake is hard to get into, as long as there isn't a road going in, it will always be that way. [Name listed] at the resort keeps a real good track of who is where and what they are doing. He knows what people like and dislike, that is how he makes his living and feeds his family. I would toss whatever data your survey generates if it doesn't agree with what he sees. For my 2 cents, Ross Lake is a state of mind and if you think hard about it or try to control it, you will screw it up. The law of unattended consequences prevails every time.
- j This "survey" seems to have an agenda.
- j Questions 20 and 21 are not appropriate. Basically none of your business unless your privacy commitments are not valid.
- j [regarding question 19 – highest education level] I'm American. For future reference you should note that in Canada college = vocational, so according to this scale, with Canadians you haven't offered any place to say they have an undergraduate education. In Canada, college is not the same as undergraduate university.
- J D We had a wonderful trip to Ross Lake. This questionnaire seems to discount the role of Ross Lake Lodge to getting kayakers/canoers up to the lake as well as the Diablo Lake portion of the experience. Those relationships need to be acknowledged and enhanced. We were disappointed in the site planning at some of the campgrounds. Buster Brown on Diablo was particularly poor. If you are upgrading sites, take advantage of the views and consider prevailing winds, topography, and vegetation. At Buster Brown a new outhouse was being installed. Instead of considering the best location for access to all campsites, the outhouse took over what must have been a nice campsite close to the water. A new campsite up the hill, awkward to get to with a less than stellar view to the outhouse for the sake of expediency for a flat piece of land close to the water. This was poor site planning and significantly detracted from our experience.
- J o m g We have stayed at Ross Lake Resort every September for the last 7 years and love the whole experience. The quiet, the natural beauty, the accommodations at the resort, and the people who run it. We appreciate the attempt you are making to restore native vegetation (although the watering cans are gone!) and the way the trails and camps are nicely maintained. Good show! Thank you for your efforts, [name signed]
- J Q Absolutely LOVED Ross Lake Resort! Don't push them out or raise fees to them that are passed to us. We come for peace and tranquil surroundings – not fishing.
- J r F 1. I'm usually opposed to concession or resort types of operations in NP's or NRA's but I liked Ross Lake Resort (boat rental anyway). I would not

- want to see more development though. 2. \$20 is a lot of money for some people! Forget it! There has to be a better way. 3. There is something about the idea of a lottery for permits that makes me want to break things, to weep and vomit – all at the same time. 4. A combination of first come and advance reservations would probably be the best.
- J r We LOVE Ross Lake Resort, and have come for 3 years in Sept. Apparently we miss the high season and have never experienced crowding in the park. Services provided by the resort (water taxi, boat and fishing equipment rental, even fishing licenses) are vital to our enjoyment. Overall, we are very impressed by the condition and maintenance of park facilities. Fees will limit use by people who have just as much right to National Parks as those who can pay. Why not implement a donation policy?
- J r I have taken my dad to Ross Lake every year for over 10 years. He and I enjoy the four good days together, and we really [verb missing; names listed] at the resort. Regardless of the weather all of our trips have been pleasant. Please don't turn this into a fee issue, it would leave a bad taste in my mouth, as well as our state really overtaxing us.
- J ROSS LAKE RESORT ROCKS!
- k g G We had an outstanding canoe trip. Excellent camping. The rangers were very helpful.
- k g Kayaking is the ideal way to experience both the grandeur and small stream inlet features of the lake. Loved Sourdough too.
- K I find the name "Ross Lake Resort" misleading. When we took the water taxi to the "Resort" we were told upon arrival that there is no restaurant. Even a cup of tea or coffee could not be made. That was a disappointment. A resort gives an impression of offering amenities to guests and there was very little. I suggest making that more clear. The downside of having a small restaurant or resort style catering is of course the increase of people, I understand that too.
- L Great people working in the Ross Lake Resort. They helped a person who got hurt on hiking trail. And they really kind to all visitors.
- m e S C My experience so far of the management of the area has been very positive. I like free backcountry passes and also have previously purchased National Parks Pass and Northwest Forest Pass to use anywhere they are required. I am in favor of limited use, but not by fees as a deterrent. The rugged demands of camping, boating, and backcountry travel should be enough to limit use. For instance, do not build roads to the lake shore. On the flipside, the campgrounds are well maintained and a welcome bit of hospitality in the wilderness as well as a good management tool. When the camps fill up, that's it for the night. Humans and their impact have rarely detracted from my experience in the wilderness. The wild is big, if one wants solitude there are places and times – moments when one can find it, even if they share the lake with speedboats, canoes, kayaks, osprey, or boy scouts.
- m e As a commute route between Winthrop and Sequim, it seems like a very under utilized park thanks to almost no services, frequent road closures (esp. all winter) for such a beautiful park of the Cascades. The Park Service appears to be doing an excellent job of keeping people out of the park.

