

Pictured Rocks National Lakeshore: Visitor Use Study

Winter 1999/2000

FINAL REPORT

Submitted to

Pictured Rocks National Lakeshore

by

Cynthia A. Warzecha, Research Fellow

E.B. James, Research Assistant

Dorothy H. Anderson, Professor and Leader Cooperative Park Studies Program

Jerrilyn L. Thompson, Research Fellow

University of Minnesota

Department of Forest Resources

Cooperative Park Studies Program

115 Green Hall

St. Paul, MN 55108

December 8, 2000

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DEFINITIONS

Cross-country Skiers or Snowshoers	A subgroup of the total sample comprised of respondents who engaged in cross-country skiing, snowshoeing, or both activities. Respondents identified as cross-country skiers or snowshoers did <i>not</i> participate in snowmobiling. The responses of <i>cross-country skiers or snowshoers</i> and <i>snowmobilers</i> are compared throughout this report. (See snowmobilers.)
Mean	A measure of the center of the data set. Popularly known as the arithmetic <i>average</i> ; the sum of the observations in the set divided by the number of observations. Means have a leveling effect. They tell nothing about variations or extreme values that may act to skew the data.
Median	The number in the data set where one-half of the numbers are at or below it and one-half above it. It is often a better statistic than the mean when the population is skewed by extreme values. An indicator of a population skewed by extreme values is a large difference between the mean and median.
Mailback Questionnaire	Survey sent to a sample of visitors after their initial contact during the onsite interview process at Pictured Rocks National Lakeshore.
N (Number)	Number of respondents. Total numbers may vary from table to table because not all visitors who responded to the onsite interview or mailback questionnaire answered every question.
Onsite Survey	Questionnaire completed by visitors contacted at various locations in Pictured Rocks National Lakeshore. Respondents had the opportunity to indicate whether they were willing or unwilling to fill out a mailback questionnaire about their experiences at the Lakeshore.
Percent	Percentage; proportion of, or ratio.
Respondents	Individual visitors (16 years of age or older) who answered the mailback questionnaire.

Significantly Different

Two subgroups of the total sample (i.e., *snowmobilers* and *cross-country skiers or snowshoers*) were tested for statistically significant differences using t-tests or chi-square tests as appropriate. Only significant differences at the .05 level were reported.

Significance Level

The probability of rejecting a null hypothesis when it is true. Throughout this report, a .05 significance level was used as the criterion for testing the null hypothesis that subgroup means of the total sample are equal. A .05 significance level assumes that we are correctly accepting a null hypothesis 95 percent of the time and risk rejecting it only 5 percent of the time. That is, there is a 95 percent probability that two subgroups really differ, or less than a 5 percent probability that the apparent difference is due to chance.

Snowmobilers

A subgroup of the total sample comprised of respondents who participated in snowmobiling. Although snowmobilers also may have participated in cross-country skiing or snowshoeing, they were *not* included in the subgroup of *cross-country skiers or snowshoers*. The responses of *snowmobilers* and *cross-country skiers or snowshoers* are compared throughout this report. (See cross-country skiers or snowshoers.)

Total Sample

Total number of respondents (total N).

SUMMARY

During the winter of 1999/2000, the Cooperative Park Studies Program (CPSP) at the University of Minnesota conducted the first phase of a three-part project to gather information about visitors to Pictured Rocks National Lakeshore (NL). The study sought to provide information to managers about visitors' perceptions of Pictured Rocks NL, including information about (a) conflicts between different user types, b) experiences in and benefits from using the area, c) management in the area, and (d) satisfaction with their trip. This study provides the information needed by managers at Pictured Rocks NL to institute specific strategies and actions to resolve visitor conflicts and related issues and to aid long range planning in terms of visitor management of the Lakeshore. The first phase of the study examines winter use and focuses on two types of user groups: (1) snowmobilers and (2) cross-country skiers or snowshoers.

Data about winter users at Pictured Rocks NL were gathered through the use of an onsite survey and mailback questionnaire. Initial visitor contacts were made at the time of the onsite survey, which was administered at six locations at the Lakeshore. Individuals indicating an interest in participating in the study were sent a mailback questionnaire. A total of 283 visitors completed the onsite survey, of which 256 indicated they were willing to fill out a mailback questionnaire. Of the 256 questionnaires that were mailed, 73 percent were returned. However, overall response rates may have been negatively affected by low return rates for individuals contacted during a snowmobile safety check during Presidents Day weekend. Response rates for that day were 56 percent, considerably lower than the overall return rate.

Using selected variables from the onsite survey, respondents and nonrespondents were evaluated to determine nonresponse bias. Statistically significant differences were detected, but may be the result of the lower response rates attained during the snowmobile safety check. In general, nonrespondents had made fewer visits to the Lakeshore, traveled in larger groups, decided to visit the Lakeshore *after* arriving in the area, were younger, and more likely to be male than were respondents.

Two user groups, *snowmobilers* and *cross-country skiers or snowshoers*, were evaluated to determine whether statistically significant differences existed between these subgroups. Snowmobilers comprised the subgroup of respondents who indicated they had participated in snowmobiling. Cross-country skiers or snowshoers engaged in skiing, snowshoeing, or both. Although snowmobilers may have participated in skiing or snowshoeing, skiers and snowshoers did *not* engage in snowmobiling.

Evaluation of selected trip characteristics revealed significant differences between the two user groups. Snowmobilers made fewer visits to the Lakeshore and traveled in larger groups than cross-country skiers or snowshoers. The median group size for snowmobilers was 20 people compared to 4 people for skiers or snowshoers. For 49 percent of skiers or snowshoers, visiting the Lakeshore was the primary purpose for their visit to the area compared to 13 percent of snowmobilers.

Looking at selected visitor characteristics, respondents had an average age of 43 and identified themselves as white and not Hispanic or Latino. Eighty percent of all respondents reported

Michigan as their permanent place of residence. Of those living in Michigan, 58 percent of cross-country skiers or snowshoers reported zip codes in the Iron Mountain region of the Upper Peninsula compared to 8 percent of snowmobilers. Statistically significant differences between subgroups were evident for gender and educational levels achieved. Snowmobilers were more frequently male (60 percent), than female (40 percent). More skiers or snowshoers had completed a masters, doctoral, or professional degree (40 percent) than snowmobilers (12 percent).

Respondents were asked to look over a list of 27 possible experiences they may have had while visiting Picture Rocks NL and rate how important each experience was to them and to what extent they were able to attain each experience. Statistically significant differences were evident between snowmobilers and cross-country skiers or snowshoers for a number of specific experiences. Ratings for experiences related to nature (experiencing nature, being close to nature), solitude (experiencing solitude, being away from other people), independence (being on one's own, testing skills and abilities), health (getting exercise, feeling healthier), enjoying the scenery of Pictured Rocks, and getting away from the usual demands of life received significantly higher ratings from skiers or snowshoers than from snowmobilers. The importance of hunting was rated significantly higher by snowmobilers than by skiers or snowshoers.

Results indicate that nearly all experiences respondents rated as either important or very important were at least moderately attained. Statistically significant differences were apparent between snowmobilers and cross-country skiers or snowshoers for 12 of the 27 experiences rated as important or very important. In all cases where significant differences existed between subgroups, skiers or snowshoers reported a higher level of attainment than snowmobilers.

Using a 7-point scale (1=very unacceptable, 7=very acceptable), respondents rated the acceptability of encounters with others at six locations within Pictured Rocks NL. Acceptability ratings for all locations were 5.3 or higher. Differences in acceptability of encounters were significant between snowmobilers and skiers or snowshoers for vehicle accessible campgrounds and while on trails. For these two locations, skiers and snowshoers reported higher acceptability ratings than did snowmobilers. However, the number of visitors to vehicle accessible campgrounds was small. That is, few respondents visited these locations.

Overall, study participants encountered few problems during their visit. Differences between subgroups were most significant for snowmobilers disturbing my backcountry experience and too many snowmobilers in the backcountry. Both situations were rated as more of a problem for skiers or snowshoers than for snowmobilers.

Respondents indicated their support or opposition for 19 possible management actions. At least two-thirds of all respondents supported or strongly supported restricting snowmobile use to designated areas only, providing visitors with natural history information about the area, and establishing "off-limit" zones to protect sensitive resources. Cross-country skiers or snowshoers indicated significantly more support for restricting snowmobile use to designated areas only, limiting the number of snowmobiles allowed in Pictured Rocks NL, restricting activities in backcountry to provide specific uses at specific places, and limiting the number of people per group than did snowmobilers. Compared to skiers or snowshoers, snowmobilers reported significantly more support for improving access to Lake Superior and allowing horseback riding.

Respondents were given the opportunity to express their satisfaction with the quality of 8 different services provided at Pictured Rocks NL. Three-quarters of all respondents reported they were satisfied (the highest possible rating) with the overall quality of services at the Lakeshore. Cross-country skiers or snowshoers gave significantly higher ratings than snowmobilers for the availability of visitor information publications, access to exhibits and other educational materials, and the response of the NPS to their needs.

Study participants were asked to provide comments concerning activities or services that *should be offered* at Pictured Rocks NL. Cross-country skiers or snowshoers provided more comments than snowmobilers and frequently referred to the maintenance and expansion of ski and snowshoe trails. Respondents also were asked to comment on activities or services that *should be prohibited* at the Lakeshore. Skiers or snowshoers provided more comments than snowmobilers and indicated support for prohibiting snowmobiling, off-road vehicles, and personal watercraft.

Study participants also were asked to evaluate a list of 10 statements about their most recent trip to the Lakeshore and to indicate the extent to which they agreed or disagreed with each statement. More than 90 percent of all respondents agreed or strongly agreed that they enjoyed their time at Pictured Rocks NL, were satisfied with their trip to Pictured Rocks NL, and thought the area and its surroundings were in good condition. Cross-country skiers or snowshoers reported a significantly higher level of agreement for enjoying their time at Pictured Rocks, enjoying the natural quiet, and the helpfulness of park staff than did snowmobilers. Snowmobilers agreed more strongly with the statement about the trip not being worth the money it cost than did skiers or snowshoers.

Forty percent of respondents completing the mailback questionnaire provided additional written comments about their visit to Pictured Rocks NL or suggestions about managing the Lakeshore. Cross-country skiers or snowshoers offered more comments than snowmobilers.

Concluding Remarks

The results of the first phase of the three-part visitor use study reveal many significant differences between snowmobilers and cross-country skiers or snowshoers. The data support the premise that skiers or snowshoers have a stronger desire than snowmobilers for solitude and closeness to nature. The significant differences between user groups concerning the situations they encountered and potential management actions for the Lakeshore further illustrate the differences between these two subgroups of the total sample. In general, the potential impact of snowmobile activity on the recreational experiences of skiers or snowshoers is greater than the impact of skiers or snowshoers on snowmobiles. *Given the availability of numerous opportunities for snowmobiling on the Upper Peninsula of Michigan, attention should be given to the appropriateness of snowmobiling at Pictured Rocks NL.*

Although some caution ought to be exercised in interpreting the snowmobiler data (most of the sample was drawn during the snowmobile safety check in February 2000) the significant differences between subgroups are substantial enough to warrant consideration in future planning and development of Pictured Rocks NL.

BACKGROUND

Pictured Rocks National Lakeshore (NL), the nation's first National Lakeshore, was authorized in 1966 to preserve the shoreline, cliffs, beaches, and dunes adjacent to Lake Superior. The 73,228 acre site, located along Lake Superior on the northern upper peninsula of Michigan, attracts more than 400,000 visitors each year. During all seasons, the lakeshore offers visitors numerous recreational opportunities. Hiking, camping, backpacking, fishing, hunting, snowmobiling, cross-country skiing, and snowshoeing are among the popular activities enjoyed by visitors. Boating, canoeing, and kayaking attract water enthusiasts to the shore of Lake Superior as well as inland lakes within Pictured Rocks NL.

New federal laws, revisions of laws and National Park Service (NPS) policies, and changes in the nature and number of some types of recreational use at Pictured Rocks NL have led to the need for an update of their current General Management Plan (GMP), which has been guiding the management and development of the Lakeshore since 1981. Pictured Rocks NL has been experiencing a trend of increased recreational use; particularly sea kayaking, personal watercraft use, and cross-country skiing. Such changes in recreation patterns have led to increased reports of *user conflicts at the Lakeshore*. However, *there are no comprehensive data about conflicts* occurring on the lakeshore or between user groups. It is suspected that motorized use and foot use, both along the shoreline and in the interior, are the sources of many user conflicts. In addition to recent user trends, the consideration of some areas of the Lakeshore for wilderness designation and improving the primitive access road by paving it, both currently underway, are expected to change visitor use patterns and may affect interaction between user groups.

During the winter of 1999/2000, the Cooperative Park Studies Program (CPSP) of the University of Minnesota, in conjunction with the NPS and Pictured Rocks NL staff, administered a visitor study to users visiting the Lakeshore. The study was the first phase of a three-part research effort to identify characteristics of visits to the Lakeshore, sociodemographic attributes of visitors, problems encountered by visitors, visitor opinions about selected management actions, and visitor perceptions of conflicts encountered while recreating at Pictured Rocks NL.

This first phase of the three-part visitor use study focuses on winter use at the Pictured Rocks NL and examines two specific user groups: (1) snowmobilers and (2) cross-country skiers or snowshoers. The subsequent phases of the investigation will focus on spring/summer and fall use and will focus on a variety of user groups such as hunters, hikers, sea kayakers, and motorized watercraft users, including personal watercraft users. The results of these investigations will provide the information and guidance necessary to institute specific management strategies and actions to resolve visitor conflicts and related issues and to aid long range planning in terms of visitor management of the park.

STUDY METHODS

The study period for the first phase of the project was from December 29, 1998 through February 19, 1999. The sample frame and study process consisted of two parts: (1) an onsite survey (Appendix A) and (2) a mailback questionnaire (Appendix B). The onsite survey addressed the number of visits to the Lakeshore, group size, group type, plans for visiting the area, overnight lodging, and whether the visitor would be willing to complete a mailback questionnaire about their experiences at Pictured Rocks NL. The mailback questionnaire addressed the importance of specific experiences to visitors and to what extent they were achieved, activities in which visitors participated, potential crowding at specific locations, possible problems encountered, degree of support or opposition to potential management actions, service quality and satisfaction, as well as selected demographic information.

