

Bob Marshall Wilderness Complex 2004 Visitor Study

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Executive Summary

Purpose of study

This purpose of this study was to provide information on the characteristics of Bob Marshall Wilderness Complex (BMWC) use, users, and user attitudes about the wilderness and its management. Originally, this project began in 2003 with a full survey conducted in that year (Dear, McCool and Borrie, 2004)¹. However, the summer of 2003 was not a typical year for the BMWC. Fires and fire fighting activity led to direct closures of popular recreation areas, destinations, and trailheads. Smoke, access limitations, and safety concerns undoubtedly discouraged visitation in areas directly affected as well as across the whole complex. A decision was made to repeat the survey in 2004 in hopes of better understanding the impacts of the fires and fire closures. Data from 2004 allows comparisons to previous studies conducted in 1970 and 1982 and an understanding of how visitation was affected while the fires were burning in 2003.

Methods

The population under study in this research was adults (16 years or older) making recreational visits to the BMWC during the summer and fall of 2004. Sampling of these visitors occurred at the thirteen most visited trailheads in the BMWC. Visitors were contacted at these trailheads between June 18 and October 18, 2004. September 9 was considered to be the beginning of the fall season. A sampling design was employed that allowed fieldworkers to maximize efficiency in the field and capture a representative sample of the total visitor population.

Onsite and mail-return questionnaires were used. Fieldworkers contacted 408 visitors. Twelve visitors refused to participate, four of whom had completed the survey the previous year. Mail-return questionnaires were mailed to the remaining 396 respondents. The questionnaire was returned by 297 respondents; three questionnaires were returned “undeliverable.” This yielded an overall response rate of 72%.

¹ Dear, C.E., McCool, S.F. and Borrie, W.T. (2005). "Bob Marshall Wilderness Complex 2003 Visitor Study Final Report" Technical Completion Report. College of Forestry and Conservation, The University of Montana, Missoula, MT 49 pp.

Analysis

Three separate analyses were conducted.

1. Overall 2004 descriptions, to provide information on the characteristics of use, users, and attitudes about the wilderness and its management in a non-fire affected year.
2. 2003 versus 2004 analysis, to understand how the factors listed above are affected by a heavily fire affected year (2003).
3. 2004 versus 1970/1982 analysis, to provide comparison to previous studies conducted in these years.

The data were analyzed using four classification variables. These are variables that are believed to influence visitor responses to use, user and attitude questions, and are believed to be of particular interest to wilderness managers. The four classification variables are:

- Length of stay: day versus overnight visitors.
- Use of outfitter: outfitted versus non-outfitted visitors.
- Season of use: summer versus fall visitors.
- Mode of travel: hiking versus horseback riding visitors.

Each use, user, or user attitude characteristic was analyzed to determine if there was a statistically significant difference in characteristics linked to these four classification variables. Only statistically significant differences are reported. A complete report of all characteristics is included in a separate technical appendix.

Summary of findings

Section 1, overall 2004 findings:

Visitor Characteristics (2004)

Day visitors were more likely than overnight visitors to be from Montana and to have previous experience in the BMWC. Day visitors were, on average, more educated

than overnight users. There were no significant differences in age or proportion of male/female visitors between day and overnight visitors.

Outfitted visitors were more likely than non-outfitted visitors to be older, to be from outside of Montana, and to have less previous experience in the BMWC. There were no significant differences in education or ratio of male:female visitors between outfitted and non-outfitted visitors.

Female visitors were more common during the summer than during the fall. There were no significant differences in age, education, place of residence, or previous experience between summer and fall visitors.

Compared to horseback riding visitors, hiking visitors were more likely to be young and have more years of education. There were no significant differences in sex, place of residence, or previous experience in the BMWC.

Visit Characteristics (2004)

Compared to overnight visitors, day visitors were more likely to be hiking and more likely to be traveling in smaller parties. When they did ride horses, day use groups typically took fewer horses than overnight groups. On average, day visitors reported encountering more other parties per day on their trips than overnight visitors. Day visitors were less likely to participate in photography, fishing, swimming, and hunting. Day visitors were also less likely to be outfitted.

Compared to non-outfitted visitors, outfitted visitors were more likely to be horseback riding, traveling in larger parties, and to be staying in the BMWC for longer periods of time. When riding, outfitted visitors used more horses or other livestock than non-outfitted visitors. Outfitted visitors were more likely to participate in photography, fishing, swimming, and rafting. Outfitted visitors were also less likely to participate in hiking. There were no significant differences in reported rates of encounters with other groups between outfitted and non-outfitted visitors.

Compared to fall visitors, summer visitors were more likely to hike, to visit in smaller groups, and to stay in the BMWC for shorter periods of time. Summer visitors were more likely to participate in photography, nature study, swimming, and rafting. Summer visitors were less likely to participate in hunting. Summer visitors reported

encountering more other parties per day than fall visitors. There were no significant differences in number of livestock used between summer and fall visitors.