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m f g j	I feel that Ross Lake is a treasure. I have been coming up 11 years now. My family, grandfather, father, uncle, for about 35 years. I think and feel that good things should be left alone. I question what this survey is about and why you need to evaluate it? However I think nature needs preserved and hope this survey isn't about making money off a new resort, park or road access. On a more positive note, I feel healthier after 4 days in this resort breathing the fresh air, spending time with family and most important catching a wild trout. Negative: caught a fish last year and it was full of worms. I have never seen this before. I also know that the fishing has slowed down. My first year was the first season of the no barbed hook law, which I strongly support. My family tells me when they first came up here long time ago they kept anything.
m r	Even though I encountered a large number of hiking groups, I still do not feel we should enact permit rationing, especially NOT fee-based permits. Government-owned lands belong to ALL AMERICANS because we pay taxes. There is still solitude out there if you're willing to walk more than a few feet from your car. This is a beautiful area with more than enough room for everyone (at least currently).
m	This is probably a "skewed review" – we come to the resort and crash – so probably aren't the best people to fill out the survey. [initialed]
m	It is a fantastic area that requires responsible management, NOT Liberal over-management. Thank you! [initialed]
m	We were only passing through. Parked the car on Highway 20 and hiked down the trail to the dam and back. No other activity in the park.
m	I support equal access to the NRA, regardless of demographics. I don't support the bureaucracy that comes with a permit system. I would like the park service to use their resources intelligently, for the good of all.
M g	Ross Lake Resort people are a little unfriendly. However this may be a good thing to keep some of the people away. It is definitely the best place on earth, though.
n g a	Limit use of recreational generators to certain camping areas. We spent a total of 22 days camping in North and South Cascades. It was an incredible experience. Would definitely go again.
n g a	Limit use of recreational generators to certain camping areas. We spent a total of 22 days camping in North and South Cascades. It was an incredible experience. Would definitely go again.
n g	Overall, requires some enforcement of the "lights-out"/quiet time period. People partying until early into the morning. Otherwise, enjoyable.
n q	Recognize that peace and quiet and the natural sounds of nature are a rapidly dwindling resource and BAN all electronic amplified music in any and all camping areas! If people want to make noise and behave badly, they can stay home. ALSO BAN for LIFE anyone caught littering! Peace!
N r f	I really enjoy the Canadian and US park ranger shows that are put on for children. As I am in a low income situation the free camping is excellent. More campsites could be opened up along the southern trail on the lakeshore, making more lakeside sites. I also think that if a person holds a Canadian or American fishing license they should be able to fish both sides of the border on this lake.

- o e R We have been coming to Ross Lake for 21 years, sometimes camping, sometimes staying at the Resort. We usually stay 4 to 5 nights and do one long point to point run (Little Beaver to Resort of Hozomeen to Ruby Arm), plus shorter hikes/runs (Desolation Peak, Big Beaver, Green Point, Sourdough Mountain, etc.). We love the area and do not consider it too crowded. We are always amazed at how few people we see on the trails. The only negative human impact we have observed is the unsightliness of large water level drops due to electricity drawdowns. We would like to see better trail maintenance on the Little Beaver/Big Beaver trails – the main problem is brush in mid to late summer; and, this year only, windfalls on the East Bank Trail.
- o e We saw only one other hiker all day, I was actually a bit concerned that should something have happened, it could have been a while before we were discovered. I should clarify – we only saw one other hiker on the trail between Ross Lake Dam and the Environmental Learning Center at Diablo Dam.
- o i The trails we hiked seemed generally well maintained but some areas needed to be brushed – Lightning Creek Trail. Loved watching and listening to the family of loons on Lake Hozomeen. We were hoping to see more wildlife but were not too lucky.
- o m We only stopped to hike in to Ross Lake from Ross Lake overlook on Hwy 20. We only used lookouts and 2 other short hiking trails. We camped at Colonial Creek Campground. You need a short questionnaire for folks like me.
- o O r For a hike that is in numerous books and magazines, the trail markings are primitive and lacking along the Big Beaver trail. Other than that, beautiful scenery and very well maintained trails – A++. PS I am in the wood every weekend and NEVER let my Nat. Rec. Pass Expire [#listed]. Preservation of our Nat. forests is essential for the youth of tomorrow – making a payment for a yearly pass should be mandatory – or the parking fee be raised to \$10.00!! I have noticed that since the parks have a \$5.00 fee they are less traveled – and there seems to be less litter (just an observation) [smiley face] “No Bad Days”
- o O I and another hiker did a day hike up Mt. Hozomeen (north peak) via the forest on the US side of the border swath to the north ridge at 6,300 feet and then followed the north ridge to the summit (it took us 6.5 hours up). It was a beautiful day and we had an excellent hike. We started our hike by doing the first half-mile of the Obelisk Trail. It's a nicely built trail and I enjoyed reading the brochure about the trail that was in the box at the trail's beginning.
- o w r I had an enjoyable backpack trip with my 4 grown children. We found people we met to be friendly and helpful, and the trails/campsites clean and well maintained for the most part. There was some difficulty following the trail (Little Beaver Trail) in some areas due to heavy vegetation and possibly flooding damage, but this was not a serious problem and added some sense of adventure to the hike. The only things that detracted from our experience were: 1. Limited view of surrounding countryside while on inland trails. We had hoped to hike Whitcom Pass but were stopped by rain. 2. We did not expect the heavy vegetation along Little Beaver Trail so were not prepared with gators/rain pants. We all got soaked waist down packing through this section in rainy conditions (wet hiking boots don't dry quickly). 3. The water taxi