Sampling days and times were based on park staff's estimation of visitor use patterns at the Lakeshore and availability of staff to assist in the data collection process. The majority of visitors were contacted during six selected weekends during the study period. A total of 283 onsite surveys were obtained from visitors, 16 years of age or older, at six locations within Pictured Rocks NL (Table 1). Of the 283 visitors who completed the onsite interview, 256 indicated they were willing to fill out a mailback questionnaire and were sent a copy soon after the initial contact. Of the 256 questionnaires mailed, 73 percent were returned.

Table 1. Interview locations at Pictured Rocks NL.

Location	N	Percent
Grand Marais lot	155	54.8
Town "Boundary" Road	61	21.6
"Maintenance" lot	41	14.5
Sand Point lots	13	4.6
Munising Visitor Center	7	2.5
Munising Falls	6	2.1
Total	283	100.0

Overall response rates may have been affected by low return rates attained on February 19th (Presidents Day weekend) during the snowmobile safety check near the Grand Marais Visitor Center. The majority of visitors contacted on that day were snowmobilers. Individuals completing the onsite survey were assured that participation in the study was voluntary. However, the presence of law enforcement rangers may have influenced snowmobilers filling out the onsite survey. Response rates on that day were 56 percent compared to the overall return rate of 73 percent.

Follow up procedures were employed to obtain the highest possible response rates. Two weeks after the initial mailback questionnaire and cover letter (Appendix C) were sent, a reminder letter (Appendix D) and replacement questionnaire were mailed to the potential respondent. A second reminder letter (Appendix E) and questionnaire were sent two weeks after the first reminder.

Two subgroups from the total sample, (1) snowmobilers and (2) cross-country skiers or snowshoers, were analyzed to determine potential differences between the groups. Snowmobilers were identified as respondents who participated in snowmobiling. Although snowmobilers also may have participated in skiing or snowshoeing, they were *not* included in the subgroup of cross-country skiers or snowshoers. Cross-country skiers or snowshoers were identified as respondents who participated in skiing, snowshoeing, or both activities. Cross-country skiers or snowshoers did *not* participate in snowmobiling.

The completed survey forms were commercially keypunched and the data set was uploaded to a personal computer for analysis. Data were analyzed using the Statistical Program for the Social Sciences (SPSS/PC+). Basic descriptive statistics, frequency distributions, and selected crosstabulations were computed for selected variables.

The sample size for the study was adequate and the response rates acceptable for this type of study. It should be acknowledged, however, that the survey results represent only visitors who visited during the time frame of the winter study and cannot be extended to other times of the year or other years. That is, survey results should be thought of as pertaining to respondents visiting the Lakeshore during the study period. Nonetheless, study results are sufficient to support an informed dialogue among interested parties about future management of Pictured Rocks NL.

SELECTED STUDY RESULTS

A. Comparison between Respondents and Nonrespondents

Selected variables from the onsite survey were examined to determine whether statistically significant differences existed between respondents and nonrespondents. Differences between the two groups were evident in regard to the location of the onsite survey, number of visits to the Lakeshore, group size, plan for visiting the Pictured Rocks NL, as well as the gender and age of the individual who completed the onsite survey and indicated a willingness to complete a mailback questionnaire.

It is important to note that statistically significant differences between respondents and nonrespondents may be attributable to the large number of snowmobilers stopped for the safety check on Presidents Day weekend near the Grand Marais Visitor Center. As noted earlier, interviewers emphasized that participation in the study was completely voluntary. However, when law enforcement was present, the overall response rate dropped. Of the 283 people who were contacted on February 19th, the majority of whom were snowmobilers, 23 were not willing to fill out the mailback questionnaire. Of the 87 individuals who did indicate a willingness to fill out the mailback questionnaire, 45 snowmobilers and 4 cross-country skiers or snowshoers returned the questionnaire. The resulting response rate for February 19th was 56 percent, considerable lower than the overall response rate of 73 percent.

Nonrespondents were more likely to have been contacted at the Grand Marais lot than respondents. Sixty-four percent of nonrespondents were contacted at the Grand Marais lot compared to 46 percent of respondents (Table A.1).

Respondents had visited Pictured Rocks NL more frequently than nonrespondents. Thirteen percent of respondents were contacted during their first visit to the Lakeshore compared to 27 percent of nonrespondents (Table A.2). Additionally, nearly half (48 percent) of respondents made 11 or more visits to the Lakeshore compared to 26 percent of nonrespondents. The median number of visits to the Lakeshore was 10 by respondents and 4 by nonrespondents. Although mean scores for respondents and nonrespondents are significantly different, median scores provide a more useful statistic for the number of visits because the means scores were skewed by a few respondents who reported visiting the Lakeshore many times.

Respondents tended to travel in smaller groups than nonrespondents. The mean group size for respondents was 3 people compared to 5 people for nonrespondents (Table A.3).

Plans for visiting Pictured Rocks NL also were different for respondents and nonrespondents. For more than half of respondents (53 percent), visiting the Lakeshore was one of several important things they planned to do during their visit to the area compared to a third of nonrespondents (Table A.4). More nonrespondents (43 percent) than respondents (11 percent) decided to visit Pictured Rocks NL *after* arriving in the area.

Significant differences between respondents and nonrespondents also were apparent when gender was considered. Respondents were more frequently female (42 percent) than nonrespondents (26 percent) (Table A.5). Nearly three-quarters (74 percent) of nonrespondents were male compared to 58 percent of respondents.

Respondents tended to be older than nonrespondents. The mean age for respondents was 42 compared to 36 for nonrespondents (Table A.6).

State of permanent residence, as determined by zip codes provided by visitors completing the onsite survey, did not differ significantly between respondents and nonrespondents (Table A.7).

B. Trip Characteristics

Respondents' initial contact and request to complete the onsite survey most frequently occurred at the Grand Marais lot (46 percent), followed by the town boundary road (27 percent) and the maintenance lot (18 percent) (Table B.1). The majority of snowmobilers (84 percent) were contacted at the Grand Marais lot. Onsite survey locations for cross-country skiers or snowshoers were more equally represented with 37 percent contacted at the town boundary road, 25 percent at the Grand Marais lot, and another 25 percent at the maintenance lot.

Nearly half (48 percent) of all respondents had visited Pictured Rocks NL more than 10 times (Table B.2). Statistically significant differences exist between the number of visits made by cross-country skiers or snowshoers and the number of visits made by snowmobilers. Snowmobilers were more likely to be first time visitors (19 percent) than skiers or snowshoers (9 percent). Skiers or snowshoers, with a median of 20 visits, visited the lakeshore more frequently than snowmobilers who had a median of 4 visits.

Cross-country skiers or snowshoers tended to travel in smaller groups than snowmobilers. Sixty-four percent of skiers or snowshoers traveled either alone or in groups of two whereas 16 percent of snowmobilers traveled alone or with one other person (Table B.3). Forty-three percent of snowmobilers traveled in groups of four or five people with an additional 28 percent traveling in groups of six or more. Mean group sizes are statistically significant between skiers or snowshoers (2.5 people) and snowmobilers (5 people).

The majority of respondents (84 percent) were traveling with family and friends (Table B.4). Fewer snowmobilers traveled alone (7 percent) than did skiers or snowshoers (19 percent).

For 43 percent of all respondents, visiting Pictured Rocks NL was one of several important things they planned to do during their visit to the area (Table B.5). Another 36 percent reported that visiting the lakeshore was the primary purpose of their visit to the area. For nearly half of cross-country skiers or snowshoers (49 percent), visiting the lakeshore was more likely to be the primary purpose of their visit to the area than for snowmobilers (13 percent).

A total of 89 percent of all respondents stayed overnight in the area while visiting Pictured Rocks NL. Of those who did stay overnight, 32 percent stayed at a local motel/hotel (Table B.6). About

half stayed either at home (31 percent) or at their cabin (18 percent). Snowmobilers more frequently reported staying at a local motel/hotel (47 percent) than skiers or snowshoers (27 percent). Forty-one percent of skiers or snowshoers indicated that they stayed at home compared to 11 percent of snowmobilers.

Visitors participated in a variety of activities while visiting Pictured Rocks NL. Sixty-one percent of all respondents engaged in cross-country skiing and 33 percent participated in snowmobiling (Table B.7). Other popular activities, in which at least 20 percent of all respondents participated, include wildlife watching (30 percent), snowshoeing (22 percent), day hiking (21 percent), and bird watching (20 percent). One quarter of snowmobilers reported visiting historic sites as compared to 10 percent of skiers or snowshoers. Skiers or snowshoers more frequently reported engaging in bird watching (28 percent) than did snowmobilers (5 percent).

C. Visitor Characteristics

There were more male respondents (60 percent) than female respondents (40 percent) (Table C.1). Three-quarters of snowmobilers were male compared to about half (52 percent) of skiers or snowshoers. The difference in gender composition of the two subgroups is statistically significant.

The mean age of respondents was 43 years (Table C.2). Nearly half of all respondents (47 percent) were between the ages of 41 and 55. Age is not statistically significant between snowmobilers and cross-country skiers or snowshoers.

The majority of study participants (85 percent) had received a post-high school education (Table C.3). However, snowmobilers were more statistically likely to report they had completed some college, business or trade school (40 percent) than skiers or snowshoers (19 percent). Forty percent of skiers or snowshoers reported completing a masters, doctoral, or professional degree but only 12 percent of snowmobilers had obtained such degrees.

Three-quarters of all respondents had an annual household income in 1999 (before taxes) of at least \$40,000 (Table C.4). Fifty-five percent of snowmobilers had household incomes of \$65,000 or more compared to 43 percent of cross-country skiers or snowshoers.

None of the respondents identified themselves as Hispanic or Latino (Table C.5). All study participants identified themselves as white (Table C.6).

Respondents came from ten states with 80 percent reporting a permanent mailing address in Michigan (Table C.7). Of respondents providing a Michigan address, 42 percent were from the Iron Mountain area in the Upper Peninsula of the state (Table B.8). Cross-country skiers or snowshoers more frequently reported having an Iron Mountain zip code (58 percent) than did snowmobilers (8 percent). Figure B.1 depicts the 3-digit zip code areas in Michigan.

D. Importance and Attainment of Experiences Sought by Respondents

Respondents were asked to look over a list of 27 different possible experiences that visitors may have while visiting Pictured Rocks NL and to indicate, along a 5-point scale (1=very unimportant, 2= unimportant, 3=neither unimportant nor important, 4=important, 5=very important), how important each experience was to them. using a. More than 75 percent of all respondents rated the following experiences as important or very important: to enjoy the scenery of Pictured Rocks (4.5), to experience nature (4.4), to participate in recreational activities (4.3), to be close to nature (4.3), to get exercise (4.1), to have a wilderness experience (4.1), and to feel healthier (4.0) (Table D.1). The experience of enjoying hunting received the lowest importance rating (2.1) followed by the experience of meeting new people (2.5).

Statistically significant differences were evident between snowmobilers and cross-country skiers or snowshoers for the importance ascribed to 19 of the 27 experiences. The most significant differences between subgroups exist for the importance of enjoying scenery of Pictured Rocks, experiencing nature, being close to nature, getting exercise, getting away from the usual demands of life, feeling healthier, experiencing solitude, being away from other people, testing skills and abilities, being on one's own, and enjoying hunting. With the exception of enjoying hunting, skiers or snowshoers reported significantly higher importance ratings than snowmobilers for the experience items noted.

For each experience study participants reported as either important or very important, they were asked to rate, along a 4-point scale (1=did not attain, 2=somewhat attained, 3=moderately attained, and 4=totally attained), the extent to which they attained their desired experiences. Results indicate that nearly all experiences respondents rated as important or very important were at least moderately attained (Table D.2). Experiences receiving the highest attainment ratings (3.8) were to do something with my family and to use my own equipment. The lowest attainment ratings, less than 3, were reported for the following experiences: to learn about the cultural history of the area (2.7), to learn about the natural history of the area (2.8), and to enjoy hunting (2.9).

Statistically significant differences were evident between snowmobilers and cross-country skiers or snowshoers for the attainment of 12 of the 27 experiences rated as important or very important by study participants. For all instances in which significant differences exist between the two subgroups, the attainment scores for skiers or snowshoers were higher than those of snowmobilers. The most significant differences between subgroups were for being with members of my group, testing skills and abilities, and doing something with family.

E. Acceptability of Encounters at Specific Locations

Using a 7-point scale (1=very unacceptable to 7=very acceptable), respondents were asked to rate the acceptability of their encounters with other visitors at six different locations within Pictured Rocks NL. Study participants reported the highest acceptability ratings for encounters at backcountry campsites (6.3), vehicle accessible campgrounds (5.9), and while on trails (5.8) (Table E.1). However, sample sizes for backcountry campsites and vehicle accessible

campgrounds are small. That is, few respondents visited these locations. The lowest acceptability rating for encounters with other visitors was reported for interior lakes (5.3). Statistically significant differences between snowmobilers and cross-country skiers or snowshoers were evident for vehicle accessible campgrounds and while on trails. For these two locations, skiers and snowshoers reported a higher rating for the acceptability of their encounters with other visitors than did snowmobilers.

Respondents had the opportunity to indicate the reasons they found encounters with other visitors unacceptable (as indicated by a rating of 3 or less on a 7-point scale). Study participants could report the number of people, something else, or both as reasons for finding their encounters unacceptable. Overall, few reasons for low acceptability ratings were reported by respondents. However, more reasons were reported by skiers or snowshoers than by snowmobilers.

F. Possible Situations Experienced by Respondents

Using a 5-point scale (1=no problem, 2=slight problem, 3=moderate problem, 4=serious problem, 5=very serious problem), respondents rated 22 possible problems they may have encountered during their visit to Pictured Rocks NL. Overall, respondents encountered very few problems during their visit. Two situations, snowmobiles disturbing my backcountry experience and too many snowmobiles in the backcountry, were rated as a slight problem (2.0) (Table F.1). Although overall ratings for both situations were low, at least 18 percent of study participants rated them as either a serious or very serious problem.

Responses of snowmobilers and cross-country skiers or snowshoers were statistically significant for 6 of the 22 situations rated by study participants. Differences between subgroups were significant for too many snowmobiles in the backcountry, snowmobiles disturbing my backcountry experience, encounters with snowmobiles, too much noise, too much National Park Service rule enforcement, and noise from airplanes. With the exception of too much National Park Service rule enforcement, skiers or snowshoers regarded these situations as more problematic did snowmobilers.

G. Management Actions at the Lakeshore

Respondents indicated their support or opposition for 19 possible management actions by rating them on a 5-point scale (1=strongly oppose, 2=oppose, 3=neither oppose nor support, 4=support, 5=strongly support). At least two-thirds of all respondents supported or strongly supported *restricting snowmobile use to designated areas only, providing visitors with natural history information about the area, and establishing "off-limit" zones to protect sensitive resources* (Table G.1). Study participants indicated the least support for limiting the number of cross-country skiers allowed in Pictured Rocks with 64 percent of all respondents opposing or strongly opposing this management action.

