



Visitor Tradeoffs and Preferences for Conditions at Henry Rierson Spruce Run Campground in Clatsop State Forest, Oregon

Final Report

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Conducted for and in cooperation with
Oregon Department of Forestry, Astoria District
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2008



ACKNOWLEDGEMENTS

The author thanks Larry Sprouse and Bryan Nielsen at Oregon Department of Forestry, Astoria District for assistance, input, and support during this project. A special thank you is extended to campground visitors who took time to complete surveys. Funding was provided by Oregon Department of Forestry, Astoria District. This project was approved by the Institutional Review Board (IRB), Office of Sponsored Programs and Research Compliance, Oregon State University (protocol: # 3648) and complied with regulations on research involving human subjects.

Although several people assisted with this project, any errors, omissions, or typographical inconsistencies in this final project report are the sole responsibility of the author. Opinions, conclusions, and recommendations in this project report represent views of the author based on the data and do not necessarily represent views of Oregon Department of Forestry.
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SUGGESTED CITATION

Needham, M. D. (2008). *Visitor tradeoffs and preferences for conditions at Henry Rierson Spruce Run Campground in Clatsop State Forest, Oregon*. Project report for Oregon Department of Forestry. Corvallis: Oregon State University, Department of Forest Resources. 47pp.

EXECUTIVE SUMMARY

Objectives

Henry Rierson Spruce Run Campground is located along the Nehalem River south of Highway 26 in Clatsop State Forest, Oregon. This campground is a popular recreation area for over 10,000 annual visitors, with most of this visitation occurring between Memorial Day and Labor Day (e.g., May 28 to September 3, 2007). The campground has 32 drive-in campsites (\$10 per night, \$2 per extra vehicle), five walk-in tent sites (\$5 per night), and a free day use picnic area. Facilities include picnic tables, fire rings, garbage and recycling services, information kiosks / signage, firewood, sealed vault and flush toilets, Camp Hosts, and hand pumped drinking water.

Oregon Department of Forestry (ODF) manages Henry Rierson Spruce Run Campground and is considering design options so the campground can continue to accommodate visitor use without deteriorating resource conditions and users' experiences. Options include enlarging the day use area, providing more privacy screening between campsites, redesigning parking facilities, and offering some group campsites. Before making any changes, it is necessary to understand current visitors' preferences and experiences at Henry Rierson Spruce Run Campground. Objectives of this project, therefore, were to address these research needs by describing visitors':

- past visitation, level of attachment to the campground, and trip characteristics;
- motivations for visiting;
- overall trip satisfaction and importance of and satisfaction with campground conditions;
- level of support and opposition for possible management strategies;
- tradeoffs for various levels of potential site alteration strategies (e.g., more screening between sites if the tradeoff was reduced parking); and
- sociodemographic characteristics.

This report addresses these objectives by summarizing visitors' responses to surveys conducted at Henry Rierson Spruce Run Campground.

Data Collection

Data were obtained from surveys administered on-site to visitors at Henry Rierson Spruce Run Campground from May to September, 2007. In total, 207 surveys were completed by visitors. This sample size allows generalizations about the population of visitors at this campground at the 95% confidence level with a margin of error of approximately $\pm 6.7\%$.

Results

Place Attachment and Trip Characteristics

- Reliability and cluster analyses revealed that most visitors were moderately (54%) or highly (33%) attached to Henry Rierson Spruce Run Campground; few visitors (13%) had low place attachment to this campground.

- Most visitors (69%) had previously visited this campground at least once before. Almost all highly attached respondents (92%) had visited before; significantly fewer (36%) less attached respondents had visited before.
- The largest proportion of visitors was in groups of three to four people (24%) or five to six people (21%). The average group size was six people, which did not differ among the three place attachment groups.
- Almost all visitors (91%) were camping overnight at the campground on their trip; only 9% were day users. There were slightly more day users in the low attachment group (20%) compared to the moderate and high attachment (< 8%) groups.

Motivations / Reasons for Visiting

- The most important reasons why respondents visited the campground were to be in nature (98%), rest or relax (96%), view the natural scenery (95%), get away from demands of life (93%), and be with friends or family (90%).
- The least important reasons for visiting were because respondents saw information or read an article about the campground (16%), to meet or observe other people (18%), to get physical exercise (46%), because they were told by someone that the campground is a nice place to visit (49%), and to explore a new area (49%).
- Factor analysis reduced the 20 motivations to seven broad reasons for visiting the campground. In order of importance, these reasons were: (a) rest / escape life pressures, (b) enjoy nature, (c) be with similar people, (d) escape crowds, (e) location / convenience, (f) participation in recreation activities, and (g) learn about and visit a new area.
- All seven broad reasons for visiting were least important to low attachment respondents and most important to high attachment visitors. There was a difference among groups for four of seven motivation factors. Enjoying nature, escaping crowds, and being with similar people were not different among groups; they were important to all respondents.

Satisfaction with and Importance of Conditions and Experiences

- Almost all visitors (96%) were satisfied with their overall visit to the campground.
- Overall satisfaction increased as place attachment increased; people who visited this campground for many years and were more attached to the campground were slightly more satisfied with their visit than the few newcomers and less attached visitors.
- The majority of respondents were satisfied with all aspects of their experience and the conditions at the campground, especially picnic tables, absence of litter, and campfire pits (over 90% of visitors satisfied).
- Visitors were least satisfied with the opportunity to hear no noise from vehicles (17% dissatisfied), amount of screening (e.g., bushes) between campsites (17%), opportunity to hear no noise from other visitors (16%), and privacy between campsites (15%).
- The majority of visitors also rated almost all aspects of their experience and the conditions at the campground as important, especially absence of litter, campfire pits, availability of campsites, picnic tables, an unspoiled natural environment, and opportunities to escape crowds of other people (over 90% of visitors rated as important).

- Least important characteristics were availability of parking in the day use area (23% unimportant), outdoor grills / barbeques for cooking (15%), and wood sheds with campfire wood for sale (15%).
- Importance of and satisfaction with experiences and conditions at the campground increased as place attachment increased. Compared to those who were moderately or highly attached to this campground, the few newcomers and less attached visitors rated almost all aspects of their experience and the conditions at the campground as less important and were less satisfied with these experiences and conditions.
- Visitors rated, on average, all aspects of their experience and the conditions at the campground as important and were satisfied with these aspects, suggesting that managers should “keep up the good work” in their management of the campground.
- The few low attachment respondents considered parking availability in the day use area to be somewhat unimportant but were satisfied with day use parking anyway, suggesting that this group of visitors considers this condition to be “possible overkill. This group also believed that it was important to have opportunities for hearing no noise from vehicles and other visitors, but were dissatisfied with these noise related conditions, suggesting that managers may need to concentrate on providing opportunities for no vehicle or visitor noise, especially for newcomers or less attached visitors.

Management Evaluations and Tradeoffs

- The largest proportion of visitors supported providing more privacy and screening (e.g., bushes, shrubs) between campsites (68% support). The majority of respondents also supported providing group campsites for large groups (58%), increasing the number of campsites (52%), and providing a separate overflow parking area (50%). Fewer visitors were supportive of keeping things as they are now and not changing anything (48%).
- Respondents were somewhat divided in their support for increasing the amount of parking at campsites (29% support, 29% oppose) and increasing the size of the day use area (24% support, 24% oppose). Respondents opposed closing the campground for up to one year to redesign the area (14% support, 61% oppose).
- There were no differences among the three place attachment groups in their opposition and support for six of the eight management alternatives. Support for keeping things as they are now and not changing anything (i.e., status quo) was slightly higher for visitors in the high attachment group compared to less attached visitors. Support for increasing the size of the day use area was slightly higher for respondents in the low and moderate attachment groups compared to those in the high attachment group.
- On average, providing more privacy / screening between campsites was the most strongly supported management action and generated the most consensus among respondents suggesting that this would be the least controversial action. Providing group campsites, not changing anything, increasing the number of campsites, and providing a separate overflow parking area were supported, but none of these actions received overwhelming support. On average, visitors were slightly opposed to increasing the amount of parking at campsites and increasing the day use area. The most controversial strategies were increasing the number of campsites, providing more parking at campsites, and increasing

the size of the day use area; it is likely that implementing any of these actions would generate disapproval and discontent from many visitors. Closing the campground for up to one year to redesign the area was opposed by almost all respondents.

- Given that implementing any strategy may not be possible without impacting something else, it is important to understand how visitors would prefer setting factors to be prioritized (i.e., tradeoffs) when preferred conditions cannot be provided for all factors simultaneously. Results of a conjoint analysis that varied levels (same as now, less, more) for three factors (amount of parking, number of campsites, amount of privacy / screening between campsites) showed that privacy / screening between campsites was the most important factor to respondents (39%). Number of campsites was less important to visitors (35%) and amount of parking was the least important factor (26%).
- The most *acceptable* management configuration would be to retain the same amount of parking and campsites, but provide more privacy / screening between campsites. The second most acceptable combination of factors would be to retain the same number of campsites, but increase parking for vehicles and privacy / screening between campsites. If spatial constraints and physical barriers at this campground (e.g., river, road, terrain) make it unrealistic or not feasible to increase some factors without decreasing or retaining the same amount of other factors, the most acceptable approach would be to provide the same number of campsites, but increase the amount of privacy / screening between campsites at the expense reducing parking. Less parking, fewer campsites, and less privacy / screening would be the most *unacceptable* combination of factors.
- Privacy / screening between campsites was the most important factor to respondents in the low and moderate place attachment groups, but not for highly attached visitors. Number of campsites was most important to these highly attached respondents, whereas campsites were less important to visitors in the moderate attachment group and was the least important factor for those in the low attachment group. Importance of campsites increased as place attachment increased and importance of privacy / screening decreased as attachment increased. Vehicle parking was the least important factor for most groups.
- The most acceptable management configuration for the low and moderate attachment groups would be to retain the same amount of parking and campsites, but provide more privacy / screening between campsites. This was the second most important combination of factors for highly attached respondents who believed that not changing anything (i.e., keep things the same as they are now; status quo) would be the most acceptable approach. The most unacceptable management combinations rarely differed among place attachment groups. For example, regardless of any changes to the amount of parking, reducing the number of campsites and amount of privacy / screening between campsites would be least acceptable for visitors in all groups.
- Evaluations of visitors in the moderately attached group most closely reflected those for all respondents considered together (i.e., aggregate across groups). This group also constituted the majority of visitors at the campground (54%). If the agency in charge of Henry Rierson Spruce Run Campground (i.e., ODF) wanted management actions to reflect the majority of visitors, it may be reasonable to consider the management configuration rankings of all visitors taken together or those belonging to moderately attached users.

Demographics

- An equal proportion of visitors were male (50%) and female (50%). There were no differences between the three place attachment groups.
- The majority of visitors were 40 years of age and older, but the largest proportion was 30 to 39 years old (24%). The average (i.e., mean) age of respondents was 41 years old.
- Average age differed among the three place attachment groups; age increased as attachment increased. Low attachment respondents were the youngest (average [i.e., mean] $M = 36$ years) followed by moderate attachment users ($M = 40$ years) and then high attachment visitors who were the oldest ($M = 46$ years).
- Almost all visitors resided in Oregon (94%). The largest proportion of respondents lived in Washington (38%) and Multnomah (17%) Counties, especially in cities and towns such as Portland and its surrounding areas (e.g., Beaverton, Hillsboro).

Recommendations

- The most important reasons why respondents visited the campground were related to enjoying nature and resting and escaping life pressures. It is important to consider these reasons in management decision making to ensure that policy changes at the campground do not negatively impact opportunities for experiencing nature and resting and relaxing.
- The majority of respondents were satisfied with all aspects of their experience and the conditions at the campground, especially picnic tables, absence of litter, and campfire pits. These and other conditions should be monitored to ensure that visitor satisfaction does not decline in the future.
- Visitors rated, on average, most aspects of their experience and the conditions at the campground as important and were satisfied with these aspects, suggesting that managers should “keep up the good work” in their current management of the campground.
- Almost all visitors were satisfied with their overall visit to the campground, but this does not mean that they were highly satisfied with all aspects of their visit. Visitors were least satisfied with the opportunity to hear no noise from vehicles and other visitors, and the lack of screening and privacy between campsites. As stated below, increasing the amount of screening (e.g., bushes, shrubs) was the most strongly supported and least controversial management action so taking this action will improve privacy and may also buffer some of the noise from traffic and other visitors.
- Most respondents believed that changes should be made at the campground, as the majority of respondents opposed keeping things as they are now and not changing anything. The largest proportion of visitors supported providing more privacy and screening between campsites. This was also the least controversial action. As stated above, this action will improve privacy and may also buffer vehicle and visitor noise.
- The majority of visitors slightly supported providing group campsites for large groups, increasing the number of campsites, and providing a separate overflow parking area. Respondents were divided in their support for increasing parking at campsites and the size of the day use area. Some of these strategies were also highly controversial (e.g., more campsites, more parking, enlarging day use area). Implementing all of these

strategies may increase satisfaction, but may not be possible given the physical barriers and spatial constraints at the campground (e.g., road, river, terrain). Implementing these actions would also generate disapproval and discontent from many visitors.

- Respondents were emphatically opposed to closing the campground for up to one year to redesign the area. Unless deemed absolutely necessary, any changes should be made without protracted closures to the campground.
- The most acceptable combination of management factors would be to retain the same amount of parking and campsites, but provide more privacy / screening between sites. If spatial constraints and physical barriers (e.g., river, road, terrain) make it unrealistic or not feasible to increase some factors without decreasing or retaining the same amount of other factors, the most acceptable approach would be to provide the same number of campsites, but increase the amount of privacy / screening between campsites at the expense of less parking. In other words, some land currently used for parking could be converted to create more screening and privacy between campsites (e.g., bushes, shrubs).
- Any future changes made at the campground should be accompanied by educational and interpretive messages and materials that discuss the rationale for changes. Messages should focus on how the changes may accommodate increasing use and reduce negative impacts to environmental conditions and visitor experiences. Messages should be disseminated through various outlets such as websites, newspapers, off-site and on-site brochures, on-site signage, and visitor contact with Camp Hosts and agency personnel.
- The majority of visitors were moderately or highly attached to Henry Rierson Spruce Run Campground; few visitors had low attachment to the campground. Compared to highly attached visitors, those who were less attached were more likely to: (a) be day users, first time visitors, and younger; (b) rate all motivations, experiences, and conditions as less important; (c) be less satisfied with experiences and conditions at the campground; (d) consider privacy and screening to be most important; and (e) be supportive of management configurations that retain the same amount of parking and campsites, but provide more screening. Highly attached visitors were older and had visited many times before, tended to camp overnight, rated all motivations and conditions as important, were most satisfied with all aspects of their experience and the campground, and were slightly more supportive of maintaining the status quo and making only minimal changes at the campground. The moderately attached group basically fell in between these two extremes and most closely reflected opinions for all respondents considered together (i.e., aggregate across groups). This group also constituted the majority of visitors at the campground. If the agency in charge of this campground (i.e., ODF) wanted management actions to reflect the majority of visitors, it may be reasonable to consider responses from all visitors taken together or those belonging to moderately attached users. Regardless, this shows heterogeneity of visitors' functional and emotional attachment to this campground, and reinforces the importance of segmenting users into more homogeneous and meaningful subgroups. Most visitors are moderately or highly devoted and attached to this campground, and considering these place attachment groups in management will facilitate more accurate planning and decision making.

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INTRODUCTION AND OBJECTIVES

Henry Rierson Spruce Run Campground is located along the Nehalem River south of Highway 26 in Clatsop State Forest. This campground is a popular recreation area for over 10,000 annual visitors. Although this campground is open year-round, most visitation occurs between Memorial Day and Labor Day (e.g., May 28 to September 3, 2007). The campground has 32 drive-in campsites, five walk-in tent sites, and a day use picnic area. Each site offers a picnic table and fire ring. Garbage and recycling services, information kiosks / signage, firewood, sealed vault and flush toilets, a Camp Host, and hand pumped drinking water are also present. Nightly user fees are \$10 for drive-in sites (\$2 per extra vehicle) and \$5 for walk-in tent sites.

Oregon Department of Forestry (ODF) manages Henry Rierson Spruce Run Campground and is considering design options for the campground so that it can continue to accommodate visitor use without deteriorating conditions and / or visitors' experiences. ODF is considering options such as enlarging the day use area, providing more screening between campsites to increase privacy, redesigning parking facilities, and offering some group campsites. Before proceeding with any changes, however, it is necessary to understand current visitors' preferences and experiences at this campground. This project addressed these research needs.

Primary objectives of this project were to describe current visitors':

- amount of past visitation, attachment to the campground, and trip characteristics (e.g., overnight camping or day use, group size);
- motivations or reasons for visiting the campground;
- overall satisfaction with their visit;
- importance of and satisfaction with current campground conditions (e.g., parking, toilets, litter, informational signage, safety from vehicle traffic);
- level of support and opposition for possible future management strategies (e.g., increase parking, more privacy / screening, provide group campsites);
- tradeoffs for various levels of potential site alteration strategies (e.g., more screening between sites if the tradeoff was reduced parking); and
- sociodemographic characteristics (e.g., age, location of residence).

This information can be used to help inform:

- understanding of visitors and their preferences at Henry Rierson Spruce Run Campground,
- recommendations for management and site design strategies related to recreation use and social and biophysical impacts at this campground, and
- future decision making and management at this campground.

This project report summarizes results from on-site surveys completed by individuals who visited Henry Rierson Spruce Run Campground in 2007.

DATA COLLECTION

Data were obtained from surveys (see Appendix B) administered on-site to visitors at Henry Rierson Spruce Run Campground from May to September, 2007. Effort was made to conduct surveys on every day of the week, including during high use periods such as weekends. In total, 207 surveys were completed by visitors. Given this sample size, data allow generalizations about the population of visitors at this campground at the 95% confidence level with a margin of error of approximately ± 6.7 (Salant & Dillman, 1994).

The survey included questions on a range of topics including prior visitation to Henry Rierson Spruce Run Campground, motivations for visiting, place attachment to the campground, satisfaction, and support for potential management strategies. Basic descriptive findings are included in Appendix A and the actual survey is presented in Appendix B.

ANALYSIS AND RESULTS

The following analyses and results are presented in several major sections: (a) visitors' trip characteristics and attachment to Henry Rierson Spruce Run Campground; (b) motivations for visiting; (c) satisfaction with and importance of conditions and experiences, (d) evaluation (e.g., support, opposition) and tradeoffs for potential management actions; (e) sociodemographic characteristics, and (f) comments. To highlight important findings, most data were recoded into major response categories (e.g., agree, disagree; support, oppose) for purposes of this report. Uncollapsed frequency distributions (e.g., strongly, slightly agree) are provided in Appendix A.

Place Attachment and Trip Characteristics

Place Attachment. Place attachment is a concept that has received substantial attention in the recreation and human dimensions literature (see Williams & Vaske, 2003 for a review). Place attachment can be defined simply as a positive connection or bond between a person and a particular place or location (Williams & Patterson, 1999). Previous research has identified two main dimensions of place attachment. First, *place dependence* is the functional form of attachment that reflects the importance of a place in providing physical and geographical features and conditions that support specific goals or desired activities (Vaske & Kobrin, 2001). Second, *place identity* reflects the emotional form of attachment or symbolic importance of a place to give meaning and purpose to life (Giuliani & Feldman, 1993; Vaske & Kobrin, 2001).

The survey in this project used six items to measure respondents' attachment to Henry Rierson Spruce Run Campground. Three items focused on place dependence: (a) "Henry Rierson Spruce Run Campground is one of the best places for doing what I like to do," (b) "I would not substitute any other area for doing what I do at Henry Rierson Spruce Run Campground," and (c) "no other place compares to Henry Rierson Spruce Run Campground." Three items measured place identity: (a) "Henry Rierson Spruce Run Campground is very special to me," (b) "I am very attached to Henry Rierson Spruce Run Campground," and (c) "I identify strongly with Henry Rierson Spruce Run Campground." These six variables were measured on 5-point scales

from 1 “strongly disagree” to 5 “strongly agree” and with the exception of the campground name are identical to items used in past studies (see Williams & Vaske, 2003 for a review).