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- service from Little Beaver seemed a bit pricey (\$70), but it was reliable and a welcome site at the end of our stay.
- o w Stayed at Newhalem campground. Hiked Pyramid Lake Trail and over Ross Dam to the Ross Lake Resort. Weather was cool and windy, some rain, so we did not go out on the lake at all.
- o I didn't have time to take a longer hike, nor stay, but I would like to if I do have a chance next time.
- o The extent of our trip to Ross Lake NRA was a hike to the dam from the Cascades Park road. I didn't know how to express that on page 3.
- O c The hike down to the dam was longer than expected. The info we received indicates a shorter hike. We had 2 kids and no water on a hot day. I would have taken water if I knew it was 2x the distance indicated.
- O N o I hike with my family from the highway to see Ross Dam. Nice hike, interesting dam! Suggestions: 1. put number of miles to dam at beginning of hike. 2. Have some historical, technical, and/or geographic displays/explanations on the dam for visitors. 3. Consider dam tours for visitors.
- O o Trails should be clearly marked with signs at every intersection. Trail markings should exactly match NPS/NFS maps. NPS/NFS maps should exactly match trail markings. Each trail should be clearly described for length, difficulty, and elevation change on NPS/NFS maps. Trail maps should be available at visitor centers and ranger stations. I had a very nice time while in the area! Your map did not include Ross Dam, where I began my hike.
- O Poor road signs
- O I suggest creating maps (sketches) of each campground, numbering the campsites, and indicating the number of people allowed. Post a laminated copy at each site.
- P g It would be great if one could access information about Ross Lake online (the websites I found weren't great) – I couldn't find much info, a lot regarding the history, but not anything to do with camping info. We heard about Ross Lake through family and were not sure what to expect. However, we loved it. Really enjoyed the activities there were for children (Junior Ranger).
- P H m Need better campsite information. Not able to do good research on where to stay and about sites; many rangers talked to had not been out and could not offer details. April at Marble Mount was very good. This trip we gathered knowledge for future trips. Keep impact low but still offer the varied services in place.
- P O I would have liked more information about trails in the area before we started our hike (better maps in the "Challenger" newspaper/newsletter). Later we found map at the North Cascades Visitor Center at Newhalem Creek and purchased it.
- P T It was a challenge to take a kayak into Ross Lake. 3 in our party of 4 rented kayaks at the resort and one of the gals brought her own. When we caught the water taxi at Diablo Lake, we found out that they didn't take kayaks over, so the two guys drove around and walked it down the 1-mile trail to the resort. I guess we would have liked to know more about

- the logistics of bringing in your own boat. Next time we'll do it differently.
- q g k I work with Outward Bound, which has many trips at Ross Lake per summer. We practice Leave No Trace techniques, including pouring dirty dishwater through a screen and packing out the food waste. It can be difficult teaching this to students when there is litter and obvious human impact to the area. Otherwise my experience with Ross Lake has always been very positive, relaxed, and I think it's a great place to learn basic canoeing techniques with Outward Bound philosophy.
- q O The trail was maintained in a natural state, however a plastic bottle was left in a stump, near carving [frown drawn]. Perhaps a "how to care for your scenic area" would be helpful?
- Q c f L r S I have made annual trips to Ross Lake Resort since 1964, first with my father and a fishing group, the last 12 years with my children and grandchildren. This is a special place for us. My father's ashes are spread in Devil's Creek, where mine will be as well. The fishing isn't what it used to be, but that is no longer our primary motivation for coming here. We come for the family time together, the serenity and refuge from the outside world, the ambiance of the lake and the hospitality of [names listed] and Ross Lake Resort. We would support a modest increase in capacity of the resort and Seattle City Light ferry service (with no further fare increases – \$10 each, each way is overkill!) We feel the camping capacity is above where it's sustainable and would object to further expansion. And do what you can to make sure the road from Hope, B.C. to the North Campground is never improved! [name printed] 8/23/05
- Q C The main positive aspects are quietness and we are very happy the use of jet skis and such is not allowed. Also appreciate the well-kept campsites.
- Q S E J C B I have been coming here every year for the last 5 years and my husband for the last 15+ years. It is a great place. We go here every year just to get AWAY. Ross Lake isn't easy to get to so it keeps a lot of people away. Yaaa for us. If you went to a reservation/permit system and some of those people who didn't show up or call and cancel and those "favorite" campgrounds remained held with no one on them... what a waste. Good job on the new bear boxes and docks. It's a great improvement. Next fix-er-up would be the outhouses. [smiley face] All in all, we don't run into a lot of people. The lodge folks are great. We have such a good time doing nothing and relaxing. It is a great joy for us every year. We try to stay 7-10 days each year. Thank you Ross Lake. Keep up the great work! We will support you in any way possible.
- r C u g We LOVE Ross Lake! I think you could easily charge for camping. The facilities make it worth it. Please do everything you can to protect this park and all of Washington's parks! We know tons of people who love to camp/travel in Washington State. If possible, keep power boats OFF these wilderness lakes, and restrict fishing. Save something for those of us who want to experience a natural, quiet environment.
- r C Love the fact that camping is free. Love the fact that you can always find a spot. Feel safe to take the kids camping by myself.
- r e I fully support permit fees for backcountry access in the NRA or NP, as suggested in question 16. However, many of these ideas seem to hint at overuse of the area. While that may occasionally be true on Ross Lake or along Route 20, while backpacking for 3 days in the area we saw only

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- 4 other people and never shared a campsite inland with anyone else. And that was on Labor Day weekend, ostensibly one of the busiest weekends of the year. So, the NPS should think seriously about specific bottlenecks and not assume blanket conclusions about all locations.
- r E I liked the fact that backcountry permits were free.
- r E Strongly opposed to charges for backcountry permits.
- r E My family and friends have been coming to Ross Lake for over 30 years. There have been many more people discovering the lake and trails and resort, but as long as they respect and preserve the land we are happy to share. I'm not an advocate for limiting park use – I'd rather put resources towards educating park users on how to minimize impacts. I'm also not an advocate of user fees for public land use, unless such services as septic systems for RV dumps are provided. Fees make camping and backpacking economically difficult or inaccessible to those with low incomes, which defeats the purpose of making the lands public and available for everyone to use.
- r F [after question 15 on user fees:] –Depends on what funds will be used for. Support use of fees for park staff, conservation actions, park facility maintenance. [after question 16 on management policies:] –We would prefer limited number of permits. At least 50% available on first come, first served basis with up to 50% available on a reservation system, with a modest fee for reservations.
- r g I think Ross Lake is a great area to camp. I would not mind supporting the park through additional use fees. I think it makes more sense to charge more money rather than limit the use of the park to people. Furthermore I think that it is a well-maintained park and that it makes a great place to go and camp and to get away from it all. Thanks for the survey!!
- r g Keep the park open and free. This is great. Start charging fees is the wrong thing to do. I visited over the July 4th weekend and people were very well behaved and respectful of other campers (at Ross Lake Camp. – Hozomeen USA). Again I pay taxes, don't charge me to use public land.
- r h Q C I have been going to Ross Lake NRA for approximately 20 years. This was the first time I went in from Highway 20. Usually I go up through Canada and we camp at Hozomeen. I strongly oppose charging a fee for camping or boating in the Ross Lake NRA because I don't feel the area is used that much after the opening weekend of fishing season. Even on opening fishing weekend, when I have been at Hozomeen, it is the same people camped there every year with maybe a few people who we don't recognize. Charging a fee would probably decrease the use of the area significantly by the "Boy Scouts" that use the area for weeks at a time to go camping and canoeing. A few of the reasons we go to Ross Lake NRA are that it is secluded, we know most of the people around us, the fishing is normally decent, and it's free. I don't know anybody willing to drive into Hozomeen on a 30-mile gravel road just so they can pay a fee to camp or launch a boat. I have taken quite a few day trips to the area for fishing, and I just don't feel it would be worth the fee, especially with the price of gas right now, and the cost of fishing licenses, which seems to go up every year. I hope this is legible enough for you, if you have any questions, feel free to call me at home [number listed]. Sorry it took so