Statistically significant differences were evident between snowmobilers and cross-country skiers or snowshoers in their level of support for 12 of the 19 management actions. The most significant

differences between subgroups occur for restricting snowmobile use to designated areas only, limiting the number of snowmobiles allowed in Pictured Rocks NL, restricting activities in backcountry to provide specific uses at specific places, limiting the number of people per group, improving access to Lake Superior, and allowing horseback riding on trails. Where significant differences exist between subgroups, skiers or snowshoers indicated more support than snowmobilers for the management actions with the exception of improving access to Lake Superior and allowing horseback riding on trails. Snowmobilers gave higher ratings than skiers or snowshoers for these actions indicating a greater desire for more access to the site.

H. Service Quality and Visitor Satisfaction

Respondents expressed their satisfaction with the quality of services provided at Pictured Rocks NL by rating 8 services along a 5-point scale (1=dissatisfied, 2=somewhat satisfied, 3=neither dissatisfied nor satisfied, 4=somewhat satisfied, 5=satisfied). Study participants who responded “did not use” or “don’t know” were not included in the sample. Three-quarters of all respondents reported they were satisfied (the highest possible rating) with the overall quality of services at Pictured Rocks NL (Table H.1). With the exception of ranger-led activities, study participants indicated being at least somewhat satisfied with all services they rated.

Statistically significant differences were evident between snowmobilers and skiers or snowshoers for the importance ascribed to 3 of the 8 service quality items they rated. Skiers or snowshoers reported significantly higher ratings for the availability of visitor information publications, the response of the NPS to their needs, and access to exhibits and other educational materials.

In question 8 of the mailback questionnaire, study participants were asked, “Are there activities or services that you think should be offered at Pictured Rocks National Lakeshore that currently are not offered?” A total of 17 percent of all respondents offered comments (Table I.2). Cross-country skiers or snowshoers provided more comments (21 percent) than snowmobilers (10 percent). Comments offered by skiers most frequently referred to the maintenance and expansion of ski and snowshoe trails. Respondents’ verbatim responses to question 8 appear in Appendix F and are arranged by the following categories: (1) snowmobilers, (2) cross-country skiers or snowshoers, and (3) other respondents.

In question 9 of the mailback questionnaire, study participants were asked, “Are there activities or services that you think should be prohibited at Pictured Rocks National Lakeshore?” A total of 31 percent of all respondents offered comments (Table I.3). Forty-four percent of cross-country skiers or snowshoers provided comments compared to 7 percent of snowmobilers. Skiers or snowshoers most frequently mentioned prohibiting snowmobiling and other motorized off-road vehicles (all-terrain vehicles and personal watercraft). They also expressed support for prohibiting hunting and horseback riding. Respondents’ verbatim responses to question 9 appear in Appendix G and are arranged by the following categories: (1) snowmobilers, (2) cross-country skiers or snowshoers, and (3) other respondents.

Study participants were asked to evaluate a list of 10 statements along a 5-point scale (1=strongly disagree, 2= disagree, 3=neither disagree nor agree, 4=agree, 5=strongly agree) about their most

recent trip to Pictured Rocks NL and to indicate the extent to which they agreed or disagreed with each statement. More than 90 percent of all respondents agreed or strongly agreed that they enjoyed their time at Pictured Rocks NL, were satisfied with their trip to Pictured Rocks NL, and thought the area and its surroundings were in good condition (Table H.2). More than 80 percent of respondents disagreed or strongly disagreed with the statement that they did not have the kind of experience they were looking for and that the trip was not worth the money it cost.

Statistically significant differences were evident between user groups regarding their level of agreement with 6 of the 10 trip experience statements they rated. Cross-country skiers or snowshoers reported significantly stronger agreement for enjoying their time at Pictured Rocks, enjoying the natural quiet, helpfulness of park staff, and overall satisfaction with their trip than snowmobilers. Snowmobilers agreed more strongly with the trip not being worth the money it cost and not having the kind of experience they were looking for than did skiers or snowshoers.

I. Open-ended Responses to Question 16

Study participants were asked to offer comments about their visit to Pictured Rocks NL or suggestions about managing the Lakeshore. A total of 40 percent offered comments (Table I.1). Snowmobilers were less likely to provide comments (33 percent) than cross-country skiers or snowshoers (45 percent). Respondents' verbatim comments are contained in Appendix H and are presented under three headings: (1) snowmobilers, (2) cross-country skiers or snowshoers, and (3) other respondents.

TABLES OF SELECTED STUDY RESULTS

A. Comparison between Respondents and Nonrespondents

Table A.1. Location of onsite survey, by respondents and nonrespondents.

Onsite survey location	Respondents		Nonrespondents	
	N	%	N	%
Grand Marais lot	86	46.0	44	63.8
Town boundary road	50	26.7	11	15.9
"Maintenance" lot	34	18.2	6	8.7
Sand Point lots	10	5.3	3	4.3
Munising visitor center	6	3.2	1	1.4
Munising Falls	1	0.5	4	5.8
Total	186	100.0	69	100.0

Source: Winter onsite survey.

Table A.2. Number of visits to Pictured Rocks NL, by respondents and nonrespondents.

Number of visits	Respondents		Nonrespondents	
	N	%	N	%
1 (this visit)	19	12.7	17	27.4
2	22	14.7	9	14.5
3	10	6.7	3	4.8
4	8	5.3	3	4.8
5-10	19	12.7	14	22.6
11-20	28	18.7	4	6.5
21 or more	44	29.3	12	19.4
Total	150	100.0	62	100.0

Source: Winter onsite survey, question 1.

Respondents:	Mean* = 73.1 visits	Median = 10 visits
Nonrespondents:	Mean* = 15.7 visits	Median = 4 visits

* Mean number of visits for respondents and nonrespondents are significantly different at the $p < .05$ level.

Table A.3. Mean and median number of people per group, by respondents and nonrespondents.

Respondents		Nonrespondents	
N	Mean*	N	Mean*
186	3.3	69	4.8

Source: Winter onsite survey, question 2.

* Mean number of people per group for respondents and nonrespondents are significantly different at the $p < .05$ level.

Table A.4. Respondents plan for visiting Pictured Rocks NL, by respondents and nonrespondents.

Plan for visiting Pictured Rocks NL	Respondents*		Nonrespondents*	
	N	%	N	%
The primary purpose of my visit to the area	54	36.0	15	24.6
One of several important things I planned to do during my visit to the area	80	53.3	20	32.8
Something I decided to do <u>after</u> arriving in the area	16	10.7	26	42.6
Total	150	100.0	61	100.0

Source: Winter onsite survey, question 4.

* There is a significant difference ($p=.05$, Chi-square analysis) between respondents and nonrespondents based on their plans for visiting the Lakeshore.

Table A.5. Gender of study participants at Pictured Rocks NL, by respondents and nonrespondents.

Gender	Respondents*		Nonrespondents*	
	N	%	N	%
Male	106	57.9	51	73.9
Female	77	42.1	18	26.1
Total	183	72.6	69	100.0

Source: Winter onsite survey, question 6.

* There is a significant difference ($p=.05$, Chi-square analysis) between respondents and nonrespondents based on their gender.

Table A.6. Mean and median age, by respondents and nonrespondents.

Respondents		Nonrespondents	
N	Mean*	N	Mean*
178	42.4	69	35.5

Source: Winter onsite survey, question 7.

* Mean ages for respondents and nonrespondents are significantly different at the $p < .05$ level.

Table A.7. Place of permanent residence by zip code regions in Michigan, by respondents and nonrespondents.

Region	Respondents		Nonrespondents	
	N	%	N	%
Michigan - local (Iron Mountain and Gaylord zip code regions)	72	38.7	19	29.2
Michigan - nonlocal	77	41.4	33	50.8
Other states	37	19.9	13	20.0
Total	186	100.0	65	100.0

B. Trip Characteristics

Table B.1. Location of onsite survey, by selected visitor characteristics.

Onsite survey location	Total sample		Snowmobilers		X-country skiers or snowshoers	
	N	%	N	%	N	%
Grand Marais lot	86	46.0	51	83.6	29	25.0
Sand Point lots	10	5.3	0	0	9	7.8
“Maintenance” lot	34	18.2	2	3.3	29	25.0
Town “boundary” road	50	26.7	7	11.5	43	37.1
Munising visitor center	6	3.2	0	0	6	5.2
Munising Falls	1	0.5	1	1.6	0	0
Total	187	100.0	61	100.0	116	100.0

Source: Winter onsite survey.

Table B.2. Number of visits to Pictured Rocks NL, by selected visitor characteristics.

Number of visits	Total sample		Snowmobilers		X-country skiers or snowshoers	
	N	%	N	%	N	%
1 (this visit)	19	10.2	10	18.5	8	9.2
2	22	14.7	12	22.2	10	11.5
3	10	6.7	4	7.4	5	5.7
4	8	5.3	3	5.6	5	5.7
5-10	19	12.6	8	14.8	10	11.5
11-20	28	18.7	7	13.0	21	24.1
21 or more	44	29.3	10	18.5	28	32.2
Total	150	100.0	54	100.0	87	100.0

Source: Winter onsite survey, question 1.

Total sample:	Mean = 73.1 visits	Median = 10 visits
Snowmobilers:	Mean* = 17.3 visits	Median = 4 visits
X-country skiers or snowshoers:	Mean* = 77.9 visits	Median = 20 visits

* Mean number of visits for *snowmobilers* and *cross-country skiers or snowshoers* are significantly different at the $p < .05$ level.

Table B.3. Number of people per group, by selected visitor characteristics.

Number of people per group	Total sample		Snowmobilers		X-country skiers or snowshoers	
	N	%	N	%	N	%
1	33	17.6	6	9.8	23	20.0
2	57	30.5	4	6.6	51	44.3
3	22	11.8	8	13.1	13	11.3
4	33	17.6	13	21.3	20	17.4
5	18	9.6	13	21.3	5	4.3
6 or more	23	12.4	17	27.9	3	2.6
Total	186	100.0	61	100.0	115	100.0

Source: Winter onsite survey, question 2.

Total sample:	Mean = 3.3 people	Median = 3 people
Snowmobilers:	Mean* = 5.0 people	Median = 4 people
X-country skiers or snowshoers:	Mean* = 2.5 people	Median = 2 people

* Mean number of people per group for *snowmobilers* and *cross-country skiers or snowshoers* are significantly different at the $p < .05$ level.

Table B.4. Type of group by selected visitor characteristics.

Group type*	Total sample		Snowmobilers		X-country skiers or snowshoers	
	N	%	N	%	N	%
Family and friends	157	84.4	56	93.3	94	81.0
Alone	29	15.6	4	6.7	22	19.0
Total	186	100.0	60	100.0	116	100.0

Source: Winter onsite survey, question 3.

Table B.5. Respondents plan for visiting Pictured Rocks NL, by selected visitor characteristics.

Plan for visiting Pictured Rocks NL	Total sample		Snowmobilers		X-country skiers or snowshoers	
	N	%	N	%	N	%
The primary purpose of my visit to the area	54	36.0	7	13.0	44	49.4
One of several important things I planned to do during my visit to the area	80	42.8	35	64.8	42	47.2
Something I decided to do <u>after</u> arriving in the area	16	10.7	12	22.2	3	3.4
Total	150	100.0	54	100.0	89	100.0

Source: Winter onsite survey, question 4.

Table B.6. For respondents staying overnight at or near the Lakeshore, response to: "On this trip, where will you or did you stay overnight while visiting Pictured Rocks National Lakeshore?", by selected visitor characteristics.

Accommodations	Total sample			Snowmobilers			X-country skiers or snowshoers		
	N	%*	%**	N	%*	%**	N	%*	%**
At a local motel/hotel	51	31.3	32.1	25	46.3	47.2	26	26.	27.1
At home	50	30.5	31.4	6	11.1	11.3	39	39.0	40.6
At my cabin	29	17.7	18.2	11	20.4	20.8	15	15.0	15.6
At a backcountry campground	10	6.1	6.3	1	1.9	1.9	8	8.0	8.3
At a local lodge	10	6.1	6.3	8	14.8	15.1	2	2.0	2.1
With friends who live in the area	10	6.1	6.3	1	1.9	1.9	8	8.0	8.3
At a vehicle accessible campsite	4	2.4	2.5	2	3.7	3.8	2	2.0	2.1
Total	164	100.0	--	54	100.0	--	100	100.0	--

Source: Winter onsite survey, question 5.

* Percentage based on number of *responses*. Respondents could give more than one response.

** Percentage based on number of *respondents*.

(Total sample N = 159, Snowmobilers N = 53, Cross-country skiers or snowshoers N = 96)

Table B.7. Activities in which respondents participated during their most recent trip to Pictured Rocks NL, by selected visitor characteristics.

Activity	Total sample			Snowmobilers			X-country skiers or snowshoers		
	N	%*	%**	N	%*	%**	N	%*	%**
Cross-country skiing	113	22.0	61.1	10	6.8	16.4	103	29.9	88.8
Snowmobiling	61	11.9	33.0	61	41.2	100.0	0	0	0
Wildlife watching	56	10.9	30.3	15	10.1	24.6	37	10.8	31.9
Snowshoeing	40	7.8	21.6	3	2.0	4.9	37	10.8	31.9
Day hiking	39	7.6	21.1	7	4.7	11.5	28	8.1	24.1
Bird watching	37	7.2	20.0	3	2.0	4.9	32	9.3	27.6
Sightseeing by automobile	34	6.6	18.4	8	5.4	13.1	20	5.8	17.2
Visiting geological sites	33	6.4	17.8	11	7.4	18.0	22	6.4	19.0
Visiting historic sites	28	5.5	15.1	15	10.1	24.6	12	3.5	10.3
Hiking the North Country Trail	14	2.7	7.6	2	1.4	3.3	12	3.5	10.3
Backpacking in the back-country	13	2.5	7.0	0	0	0	12	3.5	10.3
Fishing	10	1.9	5.4	5	3.4	8.2	5	1.5	4.3
Hunting	10	1.9	5.4	3	2.0	4.9	7	2.0	6.0
Recreational vehicle touring	5	1.0	2.7	5	3.4	8.2	0	0	0
Other***	18	3.5	9.7	0	0	0	15	4.4	12.9
Total	513	100	--	148	100.0	--	344	100.0	--

Source: Winter mailback survey, question 2.