Cronbach alpha (α) tested for reliability and internal consistency of these multiple-item indices measuring place dependence and identity. This statistic ranges from 0 (no measurement reliability) to 1 (perfect reliability). A Cronbach alpha coefficient ≥ 0.65 is viewed as acceptable and indicates that multiple items are measuring the same concept or dimension (Cortina, 1993, Nunnally & Bernstein, 1994). Table 1 shows that alpha values were .82 for place dependence and .90 for place identity, suggesting that the three items for each reliably measured their respective dimension. Item total correlations represent correlations between the score on a given variable and the sum of the other variables associated with the dimension or concept. In general, item total correlations should be $\geq .40$; all items in the place dependence and identity scales met this criterion. Deletion of any variable from its respective dimension did not improve reliability of the dimension. Reliability of the overall place attachment scale was high ($\alpha = .93$).

Table 1. Reliability analyses of dimensions measuring place attachment

Dimensions and items	Mean ¹	Std. dev. ¹	Item total correlation	Alpha (α) if deleted	Cronbach alpha (α)
Place dependence					.82
Henry Rierson Spruce Run Campground is one of the best places for doing what I like to do	3.82	.94	.60	.81	
I would not substitute any other area for doing what I do at Henry Rierson Spruce Run Campground	3.05	1.07	.70	.72	
No other place compares to Henry Rierson Spruce Run Campground	3.10	1.12	.71	.70	
Place identity					.90
Henry Rierson Spruce Run Campground is very special to me	3.78	.95	.77	.88	
I am very attached to Henry Rierson Spruce Run Campground	3.54	1.11	.85	.81	
I identify strongly with Henry Rierson Spruce Run Campground	3.43	1.02	.79	.86	
Overall place attachment index					.93

¹ Items coded on 5-point scale: 1 = strongly disagree to 5 = strongly agree.

Having demonstrated reliability of variables used to measure place attachment, K-means cluster analysis was then performed on these variables to segment visitors into place attachment groups. Cluster analysis allows classification of individuals into smaller more homogeneous groups based on patterns of responses across multiple survey variables or indices (Hair & Black, 2000). A series of two to six group cluster analyses showed that a three group solution provided the best fit for the data. To validate this solution, data were randomly sorted and a cluster analysis was conducted after each of three random sorts. These additional analyses supported the solution identifying three distinct groups of individuals, labeled:

- low attachment (cluster 1),

- moderate attachment (cluster 2), and
- high attachment (cluster 3).

The majority of visitors were classified in the moderate attachment group (54%) followed by the high attachment group (33%). The fewest visitors were in the low attachment group (13%).

These three groups were compared in terms of their responses to the original place attachment variables (Table 2). Low attachment respondents reported the lowest average (i.e., mean) scores on all variables measuring place dependence and identity; high attachment visitors had the highest mean scores. Moderate attachment visitors' responses fell in between the low and high groups for all variables. ANOVA and Tamhane T2 / Scheffe post-hoc tests showed that responses differed substantially among the three groups, $F(2, 195) \geq 125.51, p < .001, \eta \geq .75$.

In general, when a p -value associated with any of the statistical tests (i.e., χ^2, F) presented in this report is $\leq .05$, a statistically significant relationship or difference was observed between the independent (e.g., place attachment groups) and dependent (e.g., previous visitation, motivations, satisfaction) variables. All six p -values in Table 2 were statistically significant at $p < .001$. In addition to these tests of statistical significance, effect sizes (e.g., Cramer's V , eta η) were used to compare the strength of relationships. In general, a value of .10 for effect size statistics can be considered a "minimal" (Vaske, Gliner, & Morgan, 2002) or "weak" (Cohen, 1988) relationship or difference. An effect size of .30 is considered "typical" and a value of .50 or greater is a "substantial" relationship or difference. These rules of thumb (i.e., .10 = minimal, .30 = typical, .50 = substantial) apply to all effect sizes (i.e., Cramer's V , eta η) reported here. Larger effect sizes imply stronger relationships or differences. All six effect sizes in Table 2 were $\geq .75$ suggesting "large" or "substantial" differences among groups (Cohen, 1988; Vaske et al., 2002).

Table 2. Place attachment items by cluster groups

Dimensions and items	Cluster groups ¹			<i>F</i> -value	<i>p</i> -value	Eta (η)
	1. Low attachment	2. Moderate attachment	3. High attachment			
Place dependence						
Henry Rierson Spruce Run Campground is one of the best places for doing what I like to do	2.28 ^a	3.64 ^b	4.65 ^c	149.55	< .001	.78
I would not substitute any other area for doing what I do at Henry Rierson Spruce Run Campground	1.76 ^a	2.72 ^b	4.15 ^c	146.56	< .001	.78
No other place compares to Henry Rierson Spruce Run Campground	1.60 ^a	2.78 ^b	4.15 ^c	125.51	< .001	.75
Place identity						
Henry Rierson Spruce Run Campground is very special to me	2.44 ^a	3.54 ^b	4.67 ^c	132.99	< .001	.76
I am very attached to Henry Rierson Spruce Run Campground	1.76 ^a	3.24 ^b	4.70 ^c	253.11	< .001	.85
I identify strongly with Henry Rierson Spruce Run Campground	1.80 ^a	3.20 ^b	4.42 ^c	206.27	< .001	.82

¹ Cell entries are means. Items coded on 5-point scale: 1 = strongly disagree to 5 = strongly agree. Means with different letter superscripts differ at $p < .05$ using Tamhane T2 or Scheffe post-hoc tests.

Previous Visitation. In total, 69% of respondents had previously visited Henry Rierson Spruce Run Campground (Figure 1). The remaining 31% of respondents were visiting the campground for the first time when they completed the survey.

Figure 1. Respondents who had visited Henry Rierson Spruce Run Campground before their current trip

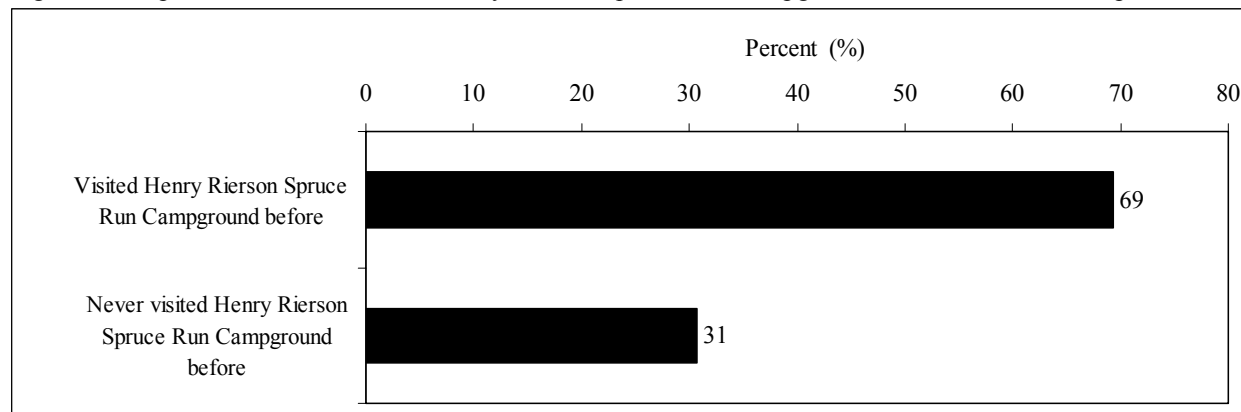
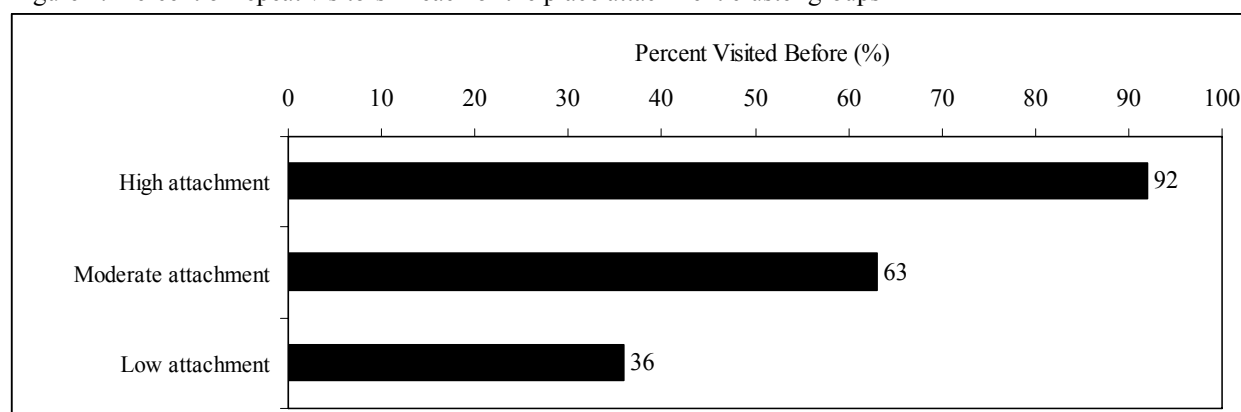


Figure 2 shows that almost all high attachment respondents (92%) had visited this campground before, whereas 63% of respondents in the moderate attachment group and only 36% of low attachment respondents had visited before. This difference among place attachment groups was statistically significant, $\chi^2(2, N = 193) = 33.11, p < .001$. In addition, the Cramer's V effect size was .40. Using guidelines from Cohen (1988) and Vaske et al. (2002), this indicates that differences among place attachment groups were “large” or “substantial.” People who have visited Henry Rierson Spruce Run Campground before were substantially more likely to feel attached to this place compared to those who were visiting for the first time.

Figure 2. Percent of repeat visitors in each of the place attachment cluster groups ¹



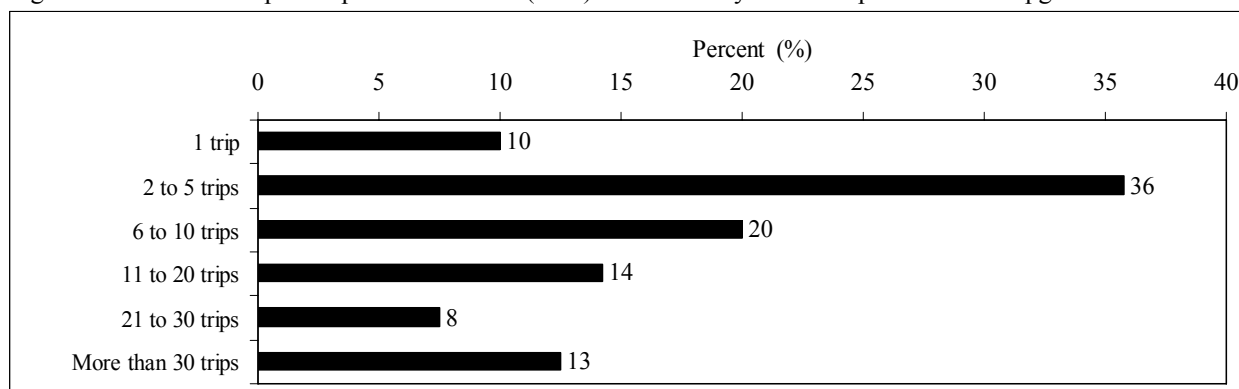
¹ $\chi^2(2, N = 193) = 33.11, p < .001, V = .40$.

The largest proportion (36%) of repeat visitors had been to Henry Rierson Spruce Run Campground two to five times before; 20% had visited six to 10 times before, 14% had visited 11 to 20 times before, and fewer respondents (10%) had only visited once before (i.e., one previous trip; Figure 3). On average (i.e., $M = \text{mean}$), previous visitors made 20.4 trips to the

campground and the median (i.e., middle point where 50% of responses fall above and below) number of previous trips was seven.

Low attachment respondents had visited fewer times ($M = 3.0$ visits) followed by moderate attachment respondents ($M = 18.0$ visits) and then high attachment visitors who had visited the campground most often in the past ($M = 26.2$), but this difference among place attachment groups was not statistically significant, $F(2, 111) = 0.65$, $p = .524$, $\eta = .11$.

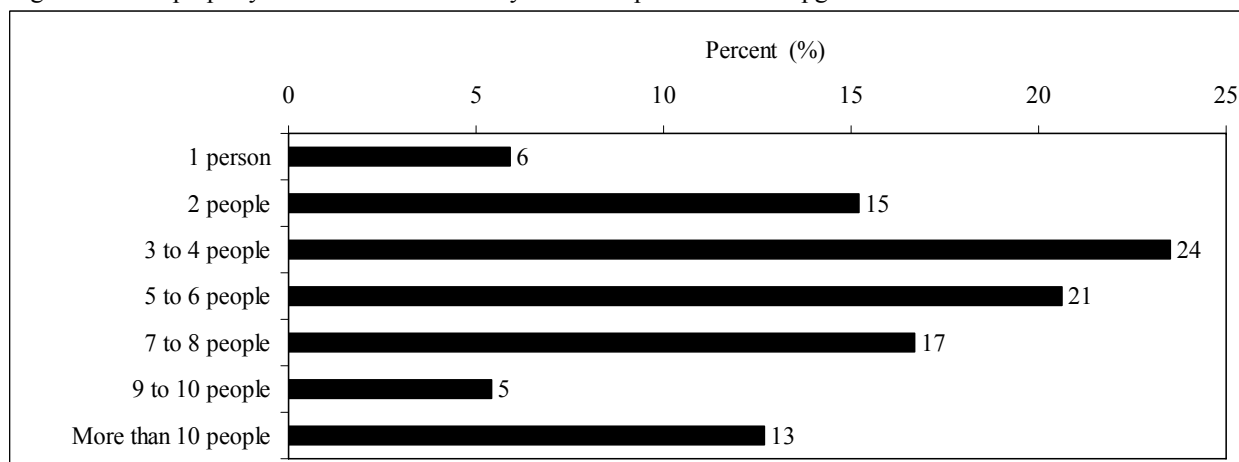
Figure 3. Number of trips that previous visitors (69%) took to Henry Rierson Spruce Run Campground ¹



¹ Average (mean) = 20.4 trips, median = 7 trips, modes = 2, 10 trips.

Group Size. Respondents were asked to indicate how many people, including themselves, were accompanying them on their visit to Henry Rierson Spruce Run Campground. The largest proportion of groups (24%) consisted of three or four people, 21% were comprised of five or six people, and 17% of groups consisted of seven or eight individuals (Figure 4). Only 6% of respondents visited on their own. The average group size was approximately six people and the median group size was five people. Average group size did not differ among the three place attachment groups, $F(2, 192) = 0.24$, $p = .791$, $\eta = .05$.

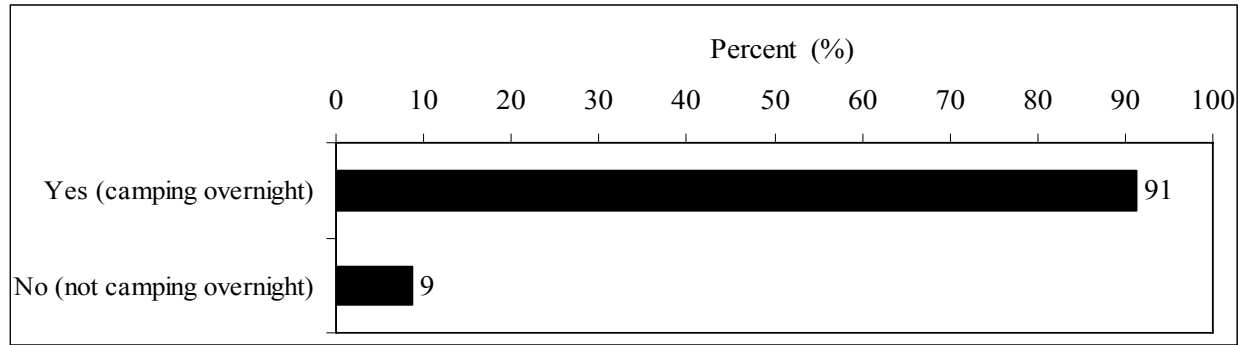
Figure 4. Group / party size of visitors at Henry Rierson Spruce Run Campground ¹



¹ Average (mean) = 6 people, median = 5 people, mode = 2 people.

Camping Participation. Figure 5 shows that 91% of visitors surveyed were camping overnight at Henry Rierson Spruce Run Campground on their current trip. Only 9% of respondents were day users. Although there were more day users in the low attachment group (20%) compared to the moderate attachment (7%) and high attachment (8%) groups, this difference among groups was not statistically significant, $\chi^2(2, N = 197) = 3.78, p = .151, V = .16$.

Figure 5. Percent of respondents who camped overnight at Henry Rierson Spruce Run Campground on their trip



Section Summary. Taken together, results showed that:

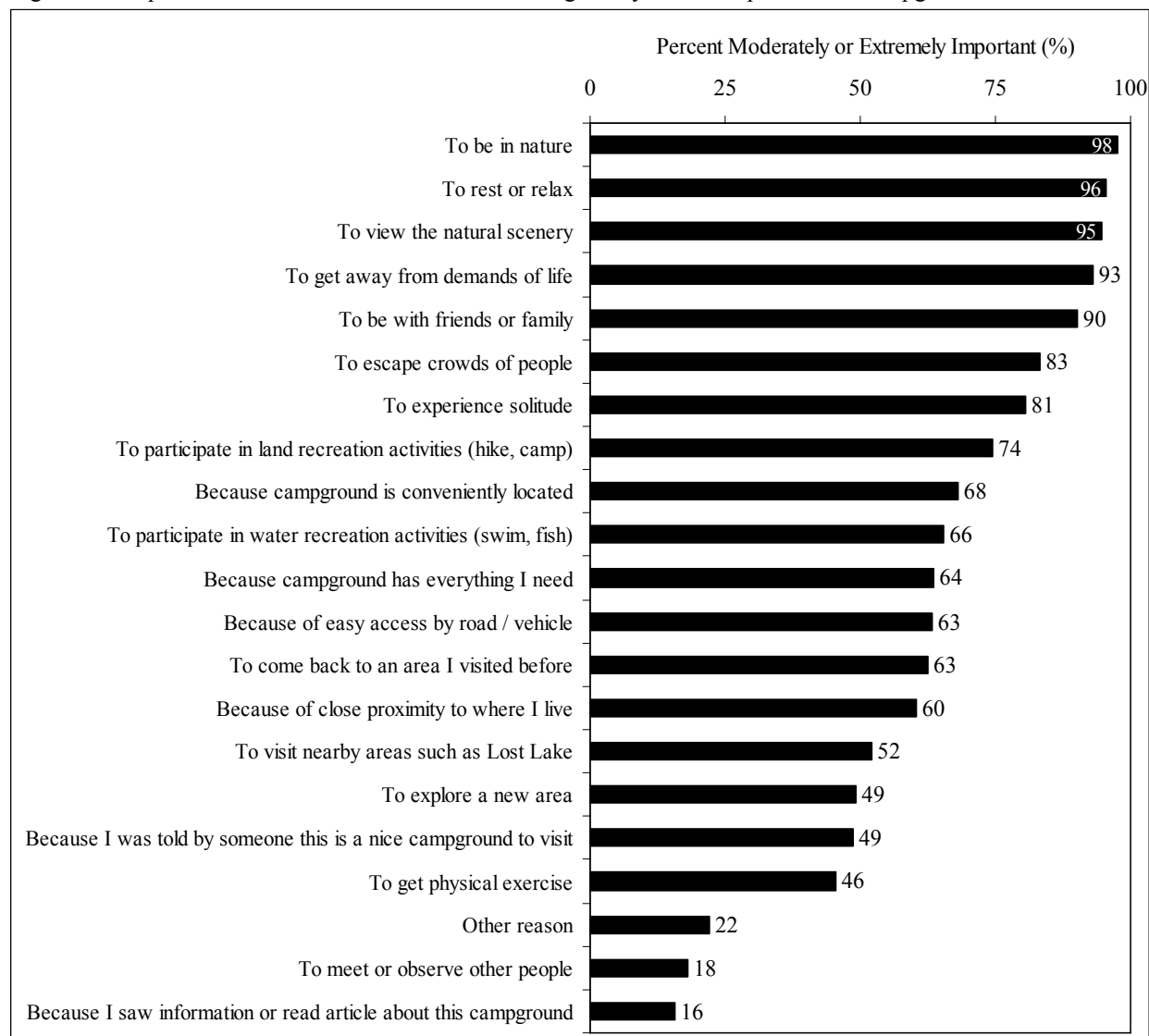
- The majority of visitors were moderately (54%) or highly (33%) attached to Henry Rierson Spruce Run Campground, whereas few visitors (13%) had low attachment to the campground.
- Most visitors (69%) had previously visited the campground at least once before with almost all high attachment respondents (92%) having visited before compared to significantly fewer (36%) low attachment respondents having visited before.
- The largest proportion of respondents visited in groups of three to four people (24%) or five to six people (21%). The average group size was six people, and this did not statistically differ among the three place attachment groups.
- Almost all visitors surveyed (91%) were camping overnight at Henry Rierson Spruce Run Campground on their current trip; only 9% were day users. Although there were more day users in the low attachment group (20%) compared to the moderate and high attachment (< 8%) groups, this difference was not statistically significant.