- long to complete this, I broke my arm pretty bad, so I have been recovering for the last month. Go Cougs!
- r H To go into the hills and mountains which God gave for our enjoyment, should be free of charge and above all, free from the usual “watchers” (who do so well in our day-to-day lives by reminding us at all times of government regulations). To search our camp to see if worms are on our hooks is LOW, and a waste of money. Is it all really for our good? What is a vacation anyway?
- r H Suggest you not charge as this would increase the number of park warden visits for checking permits, rule enforcement, etc. Money is not issue, but enforcement would be. Excellent park and experience, thank you for respecting the comments on park usage.
- r i j Tax the rich. Eliminate user fees. Other than these occasional family trips to Ross Lake Resort, I come up here for birding. If I'd been filling this out for one of my birding trips, my answers would have been different. That is, I'd be looking for solitude and quiet. Comment about the survey – the map diary is absurd – most people would find it frustratingly hard. Not all trips can be categorized using that system. It's right up there with an IRS form.
- r K m I can't understand how a private party can acquire the rights to control and collect fees with regard to recreational use of a natural resource which lies within the North Cascades National Park service complex. We, the consumer, are subject to the inflationary whims of Ross Lake Resort as it deems fit to hike prices attributed to day (and night) use of the lake as time goes on, when all of the fees – including boat rentals – should be transferred to the Park Service to fund operations. They seem to embody the position of middleman, an unnecessary obstacle between the Park Service and the public. Perhaps their position is that of caretaker/manager, in which case some sort of small maintenance contract would be the case. In any event, no individual, or private corporation, should have any vested interest in federal lands supported in part or in whole by taxpayer monies. But of course, conflicts of interest exist everywhere.
- r m d u The single biggest negative was the hordes of people who arrived on the weekend fishing season started. We left on the day the season started. The rest of the time it was great. Reduce the number of motorized boats. On a still day you could hear each boat for 20+ minutes. It destroys the tranquility of the place. Your survey needs work. Have a space for comments on each question. For example on question #16, there is no place to express my desires concerning management policies. I would like to see the Park Service receive adequate funding from Congress so that costs for using Parks are reduced to a nominal level. If this is not possible, then base fees on cost to provide services. If you are providing services like RV hookups, showers, facilities for motorboats, charge people for those services. If you are a tent camper needing only a flat surface and a toilet, the fees should be nominal. Provide the users segregated facilities. A camper should not have to set up a tent next to a huge RV that has a generator making noise most of the time. Facilities for non-motorized boats are much less expensive to create and maintain than for boats needing launching ramps and docks. Give people a choice and charge accordingly. Those users that have a low impact on the landscape and do not create noise that destroys the solitude and tranquility should be encouraged. Charge them less and establish higher

	quotas for low impact users.
r m N s	I would support a strong educational component to NPS administration to provide info and regulations to Boy Scouts of America literature. This would help ensure a more positive experience for ALL on Ross Lake at little or no extra cost to anyone (eg, taxpayers). Also, under no circumstances should user fees be started at NOCA/RLNRA for back-country users. That would be WRONG by any perspective and an insult to the American people as well as competent NPS administration ability to manage responsibly without charging the public. There are many other means. This park has a stellar reputation in many ways – let's keep it that way. Don't succumb to other NP user fee rhetoric. Thank you.
r m	The most negative aspect of a visit to any National Park today is the idea that someday user fees will increasingly supplant Congressional funding for our parks. This will turn our parks into a well-to-do person's commodity and will threaten future funding. The NPS should lobby Congress to fully fund all our parks. That said, I would gladly pay moderately increased fees if the funds will help to preserve our wild places and to maintain public access. Keep up the good work! The family and I love the North Cascades!
r m	We don't need more user fee's. A nominal (not \$20.00) fee for advance backcountry campsite reservations is acceptable so a group can plan a trip with a preset itinerary. NPS needs to lobby Congress harder for adequate funding for OUR national treasure – the parks, especially the backcountry.
r m	I support the vision of FDR to have parks for "All" to enjoy (no privatization fees/reservations that would put some at a disadvantage – those with limited income), NOT: "Privatization" as the current administration has suggested. Keep the rangers who are 'passionate' about the wilderness and their jobs versus having a job to make \$\$.
r m	It was very difficult to answer the final questions #15 and #16. While I understand the need for limitations and the expense associated with operating a park, I am continually disheartened by the increased regulation and fees associated with the enjoyment of the outdoors... from parking passes, launching, hiking permits, reservations, etc. – sometimes from multiple agencies. When certain regions get too regulated and expensive, I discontinue going to those areas. I feel strongly that our tax monies should have a much higher percentage go toward our outdoor resources. It is sad to see that the outdoors is becoming a sanctuary for the rich and internet connected only. This seems to be what happens when a regulatory system begins to rely on attrition rates in order to protect areas from overuse. I don't have the answer, but I am one of the ones that doesn't get to enjoy the outdoors when it gets too complex and expensive.
r X g	Instead of \$10 entrance fee for park, \$10 permit fee would be fine for backcountry use. \$20 would be too much. Experience was great (lots of mosquitoes). But everything we went for (quiet, peacefulness, wildlife, relaxation) was achieved to the fullest in this pristine wilderness. We brought our dogs which I saw many other people hiking with dogs also. DON'T EVER prohibit dogs in the area. This would detract from us coming back.
r y z	Minimal fees. No use restrictions. The dams are fine.