* Percentage based on number of *responses*. Respondents could give more than one response.

** Percentage based on number of *respondents*.

(Total sample N = 185, Snowmobilers N = 61, Cross-country skiers or snowshoers N = 116)

*** Other activities include: ice climbing (8), photography (4), just enjoying the area (2), winter camping (1), biking (1), picnic at visitor center (1), and annual visit to local haunts (1).

C. Visitor Characteristics

Table C.1. Gender of respondents at Pictured Rocks NL, by selected visitor characteristics.

Gender	Total sample		Snowmobilers*		X-country skiers or snowshoers*	
	N	%	N	%	N	%
Male	110	59.8	45	75.0	60	52.2
Female	74	40.2	15	25.0	55	47.8
Total	184	100.0	60	100.0	115	100.0

Source: Winter mailback survey, question 11.

* There is a significant difference ($p=.05$, Chi=quare analysis) between snowmobilers and cross-country skiers or snowshoers based on their gender.

Table C.2. Age of respondents at Pictured Rocks NL, by selected visitor characteristics.

Age	Total sample		Snowmobilers		X-country skiers or snowshoers	
	N	%	N	%	N	%
16-25	18	9.8	6	10.2	11	9.5
26-30	18	9.8	8	13.6	9	7.8
31-35	17	9.2	8	13.6	7	6.0
36-40	21	11.4	8	13.6	12	10.3
41-45	27	14.7	10	16.9	17	14.7
46-50	35	19.0	4	6.8	30	25.9
51-55	25	13.6	10	16.9	15	12.9
56-60	10	5.4	3	5.1	7	6.0
61-65	6	3.3	1	1.7	4	3.4
66 or older	7	3.8	1	1.7	4	3.4
Total	184	100.0	59	100.0	116	100.0

Source: Winter mailback survey, question 12.

Total sample:	Mean = 42.9 years	Median = 45 years
Snowmobilers:	Mean = 40.4 years	Median = 40 years
X-country skiers or snowshoers:	Mean = 44.0 years	Median = 46 years

Table C.3. Educational level of respondents at Pictured Rocks NL, by selected visitor characteristics.

Educational level	Total sample		Snowmobilers*		X-country skiers or snowshoers*	
	N	%	N	%	N	%
High school graduate or GED	27	14.6	14	23.3	10	8.6
Some college, business or trade school	50	27.0	24	40.0	22	19.0
College graduate or some graduate school	53	28.6	15	25.0	37	31.9
Masters, doctoral or professional degree	55	29.7	7	11.7	47	40.5
Total	185	100.0	60	100.0	116	100.0

Source: Winter mailback survey, question 13.

* There is a significant difference ($p=0.05$, Chi-square analysis) between snowmobilers and cross-country skiers or snowshoers based on their educational level.

Table C.4. Total household income (before taxes) in 1999, by selected visitor characteristics.

Income level	Total sample		Snowmobilers		X-country skiers or snowshoers	
	N	%	N	%	N	%
Less than \$15,000	13	7.6	5	9.4	7	6.4
\$15,000 to \$24,999	7	4.1	1	1.9	6	5.5
\$25,000 to \$39,000	23	13.5	6	11.3	17	15.5
\$40,000 to \$64,999	50	29.2	12	22.6	33	30.0
\$65,000 or more	78	45.6	29	54.7	47	42.7
Total	171	100.0	53	100.0	110	100.0

Source: Winter mailback survey, question 14.

Table C.5. Ethnicity reported by respondents to Pictured Rocks NL.

Ethnicity	Total sample	
	N	%
Not Hispanic or Latino	129	100.0
Hispanic or Latino	0	0
Total	129	100.0

Source: Winter mailback survey, question 15.

Table C.6. Race reported by respondent to Pictured Rocks NL.

Race	Total sample	
	N	%
White	179	100.0
Total	179	100.0

Source: Winter mailback survey, question 15.

Table C.7. Residents of respondents by state, by selected visitor characteristics.

State	Total sample		Snowmobilers		X-country skiers or snowshoers	
	N	%	N	%	N	%
Michigan	149	80.1	49	80.3	91	79.1
Wisconsin	8	4.3	0	0	8	6.7
Illinois	7	3.8	3	4.9	4	3.5
Indiana	7	3.8	4	6.6	3	2.6
Ohio	6	3.2	3	4.9	3	2.6
Minnesota	4	2.2	0	0	4	3.5
Texas	2	1.1	0	0	2	1.7
Florida	1	0.5	1	1.6	0	0
Georgia	1	0.5	1	1.6	0	0
Idaho	1	0.5	0	0	0	0
Total	186	100.0	61	100	115	100.0

Source: Winter onsite survey.

Table C.8. Residence of respondents by zip code regions in Michigan, by selected visitor characteristics.

zip code region	3-digit zip code prefix	Total sample		Snowmobilers		X-country skiers or snowshoers	
		N	%	N	%	N	%
Iron Mountain	498-499	63	42.3	4	8.2	53	58.2
Lansing	488-489	13	8.7	7	14.3	6	6.6
Saginaw	486-487	12	8.1	6	12.2	6	6.6
Gaylord	497	9	6.0	7	14.3	2	2.2
Jackson	492	9	6.0	5	10.2	3	3.3
Flint	484-485	8	5.4	6	12.2	2	2.2
Traverse City	496	8	5.4	4	8.2	4	4.4
Royal Oak	483	4	2.7	1	2.0	3	3.3
Grand Rapids	493-495	3	2.0	3	6.1	0	0
Kalamazoo	490-491	1	0.7	0	0	1	1.1
Total	--	149	100.0	49	100.0	91	100.0

Source: Winter onsite survey.

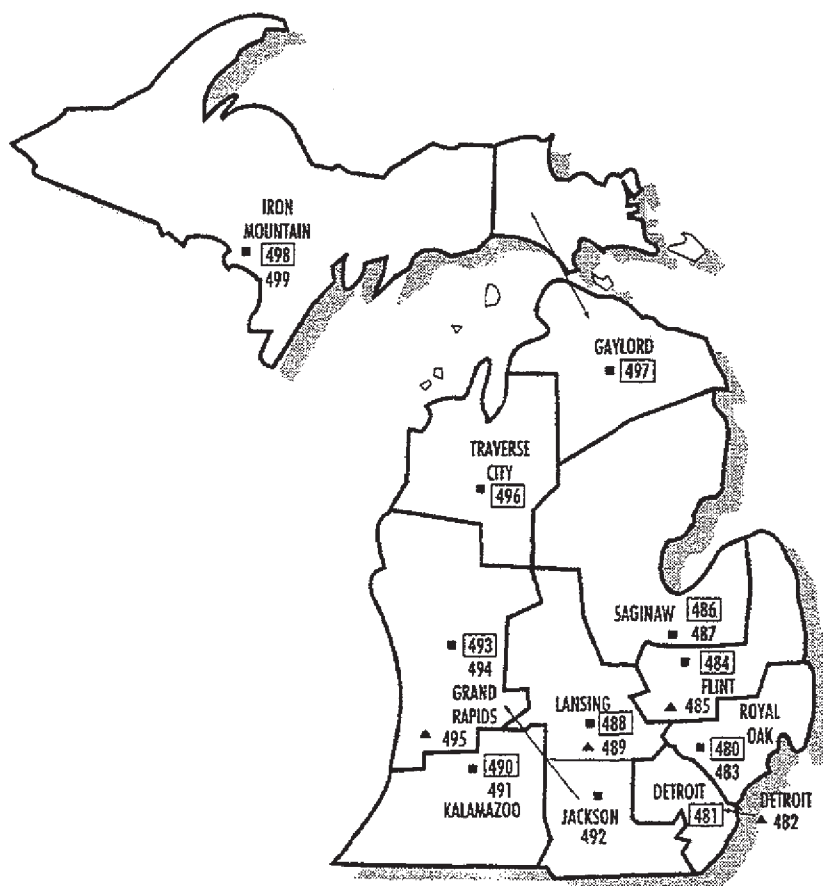


Figure C.1. Map depicting three-digit zip code regions in Michigan.

D. Importance and Attainment of Experiences Sought by Respondents

Table D.1. Importance of experiences sought by respondents on their most recent visit to Pictured Rocks NL, by selected visitor characteristics.

Experience*	Total sample							Snowmobilers		X-country skiers or snowshoers		Significant at the p < .05 level
	N	Mean	Percent of respondents by response category**					N	Mean	N	Mean	
			1	2	3	4	5					
To enjoy the scenery of Pictured Rocks	180	4.5	1.7	1.1	4.4	34.4	58.3	56	4.0	116	4.7	.000
To experience nature	176	4.4	1.7	1.1	8.0	31.3	58.0	54	4.1	115	4.6	.000
To participate in recreational activities	178	4.3	1.1	3.9	11.8	34.3	48.9	55	4.0	116	4.4	.004
To be close to nature	177	4.3	2.3	1.7	11.9	35.0	49.2	54	3.8	116	4.5	.000
To get exercise	179	4.1	2.8	2.8	15.6	39.1	39.7	55	3.4	116	4.5	.000
To get away from the usual demands of life	178	4.1	3.4	1.7	12.4	42.1	40.4	56	3.7	114	4.4	.000
To have a wilderness experience	172	4.1	2.3	3.5	14.5	37.8	41.9	54	3.8	111	4.3	.002
To feel healthier	176	4.0	4.0	2.3	17.6	42.6	33.5	54	3.5	115	4.3	.000
To be with people who enjoy the same things I do	176	3.8	5.1	7.4	19.3	41.5	26.7	54	3.8	115	3.7	.600
To experience solitude	174	3.8	4.6	5.2	20.1	46.6	23.6	54	3.2	113	4.1	.000
To use my own equipment	176	3.7	4.5	7.4	29.5	31.8	26.7	54	3.8	115	3.7	.616
To do something with my family	174	3.7	9.8	5.7	20.1	30.5	33.9	56	3.9	111	3.6	.254
To experience new and different things	176	3.7	4.5	6.3	24.4	47.2	17.6	56	3.8	113	3.7	.588
To be away from other people	176	3.7	4.5	8.5	22.2	40.3	24.4	54	3.1	114	4.0	.000
To relax physically	174	3.6	6.3	8.6	27.6	33.9	23.6	54	3.3	112	3.7	.020
To test my skills and abilities	175	3.6	1.7	5.7	34.3	42.9	15.4	54	3.3	113	3.9	.000
To challenge myself	173	3.6	4.0	8.1	29.5	41.6	16.8	53	3.3	113	3.7	.007
To be with members of my group	172	3.6	5.2	10.5	29.1	32.6	22.7	55	3.8	110	3.4	.037
To be on my own	173	3.5	5.2	11.0	31.2	31.2	21.4	53	3.1	112	3.8	.000
To have thrills and excitement	172	3.5	3.5	7.6	36.0	36.6	16.3	53	3.7	111	3.5	.199

Table D.1. continued from previous page.

Experience*	Total sample							Snowmobilers		X-country skiers or snowshoers		Significant at the p < .05 level
	N	Mean	Percent of respondents by response category**					N	Mean	N	Mean	
			1	2	3	4	5					
To think about my personal values	172	3.4	8.1	5.8	40.1	30.8	15.1	54	3.1	111	3.5	.020
To learn about the natural history of the area	170	3.4	5.9	4.7	39.4	40.6	9.4	52	3.3	111	3.5	.257
To learn about the cultural history of the area	169	3.2	8.9	9.5	44.4	30.2	7.1	53	3.2	109	3.2	.595
To share my skills and knowledge with others	173	2.8	9.2	20.2	50.9	16.2	3.5	54	2.9	111	2.8	.694
To be creative by doing something such as sketching, painting, taking photographs	172	2.8	17.4	15.1	40.1	19.8	7.6	53	2.5	112	3.0	.017
To meet new people	171	2.5	22.8	20.5	44.4	8.8	3.5	52	2.9	111	2.4	.003
To enjoy hunting	170	2.1	49.4	15.3	20.6	7.6	7.1	53	2.7	110	1.8	.000

Source: Winter mailback survey, question 1.

* Rank ordered by total sample mean scores.

** Responses based on a 5-point scale: 1 = very unimportant, 2 = unimportant, 3 = neither unimportant nor important, 4 = important, 5 = very important.

Note: Cells with shading denote statistically significant differences (p < .05) between subgroups for the importance of specific experiences.

Table D.2. Attainment of experiences sought by respondents on their most recent visit to Pictured Rocks NL for study participants who reported the importance of specific experiences as *important* or *very important*, by selected visitor characteristics.

Experience*	Total sample		Percent of respondents by response category**				Snowmobilers		X-country skiers or snowshoers		Significant at the $p < .05$ level
	N	Mean	1	2	3	4	N	Mean	N	Mean	
To do something with my family	98	3.8	1.0	0	21.4	77.6	37	3.5	58	3.9	.001
To use my own equipment	88	3.8	1.1	3.4	10.2	85.2	27	3.7	59	3.9	.095
To participate in recreational activities	134	3.7	1.5	3.7	18.7	76.1	36	3.4	95	3.8	.004
To get exercise	124	3.7	1.6	3.2	21.8	73.4	20	3.3	101	3.8	.024
To be with members of my group	81	3.7	2.5	1.2	19.8	76.5	33	3.6	47	3.8	.074
To enjoy the scenery of Pictured Rocks	148	3.6	2.7	5.4	25.0	66.9	38	3.1	106	3.8	.000
To experience nature	139	3.6	1.4	2.2	30.2	66.2	34	3.5	102	3.7	.090
To be close to nature	130	3.6	0.8	3.8	32.3	63.1	26	3.4	100	3.7	.042
To get away from the usual demands of life	130	3.6	0	6.9	30.8	62.3	33	3.3	96	3.6	.044
To be with people who enjoy the same things I do	101	3.6	2.0	6.9	18.8	72.3	30	3.5	69	3.7	.309
To feel healthier	118	3.5	1.7	7.6	33.1	57.6	23	3.1	94	3.6	.018
To have a wilderness experience	120	3.4	0.8	15.0	32.5	51.7	30	3.3	86	3.4	.139
To relax physically	83	3.4	1.2	8.4	43.4	47.0	18	3.2	63	3.4	.208
To be on my own	80	3.4	2.5	6.6	42.5	47.5	14	3.3	66	3.4	.720
To have thrills and excitement	79	3.4	1.3	8.9	43.0	46.8	28	3.2	50	3.4	.215
To think about my personal values	67	3.4	0	7.5	47.8	44.8	11	3.4	55	3.4	.857
To challenge myself	90	3.3	2.2	14.4	36.7	46.7	18	2.9	70	3.4	.012
To experience solitude	108	3.2	1.9	14.8	43.5	39.8	19	2.9	87	3.3	.054
To be away from other people	99	3.2	2.0	20.2	36.4	41.4	18	2.8	78	3.3	.029
To test my skills and abilities	91	3.2	2.2	15.4	38.5	44.0	18	2.8	71	3.4	.001

Table D.2. continued from previous page.