Motivations for Visiting the Campground

A leisure or recreation motivation is a reason for visiting an area or participating in an activity at a given time (Manfredo, Driver, & Tarrant, 1996). Researchers often provide study participants with a list of “push” and “pull” reasons (i.e., motivations), and ask them to rate the importance of each motive for their participation in leisure activities or visitation of a particular site or location. Forces that push people to engage in certain activities or visit particular sites are concerned with what arouses or activates leisure behavior at a particular site. Forces may also pull people to select certain activities or settings over others (Mannell, 1999; Mannell & Kleiber, 1997). In this study, for example, people may visit Henry Rierson Spruce Run Campground because they are being pushed by motivational factors such as the need to “get away from the demands of life” or

“be in nature.” They may also be pulled by beliefs that the campground is a good place to visit because “of the easy access by road” or because “it is conveniently located.” Consistent with previous recreation research, this study measured 20 possible push and pull motivations for visiting Henry Rierson Spruce Run Campground on 4-point scales from 1 “not at all important” to 4 “extremely important” (see Manfredo et al., 1996; Manning, 1999 for reviews).

Figure 6. Respondents' motivations / reasons for visiting Henry Rierson Spruce Run Campground ¹



¹ Other broad reasons included: nice, beautiful, fun, clean, and quiet location (11%); get together with family, children, friends, and pets (6%); good camping facilities (4%); close to the river and river life (e.g., fish, crawdads) (3%); hunting (3%); been visiting campground for years (2%); affordable / low fees (1%); and picnicking (1%).

The most important reasons why respondents visited the campground were to be in nature (98% moderately or extremely important), rest or relax (96%), view the natural scenery (95%), get away from demands of life (93%), and be with friends or family (90%; Figure 6).

Other important motivations included to escape crowds (83%) and experience solitude (81%), participate in land based (74%) and water based (66%) recreation activities, and because the

campground is conveniently located (68%), has everything that visitors need (64%) and is easily accessible (63%). A majority of visitors (52%) were also motivated to visit the campground because it is located close to nearby recreation areas such as Lost Lake.

The least important reasons for visiting were: saw information or read an article about the campground (16%), to meet or observe other people (18%), to get physical exercise (46%), because they were told by someone that the campground is a nice place to visit (49%), and to explore a new area (49%). Only 22% of respondents listed other reasons for visiting that were not listed on the survey such as: (a) it is a nice, beautiful, fun, clean, and quiet location; (b) to get together with family / children, friends, and pets; (c) there are good camping facilities; (d) it is close to the river and river life (e.g., fish, crawdads); and (e) to go hunting (Figure 6).

Table 3. Exploratory factor analysis of motivations / reasons for visiting the campground ¹

Motivations / reasons for visiting	Factor 1 Location / convenience	Factor 2 New to area / learn about area	Factor 3 Recreation activities	Factor 4 Enjoy nature	Factor 5 Rest / Escape pressures	Factor 6 Escape crowds	Factor 7 Similar people
Because the campground is conveniently located	.85						
Because of the close proximity to where I live	.83						
Because of the easy access by road	.64						
To come back to an area that I visited before	.60						
Because the campground has everything that I need	.58						
To explore a new area		.79					
Because I saw information / read article about this campground		.65					
To meet or observe other people		.61					
Because I was told by someone this is a nice campground		.49					
To participate in water recreation activities (swim, fish)			.72				
To visit nearby lake areas such as Lost Lake			.71				
To participate in land recreation activities (hike, camp)			.67				
To get physical exercise			.40				
To be in nature				.85			
To view the natural scenery				.81			
To get away from demands of life					.83		
To rest or relax					.74		
To experience solitude						.87	
To escape crowds of people						.84	
To be with friends of family							.84
Cronbach alpha	.80	.66	.66	.84	.79	.72	--
Eigenvalue	2.89	2.32	1.98	1.84	1.77	1.70	1.03
Percent variance explained ²	14.46	11.61	9.88	9.19	8.84	8.48	5.16

¹ Cell entries are factor loadings. Only factor loadings $\geq .40$ are shown. Items that cross-loaded were retained in scales where loadings were highest. Variables coded on 4-point scales where 1 = not at all important to 4 = extremely important.

² Total variance explained = 67.63%.

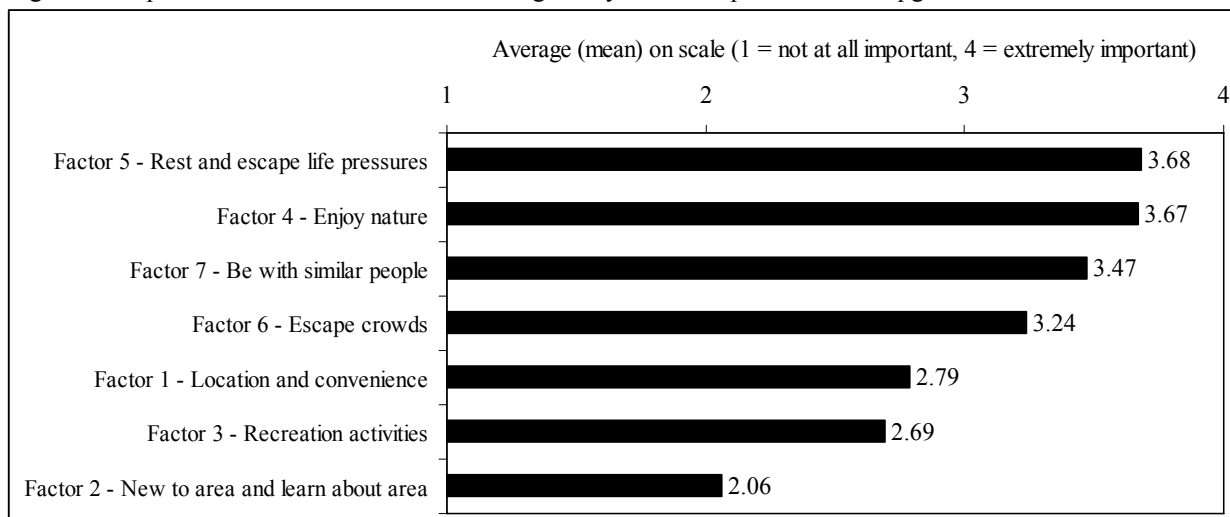
A principal components exploratory factor analysis (EFA) with varimax rotation was conducted on these motivation items to reduce them into a few broad reasons for visiting Henry Rierson Spruce Run Campground. Membership of individual variables in a particular factor is based on factor loadings attributed to each variable. In general, factor loadings should be $\geq .40$ and eigenvalues should be ≥ 1.0 (Bryant & Yarnold, 1995). Table 3 shows that this analysis resulted in seven broad factors explaining respondents' reasons for visiting the campground, labeled:

- factor 1: location and convenience (5 variables, $\alpha = .80$),
- factor 2: new to the area and learn about the area (4 variables, $\alpha = .66$),
- factor 3: participation in recreation activities (4 variables, $\alpha = .66$),
- factor 4: enjoy nature (2 variables, $\alpha = .84$),
- factor 5: rest and escape life pressures (2 variables, $\alpha = .79$),
- factor 6: escape crowds (2 variables, $\alpha = .72$),
- factor 7: be with similar people (1 variable).

Collectively, these seven factors explained 68% of respondents' motivations for visiting this campground.

Figure 7 shows that on average, the most important broad factors or reasons for visiting Henry Rierson Spruce Run Campground were to rest and escape life pressures (factor 5; $M = 3.68$) and to enjoy nature (factor 4, $M = 3.67$) followed by to be with similar people (factor 7, $M = 3.47$) and escape crowds (factor 6, $M = 3.24$). Less important factors were location and convenience (factor 1, $M = 2.79$), and participation in recreation activities (factor 3, $M = 2.69$). The least important factor was to learn about and visit a new area (factor 2, $M = 2.06$).

Figure 7. Importance of broad reasons for visiting Henry Rierson Spruce Run Campground ¹



¹ Numbers represent average importance (i.e., mean) for each composite factor.

All seven broad factors / reasons for visiting Henry Rierson Spruce Run Campground were least important to low attachment respondents and were most important to high attachment visitors

(Table 4). This difference among place attachment groups was statistically significant for four of seven motivation factors, $F(2, 194 \text{ to } 195) \geq 5.41, p < .005, \eta \geq .23$. Enjoying nature, escaping crowds, and being with similar people were important to all respondents irrespective of their level of attachment to this campground, $F(2, 194 \text{ to } 195) \leq 2.88, p > .059, \eta \leq .17$.

Table 4. Motivations for each of the place attachment cluster groups

Motivation factors	Cluster groups ¹			F-value	p-value	Eta (η)
	1. Low attachment	2. Moderate attachment	3. High attachment			
Factor 1: Location / convenience	2.18 ^a	2.65 ^b	3.21 ^c	23.05	< .001	.44
Factor 2: New to area / learn about area	1.84 ^a	1.95 ^a	2.25 ^b	5.41	.005	.23
Factor 3: Recreation activities	2.30 ^a	2.65 ^{ab}	2.88 ^b	6.80	.001	.26
Factor 4: Enjoy nature	3.59	3.64	3.78	2.88	.059	.17
Factor 5: Rest / escape pressures	3.44 ^a	3.63 ^a	3.86 ^b	6.86	.001	.26
Factor 6: Escape crowds	3.10	3.22	3.33	1.03	.359	.10
Factor 7: Similar people	3.17	3.52	3.53	2.13	.121	.15

¹ Cell entries are means. Items coded on 4-point scale: 1 = not at all important to 4 = extremely important. Means with different letter superscripts differ at $p < .05$ using Tamhane T2 or Scheffe post-hoc tests.

Section Summary. Taken together, results showed that:

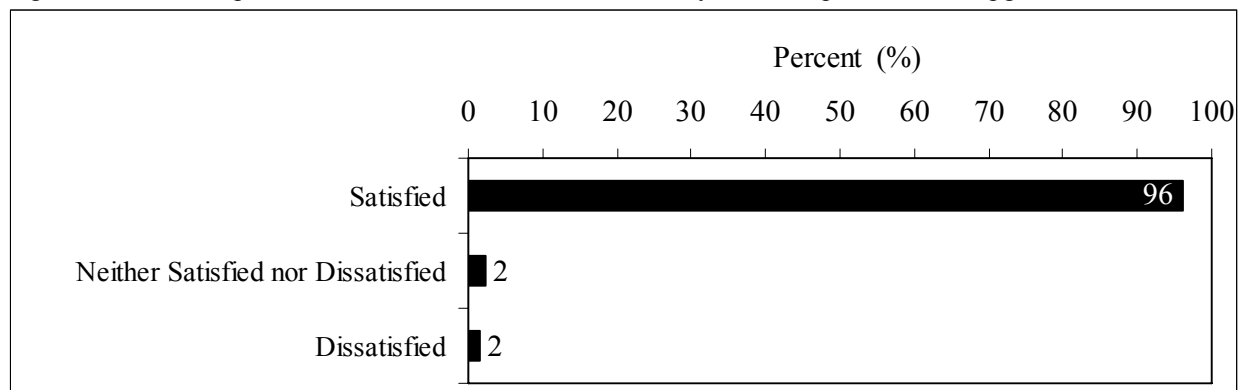
- The most important reasons why respondents visited Henry Rierison Spruce Run Campground were to be in nature (98%), rest or relax (96%), view the natural scenery (95%), get away from demands of life (93%), and be with friends or family (90%).
- The least important reasons for visiting were because respondents saw information or read an article about the campground (16%), to meet or observe other people (18%), to get physical exercise (46%), because they were told by someone that the campground is a nice place to visit (49%), and to explore a new area (49%).
- The 20 motivations were reduced to seven broad reasons for visiting the campground. In order of importance, these reasons were: (a) rest and escape life pressures, (b) enjoy nature, (c) be with similar people, (d) escape crowds, (e) location and convenience, (f) participation in recreation activities, and (g) learn about and visit a new area.
- All seven broad reasons for visiting the campground were least important to low attachment respondents and most important to high attachment visitors, and this difference among groups was statistically significant for four of seven motivation factors. Enjoying nature, escaping crowds, and being with similar people were not significantly different among groups, as they were important to all respondents irrespective of their level of attachment to this campground.

Satisfaction with and Importance of Conditions and Experiences

Overall Satisfaction. It is generally accepted that motivations tend to initiate recreation participation and satisfaction occurs as a result of this participation (see Manning, 1999 for a

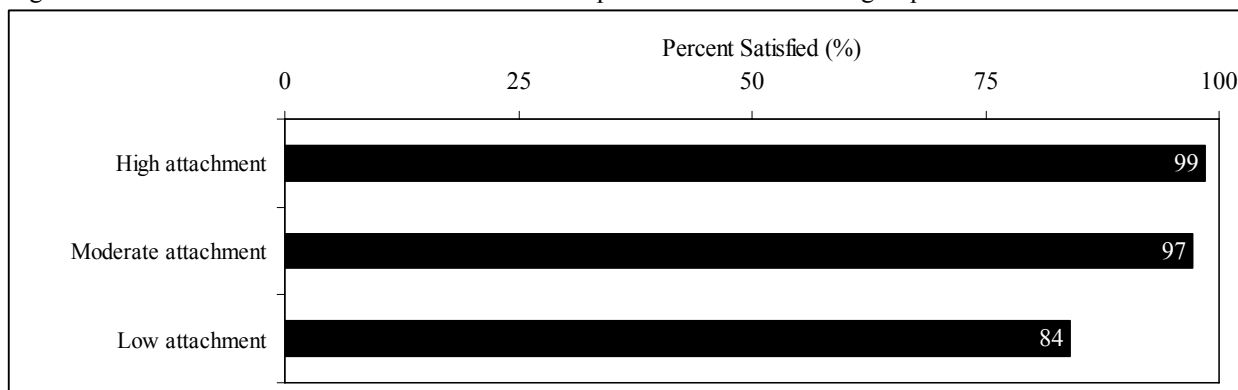
review). Respondents in this study were asked “overall, how satisfied are you with your visit to Henry Rierson Spruce Run Campground?” Overall satisfaction of respondents was extremely high, as 96% were satisfied with their visit (Figure 8). Almost no respondents (2%) were dissatisfied with their visit.

Figure 8. Overall respondent satisfaction with their visit to Henry Rierson Spruce Run Campground



Overall satisfaction increased as place attachment increased. Low attachment respondents were significantly less satisfied (84% satisfied) than moderate attachment (97%) and high attachment (99%) respondents, $\chi^2(4, N = 197) = 9.55, p = .049, V = .18$ (Figure 9). This suggests that people who visited this campground for many years and were more attached to the campground were slightly more satisfied than the few newcomers and less attached visitors.

Figure 9. Overall satisfaction of visitors in each of the place attachment cluster groups ¹



¹ $\chi^2(4, N = 197) = 9.55, p = .049, V = .18$.

Satisfaction with Specific Conditions and Experiences. Although almost all respondents were satisfied with their overall visit to Henry Rierson Spruce Run Campground (Figure 8), this does not indicate that visitors were satisfied with every aspect of their experience or the conditions at this campground. In fact, uniformly high levels of overall visitor satisfaction are common in recreation research, thus are of only limited usefulness for managers (Manning, 1999).

Hendee's (1974) “multiple satisfactions” approach suggests that recreation resources offer people the opportunity for a range of experiences which, in turn, give rise to various human

satisfactions. In other words, an individual's satisfaction with an activity or experience is complex; he or she may evaluate several aspects of the activity and experience (e.g., resource, social, managerial). Satisfaction is based on different experiences that often provide different types of satisfactions, and satisfaction is based on multiple factors that differ from person to person rather than a single overall or global evaluation of satisfaction. This study, therefore, asked visitors the extent to which they were satisfied with 20 specific aspects of their experience and the conditions at Henry Rierson Spruce Run Campground (e.g., road access, parking availability, absence of litter) on 5-point scales from 1 "very dissatisfied" to 5 "very satisfied."

Figure 10. Visitor satisfaction with conditions and experiences at Henry Rierson Spruce Run Campground

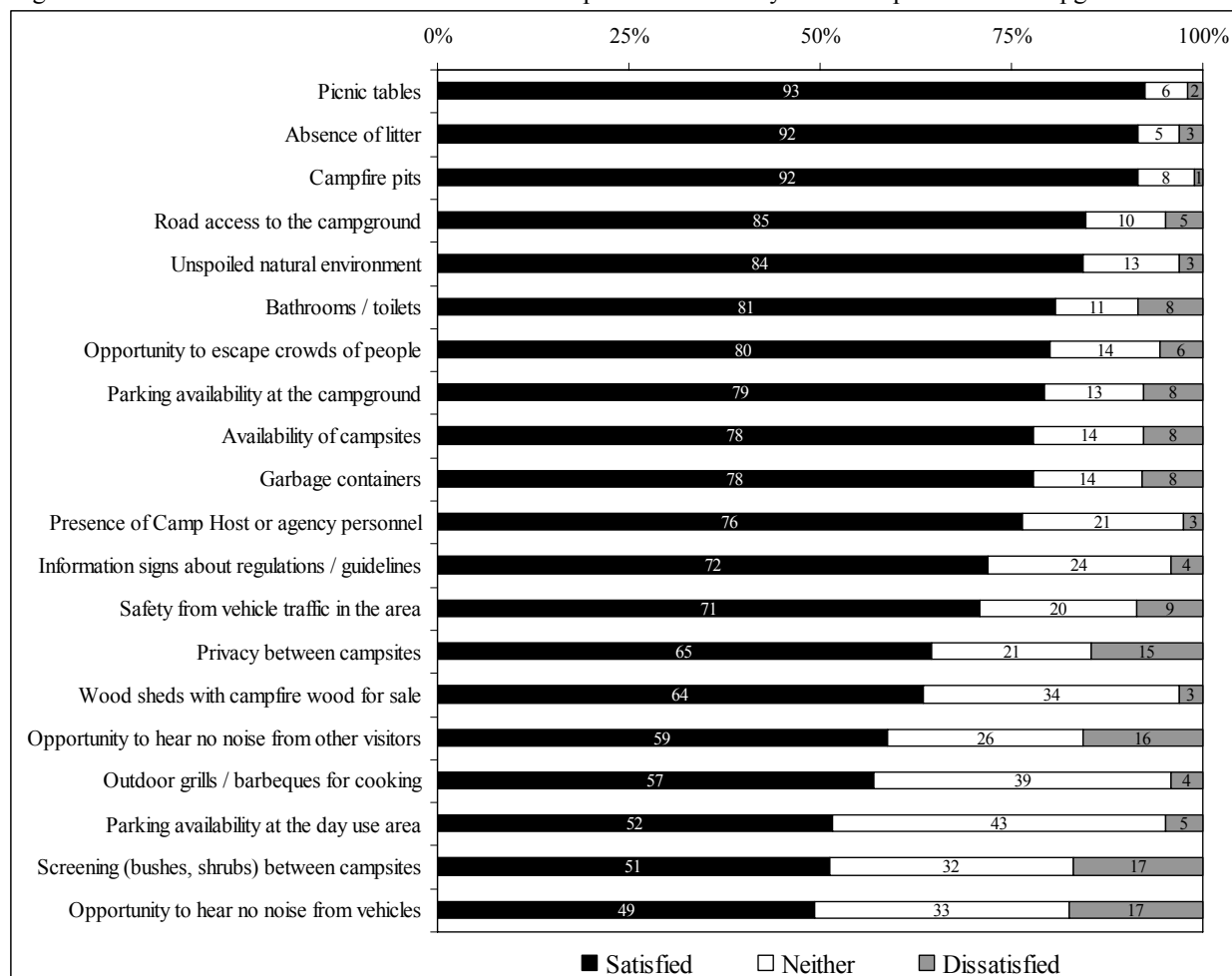


Figure 10 shows that the majority of respondents were satisfied with all aspects of their experience and the conditions at Henry Rierson Spruce Run Campground except the opportunity to hear no noise from vehicles. The largest proportion of visitors (92% to 93% satisfied) were satisfied with the picnic tables, absence of litter, and campfire pits at this campground. Many respondents were also satisfied with the road access to the campground (85%), recreating in an unspoiled natural environment (84%), condition of bathrooms (81%), and opportunities for escaping crowds of people (80%). Over 70% of visitors were also satisfied with parking availability at the campground (79%), availability of campsites (78%), garbage containers (78%),

presence of Camp Hosts or agency personnel (76%), informational signage (72%), and safety from vehicle traffic (71%).