Compared to visitors that participated in horseback riding, hiking visitors were more likely to be in smaller groups, and to be staying for shorter periods of time. Hikers reported encountering more groups per day than horseback riding visitors. Hikers were more likely to participate in nature study and swimming. Hikers were less likely to participate in fishing and hunting. Hikers were also less likely to be outfitted.

Visitor attitudes (2004)

Desirability of Management Actions

Visitors rated “signs along the trail explaining natural features or early history” and “a few trees blown down across the trail, maybe one or two per mile” as the most undesirable trail management actions in the Wilderness. “Burying unburnable trash” and “cemented rock fireplaces with metal grates” were rated by visitors as the most undesirable campsite management actions. “Issuing trip permits so visitors could only camp each night in the area assigned to them” was rated by visitors as the most undesirable visitor management action. “Eliminating grazing by visitors’ horses” and “a natural fishery—no stocking and barren lakes left barren” were rated by visitors as the most undesirable resource management actions.

Section 2, Comparing 2003 data with 2004 data

Visitor Characteristics (2003 vs. 2004)

The visitor characteristics under investigation in this study were: age, sex, level of education, place of residence, and previous experience in BMWC. In all cases, there was not a significant difference between the overall data from 2003 and that from 2004. In addition, no significant differences were found when comparing three time periods in 2003 to the same periods in 2004 (pre-fire: June, July; during-fire: August, September; after-fire: October). The conclusion is that the characteristics of the visitors themselves were not different for the two years.

Visit Characteristics (2003 vs. 2004)

Compared to 2004 visitors, both day and overnight visitors were more likely to travel by foot and less likely to fish during the fires of 2003. Overnight visitors that used livestock took fewer livestock during the fires of 2003. More day visitors used outfitters during the fires of 2003 than in August/September of 2004. No significant differences between day and overnight users were found in the mode of travel during the fires of 2003. (i.e. day visitors and overnight visitors were equally likely to hike or horseback ride during the 2003 fires as they were in the equivalent time period (August, September) in 2004.)

Compared to non-outfitted visitors, outfitted visitors were more likely to hike, took less livestock, and had shorter stays during the fires of 2003. Non-outfitted visitors were less likely to fish during the fires of 2003. No statistical difference was found in the number of encounters reported by outfitted or non-outfitted visitors during the fires of 2003.

Visitors were less likely to use horses and more likely to hike during the fires of 2003. The average number of horses taken by groups that took horses was less during the fires of 2003. Hikers were less likely to fish during the fires of 2003. Both hikers and horseback riders had shorter average stays during the fires of 2003. Horseback riders were less likely to use an outfitter during the fires of 2003.

Visitor Attitudes (2003 vs. 2004)

Desirability of Management Actions

Visitor attitudes remained very much the same from 2003 to 2004. In only five cases did they change. In four of those five cases, fire was the subject of the question. It is reasonable to assume that the fires of 2003 caused visitors' attitudes about fire related subject matter to change. "Natural forest fires started by lightning" were more desirable in 2004. "Cemented rock fireplaces with metal grates" were less desirable in 2004. "Small loose rock fireplaces (fire rings)" were less desirable in 2004. "Prohibiting wood fires where dead wood is scarce" was less desirable in 2004. "Eliminating grazing by visitors' horses (require carrying feed)" was also less desirable in 2004 compared to 2003.

Section 3, Comparing 2004 data with 1970/1982 results

Visitor Characteristics (2004 vs. 1970/1982)

After no significant change in visitor age from 1970 to 1982, visitors on average were older in 2004. After a rise in the percentage of female visitors from 1970 to 1982, the percentage of females stayed the same in 2004 with approximately 30% of visitors being female. Education levels were not significantly different between 1982 and 2004. Hikers were more likely to be from out of state in 2004 than in 1982. Visitors in 2004 were more likely to have visited the BMWC previously, more likely to have previous experience in any wilderness, made more visits to wilderness in the past 12 months, and spent more days in wilderness in the last 12 months than in previous studies at the BMWC.

Visit Characteristics (2004 vs. 1970/1982)

The average party size remained approximately the same over the years. Hikers still outnumbered horseback riders in 2004 but by a slimmer margin than in 1982. After a drop from 1970 to 1982 in the number of horses taken by groups that used horses, the average number of horses taken rebounded some in 2004. The proportion of visitors that participated in various activities did not change from 1982 to 2004. The average length of stay continued a downward trend and was less in 2004. The proportion of visitors in 2004 that used outfitters was not statistically different than in 1982. The average number of reported encounters with other groups per day was more in 2004.

Visitor Attitudes (2004 vs. 1970/1982)

Even though visitors in 2004 encountered more groups per day than in 1982, their opinions on the number of other groups encountered (saw too many, saw too few, etc.) stayed the same. For perceived change in area quality, the proportion of visitors responding with better, about the same, or getting worse was not significantly different between 1982 and 2004. (i.e. about the same percentage perceived the area quality was getting worse.)