- r y I love to visit American side of the park because it is free of charge and open for everybody to enjoy. I am not happy that Canadian site has to be paid for. People should be able to enjoy the true wilderness without paying for it. I believe that most of the visitors to Ross Lake Park are responsible parties who do care about plants and animals to which the park is home. Please keep Ross Lake National Park open to people free of charge.
- r z I strongly oppose use fees for our National Park system. Primarily because of what the Federal government is doing with the tax money we pay. If they were not waging an un-winnable war or spending billions of \$\$ on supporting so many senseless foreign policy issues we wouldn't need to pay twice to use our own natural resources, i.e. parks, etc.
- r I love it just the way it is, but charge a nominal fee to support the maintenance of the area.
- r No fees – keep parks open for all people – not just the rich!
- r I think anyone who hikes in should not have to pay a fee. I think people with autos, boats, or planes should be charged a small amount.
- r Ferry service on Diablo Lake to Ross Lake is getting too expensive!
- r Finding free camping was a pleasant surprise. Too bad we had already paid for our stay at Ross Lake (Canadian side).
- r I wish the fees came from somewhere else (i.e. the taxes we pay!!) and people who wanted to get out on our PUBLIC lands could do so at no cost – but our government is a joke and the Park Service is practically broke. If a fee system would help keep the Park Service in restoration efforts and keeping Ross relatively pristine then I would support it. I would really like to know where the money is going though. I pay for NW Forest Passes – even though I don't believe in them – and all I see is stuff catering to road tourists. If the fees go to bigger parking lots then I am against them.
- S m i x Other than road trips, my husband and I have been camping at Hozomeen on Ross Lake for nearly 10 years. We spend almost every weekend here, from opening day on. The first couple of years we were at the BC Provincial Park from Easter through to the opening of Hozomeen in mid-May. We do not avail ourselves of Provincial Parks, etc due to the crowds and noise. We much prefer to be far away from the general populace – which is why we are against ANY development on either side of the border. Development of the area would be detrimental to the wildlife, to say nothing of the enjoyment of those who come here to partake of the natural beauty and peacefulness. We would no longer see deer, river otters, beaver, bears, or cougars if this area was allowed to be developed. I have seen the results of wilderness development before and the cost to the natural environment is too high – just look at Cultus Lake or Chilliwack Lake (in B.C.) to see what we DO NOT want Ross Lake to be like. Development not only pushes the wildlife further back, it also forces campers like us to go even farther into the bush to get away from the crowds. If allowed to proceed unchecked eventually there will be nowhere left for us or the animals to go. If developed we would cease coming here so... Please leave Ross Lake AS IS!! [Entire response to question 8, re: detracting behavior:] Party of 4 (2 male adults, 2 male youth) arrived at Hozomeen Campground with boat in tow. Up for the day only, the driver proceeded to park his truck and trailer in a campsite,

	thus taking up one of the prime sites just so he could park in the shade. This is not the first time we have see this and it is not just the day users. There needs to be designated boat trailer parking with signage. Most people use one of two areas, although they are not marked. Some people are just ignorant, with no thought for others, but I think designated trailer parking with clear signage may help – especially if the Rangers have the authority to issue tickets to violators.
S Q u G c	Really liked that there is no motorized road to Ross. It would distract if people brought more power boats and jet skis. It would become too crowded. Remoteness is an attraction. Loved the peacefulness of the lake. Would have liked less power boats. Rangers were pleasant and helpful at campsites. Gave us a sense of security. We had 2 small children. Campsites were great, especially Devil's Junction. Enjoyed meeting other paddlers. The portage help from Ross Lake Resort was great and the drivers friendly. Really pleased by free campsites but OK with \$5/night fee to help with maintaining it.
S u r	The limited access to the camp site I used (on Cougar Island) provided for an exceptional experience as I saw very few other campers/hikers. I also appreciated the lack of motorized boats on the lake. Being this was my first time visiting I don't know if this was the norm. In regards to question 16 on this survey, my answers really depend on knowledge about human impact on the lake (which I don't have) – i.e. if there's been a significant amount of erosion due to human use of the land I would strongly support a fee based permit and limits on the number of people using the lake.
S u	Limited access is OK – should keep it secluded. Should work with Canada/US to limit boat h.p. like from Ross Lake Resort. When on previous canoe trip, found big boats annoying – 9.9 h.p. are OK – why be in a hurry at Ross Lake?
T P	I would like to see Ross Lake become more accessible. I wasn't sure if any service road existed from Highway 20 or not. It would be nice to know if one wanted to stay at Ross Lake Resort they could have a service vehicle carry their supplies down instead of people backpacking it down, which contributes to littering.
T	Would strongly prefer public day-use (walking) access to Ross Lake near the dam. This could be done without affecting the wilderness aspect of the areas farther North on the lake.
T	Accessibility to the lake was poor. Should have better parking on main road, and should have concession of some sort with food, overlooking the lake.
u C	Strongly encourage restricted motor boats – increase of non-motorized boat camping areas! Offer canoe/kayak only sites!
u F g	An awesome place. It needs more patrols to stop non-permitted campers. Motor boats should be limited to north and south ends of lake. A non-motorized zone in the middle (other than patrols) would be nice for hand-powered craft.
u F s o	Limiting the size of boats (power) and forbidding personal watercraft is GOOD. Limiting permits is good but I would like to see advance reservations so that groups can plan ahead. We were a scout group doing a 50-miler, which is a popular activity for Scouts. Advance