Although the majority of respondents were satisfied with almost all aspects of their experience and the conditions at the campground, they were least satisfied with the opportunity to hear no noise from vehicles (49% satisfied, 17% dissatisfied), screening (e.g., bushes) between campsites (51% satisfied, 17% dissatisfied), opportunity to hear no noise from other visitors (59% satisfied, 16% dissatisfied), and privacy between campsites (65% satisfied, 15% dissatisfied).

On average, visitor satisfaction with each of the 20 aspects of their experience and the conditions at Henry Rierson Spruce Run Campground increased as place attachment increased (Table 5). For example, average (i.e., mean) satisfaction with the opportunity to escape crowds of people was 3.52 for respondents in the low attachment group, 4.19 for moderately attached visitors, and 4.55 for those in the high attachment group. This pattern was consistent across all satisfaction variables and was statistically significant for 16 of 20 variables, $F(2, 174 \text{ to } 192) \geq 3.90$, $p < .022$, $\eta \geq .20$. Taken together, this suggests that the few newcomers and less attached visitors were less satisfied with all aspects of their experience and the conditions at the campground compared to those who were moderately or highly attached to this campground.

Table 5. Satisfaction with conditions and experiences for each of the place attachment cluster groups

Satisfaction items	Cluster groups ¹			F-value	p-value	Eta (η)
	1. Low attachment	2. Moderate attachment	3. High attachment			
Picnic tables	4.24 ^a	4.39 ^a	4.76 ^b	7.18	.001	.27
Absence of litter	4.20 ^a	4.40 ^a	4.70 ^b	5.21	.006	.23
Campfire pits	4.12 ^a	4.50 ^b	4.82 ^c	10.49	< .001	.32
Road access to the campground	3.80 ^a	4.31 ^b	4.33 ^b	3.90	.022	.20
Unspoiled natural environment	3.79 ^a	4.21 ^a	4.61 ^b	11.10	< .001	.33
Bathrooms / toilets	3.72 ^a	4.09 ^{ab}	4.45 ^b	6.05	.003	.24
Opportunity to escape crowds of people	3.52 ^a	4.19 ^b	4.55 ^c	12.87	< .001	.35
Parking availability at campground	3.54 ^a	4.18 ^b	4.31 ^b	5.63	.004	.24
Availability of campsites	3.78	4.20	4.21	1.85	.161	.14
Garbage containers	3.84	4.03	4.33	2.98	.053	.17
Presence of Camp Host / agency personnel	3.83 ^a	4.11 ^a	4.68 ^b	11.78	< .001	.34
Informational signs about regulations	3.74 ^a	3.97 ^a	4.33 ^b	4.88	.009	.22
Safety from vehicle traffic in area	3.35 ^a	3.93 ^b	4.31 ^c	8.99	< .001	.30
Privacy between campsites	3.17 ^a	3.81 ^b	4.06 ^b	5.93	.003	.24
Wood sheds with campfire wood for sale	3.50 ^a	3.91 ^a	4.42 ^b	10.43	< .001	.31
Opportunity to hear no noise from visitors	2.96 ^a	3.56 ^a	4.02 ^b	8.96	< .001	.30
Outdoor grills / barbeques for cooking	3.42 ^a	3.70 ^a	4.25 ^b	9.67	< .001	.31
Parking availability in day use area	3.57	3.68	3.82	0.73	.485	.09
Screening (e.g., bushes) between campsites	3.04	3.54	3.66	2.85	.060	.17
Opportunity to hear no noise from vehicles	2.84 ^a	3.38 ^{ab}	3.79 ^b	7.66	.001	.27

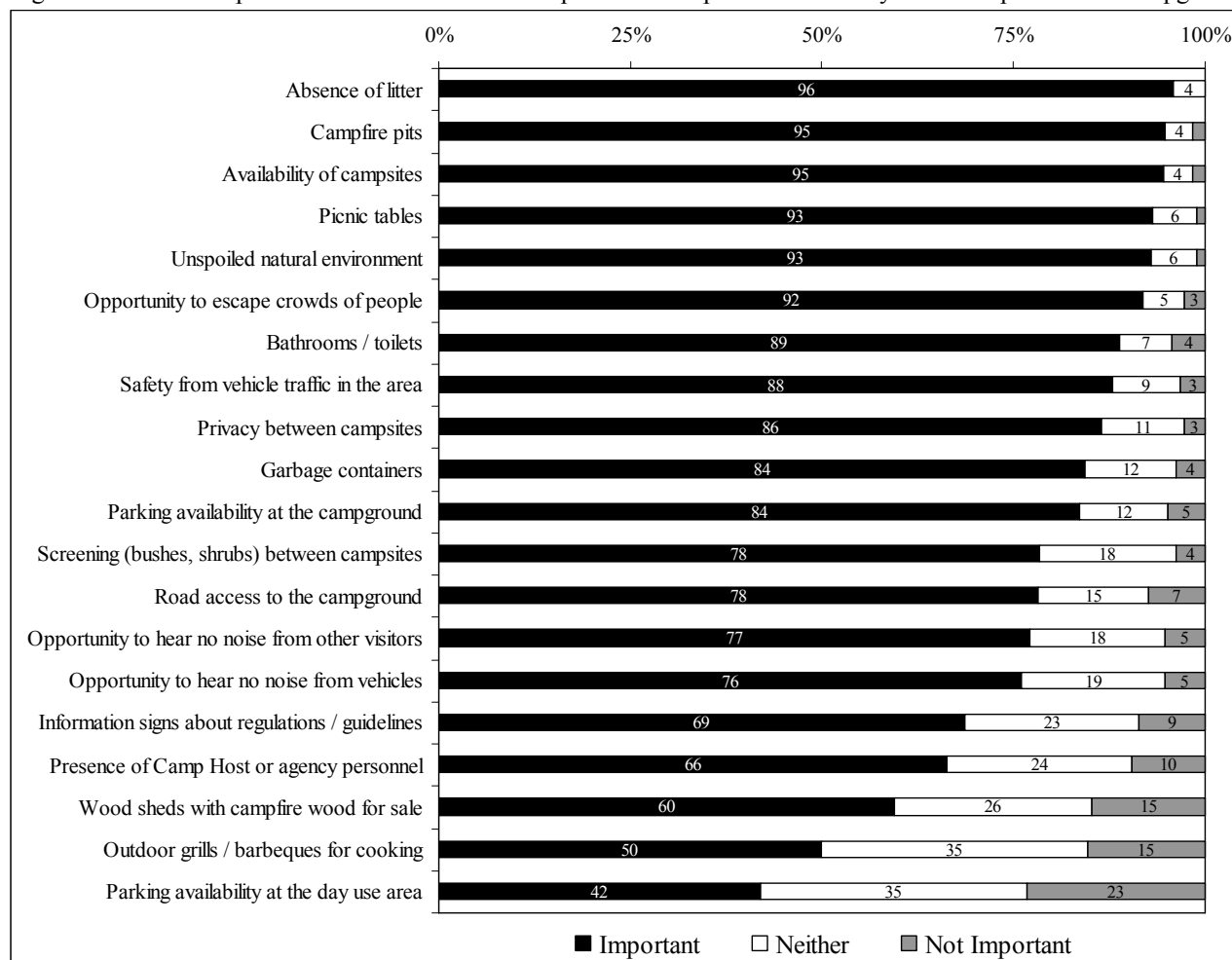
¹ Cell entries are means. Items coded on 5-point scale: 1 = very dissatisfied to 5 = very satisfied.

Means with different letter superscripts differ at $p < .05$ using Tamhane T2 or Scheffe post-hoc tests.

Importance of Specific Conditions and Experiences. Research has demonstrated that although recreationists may be satisfied with a particular aspect of the setting or their experience, it may not be important to them that the characteristic is actually provided (see Manning, 1999 for a review). For example, visitors may be satisfied with informational signage about regulations, but feel that signs are not an important characteristic of good recreation settings or experiences.

The majority of visitors surveyed at Henry Rierson Spruce Run Campground believed that it was important to provide almost all of the characteristics listed in Figure 11 at the campground. Absence of litter, campfire pits, availability of campsites, picnic tables, an unspoiled natural environment, and opportunities to escape crowds of other people were rated as important characteristics by over 90% of respondents (Figure 11). Bathrooms, safety from vehicle traffic, privacy between campsites, garbage containers, and availability of parking at the campground were also important for over 80% of respondents. Screening (e.g., bushes) between campsites, road access to the campground, and the opportunity to hear no noise from vehicles and other visitors were important for over 70% of visitors at the campground.

Figure 11. Visitor importance that conditions and experiences are provided at Henry Rierson Spruce Run Campground



Least important characteristics were availability of parking in the day use area (42% important, 23% unimportant), outdoor grills / barbeques for cooking (50% important, 15% unimportant), and wood sheds with campfire wood for sale (60% important, 15% unimportant; Figure 11).

On average, importance of specific experiences and conditions at Henry Rierson Spruce Run Campground increased as place attachment increased (Table 6). For example, average (i.e., mean) importance of the presence of Camp Hosts or agency personnel was 3.29 for respondents in the low attachment group, 3.79 for visitors in the moderate attachment group, and 4.47 for those in the high attachment group. This pattern was consistent across 19 or 20 variables and was statistically significant for 14 of 20 variables, $F(2, 167 \text{ to } 182) \geq 3.75, p < .026, \eta^2 \geq .20$. This suggests that the few newcomers and less attached visitors rated aspects of their experience and the conditions at Henry Rierson Spruce Run Campground as less important than those who were moderately or highly attached to this campground.

Table 6. Importance of conditions and experiences for each of the place attachment cluster groups

Importance items	Cluster groups ¹			F-value	p-value	Eta (η)
	1. Low attachment	2. Moderate attachment	3. High attachment			
Absence of litter	4.58 ^a	4.63 ^{ab}	4.85 ^b	4.80	.009	.23
Campfire pits	4.42 ^a	4.55 ^a	4.81 ^b	4.24	.016	.21
Availability of campsites	4.23 ^a	4.51 ^a	4.78 ^b	6.03	.003	.25
Picnic tables	4.21 ^a	4.39 ^a	4.71 ^b	6.99	.001	.27
Unspoiled natural environment	4.45	4.51	4.72	2.23	.111	.16
Opportunity to escape crowds of people	4.04 ^a	4.45 ^a	4.79 ^b	8.89	< .001	.30
Bathrooms / toilets	4.25 ^a	4.31 ^{ab}	4.69 ^b	4.39	.014	.22
Safety from vehicle traffic in area	4.23	4.33	4.50	1.14	.323	.11
Privacy between campsites	4.32 ^a	4.39 ^{ab}	4.70 ^b	3.75	.026	.20
Garbage containers	3.83 ^a	4.22 ^a	4.61 ^b	8.72	< .001	.30
Parking availability at campground	3.70 ^a	4.15 ^{ab}	4.47 ^b	8.13	< .001	.30
Screening (e.g., bushes) between campsites	4.30	4.11	4.14	0.39	.678	.07
Road access to the campground	3.83 ^a	3.86 ^a	4.51 ^b	9.10	< .001	.30
Opportunity to hear no noise from visitors	3.92	4.02	4.26	1.53	.220	.13
Opportunity to hear no noise from vehicles	3.79	4.02	4.14	1.28	.282	.12
Informational signs about regulations	3.46 ^a	3.84 ^{ab}	4.20 ^b	4.90	.009	.23
Presence of Camp Host / agency personnel	3.29 ^a	3.79 ^a	4.47 ^b	13.10	< .001	.36
Wood sheds with campfire wood for sale	3.17 ^a	3.63 ^{ab}	4.10 ^b	6.17	.003	.25
Outdoor grills / barbeques for cooking	3.21 ^a	3.33 ^{ab}	3.81 ^b	3.87	.023	.21
Parking availability in day use area	2.76	3.23	3.27	1.21	.301	.12

¹ Cell entries are means. Items coded on 5-point scale: 1 = not important to 5 = very important.

Means with different letter superscripts differ at $p < .05$ using Tamhane T2 or Scheffe post-hoc tests.

Importance – Performance Analysis. Given that visitors can be satisfied with a characteristic of the setting or their experience, but feel that it is not important that the characteristic is actually provided, it is important to understand relationships between importance and performance (i.e.,

satisfaction). Management can be informed by combining these two measures, which allows for creation of an importance – performance (IP) matrix that offers a visual understanding of relationships between the measures (Figure 12). Importance is represented on the vertical axis (i.e., y-axis) with average ratings (i.e., means) recoded from -2 “not important” to +2 “very important.” Average performance (i.e., satisfaction) is recoded and measured on the horizontal axis (i.e., x-axis) from -2 “very dissatisfied” to +2 “very satisfied.” When combined, the axes intersect and produce a matrix of 4 quadrants interpreted as “concentrate here” (high importance, low satisfaction; Quadrant A), “keep up the good work” (high importance and satisfaction; Quadrant B), “low priority” (low importance and satisfaction; Quadrant C), and “possible overkill” (low importance, high satisfaction; Quadrant D). This matrix provides managers with an easily understandable picture of the status of services, facilities, and conditions as perceived by visitors (Bruyere, Rodriguez, & Vaske, 2002; Vaske, Beaman, Stanley, & Grenier, 1996).

Figure 12. Average visitor importance and satisfaction with conditions and experiences

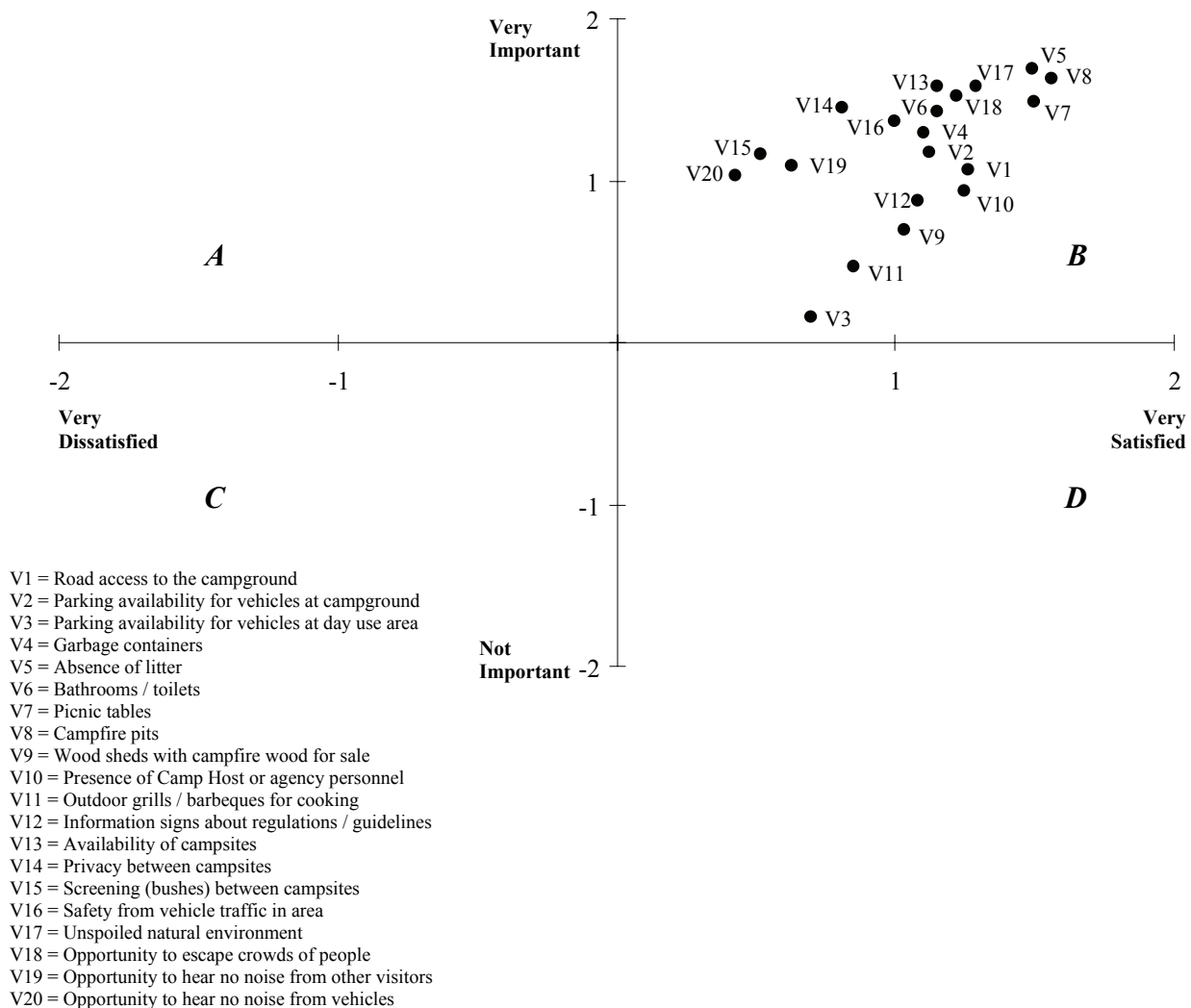
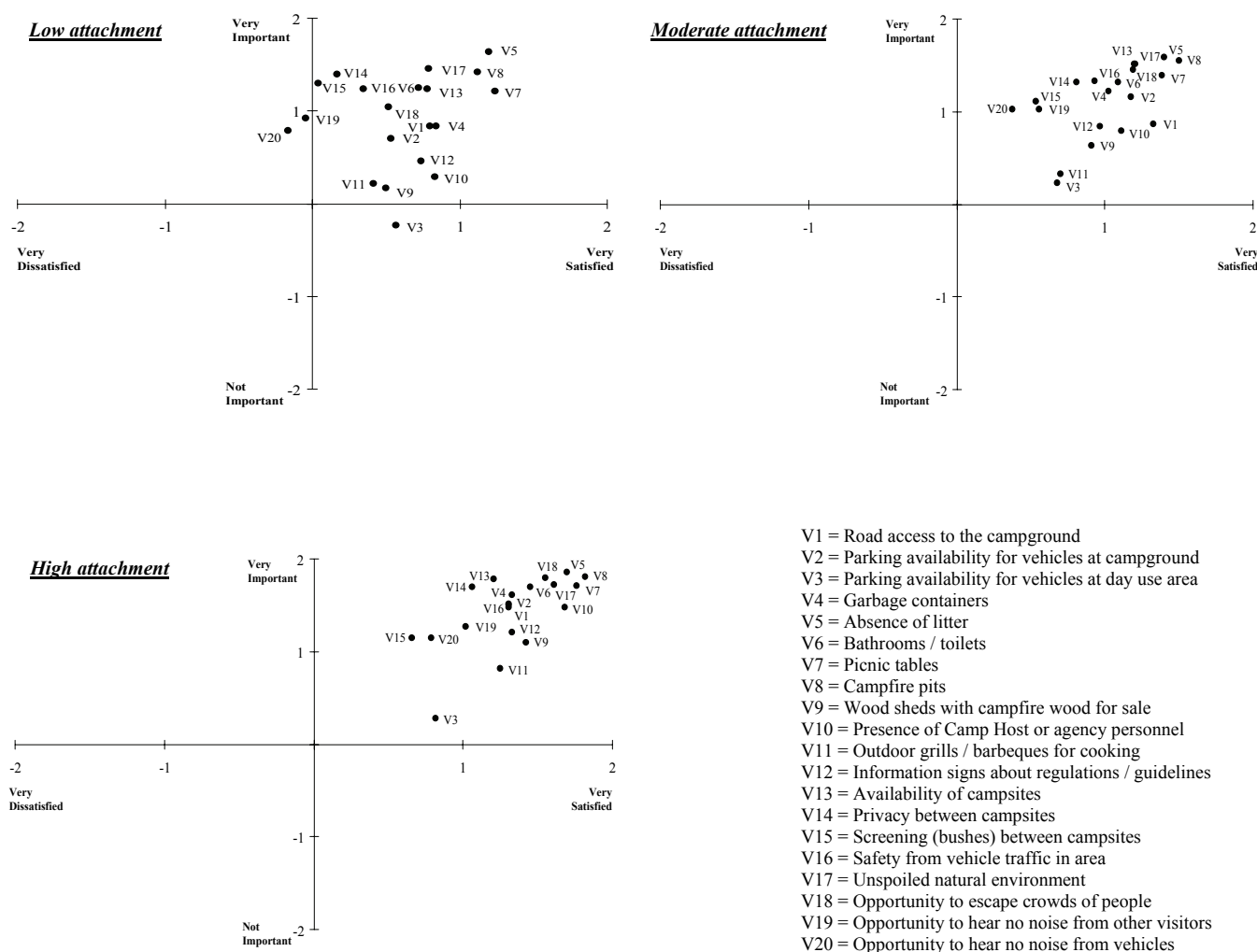


Figure 12 shows that, on average, respondents rated all characteristics (i.e., experiences, conditions) as important at Henry Rierson Spruce Run Campground. Respondents were also

satisfied with all of the characteristics at the campground. These findings suggest that managers of the campground (i.e., Oregon Department of Forestry [ODF]) should “keep up the good work” (Quadrant B) in their current management of all characteristics at the campground. Closer inspection of results in Figure 12, however, suggests that some characteristics could become problematic in the future. Screening between campsites (e.g., bushes, shrubs) and opportunities to hear no noise from vehicles and other visitors were important, but respondents were least satisfied with these characteristics. It is recommended that these issues be monitored to ensure that satisfaction does not decline in the future.