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About the study:

The original purpose of conducting a visitor study at the Bob Marshall Wilderness Complex (BMWC) was to provide information on the characteristics of use, users, and user attitudes about the wilderness and its management. More specifically, the objectives of the study were to:

1. describe characteristics of the wilderness visit, including activities, methods of travel within the wilderness, timing of use, length of stay and camping practices;
2. describe characteristics of visitors, including types of groups, party size, previous experience, residence, and socioeconomic descriptions; and,
3. describe visitor attitudes, satisfaction with wilderness conditions encountered (both resource and social density conditions, and preference of various policies and management actions).

Information on BMWC use, users, and attitudes can assist BMWC managers to more effectively manage use and users. Specifically, understanding wilderness use and users in BMWC is helpful for monitoring the popularity of recreation activities; planning and designing recreation facilities and services; planning budgetary, personnel and other resource needs; effectively conducting public information and education programs; evaluating the efficiency and equity of public outdoor recreation, and determining trends. Understanding commercial recreational use and users is especially useful for managing permit systems and achieving an appropriate balance between commercial and non-commercial use of wilderness.

To accomplish the above objectives, a study was conducted in 2003. However, the summer of 2003 was not a typical year for the BMWC. Fires and fire fighting activity led to closures of popular recreation areas, destination and trailheads. Smoke, access limitations, and safety concerns undoubtedly discouraged visitation in areas directly affected as well as across the whole complex. Additionally, other fires in the region (e.g. Glacier National Park) may have displaced or discouraged visitation. This created a unique opportunity to capture use patterns, visitor characteristics, and attitudes for a season that was highly affected by fire. Indeed, the 2003 study did confidently achieve the first three objectives listed above for a heavily fire affected season. However,

it was unclear how fire and fire fighting activity impacted different user groups. It was also unclear how representative the visitors during the summer of 2003 were of current use and user characteristics. Therefore, the fourth objective to determine trends since the 1970 and 1982 studies was not explored in 2003.

To address the difficulties arising from an atypical study year, a decision was made to expend the study to include 2004. The 2004 extension was conducted in an attempt to capture a more representative sample in the BMWC. The purpose of the extension retained the same objectives as the ones previously listed with the addition of understanding how a highly active fire season affects current use patterns, visitor characteristics, and attitudes. Fires did not affect the 2004 season significantly. In fact, no major fires occurred in the BMWC or surrounding areas.¹ This lack of fire activity in 2004 provided easy investigation of this last objective. Also with a more representative season, the comparisons with the 1970 and 1982 studies could be made with more confidence.

¹ However, it should be noted that various impacts of the 2003 fires continued on into 2004, such as blackened vegetation, open vistas, and minor damage to the infrastructure. These impacts will continue for the foreseeable future.

Study Methods:

In order to make accurate comparisons to the 2003 data, the 2004 extension followed almost identical study methods. In both years, the population under study are summer and fall adult recreational visitors to the BMWC who entered or exited the wilderness via trailheads estimated to receive the heaviest use. The trailheads included: Bear Creek; Beaver Creek; Benchmark; Gibson Reservoir; Headquarters Pass; Indian Meadows; Middle Fork Teton River; Monture creek; Morrison Creek; North Fork Blackfoot River; Owl Creek; Pyramid Pass; and, South Fork Flathead River. Visitors had to have been in or near the Wilderness for three hours or more to be considered.

At these thirteen sites, sampling occurred during the 2004 season from June 18th to October 18th and in 2003 from June 20th to October 23rd. Sampling began when a majority of trailheads were open and visitation began to pick up as the passes became travelable. Sampling ended at the first significant snow event of the season that covered access roads and caused visitation to drop off sharply. A detailed sampling schedule is included in the technical appendix.

Trailheads were sampled for four-day weekday blocks of time (Monday through Thursday) and three-day weekend blocks of time (Friday through Sunday). Fieldworkers contacted visitors at these trailheads during six hour periods between eight am and eight pm. Trailheads were sampled with probabilities proportional to size. In other words, among the 13 trailheads included in this study, those with higher levels of use were sampled more frequently than those with lower levels of use.¹ This bias towards higher use trailheads was accounted for in the analysis by weighting data *inversely* proportional to size of sample. In other words, data from lower use trailheads were weighted more than data from higher use trailheads.² This sample design allowed fieldworkers to

¹ Previous trailhead use estimates (Lucas 1985) were used to determine use levels at trailheads. These estimates were verified for rank accuracy with current Forest Service managers.

² Weighting was calculated so that the sample size analyzed remained roughly the same as the actual number sampled. The sample sizes reported in each table in the technical appendix is the weighted sample size that was used in each analysis.

optimize their efficiency and capture a representative sample of the visitor population. This system was used in both the 1970 and 1982 studies.