Experience*	Total sample						Snowmobilers		X-country skiers or snowshoers		Significant at the p < .05 level
	N	Mean	Percent of respondents by response category**				N	Mean	N	Mean	
			1	2	3	4					
To be creative by doing something such as sketching, painting, taking photographs	37	3.2	2.7	18.9	29.7	48.6	5	3.0	30	3.2	.585
To meet new people	16	3.2	0	25.0	31.3	43.8	8	3.1	8	3.3	.776
To experience new and different things	98	3.1	2.0	21.4	39.8	36.7	31	2.9	66	3.2	.096
To share my skills and knowledge with others	28	3.0	0	28.6	39.3	32.1	6	2.5	21	3.2	.038
To enjoy hunting	20	2.9	20.0	15.0	25.0	40.0	12	2.8	8	2.9	.941
To learn about the natural history of the area	72	2.8	8.3	26.4	45.8	19.4	18	2.8	54	2.8	.938
To learn about the cultural history of the area	53	2.7	7.5	30.2	49.1	13.2	17	2.7	36	2.7	.87

Source: Winter mailback survey, question 1.

* Rank ordered by total sample mean scores.

** Responses based on a 4-point scale: 1 = did not attain, 2 = somewhat attained, 3 = moderately attained, 4 = totally attained.

Note: Cells with shading denote statistically significant differences (p < .05) between subgroups for the attainment of specific experiences.

E. Acceptability of Encounters at Pictured Rocks NL

Table E.1. Acceptability of respondents' encounters at various locations during their visit to Pictured Rocks NL, by selected visitor characteristics.

Location	Total sample									Snowmobilers		X-country skiers or snowshoers		Significant at the p < .05 level
	Percent of respondents by response category*									N**	Mean	N**	Mean	
	Very unacceptable				Very acceptable									
N**	Mean	1	2	3	4	5	6	7	N**	Mean	N**	Mean		
At backcountry campsites	20	6.3	0	0	0	0	15.0	45.0	40.0	5	6.0	14	6.3	.458
At vehicle accessible campgrounds	19	5.9	0	0	0	10.5	26.3	26.3	36.8	8	5.1	10	6.4	.006
While on trails	154	5.8	3.9	1.9	1.9	5.2	16.2	35.1	35.7	48	5.3	104	6.0	.015
While visiting historic places	43	5.5	2.3	7.0	2.3	7.0	23.3	23.3	34.9	24	5.3	18	5.9	.212
At trailheads	122	5.4	5.7	4.1	0.8	9.0	20.5	30.3	29.5	41	5.2	79	5.6	.172
On interior lakes	44	5.3	4.5	4.5	0	6.8	27.3	40.9	15.9	20	5.6	22	5.0	.263

Source: Winter mailback survey, question 3.

* Responses based on a 7-point scale: 1 = very unacceptable and 7 = very acceptable.

** Number of respondents; the table does not include study participants who reported "don't recall."

Note: Cells with shading denote significant differences at the 0.05 level ($t < .05$) between subgroups for the acceptability of encounters at specific locations.

Table E.2. Respondents reasons for rating the acceptability of their encounters as unacceptable , by selected visitor characteristics.

Location	Total sample				Snowmobilers				X-country skiers or snowmobilers			
	N*	Number of people	Something else	Both	N*	Number of people	Something else	Both	N*	Number of people	Something else	Both
At backcountry campsites	3	1	1	1					3	1	1	1
At vehicle accessible campgrounds	3	2	1		1	1			2	1	1	
While on trails	12	7	5		4	4			8	3	5	
While visiting historic places	3	2	1		2	1	1		1	1		
At trailheads	11	6	5		2	2			8	4	4	
On interior lakes	5		1	4					5		1	4

Source: Winter mailback survey, question 3.

* Number of responses reported by study participants who rated the acceptability of their encounters as 3 or less (on a 7-point scale).

F. Possible Situations Experienced by Respondents

Table F.1. Respondents evaluation of situations they may have encountered on their most recent trip to Pictured Rocks NL, by selected visitor characteristics.

Situation*	Total sample							Snowmobilers		X-country skiers or snowshoers		Significant at the $p < .05$ level
	N	Mean	Percent of respondents by response category**					N	Mean	N	Mean	
			1	2	3	4	5					
Too many snowmobiles in the backcountry	159	2.0	61.6	11.3	9.4	5.7	11.9	53	1.3	98	2.3	.000
Snowmobiles disturbing my backcountry experience	155	2.0	60.6	9.7	8.4	7.1	14.2	52	1.2	94	2.6	.000
Encounters with snowmobilers	160	1.7	63.8	16.3	8.8	5.0	6.3	56	1.4	95	1.9	.003
Unsafe operation of snowmobiles in backcountry	149	1.7	64.4	13.4	12.8	3.4	6.0	55	1.6	86	1.8	.294
Too much noise	152	1.6	71.7	13.2	7.9	2.6	4.6	45	1.3	98	1.7	.005
People being inconsiderate	150	1.4	80.0	8.7	8.0	2.0	1.3	44	1.5	98	1.3	.358
Insufficient trail navigational aids	159	1.3	79.2	10.1	9.4	1.3	0	48	1.4	104	1.3	.341
Confusion about rules and regulations	159	1.3	86.2	6.3	4.4	0	3.1	51	1.5	100	1.2	.060
Lack of available information for trip planning	155	1.3	85.2	5.2	7.7	0	1.9	46	1.5	104	1.2	.090
Litter	140	1.3	80.0	13.6	5.0	1.4	0	41	1.5	91	1.2	.059
Not enough National Park Service rule enforcement	147	1.2	90.5	1.4	3.4	2.7	2.0	49	1.3	90	1.2	.331
Too much National Park Service rule enforcement	146	1.2	91.1	2.7	2.1	0.7	3.4	49	1.5	89	1.1	.017
People drinking alcoholic beverages	140	1.2	89.3	6.4	2.1	1.4	0.7	43	1.3	89	1.1	.278
Encounters with cross-country skiers	163	1.1	95.1	3.1	1.2	0	0.6	46	1.2	108	1.0	.133
Noise from airplanes	156	1.1	95.5	3.8	0.6	0	0	50	1.0	97	1.1	.019
Encounters with snowshoers	148	1.1	93.2	5.4	1.4	0	0	45	1.0	94	1.1	.213
Encounters with hikers	145	1.1	96.6	2.1	0.7	0.7	0	45	1.1	91	1.0	.469
Encounters with hunters	133	1.1	94.7	2.3	3.0	0	0	44	1.0	82	1.1	.531

Table F.1. continued from previous page.

Situation*	Total sample							Snowmobilers		X-country skiers or snowshoers		Significant at the $p < .05$ level
	N	Mean	Percent of respondents by response category**					N	Mean	N	Mean	
			1	2	3	4	5					
Campsites damaged by previous visitors	100	1.1	91.0	9.0	2.0	0	0	28	1.2	65	1.1	.188
Someone occupying my reserved campsite	99	1.1	97.0	2.0	0	1.0	0	29	1.1	64	1.0	.271
Too many cross-country skiers in the backcountry	158	1.0	97.5	2.5	0	0	0	42	1.1	107	1.0	.140
Damage or loss to personal property	151	1.0	98.7	0	1.3	0	0	48	1.0	95	1.0	.623

Source: Winter mailback survey, question 5.

* Rank ordered by sample mean score.

** Responses based on a 5-point scale: 1 = no problem, 2 = slight problem, 3 = moderate problem, 4 = serious problem, 5 = very serious problem.

Note: Cells with shading denote statistically significant differences ($p < .05$) between subgroups for the assessment of situations encountered.

G. Management Actions at the Lakeshore

Table G.1. Respondents' support or opposition regarding possible management actions at Pictured Rocks NL, by selected visitor characteristics.

Management Action*	Total sample							Snowmobilers		X-country skiers or snowshoers		Significant at the p < .05 level
	N	Mean	Percent of respondents by response category**					N	Mean	N	Mean	
			1	2	3	4	5					
Restrict snowmobile use to designated areas only	178	4.0	9.0	8.4	6.2	21.9	54.5	57	2.9	113	4.7	.000
Provide visitors with natural history information about the area	176	3.8	0.6	1.7	30.1	53.4	14.2	54	3.6	113	3.9	.023
Establish "off-limit" zones to protect sensitive resources	177	3.7	7.3	11.3	15.3	36.7	29.4	55	3.4	113	3.9	.016
Provide more backcountry campsites	176	3.7	4.0	6.3	47.2	34.1	8.5	54	3.6	113	3.3	.060
Provide more information to visitors about appropriate behavior	177	3.6	2.8	2.8	37.9	40.7	15.8	55	3.5	113	3.8	.069
Establish a part of Pictured Rocks as wilderness	170	3.6	12.4	5.9	19.4	34.7	27.6	53	3.1	108	3.9	.001
Limit number of snowmobilers allowed in Pictured Rocks	179	3.4	19.0	12.8	15.1	17.9	35.2	56	1.9	115	4.1	.000
Restrict further development and expansion of Pictured Rocks	177	3.4	7.3	17.5	23.7	26.0	25.4	54	3.4	114	3.5	.529
Aggressively enforce existing rules and regulations	176	3.4	4.5	7.4	44.3	33.0	10.8	53	3.2	114	3.6	.015
Provide more park rangers to educate visitors about appropriate behavior	176	3.3	5.7	6.8	52.3	25.0	10.2	54	3.2	113	3.4	.299
Prohibit drinking alcoholic beverages in Pictured Rocks	178	3.1	11.8	19.1	29.8	21.3	18.0	55	2.8	114	3.6	.007
Improve access to Lake Superior	176	3.1	13.1	15.3	33.5	28.4	9.7	54	3.7	113	2.8	.000
Restrict activities along Pictured Rocks shoreline to provide specific uses at specific places	172	3.1	14.5	12.8	30.2	32.0	10.5	54	2.7	110	3.3	.003

Table G.1. continued from previous page.

Management Action*	Total sample							Snowmobilers		X-country skiers or snowshoers		Significant at the $p < .05$ level
	N	Mean	Percent of respondents by response category**					N	Mean	N	Mean	
			1	2	3	4	5					
Restrict activities in backcountry to provide specific uses at specific places	172	3.1	13.4	15.7	27.3	33.7	9.9	53	2.6	111	3.4	.000
Require visitors to learn about appropriate behavior in backcountry (e.g., watch a short video presentation)	174	2.9	12.6	20.1	39.1	19.5	8.6	55	2.7	110	3.1	.014
Limit number of people <i>per group</i> allowed in the area	178	2.7	23.0	20.8	26.4	22.5	7.3	56	2.0	113	3.1	.000
Allow horseback riding on trails	177	2.7	23.2	20.3	28.2	22.6	5.6	55	3.3	113	2.4	.000
Restrict cross-country skiing to designated areas only	176	2.7	21.0	25.0	25.6	21.0	7.4	53	2.7	114	2.7	.801
Limit number of cross-country skiers allowed in Pictured Rocks	175	2.1	36.6	26.9	25.1	9.7	1.7	54	2.1	113	2.2	.499

Source: Winter mailback survey, question 6.

* Rank ordered by total sample mean scores.

** Responses based on a 5-point scale: 1 = strongly oppose, 2 = oppose, 3 = neither support nor oppose, 4 = support, 5 = strongly support.

Note: Cells with shading denote statistically significant differences ($p < .05$) between subgroups for the support or opposition of potential management actions.

H. Service Quality and Visitor Satisfaction

Table H.1. Response to: "On your most recent trip, how satisfied were you with the quality of services provided for you at Pictured Rocks National Lakeshore?" by selected visitor characteristics.

Service Quality*	Total sample							Snowmobilers		X-country skiers or snowshoers		Significant at the $p > .05$ level
	N**	Mean	Percent of respondents by response category***					N	Mean	N	Mean	
			1	2	3	4	5					
Overall quality of services at Pictured Rocks National Lakeshore	152	4.6	1.3	1.3	7.9	14.5	75.0	39	4.4	107	4.7	.072
Maintenance of facilities at Pictured Rocks National Lakeshore	135	4.5	1.5	2.2	8.9	22.2	65.2	38	4.5	91	4.5	.892
Quality of Pictured Rocks trail maps	145	4.4	0.7	8.3	7.6	20.0	63.4	35	4.2	105	4.4	.380
Response of National Park Service to your needs	98	4.3	3.1	0	22.4	12.2	62.2	27	3.8	69	4.5	.011
Availability of visitor information publications	125	4.2	4.0	6.4	15.2	14.4	60.0	32	3.5	90	4.4	.001
Access to exhibits and other educational materials	114	4.2	1.8	6.1	19.3	20.2	52.6	30	3.8	80	4.3	.043
Usefulness of National Lakeshore website	35	4.0	0	2.9	37.1	17.1	42.9	9	3.7	26	4.1	.237
Availability of ranger-led activities	60	3.8	1.7	3.3	45.0	11.7	38.3	22	3.7	35	3.8	.726

Source: Winter mailback survey, question 7.

**Rank ordered by total sample mean scores.

* *The table does not include respondents who reported "did not use/don't know."

*** Responses based on a 5 point scale: 1 = dissatisfied, 2 = somewhat dissatisfied, 3 = neither dissatisfied nor satisfied, 4 = somewhat satisfied, 5 = satisfied.

Note: Cells with shading denote statistically significant differences ($p < .05$) between subgroups for the quality of service provided.

Table H.2. Response to: "Are there any activities or services that you think should be offered at Pictured Rocks National Lakeshore that currently are not offered?," by selected visitor characteristics.

Comments	Total sample		Snowmobilers		X-country skiers or snowshoers	
	N	%	N	%	N	%
No	156	83.4	55	90.2	92	79.3
Yes	31	16.6	6	9.8	24	20.7
Total	187	100.0	61	100.0	116	100.0

Source: Winter mailback survey, question 8.

Table H.3. Response to: "Are there activities or services that you think should be prohibited at Pictured Rocks National Lakeshore?," by selected visitor characteristics.

Comments	Total sample		Snowmobilers*		X-country skiers or snowshoers*	
	N	%	N	%	N	%
No	130	69.5	57	93.4	65	56.0
Yes	57	30.5	4	6.6	51	44.0
Total	187	100.0	61	100.0	116	100.0

Source: Winter mailback survey, question 9.