Figure 13. Average importance and satisfaction with conditions and experiences for each of the place attachment cluster groups



As shown above in Tables 5 and 6, importance of and satisfaction with experiences and conditions at Henry Rierson Spruce Run Campground differed among the three place attachment groups. Figure 13 graphically shows the relationships between importance and performance (i.e., satisfaction) for each of these attachment groups. Results showed that importance of and

satisfaction with experiences and conditions at Henry Rierson Spruce Run Campground increased as place attachment increased. Both moderate attachment and high attachment respondents rated all experiences and conditions as important at the campground, and were satisfied with these characteristics. These findings suggest that according to moderately and highly attached visitors, managers of the campground (i.e., ODF) should “keep up the good work” (Quadrant B) in their current management of the campground.

The few low attachment respondents, however, considered parking availability in the day use area to be somewhat unimportant but were satisfied with day use parking anyway, suggesting that this group of visitors considers this condition to be “possible overkill” (Quadrant D). More importantly, this low attachment group also believed that it was important to have opportunities for hearing no noise from vehicles and other visitors, but were dissatisfied with these noise related conditions. This finding suggests that managers may need to concentrate (Quadrant A) on providing opportunities for no vehicle or visitor noise, especially for newcomers or visitors who are less attached to Henry Rierson Spruce Run Campground.

Section Summary. Taken together, results showed that:

- Almost all visitors (96%) were satisfied with their overall visit to Henry Rierson Spruce Run Campground.
- Overall satisfaction increased as place attachment increased; people who visited this campground for many years and were more attached to the campground were slightly more satisfied with their visit than the few newcomers and less attached visitors.
- The majority of respondents were satisfied with all aspects of their experience and the conditions at the campground, especially picnic tables, absence of litter, and campfire pits (over 90% of visitors satisfied).
- Visitors were least satisfied with the opportunity to hear no noise from vehicles (17% dissatisfied), screening (e.g., bushes) between campsites (17%), opportunity to hear no noise from other visitors (16%), and privacy between campsites (15%).
- The majority of visitors also rated almost all aspects of their experience and the conditions at the campground as important, especially absence of litter, campfire pits, availability of campsites, picnic tables, unspoiled natural environment, and opportunities to escape crowds of other people (over 90% of visitors rated as important).
- Least important characteristics to visitors were availability of parking in the day use area (23% unimportant), outdoor grills / barbeques for cooking (15%), and wood sheds with campfire wood for sale (15%).
- Importance of and satisfaction with experiences and conditions at the campground increased as place attachment increased. Compared to those who were moderately or highly attached to this campground, the few newcomers and less attached visitors rated almost all aspects of their experience and the conditions at the campground as less important, and were less satisfied with these experiences and conditions.
- Visitors rated, on average, all aspects of their experience and the conditions at the campground as important and were satisfied with these aspects, suggesting that managers should “keep up the good work” in their management of the campground.

- The few low attachment respondents considered parking availability in the day use area to be somewhat unimportant but were satisfied with day use parking anyway, suggesting that this group of visitors considers this condition to be “possible overkill. This group also believed that it was important to have opportunities for hearing no noise from vehicles and other visitors, but were dissatisfied with these noise related conditions, suggesting that managers may need to concentrate on providing opportunities for no vehicle or visitor noise, especially for newcomers or less attached visitors.
- To ensure that satisfaction does not decline in the future, these conditions should be monitored especially privacy and screening between campsites (e.g., bushes, shrubs), and opportunities to hear no noise from vehicles and other visitors.

Evaluations and Tradeoffs for Potential Management Strategies

Support and Opposition for Potential Management Strategies. One objective of this study was to examine whether visitors at Henry Rierson Spruce Run Campground supported or opposed various possible management alternatives for this campground. The survey, therefore, asked visitors the extent to which they supported or opposed eight different potential management alternatives: (a) increase the amount of parking for vehicles at campsites, (b) provide a separate overflow parking area for vehicles, (c) provide more privacy / screening between campsites, (d) increase the number of campsites, (e) provide some group campsites for large groups (e.g., up to 20 people), (f) increase the size of the day use area, (g) close the campground for up to one year to redesign the area, and (h) keep things as they are now and do not change anything. These variables were measured on 5-point scales from 1 “strongly oppose” to 5 “strongly support.”

Figure 14. Visitor support and opposition toward potential management strategies

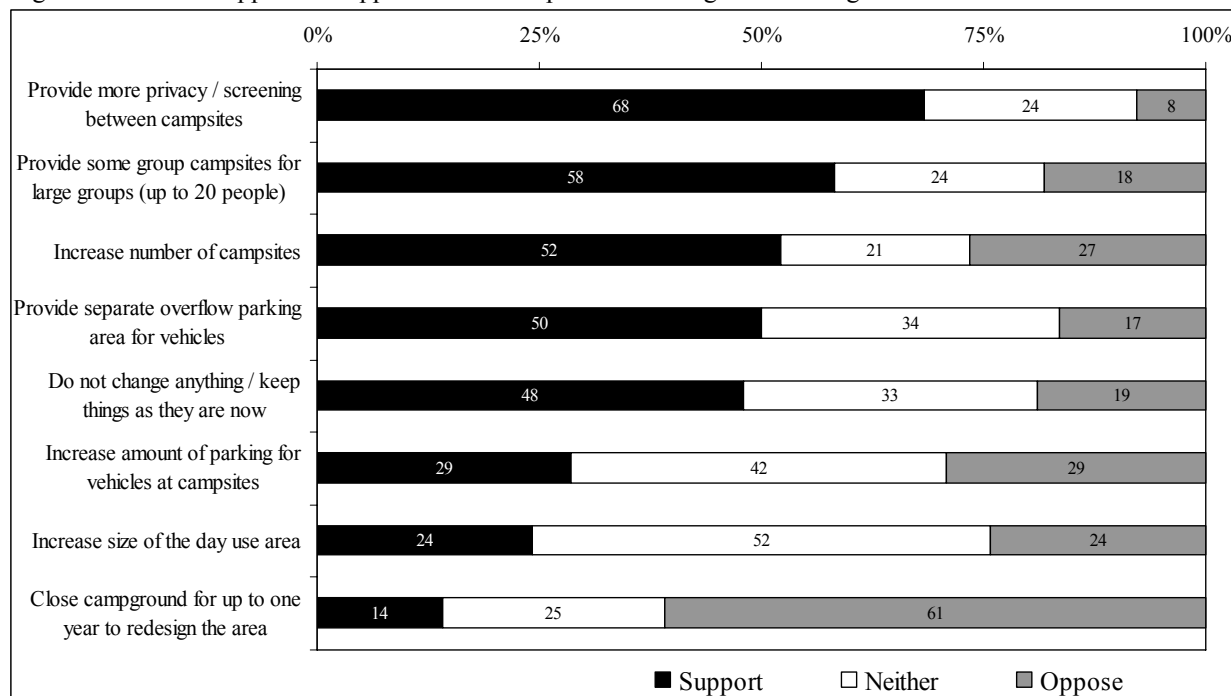


Figure 14 shows that the largest proportion of respondents supported providing more privacy and screening (e.g., bushes, shrubs) between campsites (68% support, 8% oppose). The majority of respondents also supported providing group campsites for large groups (58% support, 18% oppose), increasing the number of campsites (52% support, 27% oppose), and providing a separate overflow parking area (50% support, 17% oppose). Fewer visitors were supportive of keeping things as they are now and not changing anything (48% support, 19% oppose).

Respondents were somewhat divided in their support for increasing the amount of parking for vehicles at campsites (29% support, 29% oppose) and increasing the size of the day use area (24% support, 24% oppose). Conversely, respondents opposed closing the campground for up to a year to redesign the area (14% support, 61% oppose).

There were no differences among the three place attachment groups in their opposition and support for six of the eight management alternatives, $F(2, 192 \text{ to } 194) \leq 2.27, p \geq .106, \eta \leq .15$ (Table 7). Responses to two of the management actions statistically differed among groups. First, support for increasing the size of the day use area was slightly higher for respondents in the low and moderate attachment groups compared to those in the high attachment group, $F(2, 191) = 3.32, p = .038, \eta = .18$. This is somewhat predictable because as discussed above, less attached respondents were more likely to be day users. Second, support for keeping things as they are now and not changing anything (i.e., status quo) was slightly higher for visitors in the high attachment group compared to less attached visitors, $F(2, 189) = 5.88, p = .003, \eta = .24$.

Table 7. Visitor support toward potential management strategies for each of the place attachment cluster groups

Management strategies	Cluster groups ¹			F-value	p-value	Eta (η)
	1. Low attachment	2. Moderate attachment	3. High attachment			
Provide more privacy / screening between campsites	4.08	3.86	3.71	1.35	.263	.12
Provide some group campsites for large groups	3.48	3.72	3.40	1.42	.244	.12
Increase number of campsites	3.20	3.45	3.44	0.39	.679	.06
Provide separate overflow parking area for vehicles	3.48	3.35	3.38	0.16	.854	.04
Do not change anything / keep things as are now	2.88 ^a	3.39 ^b	3.75 ^c	5.88	.003	.24
Increase amount of parking for vehicles at campsites	3.08	2.93	3.00	0.25	.777	.05
Increase size of the day use area	3.20 ^a	3.08 ^a	2.72 ^b	3.32	.038	.18
Close campground for up to one year to redesign	2.40	2.25	1.91	2.27	.106	.15

¹ Cell entries are means. Items coded on 5-point scale: 1 = strongly oppose to 5 = strongly support.

Means with different letter superscripts differ at $p < .05$ using LSD post-hoc tests.

Although these findings illustrate whether visitors supported or opposed particular management strategies, they do not reveal the extent of support or opposition (e.g., strongly support, slightly support, strongly oppose, slightly oppose). In addition, these results do not show the level of consensus or agreement among visitors. If a management action is supported, but there is little consensus among visitors, implementation of the action could be highly controversial and cause visitor disapproval and discontent, and possible backlash toward managers.

To understand the extent of support or opposition and degree of consensus among visitors, it is necessary to examine several basic summary statistics that describe responses to management

variables in terms of central tendency (e.g., mean), dispersion (e.g., standard deviation), and form (e.g., skewness) (Loether & McTavish, 1976). A goal of human dimensions research is to provide information that will improve management decision making. When communicating results to managers, therefore, it is imperative that researchers provide clear statistical information and convey the practical implications of findings. Although these various basic summary statistics can efficiently convey meaning, an accurate understanding of a variable's distribution requires consideration of all measures simultaneously, which can be challenging to communicate and understand. The Potential for Conflict Index (PCI), therefore, was developed to facilitate understanding and interpretation of statistical data (e.g., Manfredo, Vaske, & Teel, 2003; Vaske, Needham, Newman, Manfredo, & Petchenik, 2006). The PCI was used in this project to understand the: (a) extent of support and opposition toward potential management alternatives, and (b) degree of consensus among visitors regarding these alternatives.

The management variables in this study used response scales with an equal number of response options surrounding a neutral center point. Numerical ratings were assigned in ordinal fashion and recoded with the neutral point being 0 (e.g., -2, -1, 0, 1, 2, where -2 = strongly oppose, 0 = neither, and 2 = strongly support). The PCI describes the ratio of responses on either side of a rating scale's center point. The greatest possibility for conflict (PCI = 1.0) occurs when there is a bimodal distribution between two extreme values of the response scale (e.g., 50% strongly oppose, 50% strongly support, 0% neutral). A PCI of 1.0 suggests total disagreement among respondents and no consensus. A distribution with 100% at any one point on the scale yields a PCI of 0, which suggests total agreement, complete consensus, and no potential for conflict. The PCI is computed with a frequency distribution and follows the formula:

$$PCI = \left[1 - \frac{\sum_{i=1}^{n_a} |X_a|}{X_t} - \frac{\sum_{i=1}^{n_u} |X_u|}{X_t} \right] * \frac{X_t}{Z}$$

where:

X_a = an individual's "support" (or "likely" or "acceptable") score

n_a = all individuals with "support" scores

X_u = an individual's "oppose" (or "unlikely" or "unacceptable") score

n_u = all individuals with "oppose" scores

$$X_t = \sum_{i=1}^{n_a} |X_a| + \sum_{i=1}^{n_u} |X_u|$$

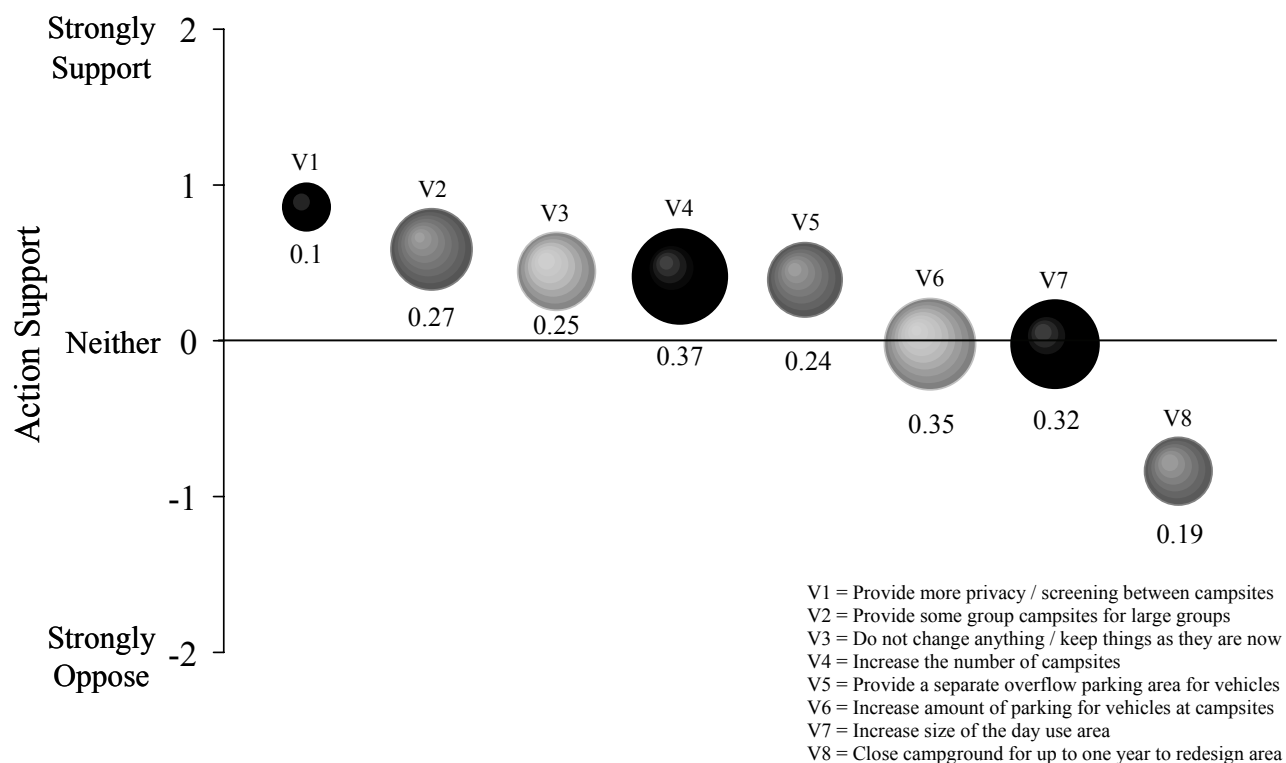
Z = the maximum possible sum of all scores = $n * \text{extreme score on scale}$
(e.g., $Z = 2n$ for scale with 5 response options); n = total number of subjects

Following computation of the PCI, results are displayed as "bubble" graphs to visually and simultaneously describe a variable's form, dispersion, and central tendency. The size of the bubble depicts the PCI and indicates degree of dispersion (e.g., extent of potential conflict regarding acceptability of a management strategy). A small bubble suggests high consensus and little potential for conflict; a large bubble suggests less consensus and more potential for conflict.

Unlike a standard deviation, which is centered on the mean, the PCI is centered on the neutral point. Although both statistics can communicate agreement, the PCI is based on absolute values and: (a) does not necessitate the relatively normal distribution required by a standard deviation, (b) accounts for all (100%) of respondents instead of just 68% that are included in one standard deviation, (c) is communicated in standardized units (i.e., 0 to 1.0) rather than the original scale, which facilitates easier comparisons across items measured on different scales, and (d) has more intuitive appeal for managers (Manfredo et al., 2003; Vaske et al., 2006).

The center of the bubble is plotted on the y-axis (e.g., extent of support, opposition) and indicates the average (i.e., mean) response to the variable (i.e., central tendency). With the neutral point of the response scale on the y-axis, it is apparent that respondents' average evaluations are situated above or below the neutral point (i.e., the action is supported or opposed). Information about a distribution's skewness is reflected by the position of the bubble relative to the neutral point (i.e., bubbles at the top or bottom of the graph suggest high degrees of skewness).

Figure 15. PCI and mean support for each potential management strategy ¹



¹ Numbers under each bubble are the potential for conflict index (PCI), which ranges from 0 (no conflict, complete consensus) to 1 (maximum conflict, no consensus). The center of each bubble is the average (i.e., mean) support of the management strategies. Six of the eight strategies (V1, V2, V4, V5, V6, V8) did not differ among the three place attachment groups. Responses to two strategies (V3, V7) differed among groups (see Table 7).

Figure 15 displays the PCI values and mean support / opposition for each of the eight potential management actions. On average, providing more privacy / screening between campsites was the most strongly supported management action ($M = 0.86$ where $-2 =$ strongly oppose, $+2 =$ strongly support). Providing group campsites, not changing anything, increasing the number of

campsites, and providing a separate overflow parking area were also supported by visitors, but the mean values showed that none of these actions received overwhelming support ($M = 0.39$ to 0.59). On average, visitors were slightly opposed to increasing the amount of parking at campsites and expanding the day use area ($M = -0.02$). Closing the campground for up to one year to redesign the area generated the most opposition among visitors ($M = -0.84$).

The PCI values showed that the most strongly supported strategy of providing more privacy / screening between campsites also generated the most consensus among respondents, suggesting that this would be the least controversial action (PCI = 0.10). The most controversial strategies were increasing the number of campsites (PCI = 0.37), providing more parking at campsites (PCI = 0.35), and increasing the size of the day use area (PCI = 0.32). Given the size of these PCI values and the mixed support and opposition toward these strategies, it is likely that implementing these actions would generate disapproval and discontent from many visitors.

Tradeoffs in Acceptance for Potential Management Strategies. There is a need in recreation management to understand better the range of contextual factors and alternatives influencing management, and how the public responds to these factors. Traditional approaches for evaluating recreationists' attitudes toward conditions and management strategies have typically involved asking visitors the extent to which they believed that conditions are important or if they supported or opposed individual management alternatives (see Manning, 1999 for a review). These approaches were used in this study and results are discussed earlier in this report. These approaches, however, may result in a "ceiling effect" where almost all conditions and strategies are important to most respondents (e.g., Figure 11), but actually implementing any strategies may not be possible without impacting something else (Oh, 2001). In this study, for example, Henry Rierson Spruce Run Campground is spatially constrained by physical barriers such as a river, road, and steep terrain so expanding the campground to include a factor or attribute such as more campsites is unlikely; managers would likely need to convert space currently used as paths or parking to create more campsites. Given this complexity of recreation management, it may be more useful to examine visitors' tradeoffs in their support of management factors and regimes such as their acceptance of more campsites if it meant that there would be less available parking.