On-site and mail-return questionnaires were used. All respondents to the on-site questionnaire were included in the mail-return questionnaire. In 2003, fieldworkers contacted 605 visitors, 408 were contacted in 2004.¹ Seven visitors refused to participate in 2003, 12 people refused in 2004, 4 of which had completed the study the previous year. Mail-return questionnaires were mailed to the remaining respondents. An initial mailing was sent to respondents within twelve days of contact. A follow-up postcard was mailed to non-respondents one to two weeks after the questionnaire was mailed. A second mailing complete with another copy of the questionnaire was mailed to non-respondents three to four weeks after the initial mailing. Six mail-return questionnaires were not deliverable in 2003, 3 were not deliverable in 2004. In 2003, the mail-return questionnaire was completed and returned by 462 respondents yielding an overall response rate of 78%. In 2004, 294 questionnaires were returned yielding an overall response rate of 72%.

A non-response bias check was conducted on six key variables including: season of use, use of outfitter, length of stay, mode of travel, education level, and previous experience in BMWC. No significant differences were found between respondents and non-respondents. Results of these tests are shown in the appendix 3.

¹ Due to financial and logistic constraints, fewer fieldworkers were employed in 2004. Never the less, in 2004, a total of 13 trailheads were sampled with a total of 18 sampling blocks in summer and 8 blocks in fall (full details of sampling shown in appendix 2).

Section 1: Overall Results from 2004 Survey

About the Results:

Options are innumerable for reporting results from a study such as this. The results presented below were chosen based on numerous communications with Forest Service personnel. The data are presented using four classification variables. These variables are believed to hold the greatest potential for demonstrating variation. The four classification variables are:

- Length of stay: day versus overnight visitors.
- Use of outfitter: outfitted versus non-outfitted visitors.
- Season of use: summer versus fall visitors. Summer sampling occurred between June 18th and September 8th. Fall sampling occurred between September 13th and October 17th
- Mode of travel: hiking versus horseback riding visitors.

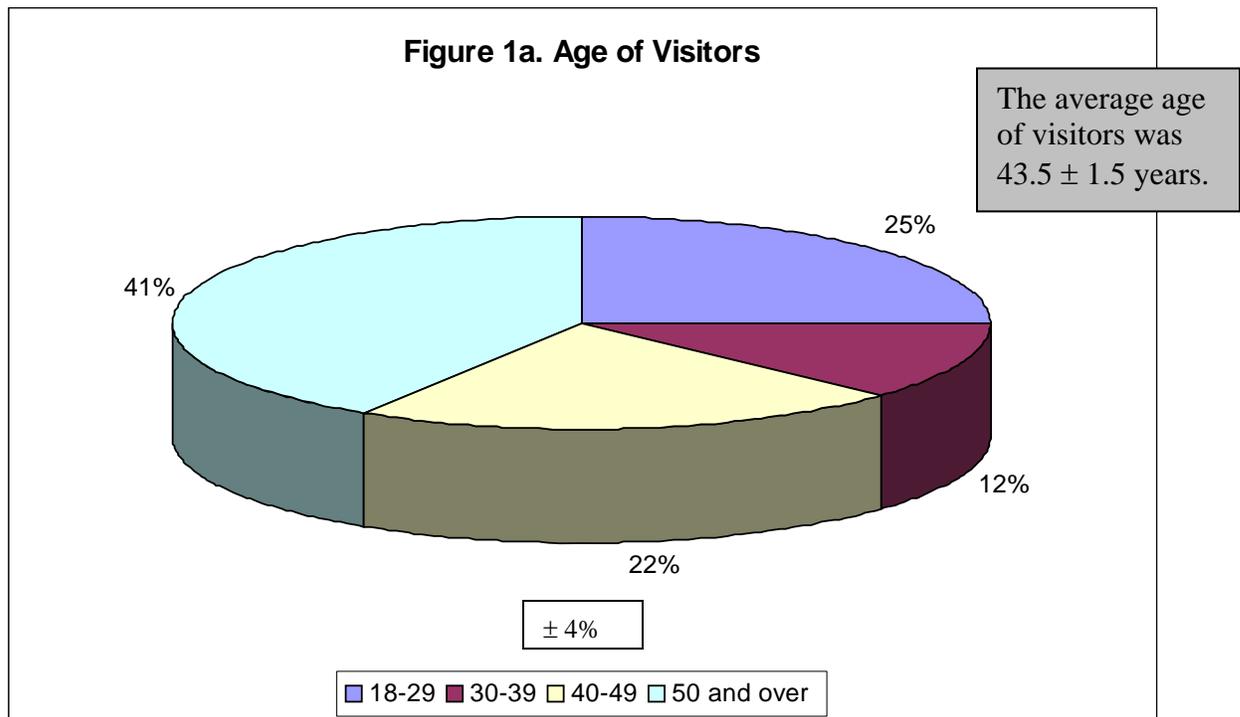
Each use and user characteristic was analyzed to determine if there was a statistically significant difference in responses due to these four classification variables. For each characteristic, we present descriptive statistics to estimate the population parameters. Following this we show descriptive statistics and statistical test results for characteristics that showed a statistically significant difference between classification variables. 95% confidence intervals are included in the summary below. We can say with 95% confidence that the means and percentages reported are within the ranges given. A complete illustration of all characteristics is included in a appendix 1.