Table H.4. Response to: "To what extent to you 'agree' or 'disagree' with the following statement about your most recent trip to Pictured Rocks National Lakeshore?," by selected visitor characteristics.

Trip experience*	Total sample							Snowmobilers		X-country skiers or snowshoers		Significant at the p < .05 level
	N	Mean	Percent of respondents by response category**					N	Mean	N	Mean	
			1	2	3	4	5					
I enjoyed my time at Pictured Rocks	183	4.6	1.1	0.5	1.6	31.7	65.0	48	4.3	116	4.7	.000
Overall, I was satisfied with this trip to Pictured Rocks	177	4.3	1.7	1.1	4.5	50.3	42.4	55	4.1	114	4.4	.005
I thought the area and its surroundings were in good condition	180	4.2	1.7	2.8	2.8	56.7	36.1	57	4.1	114	4.3	.175
I enjoyed the natural quiet	176	4.1	2.3	4.5	10.8	42.0	40.3	54	3.7	113	4.3	.000
The park staff were helpful	167	3.7	1.8	2.4	39.5	37.7	18.6	52	3.3	107	3.9	.000
I enjoyed the interpretive programs	154	3.2	0.6	1.3	81.2	12.3	4.5	51	3.1	95	3.2	.330
I avoided my favorite parts of Pictured Rocks because there were too many visitors	174	2.0	36.2	35.6	23.6	3.4	1.1	54	2.1	112	2.0	.437
The conflicts I experienced with other visitors greatly reduced the quality of my visit	173	2.0	39.9	27.2	24.9	6.9	1.2	54	2.2	111	2.0	.351
I did not have the kind of experience I was looking for	179	1.8	43.0	40.8	8.9	4.5	2.8	57	2.2	114	1.7	.001
The trip was not worth the money it cost	175	1.8	48.6	34.3	12.0	2.9	2.3	55	2.1	111	1.6	.000

Source: Winter mailback survey, question 10.

* Rank ordered by total sample mean scores.

** Responses based on a 5=point scale: 1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = agree, 5 = strongly agree

Note: Cells with shading denote statistically significant differences (p < .05) between subgroups for agreement or disagreement with specific statements concerning respondents' most recent trip to Pictured Lakes NL.

I. Open-ended Responses to Question 16

Table I.1. Response to: “Any other comments about your visit to Pictured Rocks National Lakeshore or suggestions about managing the Lakeshore are welcomed. Please use the space below or on the back of this page to write your comments,” by selected visitor characteristics.

Comments	Total sample		Snowmobilers*		X-country skiers or snowshoers*	
	N	%	N	%	N	%
No	112	59.9	41	67.2	64	55.2
Yes	75	40.1	20	32.8	52	44.8
Total	187	100.0	61	100.0	116	100.0

Source: Winter mailback survey, question 16.

APPENDIX A

Onsite Survey

Pictured Rocks National Lakeshore WINTER Visitor Survey

Date: _____

Location: _____

Identification #: _____

Thank you for visiting Pictured Rocks National Lakeshore! Your willingness to complete this form is appreciated. Your feedback will provide us with important information and will be used to enhance visitor services and improve resources management in the area.

Name (please print): _____

Permanent mailing address: _____

City: _____ State: _____ ZIP Code: _____

Phone Number: () _____

1. Approximately how many times (*ever*) have you visited Pictured Rocks National Lakeshore?

_____ Total number of visits (*including this visit*)

2. On this trip, how many people, including yourself, are traveling with you?

_____ Total number of people

3. On this trip, what type of group are you traveling with? (*check one*)

___ Alone ___ Family and friends ___ Business ___ Tour ___ Other (specify):

4. Visiting Pictured Rocks was (*check one*)

___ The primary purpose of my visit to the area
___ One of several important things I planned to do during my visit to the area
___ Something I decided to do after arriving in the area.

5. On this trip, where will you or did you stay overnight while visiting Pictured Rocks National Lakeshore? (*check all that apply*)

___ I am not staying overnight in the area (*go to Question 6*)
___ At a backcountry campground
___ At a vehicle accessible campsite
___ At a local lodge
___ At a local motel/hotel
___ With friends who live in the area
___ At my cabin
___ At home

6. What is your gender? ___ Female ___ Male

7. What is your age? _____ years

8. We would like to know more about your visit to Pictured Rocks National Lakeshore. Would you be willing to fill out a mailback questionnaire about your experience while visiting Pictured Rocks? Your involvement is voluntary. Completing the questionnaire will take about 15 minutes and the results will be completely confidential.

___ Yes, I am willing to complete a mailback questionnaire.
___ No

Thank You !

APPENDIX B

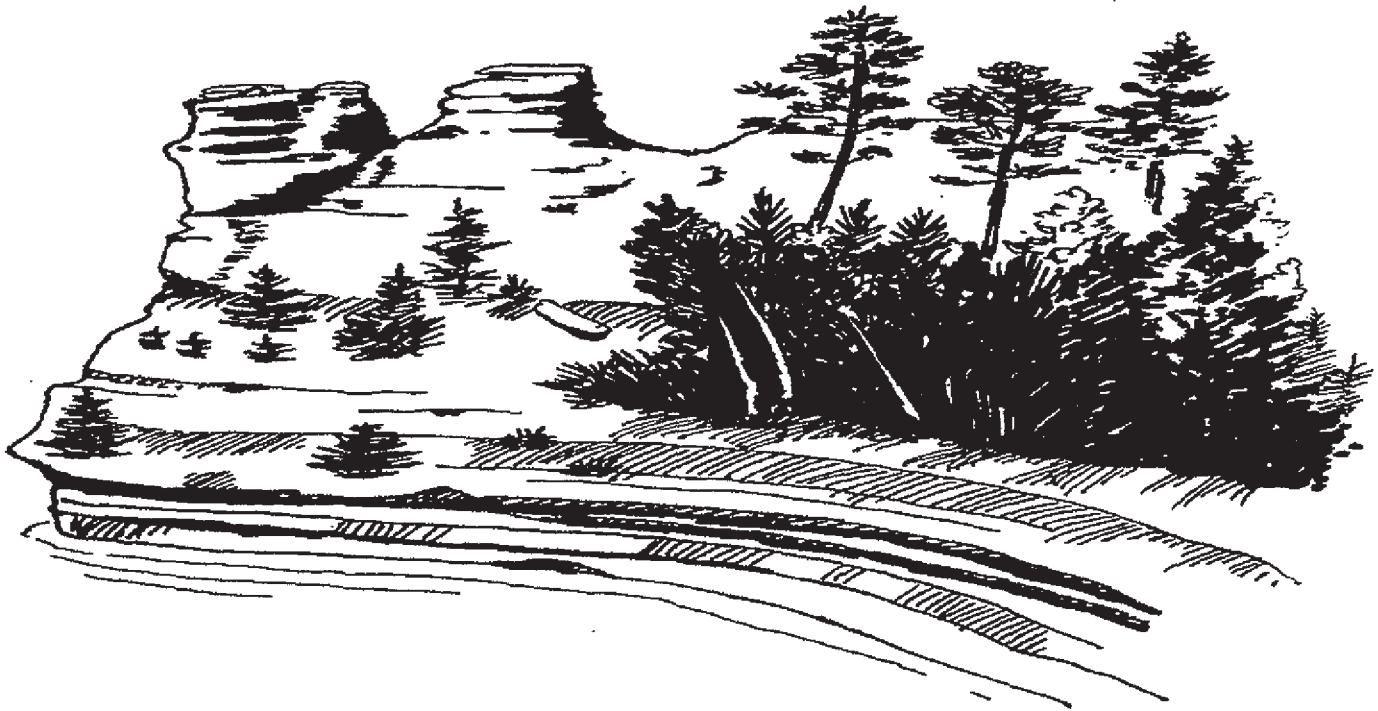
Mailback Questionnaire



OMB #: 1024-0224 (NPS99-026)
Expires: 6/30/01

Questionnaire # _____
Date ____/____/____

Pictured Rocks National Lakeshore Winter 2000 Visitor Survey



Dear Visitor,

Thank you for agreeing to share your opinions about your most recent visit to Pictured Rocks National Lakeshore. This study is being conducted as a joint effort between the University of Minnesota and the National Park Service. Pictured Rocks National Lakeshore is presently in the process of preparing a new General Management Plan. Your feedback will provide us with important information and will be used to improve resources management and enhance visitor services in the best possible way for all visitors. For more information about Pictured Rocks, and to view updates on park policies and the progress of the General Management Plan, please visit the National Lakeshore web site at www.nps.gov/piro/ or contact our office at (906) 387-2607.

Sincerely,

Grant A. Petersen
Superintendent

Reasons For Your Visit

1. Below is a list of possible experiences visitors may have while visiting Pictured Rocks National Lakeshore. Please look over the list of possible experiences. After you have looked over the list, indicate how important each experience was to you on your most recent visit to the park. *For each experience for which you circled a 4 or 5 please indicate how much you were able to attain each of them.*

Experience	Very Unimportant	Unimportant	Neither Unimportant Nor Important	Important	Very Important	Did not Attain	Somewhat Attained	Moderately Attained	Totally Attained
To be on my own	1	2	3	4	5	1	2	3	4
To use my own equipment	1	2	3	4	5	1	2	3	4
To have a wilderness experience	1	2	3	4	5	1	2	3	4
To experience nature	1	2	3	4	5	1	2	3	4
To do something with my family	1	2	3	4	5	1	2	3	4
To be with members of my group	1	2	3	4	5	1	2	3	4
To be with people who enjoy same things I do	1	2	3	4	5	1	2	3	4
To meet new people	1	2	3	4	5	1	2	3	4
To participate in recreational activities	1	2	3	4	5	1	2	3	4
To learn about the cultural history of the area	1	2	3	4	5	1	2	3	4
To learn about the natural history of the area	1	2	3	4	5	1	2	3	4
To experience new and different things	1	2	3	4	5	1	2	3	4
To test my skills and abilities	1	2	3	4	5	1	2	3	4
To enjoy the scenery of Pictured Rocks	1	2	3	4	5	1	2	3	4
To think about my personal values	1	2	3	4	5	1	2	3	4
To be close to nature	1	2	3	4	5	1	2	3	4
To be creative by doing something such as sketching, painting, taking photographs	1	2	3	4	5	1	2	3	4
To get exercise	1	2	3	4	5	1	2	3	4
To be away from other people	1	2	3	4	5	1	2	3	4
To relax physically	1	2	3	4	5	1	2	3	4
To experience solitude	1	2	3	4	5	1	2	3	4
To get away from the usual demands of life	1	2	3	4	5	1	2	3	4
To have thrills and excitement	1	2	3	4	5	1	2	3	4
To share my skill and knowledge with others	1	2	3	4	5	1	2	3	4
To enjoy hunting	1	2	3	4	5	1	2	3	4
To challenge myself	1	2	3	4	5	1	2	3	4
To feel healthier	1	2	3	4	5	1	2	3	4
Other (please describe) _____									

About your visit to Pictured Rocks National Lakeshore

2. Please look at the list below. Place a check by each activity you participated in during your most recent trip to Pictured Rocks National Lakeshore. (check all that apply)

- | | |
|------------------------------------------------------------------|-------------------------------------------------------|
| <input type="checkbox"/> Snowmobiling | <input type="checkbox"/> Hunting |
| <input type="checkbox"/> Cross-country skiing | <input type="checkbox"/> Sightseeing by automobile |
| <input type="checkbox"/> Snowshoeing | <input type="checkbox"/> Recreational Vehicle touring |
| <input type="checkbox"/> Day hiking | <input type="checkbox"/> Visiting historic sites |
| <input type="checkbox"/> Hiking the North Country Trail | <input type="checkbox"/> Visiting geological sites |
| <input type="checkbox"/> Camping at vehicle accessible campsites | <input type="checkbox"/> Bird watching |
| <input type="checkbox"/> Backpacking in the back-country | <input type="checkbox"/> Wildlife watching |
| <input type="checkbox"/> Fishing | <input type="checkbox"/> Other (specify): _____ |

3. We would like to know how you felt about encountering other visitors at various locations during your most recent visit to Pictured Rocks National Lakeshore. Complete columns A and B for each location you visited in Pictured Rocks. If you don't recall the encounters, circle "0" in column A. If you did not visit the location, circle "no" in the second column, and go to the next location.