Recent research has used multivariate statistical techniques such as stated choice modeling and conjoint analysis to quantitatively measure the relative importance that visitors place on selected factors of recreation settings and the extent to which individuals make tradeoffs in their support of alternative management practices (see, for example, Kneeshaw, Vaske, Bright, & Absher, 2004; Lawson, Roggenbuck, Hall, & Moldovanyi, 2006 for reviews). Instead of asking visitors to rate their support for a single factor or attribute at one time, individuals choose among scenarios describing alternative configurations of a set of factors. When evaluating each scenario, visitors weigh tradeoffs among the factors. This approach provides managers with an understanding of how visitors would prefer setting factors to be prioritized when preferred conditions cannot be provided for all factors simultaneously. In addition, this approach allows researchers and managers to rank alternative configurations of study factors (i.e., alternative management regimes) from most acceptable to least acceptable (Lawson et al., 2006).

Oregon Department of Forestry (ODF) is considering design options for Henry Rierson Spruce Run Campground so that it can continue to accommodate visitor use without deteriorating conditions and visitors' experiences. To do this, ODF is considering options such as enlarging

the day use area, providing more screening between campsites to increase privacy, redesigning parking facilities, and offering group campsites. Given the spatial constraints and physical barriers of this campground (e.g., river, road, terrain), it is not realistic or feasible to make all of these changes simultaneously. It is necessary, therefore, to understand current visitors' tradeoffs in potential management alternatives at this campground. This study used conjoint analysis to determine the relative importance of these situational factors and the influence of varying factor levels in acceptance of management at this forest campground.

In conjoint analysis, scenarios are used in surveys to represent combinations of situational factors and impact levels. By presenting visitors with descriptions of different management scenarios containing various factors and levels, respondents can make implicit tradeoffs in their decisions. For the conjoint analysis in this study, scenarios represented combinations of three factors:

- Amount of parking for vehicles.
- Number of campsites.
- Amount of privacy / screening between campsites (e.g., bushes, shrubs).

Three levels were used for each factor:

- Less than now.
- Same as now.
- More than now.

A full factorial design involving all of these factors and levels would produce 3^3 or 27 possible combinations or scenarios. To reduce respondent burden, a smaller subset of scenarios is created using an orthogonal fractional factorial design. This reduced the number of scenarios asked in the survey to nine (Table 8). For each scenario, respondents were asked to imagine that all three changes were to be made at Henry Rierson Spruce Run Campground (e.g., less parking, same number of campsites, more privacy / screening; scenario 4) and then rate their acceptability of each scenario on a 9-point scale from 1 "very unacceptable" to 9 "very acceptable." For analysis purposes, this scale was recoded to -4 "very unacceptable" to +4 "very acceptable." Information about main effects of all other possible combinations (scenarios) can be determined additively from the constants and utility scores generated by conjoint analysis and can be used to predict acceptability of management scenarios that were not evaluated by respondents.

In conjoint analysis, the factors (i.e., vehicle parking, campsites, privacy / screening) are considered the independent variables and acceptability ratings are the dependent variables. The output displays utility scores or part-worth estimates identifying preferences for factor levels, percentages of averaged importance attributed to each factor, and correlations between predicted and observed acceptability ratings (i.e., Pearson R and Kendall's tau goodness of model fit statistics). Conjoint analysis decomposes each respondent's ratings into utility scores for each factor. Utility scores represent the influence of each factor level on acceptability ratings. Utility scores can be added together with the constant to predict rankings of all possible scenarios, including those not asked in the survey. Unlike ordinary least-squares regression, conjoint analysis eliminates cases with missing values and cases with equal ratings (i.e., ties) across all scenarios. If a respondent rated scenario 1 as "very acceptable," for example, and then repeated

this same answer for all nine scenarios, he or she would be eliminated from the analysis because this individual would not have a preference for the different factors and their associated levels. Averaged importance scores are standardized percentages computed by taking the range of utility scores for each factor and dividing them by the total range in utility values across all factors. A conjoint model was first conducted for all respondents and then separate models were run for each of the three place attachment groups to examine possible differences among groups.

Table 8. Orthogonal fractional factorial design for management scenarios with varying combinations of factors and factor levels¹

Scenario	Parking for vehicles	Campsites	Privacy / screening between campsites
1	Same	Same	Same
2	Less	Less	Less
3	More	More	More
4	Less	Same	More
5	Less	More	Same
6	Same	More	Less
7	Same	Less	More
8	More	Less	Same
9	More	Same	Less

¹ Each factor (parking, campsites, privacy / screening) has three categorical levels (less, same, more than now) Respondents rated each scenario on a 9-point scale recoded as -4 “very unacceptable” to +4 “very acceptable.”

Only 6.2% ($n = 13$) of respondents either did not rate a scenario or rated the acceptability equal across scenarios. Conjoint analysis does not include these individuals in subsequent analyses. Elimination of these individuals resulted in 194 respondents for the conjoint analysis. Given this sample size, deleting these 13 individuals did not affect parameter estimates.

Table 9 shows results derived from the conjoint analysis including the averaged importance of each factor, model fit, and utility scores for the factor levels. The averaged importance scores show the extent to which each factor is important to visitors’ preferences for management at the campground. Results show that amount of privacy / screening between campsites had the most influence on acceptability ratings and was most important factor to respondents (39%). Number of campsites was less important (35%) and amount of parking for vehicles was the least important factor to visitors (26%). Taken together, these findings suggest that visitors believed that management actions focusing on campsite privacy and screening were more important than those involving parking.

The Pearson’s R and Kendall’s tau statistics provide measures of the correlation between observed and predicted acceptability. Table 9 shows that these statistics were .925 and .930, respectively and were statistically significant at $p < .001$ suggesting acceptable goodness of fit for this conjoint model.

Utility scores represent averages across all respondents and assess how factor levels affect mean acceptability. The magnitude and sign of the utility score (positive or negative) indicate the relative influence of each factor level on mean acceptability. A positive utility score indicates

that the factor level increased acceptability; a negative utility score suggests that the factor level decreased acceptability. Results in Table 9 show that retaining the same amount of parking, the same number of campsites, and providing more privacy / screening between campsites would be most *acceptable* to visitors. Providing more campsites and retaining the same amount of privacy / screening between campsites also increased acceptability. Providing less parking, fewer campsites, and less privacy / screening between campsites would be most *unacceptable* to visitors. Providing more parking also decreased acceptability.

Table 9. Utility scores and averaged importance scores for management scenarios

Factors	Utility score	Averaged importance ¹
Amount of parking for vehicles		26.33%
Less	-0.2829	
Same	0.3202	
More	-0.0372	
Number of campsites		35.02%
Less	-0.9410	
Same	0.7085	
More	0.2325	
Privacy / screening between campsites		38.65%
Less	-1.3448	
Same	0.4026	
More	0.9422	
Constant	-0.7222	
Goodness of fit ²		
Pearson's R	.925	
Kendall's tau	.930	

¹ Averaged relative importance of the factors totals 100%.

² Goodness-of-fit statistics significant at $p = .0002$ (Pearson's R) and $p = .0003$ (Kendall's tau).

Given that utility scores are all expressed in a common unit, they can be added together with the constant to give the total utility (i.e., acceptability ranking) of any combination of factor levels including those that were not evaluated by respondents. In other words, the utility scores generated from the nine scenarios that were asked in the survey (Table 9) can be used to predict utilities of the 18 other possible scenarios that were not asked in the survey (i.e., $3^3 = 27$ possible combinations or scenarios – 9 presented in survey = 18 scenarios not presented). For example, the total utility of a management scenario that would create less parking for vehicles, more campsites, and more privacy / screening between campsites would be:

$$\text{Total utility} = \beta_{(\text{constant})} + \beta_{(\text{parking})} + \beta_{(\text{campsites})} + \beta_{(\text{screening})}$$

or

$$-0.7222 + (-0.2829) + 0.2325 + 0.9422 = 0.1696$$

These total utilities can be calculated for all 27 possible combinations / scenarios and then ranked from most acceptable to least acceptable possible management approaches (Table 10).

Table 10. Total utilities and rankings for all combinations and scenarios from most (1) to least (27) acceptable

Parking for vehicles	Campsites	Privacy / screening between campsites	Total utility	Rank
Same	Same	More	1.2487	1
More	Same	More	0.8913	2
Same	More	More	0.7727	3
Same	Same	Same	0.7091 ^a	4
Less	Same	More	0.6456 ^a	5
More	More	More	0.4153 ^a	6
More	Same	Same	0.3517	7
Same	More	Same	0.2331	8
Less	More	More	0.1696	9
Less	Same	Same	0.1060	10
More	More	Same	-0.1243	11
Less	More	Same	-0.3700 ^a	12
Same	Less	More	-0.4008 ^a	13
More	Less	More	-0.7582	14
Same	Less	Same	-0.9404	15
Less	Less	More	-1.0039	16
Same	Same	Less	-1.0383	17
More	Less	Same	-1.2978 ^a	18
More	Same	Less	-1.3957 ^a	19
Same	More	Less	-1.5143 ^a	20
Less	Less	Same	-1.5435	21
Less	Same	Less	-1.6414	22
More	More	Less	-1.8717	23
Less	More	Less	-2.1174	24
Same	Less	Less	-2.6878	25
More	Less	Less	-3.0452	26
Less	Less	Less	-3.2909 ^a	27

^a Scenarios presented in the survey.

Table 10 presents the total utility scores and rankings of all possible scenarios. Results show that the most acceptable management configuration would be to retain the same amount of parking and campsites, but provide more privacy / screening between campsites. The second most acceptable combination of factors would be to retain the same number of campsites, but increase the amount of parking for vehicles and privacy / screening between campsites. The third most acceptable configuration would be to retain the same amount of parking, but provide more campsites and screening. The fourth most acceptable combination of management factors would be to make no changes to any of these factors (i.e., status quo).

If spatial constraints and physical barriers at this campground (e.g., river, road, terrain) make it unrealistic or not feasible to increase some factors without decreasing or retaining the same amount of other factors, the fifth most acceptable combination would be appropriate. This configuration would entail the same number of campsites, but more privacy / screening between campsites at the expense of less parking for vehicles. In other words, some of the land currently

used for parking would be converted to create more privacy and screening between existing campsites (e.g., bushes, shrubs). Providing less parking, fewer campsites, and less privacy / screening between campsites would be the most *unacceptable* combination of factors.

Table 11. Averaged importance scores for each factor for each of the place attachment cluster groups

Factors	Cluster groups ¹		
	1. Low attachment	2. Moderate attachment	3. High attachment
Amount of parking for vehicles	27.60	25.16	27.27
Number of campsites	23.14	35.11	40.10
Privacy / screening between campsites	49.26	39.73	32.63
Total	100.00	100.00	100.00

¹ Cell entries are averaged percentage importance (%).

Separate conjoint models were run for each of the place attachment groups to examine potential differences among groups. Privacy / screening between campsites was the most important factor to respondents in the low (49%) and moderate (40%) attachment groups, but not highly attached visitors (33%; Table 11). Number of campsites was most important to these highly attached users (40%), whereas campsites were less important to visitors in the moderate attachment group (35%) and was the least important factor for the low attachment group (23%). These findings suggest that as attachment increased, importance of campsites increased and importance of privacy / screening decreased. Parking was important for 28% of visitors in the low attachment group and was the least important factor for moderately (25%) and highly (27%) attached users.

Table 12. Utility scores for each of the place attachment cluster groups

Factors	Cluster groups ¹		
	1. Low attachment	2. Moderate attachment	3. High attachment
Amount of parking for vehicles			
Less	0.0231	-0.3388	-0.3164
Same	0.1204	0.2658	0.5141
More	-0.1435	0.0730	-0.1977
Number of campsites			
Less	-0.4213	-1.0414	-1.0565
Same	0.3704	0.7462	0.7853
More	0.0509	0.2952	0.2712
Privacy / screening between campsites			
Less	-1.7824	-1.4205	-1.0282
Same	0.2037	0.3932	0.5198
More	1.5787	1.0272	0.5085
Constant	-0.3287	-0.6612	-0.9266
Goodness of fit ²			
Pearson's R	.949	.939	.885
Kendall's tau	.817	.833	.944

¹ Cell entries are part worth utility scores.

² Goodness-of-fit statistics significant at $p = .0001$ to $.0008$ (Pearson's R) and $p = .0002$ to $.0012$ (Kendall's tau).

The utility scores in Table 12 show that retaining the same number of campsites and providing more privacy / screening between campsites would generally be most acceptable to all visitors irrespective of their level of place attachment. In addition, providing fewer campsites and less privacy / screening would be most unacceptable to visitors regardless of their attachment. Utility scores, however, differed among groups for acceptance of vehicle parking. Retaining the same amount of parking would be most acceptable for each group, but more parking would be least acceptable to visitors in the low attachment group, less parking would be least acceptable to moderately attached respondents, and any change in the amount of parking (i.e., more or less) would be unacceptable to visitors in the high attachment group.

Table 13. Total utilities and rankings for all combinations and scenarios from most (1) to least (27) acceptable for each of the place attachment cluster groups

Parking for vehicles	Campsites	Privacy / screening between campsites	1. Low attachment		2. Moderate attachment		3. High attachment	
			Total utility	Rank	Total utility	Rank	Total utility	Rank
Same	Same	More	1.7408	1	1.3780	1	0.8813	2
More	Same	More	1.4769	3	1.1852	2	0.1695	6
Same	More	More	1.4213	4	0.9270	3	0.3672	4
Same	Same	Same	0.3658	10	0.7440	5	0.8926	1
Less	Same	More	1.6435	2	0.7734	4	0.0508	8
More	More	More	1.1574	6	0.7342	6	-0.3446	10
More	Same	Same	0.1019	12	0.5512	7	0.1808	5
Same	More	Same	0.0463	13	0.2930	9	0.3785	3
Less	More	More	1.3240	5	0.3224	8	-0.4633	12
Less	Same	Same	0.2685	11	0.1394	10	0.0621	7
More	More	Same	-0.2176	15	0.1002	11	-0.3333	9
Less	More	Same	-0.0510	14	-0.3116	12	-0.4520	11
Same	Less	More	0.9491	7	-0.4096	13	-0.9605	15
More	Less	More	0.6852	9	-0.6024	14	-1.6723	20
Same	Less	Same	-0.4259	16	-1.0436	16	-0.9492	14
Less	Less	More	0.8518	8	-1.0142	15	-1.7910	22
Same	Same	Less	-1.6203	19	-1.0697	17	-0.6554	13
More	Less	Same	-0.6898	18	-1.2364	18	-1.6610	19
More	Same	Less	-1.8842	21	-1.2625	19	-1.3672	17
Same	More	Less	-1.9398	22	-1.5207	20	-1.1695	16
Less	Less	Same	-0.5232	17	-1.6482	21	-1.7797	21
Less	Same	Less	-1.7176	20	-1.6743	22	-1.4859	18
More	More	Less	-2.2037	24	-1.7135	23	-1.8813	23
Less	More	Less	-2.0371	23	-2.1253	24	-2.0000	24
Same	Less	Less	-2.4120	25	-2.8573	25	-2.4972	25
More	Less	Less	-2.6759	27	-3.0501	26	-3.2090	26
Less	Less	Less	-2.5093	26	-3.4619	27	-3.3277	27

Table 13 presents the total utility scores and rankings of all possible scenarios for each of the three place attachment groups. Results show that utilities and rankings differed slightly among groups. For example, the most acceptable management configuration for both the low and moderate attachment groups would be to retain the same amount of parking and campsites, but provide more privacy / screening between campsites. This was the second most important combination of factors for highly attached respondents who believed that not changing anything (i.e., keep things same as they are now; status quo) would be the most acceptable management approach. The second most important configuration for less attached users would be to retain the same number of campsites, but reduce the amount of parking and increase privacy / screening. Conversely, the second most important combination of factors for moderately attached visitors would be to retain the same number of campsites, but increase the amount of parking for vehicles and privacy / screening between campsites.

In general, the most unacceptable management combinations rarely differed among place attachment groups. For example, regardless of alterations to the amount of parking, reducing the number of campsites and amount of privacy / screening between campsites would be least acceptable to visitors in all of the place attachment groups. Rankings for visitors in the moderately attached group most closely reflected those for all respondents considered together (i.e., aggregate across all three groups). This group also constituted the majority of visitors at the campground (54%). If the agency in charge of Henry Rierson Spruce Run Campground (i.e., ODF) wanted management actions to reflect the majority of visitors, it may be reasonable to consider primarily the rankings of all visitors taken together (i.e., Table 10) or those belonging to the moderately attached group (i.e., Table 13).

Section Summary. Taken together, results showed that:

- The largest proportion of visitors supported providing more privacy and screening (e.g., bushes, shrubs) between campsites (68% support). The majority of respondents also supported providing group campsites for large groups (58%), increasing the number of campsites (52%), and providing a separate overflow parking area (50%). Fewer visitors were supportive of keeping things as they are now and not changing anything (48%).
- Respondents were somewhat divided in their support for increasing the amount of parking at campsites (29% support, 29% oppose) and increasing the size of the day use area (24% support, 24% oppose). Respondents opposed closing the campground for up to one year to redesign the area (14% support, 61% oppose).
- There were no differences among the three place attachment groups in their opposition and support for six of the eight management alternatives. Support for keeping things as they are now and not changing anything (i.e., status quo) was slightly higher for visitors in the high attachment group compared to less attached visitors. Support for increasing the size of the day use area was slightly higher for respondents in the low and moderate attachment groups compared to those in the high attachment group.
- On average, providing more privacy / screening between campsites was the most strongly supported management action and generated the most consensus among respondents suggesting that this would be the least controversial action. Providing group campsites, not changing anything, increasing the number of campsites, and providing a separate overflow parking area were supported, but none of these actions received overwhelming

support. On average, visitors were slightly opposed to increasing the amount of parking at campsites and increasing the day use area. The most controversial strategies were increasing the number of campsites, providing more parking at campsites, and increasing the size of the day use area; it is likely that implementing any of these actions would generate disapproval and discontent from many visitors. Closing the campground for up to one year to redesign the area was opposed by almost all respondents.

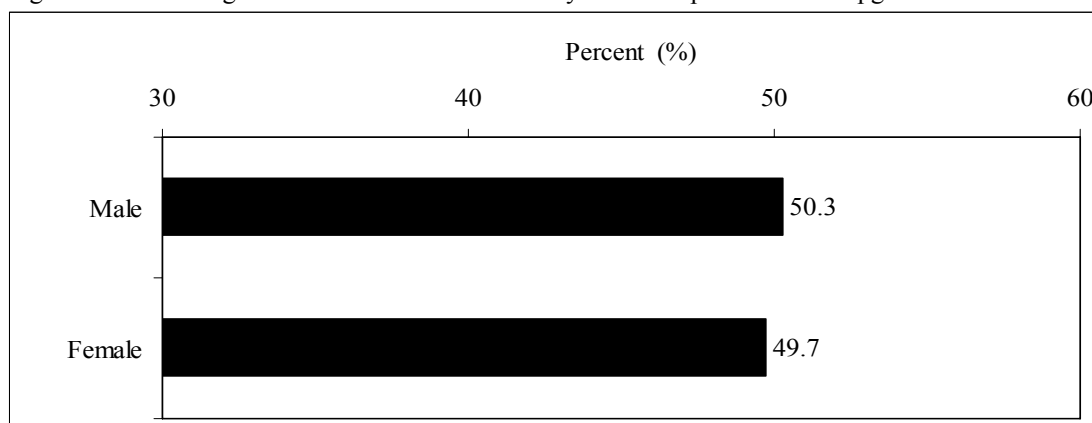
- Given that implementing any strategy may not be possible without impacting something else, it is important to understand how visitors would prefer setting factors to be prioritized (i.e., tradeoffs) when preferred conditions cannot be provided for all factors simultaneously. Results of a conjoint analysis that varied levels (same as now, less, more) for three factors (amount of parking, number of campsites, amount of privacy / screening between campsites) showed that privacy / screening between campsites was the most important factor to respondents (39%). Number of campsites was less important to visitors (35%) and amount of parking was the least important factor (26%).
- The most acceptable management configuration would be to retain the same amount of parking and campsites, but provide more privacy / screening between campsites. The second most acceptable combination of factors would be to retain the same number of campsites, but increase parking for vehicles and privacy / screening between campsites. If spatial constraints and physical barriers at this campground (e.g., river, road, terrain) make it unrealistic or not feasible to increase some factors without decreasing or retaining the same amount of other factors, the most acceptable approach would be to provide the same number of campsites, but increase the amount of privacy and screening between campsites at the expense of less parking. Less parking, fewer campsites, and less privacy / screening between campsites would be the most unacceptable combination of factors.
- Privacy / screening between campsites was the most important factor for respondents in the low and moderate place attachment groups, but not for highly attached visitors. Number of campsites was most important to these highly attached respondents, whereas campsites were less important to visitors in the moderate attachment group and was the least important factor for those in the low attachment group. Importance of campsites increased as place attachment increased and importance of privacy / screening decreased as attachment increased. Vehicle parking was the least important factor for most groups.
- The most acceptable management configuration for the low and moderate attachment groups would be to retain the same amount of parking and campsites, but provide more privacy / screening between campsites. This was the second most important combination of factors for highly attached respondents who believed that not changing anything (i.e., keep things the same as they are now) would be the most acceptable approach. The most unacceptable management combinations rarely differed among place attachment groups. For example, regardless of any changes to the amount of parking, reducing the number of campsites and amount of privacy / screening between campsites would be the least acceptable approach for visitors in all groups.
- Rankings for visitors in the moderately attached group most closely reflected those for all respondents considered together (i.e., aggregate across groups). This group also constituted the majority of visitors at the campground (54%). If the agency in charge of Henry Rierson Spruce Run Campground (i.e., ODF) wanted management actions to

reflect the majority of visitors, it may be reasonable to consider management configuration rankings of all visitors taken together or those belonging to moderately attached users.