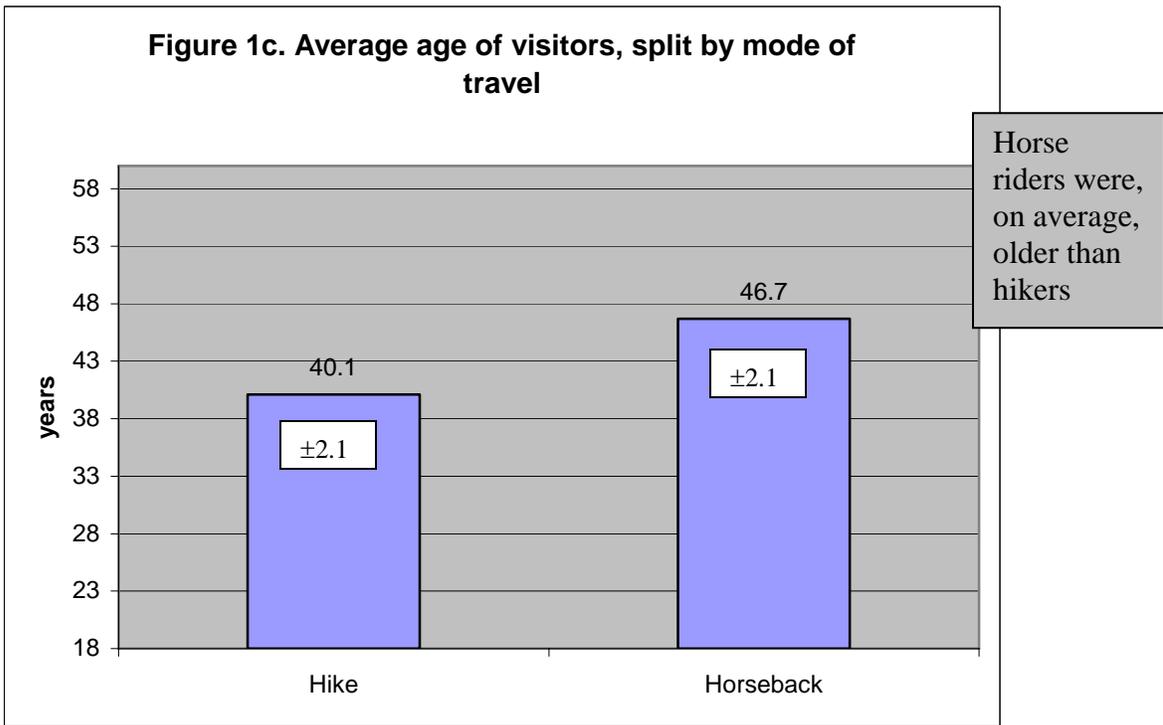
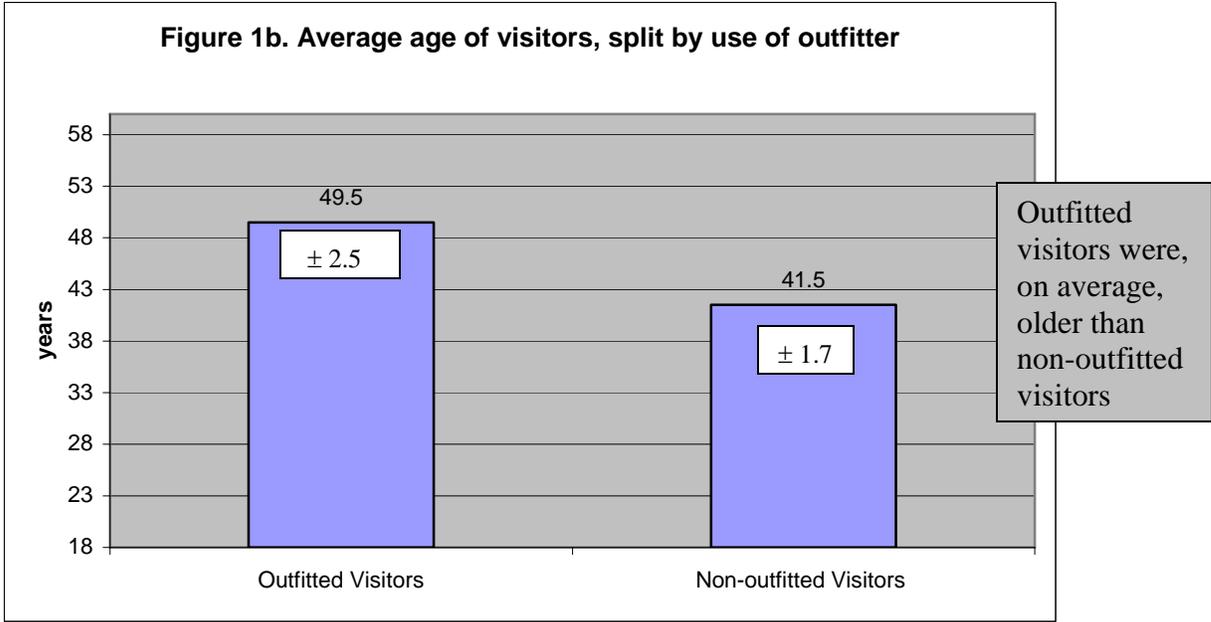
Who were the 2004 visitors to BMWC?