- planning is critical.
- u m The surest way to lower use impact on the lake is to target motorized boats. Motorized boats are loud, cause large wakes, people can carry more items (increasing chances of littering), and it makes getting up the lake easy. If you were to limit the # of motorized boats the use of the lake will be considerably less. Please do not lump hikers in with non-motorized boat users and horse campers in with motorized boat users. Consider the types of impact caused by each user type when considering visitation regulation changes.
- u Q We enjoy the peaceful area of Ross Lake, and hope that jet boats, water skiing, jet skis (sea-doo type boats) are not permitted in the lake.
- u r m x Do see the need to manage motor boat use in lake, so does not detract from wilderness experience and solitude. This was a splurge for us – very expensive to stay at the resort. Possible NPS boat rental at a lower cost so boating/camping a more economic option. Overall beautiful place, NPS does a fine job.
- u Please consider limiting the usage of motorized vehicles on Ross Lake.
- u I would like to see motorized boat use prohibited on the lake. How does it make sense that campers are told to dump their dishwater in the latrine to avoid contaminating the lake when motorboats are leaking oil and gas? It would be a much nicer place to visit without the loud, hurried, crowded boat traffic.
- u The motorboat noise detracts from the experience.
- u Although we used the water taxi to access the Little Beaver trailhead, we would support a “no motorized boat” rule on Ross Lake. We feel that the environmental impact it has on Ross Lake is not worth the convenience it provides.
- u Referring to question #16, “possible management policies,” a suggestion to limit the number of persons/parties with each activity to not overextend any use. The five motorboats with one person in each boats seems excessive and certainly distracting.
- u [comments taken from response to question 8d, which wouldn’t fit in question’s database text box]. While we were canoeing on Ross Lake we saw a number of motor boats. They were loud and smelled bad (for a long time after passing us the smell lingered). Also they left oily residue in the water that was clearly visible. This was in complete contrast to the otherwise peaceful, beautiful, and pristine surroundings. With the exception of NPS boat clearly needed for safety and monitoring and a shuttle boat for Ross Lake Resort, I do not believe motorized craft should be allowed on the lake. RLR should rent row boats not motor boats.
- u Get rid of motors on the lake!
- U d X q The secret is out! The area where we camp on the Canadian side (silver tip camp site) is WAY more crowded than ever! The word has gone out and people now know of this great spot. We camp at silver tip and spend at least one day at Ross Lake (USA) swimming and having a picnic. We have a dog and love to swim and play at the boat launch area. We take full advantage of the picnic area, but notice more litter now. There are no garbage cans, but I think this is intentional. We have noticed an increase in motor boat use at the launch in the past 2 years. I prefer canoes and

Appendix D: Ross Lake User Survey – Visitor Comments

	kayaks. We have really enjoyed the secret of Ross Lake!
U g N	I have enjoyed using Ross Lake National Recreation Area for almost eight years now. With the cutbacks in our Canadian Provincial and National parks systems along with increased user fees I have noticed a steady decline in the quality of our parks, parks services, and staff. At Ross Lake NRA park system I have been impressed with the maintenance of the campsites, general information available, and the helpfulness of parks staff when required. We do miss the outdoor programs held in the evenings at the outdoor amphitheater.
U n r	I'm assuming page 13 refers to the American side of Ross Lake. We however camped on the Canadian side. My only comment is the Canadian side charges \$14.00 a night. We did not have firewood or clean bathrooms and we had to put up with two nights of very noisy camping. We visited the Hozomeen campsite, which is open field camping but you do have nice washrooms and camping is free. I don't know how the noise level is controlled. As for all the charges on page 13, if those charges are to apply for Hozomeen then I won't respond. But if they apply to the Canadian side, these should be included in our camping cost of \$14.00 a night. A comment for noise control on the Canadian side only. First a warning – written up and served to the party; second, why not a fine? Then they have to leave the park the next morning!
v b c	Beautiful area. Appreciate Ross Lake Resort, as our 10-year-old son is disabled and the wood docks make the park and boats accessible to him and his wheelchair. Many parks put ADA campsites near noisy and scenery-deficient bathrooms, but here he can experience pristine wilderness on the lake in boats available at the resort.
v	It would be nice to have a visitor center just for and at the lake(s) – info, maps, current conditions, permits, etc.
w u	Our plan was to rent canoes at Ross Lake Resort on day 2 and camp at various points over the next few days, going on a few day hikes. The weather was so bad on day 2 that we decided to leave and changed our camping plans. [also, written on page 10:] We usually come from Hozomeen. This was our first stay at the resort. Too many motorboats.
x	I don't like the idea of having hydroelectric installations and electric power stations in a recreation area. It alters the environment.
y C	If it isn't broke, don't fix it. The beauty of Ross Lake campground as it is, is the way it should stay. If they start implementing fees and extra services you would take away the uniqueness of this beautiful park and campground.
y F	I think that in general, the type of person that makes their way to Ross Lake takes pride to leave as they found. Over the years there has to have been more people that come to visit, but I don't think it has gotten to the point that the government needs to start making restrictions. I do think if you were to change something, it would be nice if you could, online or by phone, get a backcountry permit 1 or 2 days in advance of driving out to Marblemount – just to eliminate the possibility of not getting a spot and making a drive for nothing (not that that has ever happened to me). If the party chose not to confirm at ranger station by the first day of trip the Back Country Permit would then be nullified.
y	Please leave it alone! Make no changes. Thanks

- z We camped at Lake Diablo, made a day trip to Ross Lake via a trail from Hwy 20 to lake, went to Ross Lake Resort, and then returned up the trail to our car.
- z The roads were extremely well maintained. I did not expect such good roads for driving over the mountains.
- z [page 3] Took water taxi to Ross Lake resort; canoed on Ross Lake 3 hours; took water taxi back and walked to [???] car & drove home.
- z This pencil was so sharp it poked through the bag and punctured the butter in my food bag, making a small mess.
- z The road from Highway #1 to Ross Lake is 90% unpaved, it is no good for driving.