LOCATION	Did you visit the location? <i>(circle one)</i>	COLUMN A								COLUMN B
		In general, how acceptable were the encounters you had with other visitors at Pictured Rocks?								If you circled 1, 2, or 3 in Column A, what made you feel this way? <i>(check one)</i>
		Very Unacceptable					Very Acceptable	Don't recall		
On interior lakes	yes no <i>(go to next location)</i>	1	2	3	4	5	6	7	0	____ number of people ____ something else (specify):
At vehicle accessible campgrounds	yes no <i>(go to next location)</i>	1	2	3	4	5	6	7	0	____ number of people ____ something else (specify):
At backcountry campsites	yes no <i>(go to next location)</i>	1	2	3	4	5	6	7	0	____ number of people ____ something else (specify):
While on trails	yes no <i>(go to next location)</i>	1	2	3	4	5	6	7	0	____ number of people ____ something else (specify):
At trailheads	yes no <i>(go to next location)</i>	1	2	3	4	5	6	7	0	____ number of people ____ something else (specify):
While visiting historic sites	yes no <i>(go to next location)</i>	1	2	3	4	5	6	7	0	____ number of people ____ something else (specify):
Other (specify):		1	2	3	4	5	6	7	0	____ number of people ____ something else (specify):

4. On your most recent trip, where did you enter Pictured Rocks National Lakeshore?

Place entered: _____

Situations Experienced

5. This question concerns possible situations you may have experienced on your most recent trip to Pictured Rocks National Lakeshore. Please evaluate each situation below. (Circle one number that best describes how much of a problem, if any, you found each to be)

Situation	No Problem	Slight Problem	Moderate Problem	Serious Problem	Very Serious Problem	Don't Know
Lack of available information for trip planning	1	2	3	4	5	6
Someone occupying my reserved campsite	1	2	3	4	5	6
Insufficient trail navigational aids	1	2	3	4	5	6
Campsites damaged by previous visitors	1	2	3	4	5	6
Litter	1	2	3	4	5	6
People being inconsiderate	1	2	3	4	5	6
Too much noise	1	2	3	4	5	6
People drinking alcoholic beverages	1	2	3	4	5	6
Too many snowmobiles in the backcountry	1	2	3	4	5	6
Too many cross-country skiers in the backcountry	1	2	3	4	5	6
Unsafe operation of snowmobiles in backcountry	1	2	3	4	5	6
Encounters with hikers	1	2	3	4	5	6
Encounters with snowmobilers	1	2	3	4	5	6
Encounters with cross-country skiers	1	2	3	4	5	6
Encounters with snowshoers	1	2	3	4	5	6
Encounters with hunters	1	2	3	4	5	6
Snowmobiles disturbing my backcountry experience	1	2	3	4	5	6
Damage or loss to personal property	1	2	3	4	5	6
Confusion about rules and regulations	1	2	3	4	5	6
Not enough National Park Service rule enforcement	1	2	3	4	5	6
Too much National Park Service rule enforcement	1	2	3	4	5	6
Noise from airplanes	1	2	3	4	5	6

Other things (please specify): _____

Management

6. Given the conditions at Pictured Rocks National Lakeshore, to what extent do you 'oppose' or 'support' each of the following management actions? (*circle one number for each action*)

Management Actions	Strongly Oppose	Oppose	Neither oppose nor support	Support	Strongly Support
Restrict activities along Pictured Rocks shoreline to provide specific uses at specific places	1	2	3	4	5
Restrict activities in backcountry to provide specific uses at specific places	1	2	3	4	5
Establish "off-limit" zones to protect sensitive resources	1	2	3	4	5
Establish a part of Pictured Rocks as wilderness	1	2	3	4	5
Restrict snowmobile use to designated areas only	1	2	3	4	5
Restrict cross-country ski use to designated areas only	1	2	3	4	5
Limit number of snowmobilers allowed in Pictured Rocks	1	2	3	4	5
Limit number of cross-country skiers allowed in Pictured Rocks	1	2	3	4	5
Limit number of people <i>per group</i> allowed in the area	1	2	3	4	5
Improve public access to Lake Superior	1	2	3	4	5
Restrict further development and expansion of Pictured Rocks	1	2	3	4	5
Provide more backcountry campsites	1	2	3	4	5
Provide more information to visitors about appropriate behavior	1	2	3	4	5
Provide more park rangers to educate visitors about appropriate behavior	1	2	3	4	5
Require visitors to learn about appropriate behavior in backcountry (e.g., watch a short video presentation)	1	2	3	4	5
Aggressively enforce existing rules and regulations	1	2	3	4	5
Provide visitors with natural history information about the area	1	2	3	4	5
Allow horseback riding on trails	1	2	3	4	5
Prohibit drinking alcoholic beverages in Pictured Rocks	1	2	3	4	5
Other things (please specify) _____					

Service Quality and Visitor Satisfaction

7. On your most recent trip, how satisfied were you with the quality of services provided for you at Pictured Rocks National Lakeshore? (circle one number for each item)

Service Quality	Dissatisfied	Somewhat Dissatisfied	Neither Dissatisfied nor satisfied	Somewhat Satisfied	Satisfied	Did not use/do not know
Usefulness of National Lakeshore website	1	2	3	4	5	6
Availability of visitor information publications	1	2	3	4	5	6
Quality of Pictured Rocks trail maps	1	2	3	4	5	6
Access to exhibits and other educational materials	1	2	3	4	5	6
Maintenance of facilities at Pictured Rocks National Lakeshore	1	2	3	4	5	6
Availability of park ranger-led activities	1	2	3	4	5	6
Response of National Park Service employees to your needs	1	2	3	4	5	6
Overall quality of services at Pictured Rocks National Lakeshore	1	2	3	4	5	6

8. Are there activities or services that you think should be offered at Pictured Rocks National Lakeshore that currently are not offered? _____

9. Are there activities or services that you think should be prohibited at Pictured Rocks National Lakeshore? _____

10. To what extent do you 'disagree' or 'agree' with the following statement about your most recent trip to Pictured Rocks National Lakeshore? (circle one number for each item)

Trip Experience	Strongly Disagree	Disagree	Neither oppose nor support	Agree	Strongly Agree
I enjoyed my time at Pictured Rocks	1	2	3	4	5
I did not have the kind of experience I was looking for	1	2	3	4	5
The trip was not worth the money it cost	1	2	3	4	5
I thought the area and its surroundings were in good condition	1	2	3	4	5
I avoided my favorite parts of Pictured Rocks because there were too many visitors	1	2	3	4	5
The park staff were helpful	1	2	3	4	5
I enjoyed the natural quiet	1	2	3	4	5
The conflicts I experienced with other visitors greatly reduced the quality of my visit	1	2	3	4	5
I enjoyed the interpretive programs	1	2	3	4	5
Overall, I was satisfied with this trip to Pictured Rocks	1	2	3	4	5

About You

11. What is your gender? Female Male

12. What is your age? years

13. What is the highest level of education you have completed? (check one)

- 8th grade or less
- Some high school
- High school graduate or GED
- Some college, business or trade school
- College graduate
- Some graduate school
- Masters, doctoral or professional degree

14. What was your total household income (before taxes) last year?

- Less than \$15,000
- \$15,000 to \$24,999
- \$25,000 to \$39,999
- \$40,000 to \$64,999
- \$65,000 or more

15. In what ethnicity and race would you place yourself?

Ethnicity Hispanic or Latino
 Not Hispanic or Latino

Race American Indian or Alaska Native
 Asian
 Black or African American
 Native Hawaiian or other Pacific Islander
 White

16. Any other comments about your visit to Pictured Rocks National Lakeshore or suggestions about managing the Lakeshore are welcomed. Please use the space below or on the back of this page to write your comments.

Thank you for your help!

If you want more information about this study, contact the University of Minnesota Cooperative Park Studies Program, 115 Green Hall, 1530 Cleveland Avenue North, St. Paul, MN 55108-1027, 612-624-3699.

16 U.S.C. 1a-7 authorizes collection of this information. This information will be used by the National Park Service, the Department of the Interior, and Pictured Rocks National Lakeshore to improve resources management and visitor services. Response to this request is voluntary. No action may be taken against you for refusing to supply the information requested. The information you provide will be anonymous. Please do not put your name or that of any member of your group on the questionnaire. Data collected through visitor surveys may be disclosed to the Department of Justice when relevant to litigation, or to appropriate Federal, State, local or foreign agencies responsible for investigating or prosecuting a violation of law. Public reporting burden for this form is estimated to average 15 minutes per respondent. Direct comments regarding the burden estimate or any other aspect of this form to the Office of Information and Regulatory Affairs of OMB, Attention Desk Officer for the Interior Department, Paperwork Reduction Project 1024-0224 (NPS99-026), and to the Information Collection Clearance Officer, WASO APC, Accountability and Audits Team, National Park Service, 1849 C Street, N.W., Washington, D.C. 20240. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

APPENDIX C

Cover Letter

[Date] , 2000

Dear Pictured Rocks National Lakeshore Visitor,

We need your help! The National Park Service is currently gathering data about types of use at Pictured Rocks National Lakeshore to help them as they develop a new general management plan. What they learn from this data will be used to better provide for your needs. During your visit to Pictured Rocks this winter you agreed to participate in a survey. Your opinions, as a visitor to Pictured Rocks, will provide valuable information about what resource management and visitor use issues need to be addressed in the management plan for Pictured Rocks.

Enclosed is the questionnaire we said we'd send you soon after your visit. Please complete and return this questionnaire in the pre-paid, self-addressed envelope provided as soon as possible.

Your participation is important and it will take less than 15 minutes of your time to fill out the questionnaire. This is your opportunity to offer your opinions and comments about your experience at Pictured Rocks National Lakeshore and how the area should be managed. Of course, this survey is *voluntary and your confidentiality will be maintained.*

If you have any questions about the questionnaire, please feel free to contact us at the address shown on the letterhead, by phone, or by email.

Thank you for your help!

Sincerely,

Dorothy H. Anderson, Ph.D.
Professor
(612) 624-2721
danderso@forestry.umn.edu

E. B. James
Research Assistant
(612) 624-4280
jame0136@tc.umn.edu

APPENDIX D

First Reminder Letter

[Date], 2000

Dear Pictured Rocks National Lakeshore Visitor,

Two weeks ago you received a questionnaire from the University of Minnesota asking you to offer your comments concerning your experiences in and opinions about Pictured Rocks National Lakeshore.

So far we have not received your completed questionnaire. Because we've contacted a small number of visitors for this study, we need to receive as many completed questionnaires as possible. Your input is extremely important. In the event that you did not receive the first questionnaire or no longer have it, another questionnaire is enclosed. Please complete and mail this questionnaire at your earliest convenience. It will not take more than 15 minutes of your time.

This is an opportunity for you to offer your opinions and comments about resource management and visitor services at the lakeshore. Of course, this survey is *voluntary and your confidentiality will be maintained*.

If you have any questions, please feel free to contact me at the address shown on the letterhead or by phone.

Thank you for your help!

Sincerely,

Dorothy H. Anderson, Ph.D.
Professor
(612) 624-2721
danderso@forestry.umn.edu

E. B. James
Research Assistant
(612) 624-4280
jame0136@tc.umn.edu

APPENDIX E

Second Reminder Letter

[Date] , 2000

Dear Pictured Rocks National Lakeshore Visitor,

Two weeks ago you received a second questionnaire from the University of Minnesota asking you to offer your opinions and comments concerning your experiences in and opinions about Pictured Rocks National Lakeshore.

We still have not received your completed questionnaire. Because we've contacted a small number of visitors for this study, we need to receive as many completed questionnaires as possible. Your input is extremely important. In the event that you no longer have a questionnaire, another is enclosed. Please complete and mail this questionnaire at your earliest convenience. It will not take more than 15 minutes of your time.

This is an opportunity for you to offer your opinions and comments about resource management and visitor services at the lakeshore. Of course, this survey is *voluntary and your confidentiality will be maintained*.

We really appreciate you taking time out of your busy schedule to respond to this questionnaire.

If you have any questions, please feel free to contact me at the address shown on the letterhead or by phone.

Thank you for your help!

Sincerely,

Dorothy H. Anderson, Ph.D.
Professor
(612) 624-2721
danderso@forestry.umn.edu

E. B. James
Research Assistant
(612) 624-4280
jame0316@tc.umn.edu

APPENDIX F

Activities or Services that should be offered - Verbatim Responses to Question 8

In question 8 of the mailback questionnaire, study participants were asked, "Are there activities or services that you think should be offered at Pictured Rocks National Lakeshore that currently are not offered?" Respondents' verbatim responses to this question appear here and are arranged by the following categories: (1) snowmobilers, (2) cross-country skiers or snowshoers, and (3) other respondents.

Snowmobilers

Rest rooms for winter activities.

Ice skating

Allowing trapping.

Are there maps of snowmobile trails? I did not see them with the other park information.

Horseback riding along shore.

More two track roads should be open for hunting & fishing access.

Cross-country skiers or snowshoers

More ski trails.

Expand cc-x ski trails.

Better preparation of ski trails during the spring summer or fall to smooth the surface. Encourage/promote human powered recreation.

More historical tours by the rangers. Show endangered plant species, tour historical paths, explain unusual rock formations for instance.

Restore Grand Sable Beach, this was a big loss when you let it go.

Environmental awareness program.

How about maps on website.

Improved & expanded ski & snowshoe trails. Trails (hiking, bicycle) connecting to Grand Marais in addition to the Lakeshore trail.

Was not at the park long enough to comment.

Mountain bicycle trails.

Sea kayaking literature & trip plans.

Increase skiing & snowshoeing trails.

Would have enjoyed groomed trail for snowshoe/skiing access to back park campsites. Wife is partially disabled. I am prohibited from taking her on the back trail because can't carry gear using a light 2 wheeled hand pulled backpack--wheels outlawed.

More backcountry camping for ice climbers.

Mtn. biking trails on ski trails off H-58.

More natural history/cultural information & programs.

I wish the trails were kept free of debris such as fallen trees & branches. They were left on the trails all summer.

More winter (only?) backcountry campsites for ice climbers. Very low-impact!

Restrooms in parking lots.

Should be open to horses.

Groom cross country skiing trails more often.

Snowshoe trails and dog walks, designated ORV trails.

Trail improvements and better marking.

One accurate map with all pertinent info: mileage between campsites, landmarks, campsite features & restrictions.

Other Respondents

Open areas (groomed) to allow snowmobilers to stop at sights along the trail. Firepit/tables (i.e., rest area).

APPENDIX G

Activities or Services that should be Prohibited - Verbatim Responses to Question 9

In question 9 of the mailback questionnaire, study participants were asked, "Are there activities or services that you think should be prohibited at Pictured Rocks National Lakeshore?" Respondents' verbatim responses to this question appear here and are arranged by the following categories: (1) snowmobilers, (2) cross-country skiers or snowshoers, and (3) other respondents.

Snowmobilers

Snowmobiles-wheeled vehicles and climbing on dunes.

Not to my knowledge.

No--this park is already way to restrictive.

No access by vehicles, snowmobile, etc., except on the roads like the trails are now.

Cross-country skiers or snowshoers

Hunting

Use of gasoline powered recreational vehicles, ATV's, PWC's, etc.

ATV, snowmobile, usage

Snowmobiling anywhere in the park!

Just anything that would change the serenity & remoteness of the area from what it already is.

Snowmobilers or anything else gas powered.

Mountain biking on hiking trails.

Roads are too close to Lake Superior at some locations.

All ORV use.

The use of jet ski's especially near swim beaches (ex. Sand Pt. Miners).

Jet skis! (personal watercraft), off road vehicles, snowmobiles should be limited & monitored.

The cross country ski trails were well groomed this year. Wish they could be expanded in the Grand Marais area.

Strip mining & artillery practice, I suppose.

Trail bikes, jet skis.

Snowmobiling.

No motorized vehicle off roads.

Hunting bear.

No alcoholic beverages.

No jet skis along the shoreline and continue to restrict snowmobile & ORV usage.

Hunting & snowmobiling.

Power vehicles.

Snowmobiles, drinking.

Horseback riding, snowmobiles.

Snowmobilers!

Snowmobiling.

Snowmobiling.

Alcohol, large groups.

Alcohol, large groups, ORVs.

Horseback riding—there needs to be a soil system study done before this activity is ever considered. Also ORV's prohibited. Sand soil system would leave hiking trails like ----- conditions following horses.

Horseback riding, snowmobiling, jet skis, 4-wheelers.

Bear hunting, especially with dogs & telemetry & baiting.

The park should be kept for wilderness activities and not as just another amusement park—entertainment-get loud type of place.

Can you ban jet skis in front of pictured rocks in summer.