Visitor Demographics

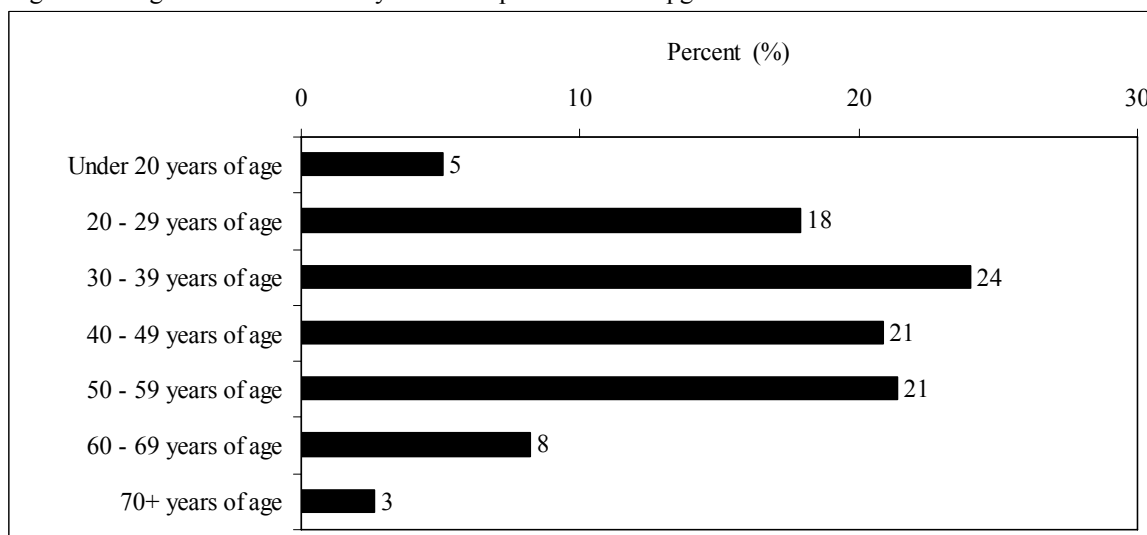
Figure 16 shows that an equal proportion of visitors surveyed at Henry Rierson Spruce Run Campground were male (50%) and female (50%). There were no differences between the three place attachment groups, $\chi^2(2, N = 187) = 2.22, p = .329, V = .11$.

Figure 16. Percentage of males and females at Henry Rierson Spruce Run Campground



The majority of visitors surveyed at Henry Rierson Spruce Run Campground were 40 years of age and older, but the largest proportion was 30 to 39 years old (24%; Figure 17). In total, 23% of respondents were under 30 years of age, 21% were 40 to 49 years old, 21% were 50 to 59, and 11% were over 60 years old. The average (i.e., mean) age of respondents was 41 years old.

Figure 17. Age of visitors at Henry Rierson Spruce Run Campground¹



¹ Average (mean) = 41.4 years, median = 40.5 years, modes = 50, 55 years.

Table 14. Average age for each of the place attachment cluster groups

Cluster groups	Average (mean) age
1. Low attachment	35.7 ^a
2. Moderate attachment	39.8 ^a
3. High attachment	45.7 ^b

¹ Cell entries are mean years of age. $F(2, 185) = 5.80, p = .004, \eta = .24$
Means with different letter superscripts differ at $p < .05$ using Scheffé post-hoc tests.

Table 14 shows that average age differed among the three place attachment cluster groups; age increased as attachment increased. On average, low attachment respondents were the youngest ($M = 36$ years) followed by moderate attachment respondents ($M = 40$ years) and then high attachment visitors who were the oldest ($M = 46$ years). These differences among the three groups were statistically significant, $F(2, 185) = 5.80, p = .004, \eta = .24$.

Table 15. Visitors' location of residence

	Percent (%)
State	
Oregon	94
Washington	3
Other	3
County	
Washington	38
Multnomah	17
Clatsop	14
Columbia	11
Clackamas	5
Yamhill	4
Marion	3
Other	7
City / town	
Portland	17
Beaverton	12
Hillsboro	10
St. Helens	6
Seaside	6
Aloha	5
Warrenton	5
Banks	3
Milwaukie	3
Tigard	3
Astoria	2
Cornelius	2
Vancouver	2
Other	26

Table 15 shows that almost all of the visitors surveyed at Henry Rierson Spruce Run Campground resided in Oregon (94%). The largest proportion of respondents lived in Washington County (38%) and Multnomah County (17%). An additional 14% of respondents

resided in Clatsop County and 11% lived in Columbia County. The largest percentage of visitors surveyed at the campground (17%) resided in Portland and surrounding areas such as Beaverton (12%) and Hillsboro (10%).

Section Summary. Taken together, results showed that:

- An equal proportion of visitors were male (50%) and female (50%), and there were no differences between the three place attachment groups.
- The majority of visitors were 40 years of age and older, but the largest proportion was 30 to 39 years old (24%). The average (i.e., mean) age of respondents was 41 years old.
- Average age differed among the three place attachment groups; age increased as attachment increased. Low attachment respondents were the youngest ($M = 36$ years) followed by moderate attachment users ($M = 40$ years) and then high attachment visitors who were the oldest ($M = 46$ years).
- Almost all visitors resided in Oregon (94%). The largest proportion of respondents lived in Washington (38%) and Multnomah (17%) Counties, especially in cities and towns such as Portland and its surrounding areas (e.g., Beaverton, Hillsboro).

Visitor Comments

At the end of the survey, respondents were given an opportunity to write any additional comments about Henry Rierson Spruce Run Campground and their experience at this campground. These comments have been transcribed verbatim and categorized into two groups below: (a) positive comments, and (b) negative comments / recommendations or suggestions.

Positive Comments. The following are positive comments from visitors transcribed verbatim:

- First time I have been here for 20 years. I really enjoyed myself and will be back.
- As a first time visitor, I am impressed. I will certainly come back.
- Attending with a group from University of Portland. Nice campground!
- Beautiful campground. My first time here and we loved it. Don't change a thing. Loved how spread out it is.
- Been coming here for 50 years and still love it.
- Camp Hosts are very helpful.
- Despite the changes over the last 20 years, this has been our family "end of summer" camping tradition.
- Enjoyable area not too far from home.
- Enjoyed our stay - thanks. Will be back.
- First time here, I like it so far.
- For the last four years I have been coming back and always had a great time. Thank you for the wonderful memories.
- Great park. Great hosts. Quiet.
- Great place for a July 4 picnic.
- I had a great time here.
- I have been coming since 1977. The changes you have made are really good. We like going to small, family camping areas. You have done this here. I can remember not wanting to come here because of the booze, trash, and traffic. Great job guys.
- I like it just the way it is. Don't make any changes.
- I like the number of sites and parking.
- I like the campsite as it is.

- I love it. The size of spaces are great. Loving the scenery and the river. Please don't make it a suburbia.
- I love this campground.
- I love this place and would always come here and will. Thank you for a great place.
- I love this place. I have been coming here for 40+ years. Please don't change a lot of things. It's perfect now.
- I love this place. Minor changes would be ok, but please don't take away from it to increase revenue.
- I love this park just as it is. I have been coming here for years.
- I really like just the way it is.
- I think this campground is a beautiful place to just be calm and relaxed.
- It's a nice campground.
- It is very beautiful here.
- It would be nice to see campground left as is. There isn't a need to change a good thing.
- Keep as it is. Great job to date.
- Keep it the way it is.
- Leave as is. Don't make it into a state park. Stub Stewart can serve that purpose. To be on the river, it needs to remain small to limit impact.
- Leave it alone.
- Leave it as is.
- Leave it as it is; no changes.
- Like campground as it is.
- Like it here.
- Like it how it is.
- Love it.
- Love it here.
- Love it here.
- Love the walk-in sites.
- Camp Hosts were fantastic.
- Camp Host employee excellent. Thanks, we'll be back.
- River is nice.
- Really are enjoying the camp.
- We love it here. Keep up the good work.
- We like the privacy of the campsites. We come here a lot.
- Nice area next to river for water activities.
- Nice - very clean - keep up the good work.
- Nice place, good spots.
- Please leave it as it is. It is peaceful, enjoyable, and has lots of outdoor recreation. The fall colors are beautiful to watch, the summer is warm and cool in the river. It is wonderful.
- Privacy is fine now.
- Really clean, no garbage. Quiet.
- Really enjoy the Camp Host. Very kind and cheerful.
- Really enjoyed scenery and peacefulness of campgrounds.
- Satisfied now. Change is important, but I like it the way it is.
- The Camp Hosts were great, helpful, friendly, and fun.
- This has been a great campground and has improved since ODF has taken it over. Thanks.
- Very beautiful place.
- Very clean, quiet, and lots of fun. Thank you.
- Very lovely, very clean, perfect for picnic and nice to have bathroom. Could also bring dogs, which was great!
- Very nice.
- Very nice campground.
- Very nice.
- We come because it is a great place to tent camp and we do not want an RV park. We have been here 15 years. Don't ruin it!
- We come here several times a year and like the privacy.
- We like the campground.

- We love it here.
- We love it here. Don't change a thing.
- We love it here. We come here at least 10 times a year.
- We love it here.
- We love this campground. Please don't close it.
- We would like the park to stay as wonderful as it is.
- Wonderful concerned Camp Host with creative ideas.
- Camp Hosts are very nice.
- Enjoyed how clean the camp was.
- Enjoyed having campfires.

Negative Comments / Suggestions. The following are negative comments and recommendations / suggestions from visitors transcribed verbatim:

- Need access to showers.
- Need electrical for RV's.
- Need a small store.
- Add more drinking water wells.
- Could use more flushing toilets.
- Need better paths to river.
- Clean bathrooms daily.
- More level spots for tents.
- Need better water to campsite areas. I know this was done years ago, but taken out due to state water regulations for a system too costly.
- Need bigger campsites.
- Need more privacy.
- Something needs to be done about the road traffic, very noisy.
- Clear some brush near river.
- Provide more hiking trails.
- Need more sites, but keep semi-private.
- Need finer gravel campsites 3/4 rock.
- Centrally located playground would be nice if you make any changes.
- Get power hookups.
- Have Camp Host patrol for garbage.
- Need hot water showers.
- Please just add bushes / shrubs between sites for privacy.
- Inmates doing maintenance around young kids a little disconcerting!
- Add more sites only if enlarging the campground.
- Get the rope swing back up, that was the best.
- You should get showers.
- I would like more privacy.
- I would like coin operated hot showers.
- More wood for the price you pay now.
- Maintain trails better for easy access.
- If showers and better toilet facilities were provided we would come more. It's difficult to keep four kids clean for longer.
- Improve river access by removing day use area.
- More campsites and screening would be nice but I would hope the campsites that are available are still available in the peak summer months.
- Add more trees.
- Labeling of campsites needs to be more visible.
- Less RV's.

- Need less smelly bathrooms with water to clean hands.
- Less traffic and crowds would be nice.
- Need level campsites to park RV's.
- Some water with faucets would be nice.
- Need attachment to pump to fill water jugs.
- Keep it open all year.
- No more campsites.
- Limit generator use.
- No lower fees for winter/off season.
- Too many sites and more people would not be good.
- Noise from semi trucks during the night is too much.
- Need more privacy for campsites.
- Maybe a little more two vehicle parking in campsite.
- Need overflow parking.
- Maybe a shower.
- More access to running toilets.
- Too bad others don't pick up their garbage by the river.
- More ATV riding areas need to be available here.
- More campsites and reservations at least for a large campsite for 20 people.
- Need more campsites.
- Need locals discount price.
- More campsites would be nice but wouldn't sacrifice anything to get it but expanding it would be cool.
- A select few for reservations for big camping weekends would be nice, not for entire season.
- More flush toilets and water closer to #8 area.
- Showers would be a nice convenience.
- More maintenance needed on brush, trails, and blackberry bushes.
- Day use should be moved so paying campers can be on river.
- Need more native privacy.
- More potable water sites are needed.
- More privacy.
- More parking.
- Need easier access to water for waterfront camping.
- More sites would be nice for availability.
- More wood for your money.
- Motor homes should not be allowed or they should only occupy sites on other side of road not river side.
- Move garbage locations.
- Need more privacy.
- Mow lawn.
- Need better bathrooms.
- Need garbage cans and soap in all bathrooms.
- Need more parking.
- More tent sites.
- Need more BBQ pits.
- Need shower facility open while park is open.
- Need showers.
- Need flush toilets.
- The toilets are creepy.
- Need to maintain growth of weeds in campground.
- Needs to be a little bigger.
- Maybe showers.
- No reserving or holding spots.
- Lots of litter.
- Too much loud music.

- Don't allow people to hold sites for friends for days.
- Noise from other campers (music) should be controlled or prohibited.
- Do not allow campers, trailers, or motor homes or have them in a small area not on the river.
- Open all bathrooms, not just some.
- Open showers if available. If not, install some and charge them to use it that would pay for them.
- Please cut larger trails to river from campground.
- Please move firepits closer to parking for motor home sites to allow picnic table to be near fire and under awnings.
- Would like to see sites changed back with lower area cleared and parking extended. Been camping there for 16 years and now unusable for us.
- Enjoyed except all the traffic back and forth throughout the day.
- Reservations would be an improvement.
- Clear instructions on use would help.
- Camp Host presence should increase to ensure proper use of spaces (i.e., stop claim jumping of camping space).
- Restrict generator usage thus minimizing noise pollution.
- Need running water central to river side of camp.
- More gravel parking spots.
- Shower would be nice.
- Showers needed.
- The link between improving Lost Lake and changes to Spruce Run may change my views.
- The only thing we need is the way to the water fixed.
- The rocks around the park are in the way; they cause damage sometimes.
- The traffic of vehicles going to Lost Lake is ridiculous. The cars go by way to fast and it's unsafe. Too many kids and pets to be going 30+mph through the campground.
- Their needs to be an enforced speed limit through campground. Cars go too fast especially since kids are running around.
- There were empty campsites so it may have affected my perception of privacy.
- Too much private landowners.
- Too much clear cutting.
- Vehicles sometimes come pretty fast through the main road through the campground. Speed bumps may help.
- Would be even better if campground was expanded without loss of privacy.
- Don't like portable bathrooms.
- Should be able to park on grass if needed.
- Water in bathrooms would be great.
- Need water at each site.
- We all feel that paying the Camp Host should be done immediately. Bob was great - he needs to be paid!
- Another water source could help.
- Would not like to see it become too commercialized.
- Reservations would be nice.
- I don't like to see "saved" sites. It should be first come, first served or reservations.
- Would like more grass.
- Would like group sites.
- Make more space for parking in campsites.
- We normally camp in groups so we would prefer to have sites close together.
- Maybe showers.
- We would like to see water and a dump station.
- More privacy between campsites.
- It is not fair for people to reserve sites, leave, and return three days later for them or reserve for friends. We observed five sites empty for three days and they were the best river sites.
- Would be nice to make reservations.
- Should not charge for one extra vehicle, more than two should charge.
- Would like the fire pits closer to the parking. When we park our motor home, the awning is too far from the campfire on rainy days.

- Would like to see hot showers and better restrooms.
- Need easy access to running water.
- Would like to see more screening between campsites.
- Need steps down to the river.
- Need sites with better view of the water.
- You should make a nature trail.
- Need some showers.

RECOMMENDATIONS

Based on results from this survey of visitors at Henry Rierson Spruce Run Campground, the following recommendations are proposed for management of the campground:

- The most important reasons why respondents visited the campground were related to enjoying nature and resting and escaping life pressures. It is important to consider these reasons in management decision making to ensure that policy changes at the campground do not negatively impact opportunities for experiencing nature and resting and relaxing.
- The majority of respondents were satisfied with all aspects of their experience and the conditions at the campground, especially picnic tables, absence of litter, and campfire pits. These and other conditions should be monitored to ensure that visitor satisfaction does not decline in the future.
- Visitors rated, on average, most aspects of their experience and the conditions at the campground as important and were satisfied with these aspects, suggesting that managers should “keep up the good work” in their current management of the campground.
- Almost all visitors were satisfied with their overall visit to the campground, but this does not mean that they were highly satisfied with all aspects of their visit. Visitors were least satisfied with the opportunity to hear no noise from vehicles and other visitors, and the lack of screening and privacy between campsites. As stated below, increasing the amount of screening (e.g., bushes, shrubs) was the most strongly supported and least controversial management action so taking this action will improve privacy and may also buffer some of the noise from traffic and other visitors.
- Most respondents believed that changes should be made at the campground, as the majority of visitors opposed keeping things as they are now and not changing anything (i.e., status quo). The largest proportion of visitors supported providing more privacy and screening between campsites. This was also the least controversial action. As stated above, this action will improve privacy and may buffer vehicle and visitor noise.
- The majority of visitors slightly supported providing group campsites for large groups, increasing the number of campsites, and providing a separate overflow parking area. Respondents were divided in their support for increasing parking at campsites and the size of the day use area. Some of these strategies were also highly controversial (e.g., more campsites, more parking, enlarging day use area). Implementing these strategies may increase satisfaction, but may not be possible given the physical barriers and spatial

constraints at the campground (e.g., road, river, terrain). Implementing these actions would also generate disapproval and discontent from many visitors.

- Respondents were emphatically opposed to closing the campground for up to one year to redesign the area. Unless deemed absolutely necessary, any changes should be made without protracted closures to the campground.
- The most acceptable combination of management factors would be to retain the same amount of parking and campsites, but provide more privacy / screening between sites. If spatial constraints and physical barriers (e.g., river, road, terrain) make it unrealistic or not feasible to increase some factors without decreasing or retaining the same amount of other factors, the most acceptable approach would be to provide the same number of campsites, but increase the amount of privacy and screening between campsites at the expense of less parking. In other words, some land currently used for parking could be converted to create more screening and privacy between campsites (e.g., bushes, shrubs).
- Any future changes made at the campground should be accompanied by educational and interpretive messages and materials that discuss the rationale for changes. Messages should focus on how the changes may accommodate increasing use and reduce negative impacts to environmental conditions and visitor experiences. Messages should be disseminated through various outlets such as websites, newspapers, off-site and on-site brochures, on-site signage, and visitor contact with Camp Hosts and agency personnel.
- The majority of visitors were moderately or highly attached to Henry Rierson Spruce Run Campground; few visitors had low attachment to the campground. Compared to highly attached visitors, those who were less attached were more likely to: (a) be day users, first time visitors, and younger; (b) rate all motivations, experiences, and conditions as less important; (c) be less satisfied with experiences and conditions at the campground; (d) consider privacy and screening to be most important; and (e) be supportive of management configurations that retain the same amount of parking and campsites, but provide more screening. Highly attached visitors were older and had visited many times before, tended to camp overnight, rated all motivations and conditions as important, were most satisfied with all aspects of their experience and the campground, and were slightly more supportive of maintaining the status quo and making only minimal changes at the campground. The moderately attached group basically fell in between these two extremes and most closely reflected opinions for all respondents considered together (i.e., aggregate across groups). This group also constituted the majority of visitors at the campground. If the agency in charge of this campground (i.e., ODF) wanted management actions to reflect the majority of visitors, it may be reasonable to consider responses from all visitors taken together or those belonging to moderately attached users. Regardless, this shows heterogeneity of visitors' functional and emotional attachment to this campground, and reinforces the importance of segmenting users into more homogeneous and meaningful subgroups. Most visitors are moderately or highly devoted and attached to this campground, and considering these place attachment groups in management will facilitate more accurate planning and decision making.