Respondents were asked numerous questions on both the onsite and mail-return questionnaires that helped to characterize the demographic and other characteristics of visitors to BMWC. These included: age, sex, level of education, place of residence, and previous experience in BMWC. Wherever possible, results from the onsite questionnaire were used instead of results from the mail-return questionnaire. This was done because more visitors completed the onsite questionnaire (n=396) than completed the mail-return questionnaire (n=294). In some cases, questions about the same characteristic were asked in different ways on the onsite and mail-return questionnaire. This allowed for a more nuanced understanding of the characteristic.

Age

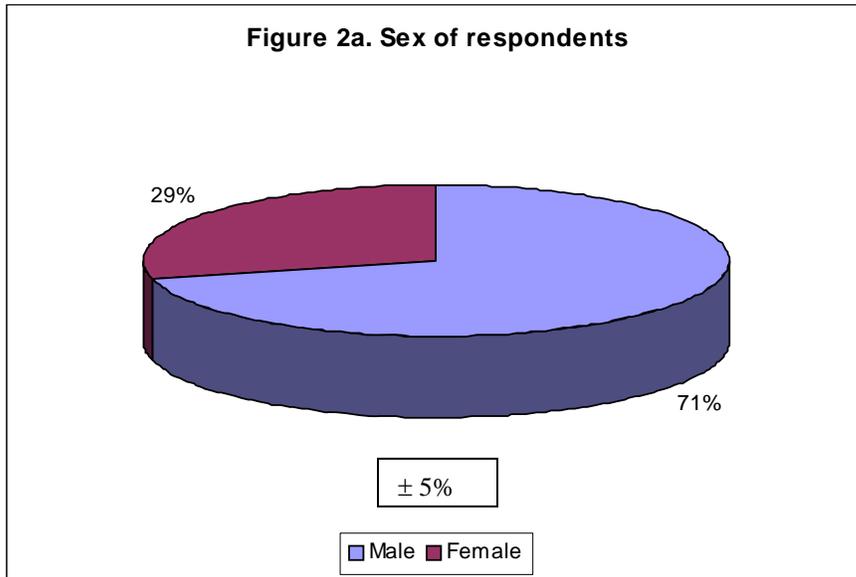
The onsite questionnaire asked respondents for their year of birth. There were significant differences in age when visitors were split by use of outfitter and by mode of travel. There were no significant differences when visitors were split by length of stay or season of use.