PWC use needs to be restricted.

Snowmobiles.

Personal watercraft (noise is annoying).

Jet ski.

Jet ski.

Snowmobiles, hunting.

I question the roles of snowmobiles as their winter popularity increases. The noise, etc. is extremely disturbing as "noise litter."

Snowmobiling.

No jet skis or power boats on lakes.

Don't prohibit snowmobiles but strictly enforce trail designation & speed.

Activities that create noise/destroy the solitude (e.g., snowmobiles) or damage land (e.g., mountain biking).

Jet ski, more roads.

Off trails motorized vehicles.

Activities which destroy the aspects of the park or its atmosphere, i.e., logging, road development, ORVs & other mechanical intrusions.

No personal watercraft⁶ (jet skis) along shoreline.

Horseback riding, ATVs, large RVs in sensitive areas.

Use of motor vehicles, recorded music, large fires.

Please, no snowmobiles—they are terribly loud and polluting.

Other Respondents

Snowmobiles!

Snowmobiling in new tree plantation areas.

APPENDIX H

Open-ended Responses to Question 16

In question 16 of the mailback questionnaire, study participants had an opportunity to respond to the statement, "Any other comments about your visit to Pictured Rocks National Lakeshore or suggestions about managing the Lakeshore are welcomed." Respondents' verbatim responses to this statement appear here and are arranged by the following categories: (1) snowmobilers, (2) cross-country skiers or snowshoers, and (3) other respondents.

Snowmobilers

We have visited this site many years and snowmobilers & have enjoyed it. We hope to continue in the future.

Since we only visit in winter on snowmobiles, most of the questions were inappropriate for me to try to answer. We enjoy the trip several times during the winter and each experience has been rewarding.

I had a "run in" with a ranger on a holiday weekend (New Years). He had an attitude and was rude in the initial contact—I'm sure my criminal behavior (fire in undesignated location) pulled him from a football game on TV. He had the opportunity to educate or be punitive. He chose the later. He would have gotten the same results with education and not have soiled my experience with the park rangers.

The park staff (ranger) was rude and discourteous to our group. We had unknowingly broken one of the rules of the park—there were no posted rules. We apologized & corrected our actions immediately. I believe his rude attitude was inappropriate—he did not have to issue a ticket—it ruined our stay. We meant no harm—a warning would have been sufficient. We won't be in any hurry to go back. Our tax dollars pay his salary.

What would a park be without people? We have been to this park many times and the only thing I don't like is the damage done by 4 wheelers & dirt bikes.

Upper management should be changed! Need new ideas.

I would like more groomed access to natural and historic sites. If these were dead-end off-shoots from the main trail I think the number of people would be reduced to those who want to sight see.

(1) I was pleased to see the park rangers offering safety instruction to snowmobilers at the Grand Marais entrance. I have been riding snowmobiles for 25 years and this is the first time I have seen a positive proactive approach to safety on the trails. Thank you! (2) After the safety instruction I did encounter some younger snowmobilers riding at excessive speeds (60+ mph) and taking up the entire trail on corners.

We enjoy snowmobiling in the area with friends and relatives just to see the sites. We've been going up in the area for about five years now.

This is a poorly written questionnaire. I'd say the purpose was a set up to restrict use & you want it to be a wilderness area. I'm sorry I said I'd help!

Park rangers were very courteous & informative.

Our snowmobile group did not take the Picture Rock Lakeshore trail tried to use H58 but trail was way to rough to navigate with snowmobile so took the state groomed trail. A lot of the survey did not pertain to our experience.

Would have been great if you could of saw it but the trail were too bad.

Did not visit Pictured Rock National Lakeshore. Tried to use H-58 but trail was to rough for snowmobiling.

Would be nice (and easier snowmobiling) if H48 road (trail) was groomed just like the track trail is. Very rough riding on that trail.

I would like to see better access to Towes Creek at Sable Lake for fishing smelt at night is hard to find your way in and out and, a fire pit should be put at the mouth of the creek—I would be willing to help do this—also over the years too many two track roads have been closed off—lastly retire [name] he's been here way too long!

We just seen it when we went snowmobiling. The trails should of been a little smoother & needed mile markers & signs up on the trails which way goes were. P.S. mile markers would of been good and case of emergency. We just visit it this winter when we were up there while we were snowmobiling. They should have speed limits on snowmobile trails. And something just in case of emergency. But otherwise when we were snowmobiling it look really nice. Looks like a nice campground for summer.

We would like to have been allowed to ride on a trail to Sable Falls & some of the other look out areas that were restricted.

I normally visit my property/cabin 25 miles south of Marquette or my buddy's cabin 12 miles west of Grand Marais near the log slides. My visits are always most enjoyable.

We own a cabin that borders the National Lakeshore just west of Grand Marais. We love the beauty and serenity of the area. An only concern is the paving of H58 through the park! We feel it would only speed up traffic and ruin the peacefulness of the area!

Cross-country skiers or snowshoers

Access to fishing from shore is poor at Sable Lake. Paths are overgrown w/ poison ivy in summer.

Obviously I'm very unhappy about the noise pollution and the speed of the snowmobile traffic.

Protect the availability of locations where non-motorized, non-polluting human powered recreation can be realized. Promote & recognize the importance of providing opportunities for the quiet enjoyment and appreciation of the lakeshores many natural wonders.

Only comment is in regards to snowmobile usage and conflict/complication with other recreational sports without motors—within same area. Along with the obvious physical dangers, the noise pollution cannot be ignored.

Snowmobilers in Grand Marais ride the sand dunes more prolific desecrating & destroying wildlife. We need law enforcement to severely ticket them. Laws regarding building, walking your dog, etc. are flagrantly ignored by this "great tourism business interest!" We have a house on the bay & have seen a definite erosion of respect by snowmobilers for local & national laws, i.e., dune riding. Please stop them.

A gem to be protected.

As I have already stated, you lost part of the experience when they let the beach go at Grand Sable Lake. I would like to see that return. Also filling in the lake to make a road has taken away from the park.

The x-c ski trails could be upgraded. In particular, there is a hill with turn on it that needs to be made safer. The hill is near the lakeshore on loop "E" I believe. Also, by adding some cross links, the trails could be made more interesting. A trail head should be established on H-58 just west of town. Lastly, is adding a lighted trail asking too much?

Something definitely has to be done about the snowmobiles. They are annoying and they pollute way too much.

My parents who are elderly cannot access certain areas as they used to—your service should consider the aging demographics a bit better—otherwise I am quite happy with the trails (x-c hiking and snowshoeing).

I strongly believe motorized sports have little or no place in the Pictured Rocks.

I have been coming to the pictured rocks for close to 20 yrs. Typically, I camp at Beaver Lake in the summer and ski the Munising ski trail in the winter. I believe you are doing a great job of managing the park. I do not support paving H58. I feel that paving the road would draw too many people who do not appreciate the wilderness nature of the park. Recently they planted walleyes in Beaver Lake. Although it was great fun catching and eating them, I do not recommend further plantings. I believe it drew too many people there just for the fish. To me, the beauty of the park is the remote wilderness experience. During the summer, I hike, canoe, kayak, fish, bird watch. I love the park as it is. One thing I would recommend is rerouting H58 south of 12-mile beach campground. I have never camped there because the road is too close. Keep up the good work, and don't hesitate to contact me if you want more info.

Keep the Pictured Rocks Lakeshore a remote region on Lake Superior. Do not over develop. Remoteness and wilderness should be the most memorable qualities of the park.

I spend a lot of time in the park and rarely see park rangers. I have witnessed plenty of "misbehavior" in the park with no presence of authority to prevent it. Not that all campsites or recreational areas need a police, but someone making rounds once in a while, I think would curb "misbehavior" and be a help to whoever has questions.

The cross-country ski trail at Pictured Rocks is spectacular. The trails were well groomed.

It seems like a lot of effort is put into enforcing/publicizing rules about dogs on hiking trails & the gathering of beach stones while snowmobiles & jet skis have free rein. This is misplaced effort. In my opinion the jet skis & snowmobiles are much more damaging to the environment & much more intrusive & disruptive to others. I'd like to see real efforts to protect the fragile ecology of the PRNL.

We love it--its beautiful and will return again next winter.

It is a curious tightrope you walk, a paradox. You work very hard to encourage visitors, and the more visitors, the greater the threat to the wilderness that brings them,. Ah me ... I have no answers.

What a beautiful place! Thank you for your efforts.

Keep rules simple and consistent. Try to maintain rules and reservations for long duration. My biggest problem is not knowing what I am able to do or not do.

I always enjoy my visits to PRNL and believe it to be the jewel of our community. Some of my responses might be misleading because the questions pertained to "our most recent visit." For example, during my last visit the number of visitors I came in contact with was very acceptable, however during the summer I avoid places like Miners Castle and Sand Point because of the large number of visitors. I also hope the park continues to groom the ski trails. Also, jet ski (personal watercraft) use along the lakeshore has destroyed the peaceful natural setting of the park. This was not a problem during my last visit of course, because my last visit was in the winter.

I enjoy cross-country skiing. I wish the trails were marked a little better & groomed better. In general, it is well kept & enjoyable.

If unable to track the cross country ski trails right away--would rather leave them with tracks rather than flatten out--safer too!

The main problem w/ snowmobiles is noise pollution & speed of travel.

Trail markers to designate falls for ice climbing. Although this could make this activity more popular it could reduce trampling of veg. & trails.

I do not think it is necessary to make winter backcountry backpackers to camp in designated sites. common leave no trace ethics would be fine.

We snowshoed a portion of the Pictured Rocks in Jan. We are looking forward to a return visit when we can hike the rest of it.

The Park Service workers at the V.C. in Munising were very helpful and enjoyable.

I did wonder if you had personnel in our area doing the same thing in the summer season.

There have been past experiences where loud, drunken, late night parties have spoiled a hike/camping experience at the park. Overall, it's a wonderful place, & the staff seems to try hard to keep the wilderness experience alive.

I would like to see a one track traditional cross-country ski trail and a track for snowshoers that would go along the entire length of the park parallel to the lakeshore along the high bluffs.

More winter back-country campsites!! Over-the-phone, 1 day advance, late arrival B/C permits!! (maybe just in the winter?)

Please continue to provide trail access for dogs on leashes, I do enjoy hiking with my dogs.

Groom ski trails better--some loop were not done--but I still liked it. Thanks.

Made responses for last visit 1st use of ski trails. Visit to other sites reached by auto during summer visit all positive.

A great park with great opportunities to enjoy winter recreational activities.

Please improve the roads, H-58 ASAP!

It seems as if the cross country ski trails near Munising have not been maintained as good this year as in the past.

Do not improve the roads because the park will be flooded with people. On prior trips (twice) rules were overenforced by rangers with arrogant attitudes; not on myself but on others that I witnessed. You should loosen rules on # of tents at campsites so friends/family can stay together. Also, add more "group" campsites that can be reserved.

I do a lot of skiing and would like to see the trails groomed a little more often if at all possible.

Please groom ski trails more often. Don't prohibit snowmobiles but strictly enforce where and the speed. The park is for all visitors but areas need to be designated more specifically! As a teacher in Munising, Ranger [name] is a valuable addition to our curriculum. My class comes to the park 3 times a year and totally enjoys the curriculum. The education programs are very important!

People are drawn here by the beauty. Helps tourism in area. This is an exceptionally beautiful area--a treasure to be preserved as it is. That is I would discourage further development, other than to manage the area for low impact use. I discourage snowmobile or other ORV/trail bike use. There are plenty other outlets for this in the area.

I was disappointed that the trail (x country ski) was not left as new snow or that the ski groves were not cut. Someone had went down the trails with a snowmobile and made skiing difficult--also some of the sign posts were down making following the trails a little difficult.

Emphasize wilderness values, decrease snowmachine noise.

I am an avid cross country skier and I have been very dissatisfied with the upkeep of the H-58 trail. It is a very scenic trail and I enjoyed skiing it, but the grooming should improve. I know others skiers who go elsewhere because of it.

I am not aware of damage to park caused by cross-country skiing. If it is significant, I would support limiting the number of skiers and restrict the areas which allow skiing. Snowmobiles should be required to be quieter to be allowed in park. Vehicles should not be driven while intoxicated. And speed limits should be imposed. We heard 3 ambulances in one day which we were later told were going to snowmobile accidents. The ski trails & snowmobile trails should be separated as much as possible (for reasons of noise, safety, and gas fumes). Activities which have more negative impact to the park should be required to pay higher fees. The higher fees would limit the numbers and the fees could be used to repair the damages.)

You can't equate one activity (or usage) with another. Snowmobiles & ORVs cause destruction when used properly and as they are intended. And the sound itself destroys the experience for others. To say snowmobiles & ORV users have the rights to public wilderness as hikers, skiers, swimmers, kayakers, etc. ignores the fact that these latter users are benign, cause little damage (especially on a comparative basis) damage, & do not destroy the wilderness areas for others to use. Just because technology creates the capabilities to allow someone to exploit the wilderness for their version of entertainment does not mean that the custodians of the wilderness have to accommodate every usage because people have invested substantial funds in pursuit of their entertainment or it bolsters certain segments of the local economy. I may enjoy watching fires and using my flame-thrower to start them, but surely no one would argue I should be afforded those rights of usage at Pictured Rocks. The damage caused by snowmobiles, their trails & ORV's is not less significant and permanent. Their boost to the local economy should be no more of a justification than it would for the local flame-thrower merchant who claims a thousand fire-bug customers like me.

Manage forests for rec, wildlife, forest health, timber in areas to show public that forest management/recreation management are not opposed and are compatible.

We would like to see more x-country ski trails! The trails you have were wonderful and well-groomed but not long enough.

Keep it wild. Remove the roads. I would be willing to share the experience with a handicapped person & sea kayak, rickshaw, sled.

It's important to keep this area natural, clean & safe.

There was very little "natural quiet" due to the snowmobiles.

Other Respondents

Sirs: Why should I believe that answering the questionnaire will be of any benefit? It has been my experience that federal employees tend to go thru the motion of listening but have no intention of complying with the wishes or recommendations of the populace. The promises made by the Federal Government at the inception of the park have not been kept.

We came to see how far the road was plowed & eat our picnic lunch—only went in to Sable Lake. Saw a few snow machines and didn't talk to any other visitors this day.

I and or my wife have visited the park probably over 1800 x most of the x's for hiking at the eastern end. We have also backpacked and fished the lakes. We have lived in Grand Marais 18 yrs—1-1/2 miles from the E. entrance. Hunting is allowed in the park—it scares the hell out of my wife when a gun goes off.