Appendix E: Basic Statistical Concepts Used

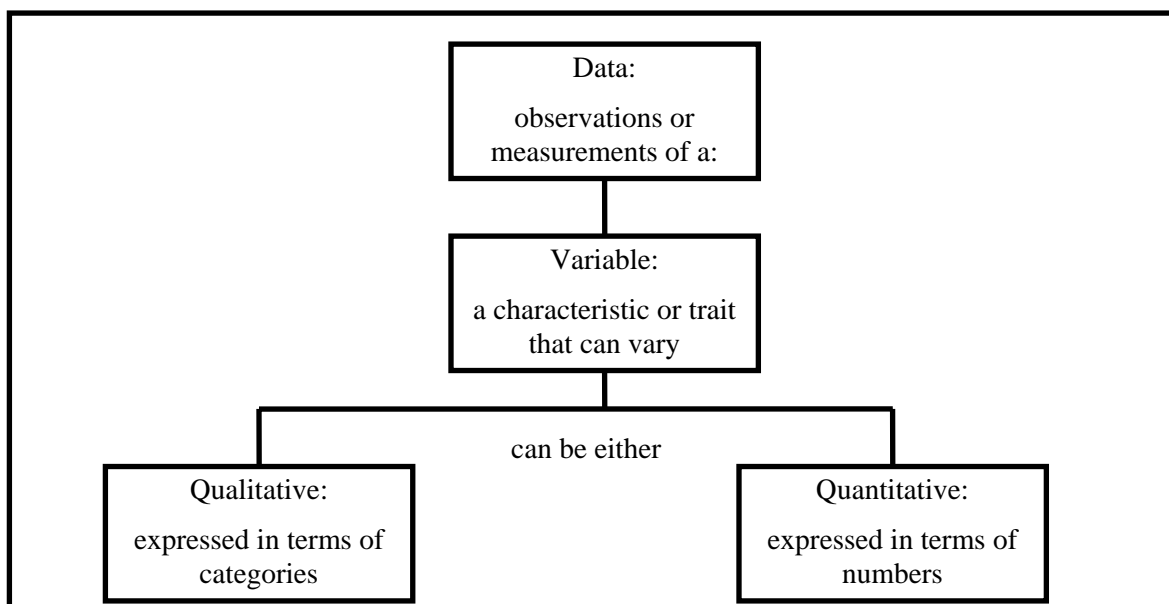
This section is a brief introduction to the basic statistical methods included in this report. It defines some key terms and illustrates the ways in which the statistical tables and graphs have been prepared.

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 for 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 encounters with military overflights can all be considered variables: Each of these traits or characteristics may vary from person to person in the study sample.

Variables can be of two types: Qualitative variables involve the categorization of events, such as whether or not a person was annoyed by military overflights. Quantitative variables use numbers to characterize the size of the event, such as the number of military overflights encountered. Figure E.1 illustrates these concepts.

Figure E.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 data set. 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 during June, July and August. 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 our mail surveys, although the original was random, not all of those people contacted returned their mail survey. Thus, in the strictest mathematical sense, the mail survey samples in this report are not random due to the possibility of bias through non-response. However, the authors perform analyses looking for potential bias and the results of those analyses are reported in each study report.

The data are reported as descriptive statistics. Descriptive 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 visitor's age. Descriptive statistics can be used to quickly summarize this long list. The average (mean) age would be the total of all 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.

In addition to descriptive statistics, inferential statistical procedures have been used to determine the likelihood that observed relationships among the different variables are due to chance. The smaller the likelihood that an observed effect is due to chance the more confident one can be that the effect is due to systematic variation. The p-value is the probability of obtaining the observed result due to chance alone and is directly related to the results of the statistical test. By convention, when the probability of obtaining a result due to chance is very small ($p < .05$), then it is concluded that the observed effect is due to systematic variation or a "real" effect. Results with p-values less than .05 are also referred to as significant. In this report, you will see the value of the statistic and its corresponding p-value (e.g., $\chi^2(1, n = 25) = 3.44, p < .01$). The important thing to remember is that effects that have p-values less than .05 are considered real effects.

The most common statistical procedure used in this report is the chi-square test for independence. This statistical test determines if the pattern of responses for one categorical variable differs across different categories of the second categorical variable. For example, suppose a chi-square test examining the relationship between sex of respondent and day of week contacted was significant. This means that the proportion of males and females among respondents contacted on weekdays (e.g., 50% males, 50% females) differed significantly from that of respondents contacted on the weekend (e.g., 60% males, 40% females).

When one of the variables is measured on a continuous (e.g., age) basis and the other variable is measured categorically (e.g., gender), the statistical procedure used to examine differences across groups is a *t*-test when there are two groups and Analysis of Variance (F-test) when there are three or more groups. A significant F-value indicates that there is a significant difference among the groups. Follow-up tests (e.g., post hoc Tukey tests) can be performed to determine which groups differ from each other. Additional statistical procedures used in this report are explained briefly either in the text or a footnote when they are first introduced.

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

Appendix F: Social Science Bibliography

Below is a list of social science research conducted at North Cascades National Park Complex since the early 1980's. The list is divided by locations where the reports can be found and include call numbers as well.