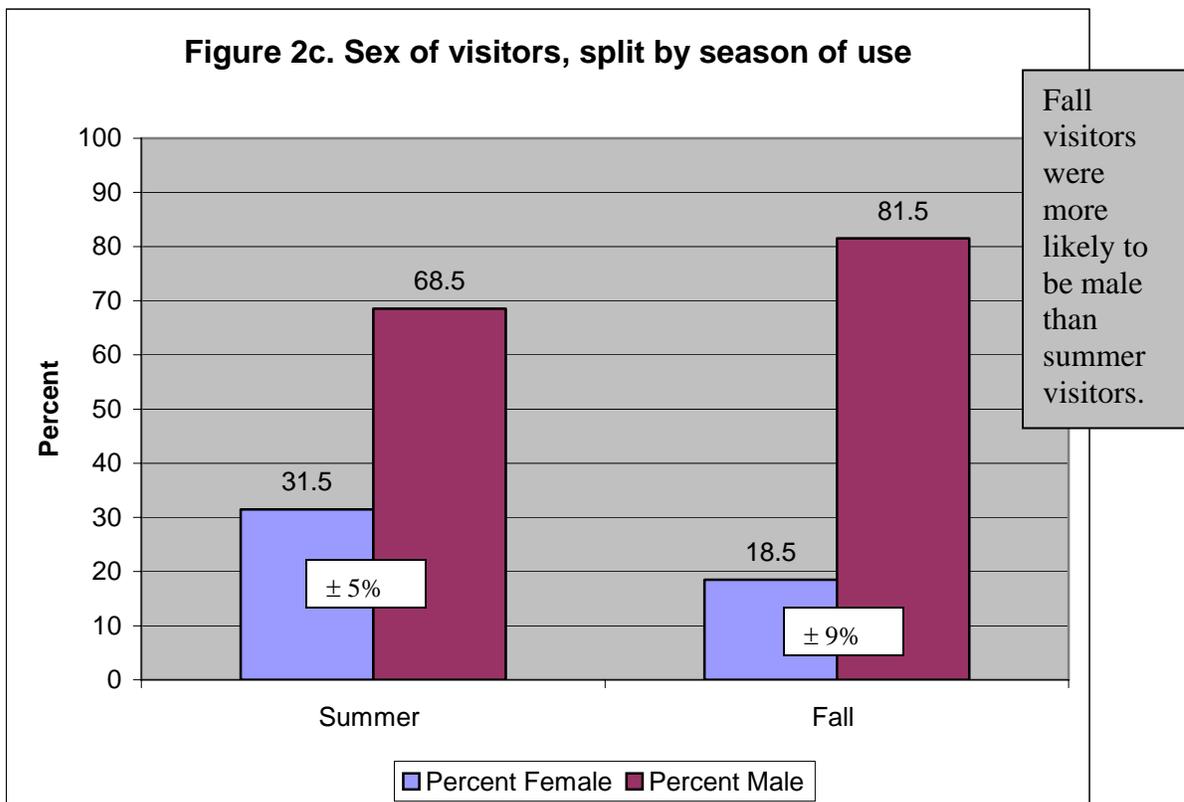


Sex

Respondents' sex was documented on the onsite questionnaire. There were significant differences in sex when visitors were split by season of use. There were no significant differences in sex when visitors were split by use of outfitter, length of stay, or mode of travel.



More than two-thirds of visitors were male.



Fall visitors were more likely to be male than summer visitors.

Education

Respondents to the onsite questionnaire were asked to indicate the highest year of school they completed. There were significant differences in education when visitors were split by length of stay and by mode of travel. There were no significant differences in education when visitors were split by use of outfitter or season of use.