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APPENDIX A: UNCOLLAPSED FREQUENCIES

Visitors' Experiences and Preferences at Henry Rierson Spruce Run Campground: A Study Conducted by Oregon Department of Forestry and Oregon State University

We are conducting this survey to understand your experiences at Henry Rierson Spruce Run Campground and opinions about how this campground should be managed. Your input is important and will assist managers. Participation is voluntary and all answers are anonymous. **Please answer all of the following survey questions and return it to the Camp Host or agency official.**

1. You are at Henry Rierson Spruce Run Campground right now.
Prior to this trip, had you ever visited this campground before? (check ONE)
31% No
69% Yes → if yes, how many previous trips have you made to this campground? (write response) see report trip(s)
2. Listed below are several possible reasons for visiting Henry Rierson Spruce Run Campground. Please indicate how important each of these reasons was in influencing your decision to visit this campground. (circle one number for EACH reason)
- | | Not at all Important | Slightly Important | Moderately Important | Extremely Important |
|---|----------------------|--------------------|----------------------|---------------------|
| To be with friends or family. | 5% | 4% | 28% | 62% |
| To meet or observe other people. | 53 | 29 | 14 | 4 |
| To experience solitude. | 4 | 16 | 39 | 42 |
| To escape crowds of people. | 4 | 13 | 31 | 53 |
| To be in nature. | 0 | 2 | 25 | 72 |
| To view the natural scenery. | 0 | 5 | 24 | 70 |
| Because of the easy access by road / vehicle. | 12 | 24 | 40 | 23 |
| Because of the close proximity to where I live. | 17 | 23 | 29 | 31 |
| Because the campground is conveniently located. | 8 | 24 | 37 | 32 |
| To rest or relax. | 1 | 4 | 20 | 76 |
| To get away from the demands of life. | 2 | 5 | 19 | 75 |
| To get physical exercise. | 17 | 38 | 30 | 16 |
| To visit nearby lake areas such as Lost Lake. | 22 | 27 | 31 | 21 |
| To participate in water-based recreation activities (e.g., swim, fish). | 17 | 17 | 34 | 32 |
| To participate in land-based recreation activities (e.g., hike, camp). | 7 | 18 | 43 | 31 |
| To explore a new area. | 19 | 31 | 30 | 19 |
| To come back to an area that I have visited before. | 23 | 15 | 27 | 36 |
| Because I was told by someone that this is a nice campground to visit. | 28 | 23 | 27 | 22 |
| Because I saw information or read an article about this campground. | 65 | 19 | 11 | 5 |
| Because the campground has everything I need (e.g. toilets, firewood). | 15 | 21 | 36 | 27 |
| Other reason for visiting? (write response) see report | 0 | 1 | 3 | 19 |

3. To what extent do you disagree or agree with each of the following statements? (circle one number for EACH statement)

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Henry Rierson Spruce Run Campground is very special to me.	2%	5%	31%	37%	25%
Henry Rierson Spruce Run Campground is one of the best places for doing what I like to do.	2	7	22	45	24
I am very attached to Henry Rierson Spruce Run Campground.	4	11	35	26	24
I would not substitute any other area for doing what I do at Henry Rierson Spruce Run Campground.	6	23	42	16	13
I identify strongly with Henry Rierson Spruce Run Campground.	5	10	38	32	15
No other place compares to Henry Rierson Spruce Run Campground.	8	22	37	21	13

4. Are you camping overnight at Henry Rierson Spruce Run Campground on this trip? (check ONE) 9% No 91% Yes

5. Including yourself, how many people are accompanying you at Henry Rierson Spruce Run Campground? see report people

6. Overall, how satisfied are you with your visit to Henry Rierson Spruce Run Campground? (check ONE)

1% Very Dissatisfied 1% Dissatisfied 2% Neither 35% Satisfied 61% Very Satisfied

7. Listed below are several characteristics. On the left, rate how **important** it is to you that each characteristic is provided at Henry Rierson Spruce Run Campground. Then, on the right, rate how **satisfied** you are with each characteristic at this campground. **Answer both the importance (on left) and satisfaction (on right) questions by circling numbers for EACH characteristic.**

Rate IMPORTANCE					Rate SATISFACTION				
Not Important	Neither	Very Important	Characteristics at this campground		Very Dissatisfied	Neither	Very Satisfied		
5%	3%	38%	40%	Road access to the campground	2%	3%	10%	37%	48%
1	4	12	44	Parking availability for vehicles at the campground	3	5	13	36	43
21	3	35	24	Parking availability for vehicles at the day use area	1	4	43	27	25
2	2	12	35	Garbage containers	2	7	14	36	42
0	0	4	23	Absence of litter	1	3	5	31	61
3	2	7	29	Bathrooms / toilets	1	7	11	37	44
0	1	6	37	Picnic tables	1	2	6	33	60
1	1	4	24	Campfire pits	1	1	8	25	66
8	7	26	26	Wood sheds with campfire wood for sale	2	1	34	20	44
4	5	24	26	Presence of Camp Host or agency personnel	1	2	21	24	52
10	5	35	28	Outdoor grills / barbecues for cooking	1	3	39	23	34
4	4	23	36	Information signs about regulations / guidelines	1	4	24	32	41
1	1	4	29	Availability of campsites	1	7	14	32	46
2	1	11	24	Privacy between campsites	4	11	21	31	34
2	2	18	35	Screening (e.g., bushes, shrubs) between campsites	5	12	32	29	22
2	1	9	34	Safety from vehicle traffic in the area	1	8	20	33	38
1	1	6	26	Unspoiled natural environment	0	3	13	37	48
1	2	5	28	Opportunity to escape crowds of people	1	5	14	32	48
3	3	18	37	Opportunity to hear no noise from other visitors	7	9	26	33	26
2	4	19	43	Opportunity to hear no noise from vehicles	7	11	33	31	18

8. To what extent do you oppose or support each of the following possible management actions at Henry Rierson Spruce Run Campground? (circle one number for EACH possible management action)

	Strongly Oppose	Oppose	Neither	Support	Strongly Support
Increase the amount of parking for vehicles at campsites.	8%	21%	42%	22%	6%
Provide a separate overflow parking area for vehicles.	7	9	34	37	13
Provide more privacy / screening (e.g., bushes) between campsites.	2	5	24	41	28
Increase the number of campsites.	11	16	21	26	26
Provide some group campsites for large groups (e.g., up to 20 people).	9	9	24	30	28
Increase the size of the day use area.	10	14	52	16	8
Close this campground for up to one year to redesign the area.	42	19	25	10	4
Do not change anything / keep things as they are now.	6	13	33	26	22

The next 9 shaded boxes contain hypothetical scenarios describing possible changes at Henry Rierison Spruce Run Campground. **NO SCENARIOS ARE THE SAME. Carefully read EACH scenario and then answer the question following EACH scenario.**

Scenario 1: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide:

- **SAME** amount of parking for vehicles as now, *and*
- **SAME** number of campsites as now, *and*
- **SAME** amount of privacy / screening between campsites (e.g., bushes, shrubs) as now.

9. How acceptable would it be for managers to make all three changes listed in **Scenario 1** above? (**circle one number**)

2%	2%	4%	7%	15%	21%	20%	13%	17%
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 2: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide:

- **LESS** parking for vehicles, *and*
- **LESS** campsites, *and*
- **LESS** privacy / screening between campsites (e.g., bushes, shrubs).

10. How acceptable would it be for managers to make all three changes listed in **Scenario 2** above? (**circle one number**)

48	12	16	9	9	3	2	0	2
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 3: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide:

- **MORE** parking for vehicles, *and*
- **MORE** campsites, *and*
- **MORE** privacy / screening between campsites (e.g., bushes, shrubs).

11. How acceptable would it be for managers to make all three changes listed in **Scenario 3** above? (**circle one number**)

7	3	7	6	12	22	14	10	22
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 4: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide:

- **LESS** parking for vehicles, *and*
- **SAME** number of campsites as now, *and*
- **MORE** privacy / screening between campsites (e.g., bushes, shrubs).

12. How acceptable would it be for managers to make all three changes listed in **Scenario 4** above? (**circle one number**)

9	7	9	12	21	12	13	10	10
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 5: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide:

- **LESS** parking for vehicles, *and*
- **MORE** campsites, *and*
- **SAME** amount of privacy / screening between campsites (e.g., bushes, shrubs) as now.

13. How acceptable would it be for managers to make all three changes listed in **Scenario 5** above? (**circle one number**)

14	6	18	16	20	15	4	5	4
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 6: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide:

- **SAME** amount of parking for vehicles as now, *and*
- **MORE** campsites, *and*
- **LESS** privacy / screening between campsites (e.g., bushes, shrubs).

14. How acceptable would it be for managers to make all three changes listed in **Scenario 6** above? (**circle one number**)

28	16	17	16	12	6	2	3	2
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 7: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide:

- **SAME** amount of parking for vehicles as now, *and*
- **LESS** campsites, *and*
- **MORE** privacy / screening between campsites (e.g., bushes, shrubs).

15. How acceptable would it be for managers to make all three changes listed in **Scenario 7** above? (**circle one number**)

14	11	17	11	19	15	4	4	7
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 8: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide:

- **MORE** parking for vehicles, *and*
- **LESS** campsites, *and*
- **SAME** amount of privacy / screening between campsites (e.g., bushes, shrubs) as now.

16. How acceptable would it be for managers to make all three changes listed in **Scenario 8** above? (**circle one number**)

22	16	19	15	14	11	1	0	2
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 9: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide:

- **MORE** parking for vehicles, *and*
- **SAME** number of campsites as now, *and*
- **LESS** privacy / screening between campsites (e.g., bushes, shrubs).

17. How acceptable would it be for managers to make all three changes listed in **Scenario 9** above? (**circle one number**)

24	16	19	13	13	9	1	1	5
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

18. Are you: (**check ONE**) 50% Male 50% Female

19. What is your age? (**write response**) see report years old

20. Where do you live? (**write responses**) City / town see report County see report State see report

Do you have any other comments about Henry Rierison Spruce Run Campground? If so, please write your comments below.

See report

Thank you, your input is important! **Please return this survey to the Camp Host or agency official immediately.**

APPENDIX B: SURVEY INSTRUMENT

Visitors' Experiences and Preferences at Henry Rierison Spruce Run Campground: A Study Conducted by Oregon Department of Forestry and Oregon State University

We are conducting this survey to understand your experiences at Henry Rierison Spruce Run Campground and opinions about how this campground should be managed. Your input is important and will assist managers. Participation is voluntary and all answers are anonymous. **Please answer all of the following survey questions and return it to the Camp Host or agency official.**

1. You are at Henry Rierison Spruce Run Campground right now.
Prior to this trip, had you ever visited this campground before? (check ONE)

☐ No ☐ Yes → if yes, how many previous trips have you made to this campground? (write response) _____ trip(s)

2. Listed below are several possible reasons for visiting Henry Rierison Spruce Run Campground. Please indicate how important each of these reasons was in influencing your decision to visit this campground. (circle one number for EACH reason)

	Not at all Important	Slightly Important	Moderately Important	Extremely Important
To be with friends or family.	1	2	3	4
To meet or observe other people.	1	2	3	4
To experience solitude.	1	2	3	4
To escape crowds of people.	1	2	3	4
To be in nature.	1	2	3	4
To view the natural scenery.	1	2	3	4
Because of the easy access by road / vehicle.	1	2	3	4
Because of the close proximity to where I live.	1	2	3	4
Because the campground is conveniently located.	1	2	3	4
To rest or relax.	1	2	3	4
To get away from the demands of life.	1	2	3	4
To get physical exercise.	1	2	3	4
To visit nearby lake areas such as Lost Lake.	1	2	3	4
To participate in water-based recreation activities (e.g., swim, fish).	1	2	3	4
To participate in land-based recreation activities (e.g., hike, camp).	1	2	3	4
To explore a new area	1	2	3	4
To come back to an area that I have visited before.	1	2	3	4
Because I was told by someone that this is a nice campground to visit.	1	2	3	4
Because I saw information or read an article about this campground.	1	2	3	4
Because the campground has everything I need (e.g. toilets, firewood).	1	2	3	4
Other reason for visiting? (write response) _____	1	2	3	4

3. To what extent do you disagree or agree with each of the following statements? (circle one number for EACH statement)

	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree
Henry Rierison Spruce Run Campground is very special to me.	1	2	3	4	5
Henry Rierison Spruce Run Campground is one of the best places for doing what I like to do.	1	2	3	4	5
I am very attached to Henry Rierison Spruce Run Campground.	1	2	3	4	5
I would not substitute any other area for doing what I do at Henry Rierison Spruce Run Campground.	1	2	3	4	5
I identify strongly with Henry Rierison Spruce Run Campground.	1	2	3	4	5
No other place compares to Henry Rierison Spruce Run Campground.	1	2	3	4	5

4. Are you camping overnight at Henry Rierison Spruce Run Campground on this trip? (check ONE) ☐ No ☐ Yes

5. **Including yourself**, how many people are accompanying you at Henry Rierison Spruce Run Campground today? _____ people

6. Overall, how satisfied are you with your visit to Henry Rierison Spruce Run Campground? (check ONE)
☐ Very Dissatisfied ☐ Dissatisfied ☐ Neither ☐ Satisfied ☐ Very Satisfied

7. Listed below are several characteristics. On the left, rate how **important** it is to you that each characteristic is provided at Henry Rierison Spruce Run Campground. Then, on the right, rate how **satisfied** you are with each characteristic at this campground. **Answer both the importance (on left) and satisfaction (on right) questions by circling numbers for EACH characteristic.**

Rate IMPORTANCE					Rate SATISFACTION					
Not Important	Neither	Very Important	Characteristics at this campground		Very Dissatisfied	Neither	Very Satisfied			
1	2	3	4	5	Road access to the campground	1	2	3	4	5
1	2	3	4	5	Parking availability for vehicles at the campground	1	2	3	4	5
1	2	3	4	5	Parking availability for vehicles at the day use area	1	2	3	4	5
1	2	3	4	5	Garbage containers	1	2	3	4	5
1	2	3	4	5	Absence of litter	1	2	3	4	5
1	2	3	4	5	Bathrooms / toilets	1	2	3	4	5
1	2	3	4	5	Picnic tables	1	2	3	4	5
1	2	3	4	5	Campfire pits	1	2	3	4	5
1	2	3	4	5	Wood sheds with campfire wood for sale	1	2	3	4	5
1	2	3	4	5	Presence of Camp Host or agency personnel	1	2	3	4	5
1	2	3	4	5	Outdoor grills / barbecues for cooking	1	2	3	4	5
1	2	3	4	5	Information signs about regulations / guidelines	1	2	3	4	5
1	2	3	4	5	Availability of campsites	1	2	3	4	5
1	2	3	4	5	Privacy between campsites	1	2	3	4	5
1	2	3	4	5	Screening (e.g., bushes, shrubs) between campsites	1	2	3	4	5
1	2	3	4	5	Safety from vehicle traffic in the area	1	2	3	4	5
1	2	3	4	5	Unspoiled natural environment	1	2	3	4	5
1	2	3	4	5	Opportunity to escape crowds of people	1	2	3	4	5
1	2	3	4	5	Opportunity to hear no noise from other visitors	1	2	3	4	5
1	2	3	4	5	Opportunity to hear no noise from vehicles	1	2	3	4	5

8. To what extent do you oppose or support each of the following possible management actions at Henry Rierison Spruce Run Campground? (circle one number for EACH possible management action)

	Strongly Oppose	Oppose	Neither	Support	Strongly Support
Increase the amount of parking for vehicles at campsites.	1	2	3	4	5
Provide a separate overflow parking area for vehicles.	1	2	3	4	5
Provide more privacy / screening (e.g., bushes) between campsites.	1	2	3	4	5
Increase the number of campsites.	1	2	3	4	5
Provide some group campsites for large groups (e.g., up to 20 people).	1	2	3	4	5
Increase the size of the day use area.	1	2	3	4	5
Close this campground for up to one year to redesign the area.	1	2	3	4	5
Do not change anything / keep things as they are now.	1	2	3	4	5

The next 9 shaded boxes contain hypothetical scenarios describing possible changes at Henry Rierison Spruce Run Campground. **NO SCENARIOS ARE THE SAME. Carefully read EACH scenario and then answer the question following EACH scenario.**

Scenario 1: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide: • **SAME** amount of parking for vehicles as now, *and*
• **SAME** number of campsites as now, *and*
• **SAME** amount of privacy / screening between campsites (e.g., bushes, shrubs) as now.

9. How acceptable would it be for managers to make all three changes listed in **Scenario 1** above? (**circle one number**)

1	2	3	4	5	6	7	8	9
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 2: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide: • **LESS** parking for vehicles, *and*
• **LESS** campsites, *and*
• **LESS** privacy / screening between campsites (e.g., bushes, shrubs).

10. How acceptable would it be for managers to make all three changes listed in **Scenario 2** above? (**circle one number**)

1	2	3	4	5	6	7	8	9
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 3: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide: • **MORE** parking for vehicles, *and*
• **MORE** campsites, *and*
• **MORE** privacy / screening between campsites (e.g., bushes, shrubs).

11. How acceptable would it be for managers to make all three changes listed in **Scenario 3** above? (**circle one number**)

1	2	3	4	5	6	7	8	9
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 4: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide: • **LESS** parking for vehicles, *and*
• **SAME** number of campsites as now, *and*
• **MORE** privacy / screening between campsites (e.g., bushes, shrubs).

12. How acceptable would it be for managers to make all three changes listed in **Scenario 4** above? (**circle one number**)

1	2	3	4	5	6	7	8	9
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 5: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide: • **LESS** parking for vehicles, *and*
• **MORE** campsites, *and*
• **SAME** amount of privacy / screening between campsites (e.g., bushes, shrubs) as now.

13. How acceptable would it be for managers to make all three changes listed in **Scenario 5** above? (**circle one number**)

1	2	3	4	5	6	7	8	9
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 6: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide: • **SAME** amount of parking for vehicles as now, *and*
• **MORE** campsites, *and*
• **LESS** privacy / screening between campsites (e.g., bushes, shrubs).

14. How acceptable would it be for managers to make all three changes listed in **Scenario 6** above? (**circle one number**)

1	2	3	4	5	6	7	8	9
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 7: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide: • **SAME** amount of parking for vehicles as now, *and*
• **LESS** campsites, *and*
• **MORE** privacy / screening between campsites (e.g., bushes, shrubs).

15. How acceptable would it be for managers to make all three changes listed in **Scenario 7** above? (**circle one number**)

1	2	3	4	5	6	7	8	9
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 8: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide: • **MORE** parking for vehicles, *and*
• **LESS** campsites, *and*
• **SAME** amount of privacy / screening between campsites (e.g., bushes, shrubs) as now.

16. How acceptable would it be for managers to make all three changes listed in **Scenario 8** above? (**circle one number**)

1	2	3	4	5	6	7	8	9
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

Scenario 9: Imagine all three of the following changes were to be made at Henry Rierison Spruce Run Campground:
Provide: • **MORE** parking for vehicles, *and*
• **SAME** number of campsites as now, *and*
• **LESS** privacy / screening between campsites (e.g., bushes, shrubs).

17. How acceptable would it be for managers to make all three changes listed in **Scenario 9** above? (**circle one number**)

1	2	3	4	5	6	7	8	9
Very Unacceptable	Unacceptable	Neither	Acceptable	Very Acceptable				

18. Are you: (**check ONE**) ☐ Male ☐ Female

19. What is your age? (**write response**) _____ years old

20. Where do you live? (**write responses**) City / town _____ County _____ State _____

Do you have any other comments about Henry Rierison Spruce Run Campground? If so, please write your comments below.

Thank you, your input is important! **Please return this survey to the Camp Host or agency official immediately.**