PARK LIBRARY RESOURCES:

- Bartholomew, Mary Ellen. Legislative history for North Cascades National Park Service Complex, 97th Congress through 100th Congress. Seattle: National Park Service, Pacific Northwest Regional Library, 1990. Pacific West - Seattle & NOCA Call Number: KF5646.N6 L44 1990
- Beyers, William B. An economic impact study of the North Cascades National Park and Lake Chelan and Ross Lake National Recreational Area. [S.l. : s.n., 1970] Pacific West - Seattle & NOCA Call Number: NOCA 168 1970
- Boxberger, Daniel L., An ethnographic overview and assessment of North Cascades National Park Service Complex / prepared for National Park Service, Pacific Northwest Region. Seattle, Wash.: North Cascades National Park Service Complex, National Park Service, Cultural Resources, 1996.
- Chatfield, Dale and Susan Sugai. Report on the conditions of Stout Lake, North Cascades National Park. 1976. North Cascades National Park-ARC Call Number: GV191.42 .W3 .C53s
- Chatfield, Dale and Susan Sugai. Report on the conditions of the two routes to Trapper Lake, North Cascades National Park. 1976. North Cascades National Park-ARC Call Number: GV191.42.W3 C53t
- Cochran, Betsy. Maple Pass impact report. 260 1 1986. North Cascades National Park-STEHL Call Number: QH541.5.A46 C62
- Collins, Bernard C. Land use conflict in the North Cascades wilderness of Washington State North Cascades National Park Call Number: F897.C3 C64
- Community Development Services. The North Cascades Highway: Its impact on community economies. [Seattle] : Community Development Services, 1972.
- Dougher, Hugh North Cascades National Park Service Complex aviation management plan. U. S. Dept. of the Interior, National Park Service, North Cascades National Park, 1997.
- Gettinger, Dean S., Edwin E. Krumpe and R. Gerald Wright. Recreational impacts to wilderness campsites at North Cascades National Park. 1998. Pacific West - Seattle Call Number: GV191.42.W2 G4 1998

- Hospodarsky , Denver. North Cascades National Park Service Complex backcountry visitor use mail survey, 1989: statistical abstract. National Park Service, Cooperative Park Studies Unit, Oregon State University, 1990. Pacific West - Seattle Call Number: GV54.W2no N67sa 1989
- Human-bear management plan North Cascades National Park Service Complex. Sedro-Woolley, Wash.: United States Department of the Interior, National Park Service, North Cascades National Park Service Complex, 1998. North Cascades National Park-Skagit Call Number: QL737.C27 H94
- Littlejohn, Margaret Title: Visitor services project : Stehekin, North Cascades National Park, Lake Chelan National Recreation Area/ Margaret Littlejohn. Format: Book Publisher: [Moscow, Idaho: Cooperative Park Studies Unit, University of Idaho], 1992. Pacific West - Seattle Call Number: GV54.W2st L58 1992
- Louter, David. Contested terrain: North Cascades National Park Complex, an administrative history. Seattle, Wash.: National Park Service, [Pacific West Region, Columbia Cascade Support Office], 1998. Pacific West - Seattle Call Number: F897.C3 L68 1998 c.1-2
- Methow Research Institute. Forecast of travelers to the Methow Valley and the North Cascades Highway, 1973-1978. Winthrop, Wash.: The Institute, 1973. North Cascades National Park Call Number: G155.W2 M47
- Mierendorf, Robert R. Title: People of the North Cascades / by Robert R. Mierendorf. Format: Book Publisher: Seattle, Wash.: North Cascades National Park Service Complex : Cultural Resources Division, Pacific Northwest Region, 1986. (Archeology)
- Mullen, Kevin Title: Trapping experiences concerning lynx, bobcats, cougar and otters in the North Cascades Area. (Personal narrative). 1977. North Cascades National Park-ARC Call Number: SK283.2 .M94
- National Park Service visitor study: North Cascades National Park Complex. Format: Book Publisher: Madison, Wis. : HBRS Inc., [1992]. Subject(s): Surveys Washington North Cascades National Park. Airplanes Noise Law and legislation. North Cascades National Park Service Complex Washington Recreational use. North Cascades National Park-STEHE Call Number: GV54.W2 N38
- Nature has no borders: A collection of papers: presented at a conference on the protection and management of the northern Cascades ecosystem, held March 25-27, 1994, Seattle, Washington / [sponsored by] National Parks and Conservation Association. Format: Book Publisher: Seattle, WA : Peanut Butter Pub. Co., [1994?] Pacific West - Seattle Call Number: QH77.C37 N37 1994
- Northwest American. Preliminary demand forecast for the North Cascades Recreational Area / prepared for the Skagit County Development Association and The State of Washington, Department of Commerce & Economic Development. Seattle : [s. n.], 1972. Pacific West - Seattle & NOCA Call Number: G155.U6 N6

Appendix F: Social Science Bibliography

- Official transcript of proceedings before the North Cascade Mountain Study Team,, U. S. Departments of the Interior and Agriculture...in the matter of public hearing views and recommendations on resource use from groups and individuals interested in the management and administration of the federal lands in the North Cascades area. Seattle, Wash.: Cascade Reporting Company, 1970. North Cascades National Park Call Number: F897.C3 N67
- Oliver, Chadwick D. Forest resource survey and related consumptive use of firewood in lower Stehekin valley, North Cascades National Park complex: final report. 1981 Pacific West - Seattle & NOCA Call Number: QH76.5.W2 O48 PREL
- Rice, Harvey S. Title: An archaeological survey of the Stehekin Valley road in the Lake Chelan National Recreation Area and North Cascades National Park. Pullman, Wash.: Washington Archaeological Research Center, Washington State University, 1969[?] Denver Service Center - Main Library Call Number: F897.C3 R52 1969
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