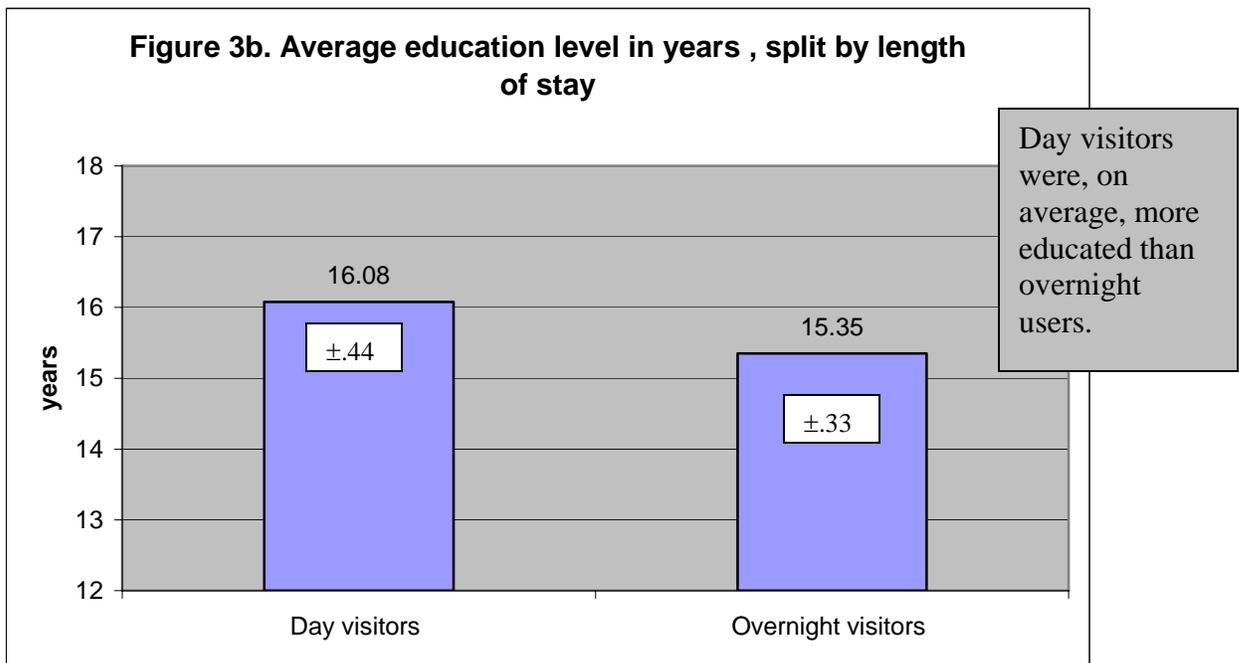
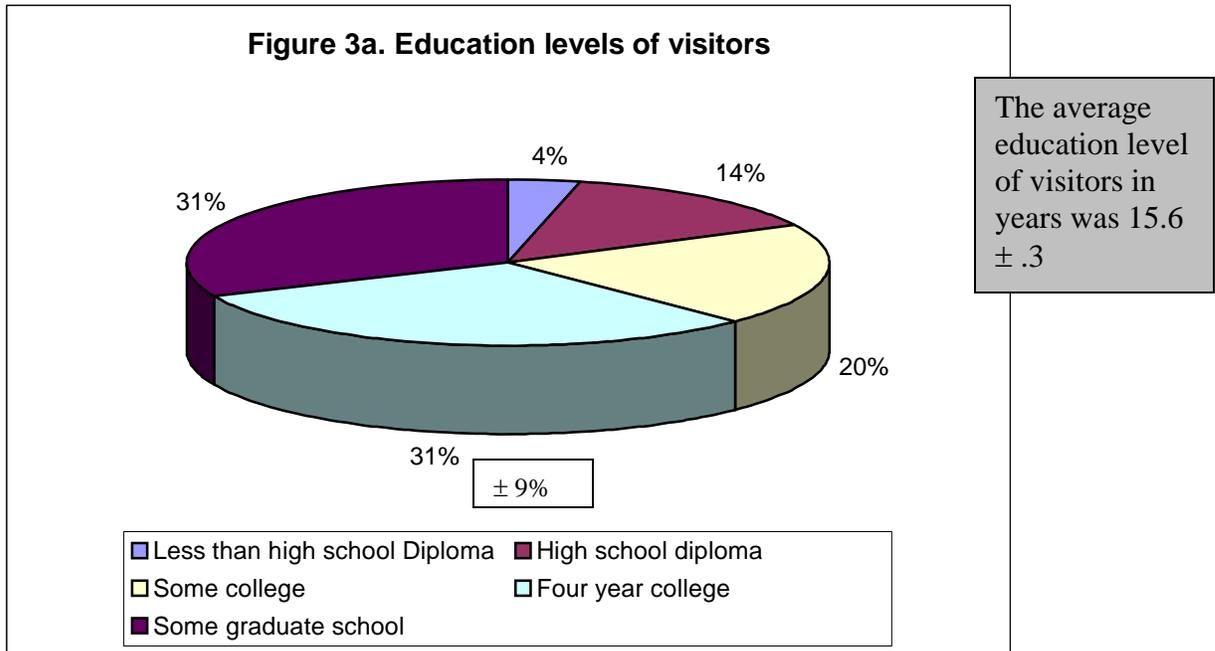
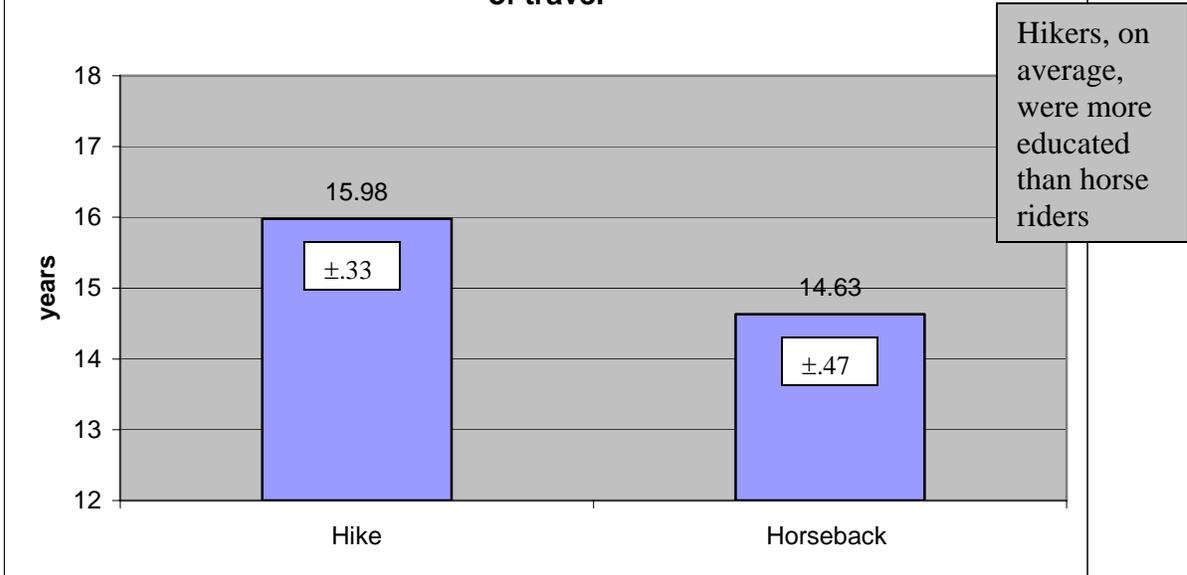


Figure 3c. Average education levels in years, split by mode of travel



Place of Residence

The last part of the onsite questionnaire asked respondents to provide their name and mailing address so that we could send them a mail-return questionnaire. The mailing information was also used to analyze visitors' place of residence. Identities and personal information of respondents were kept anonymous and confidential. There were significant differences in place of residence when visitors were split by length of stay and when split by use of outfitter. There were no significant differences in place of residence when split by mode of travel or season of use.

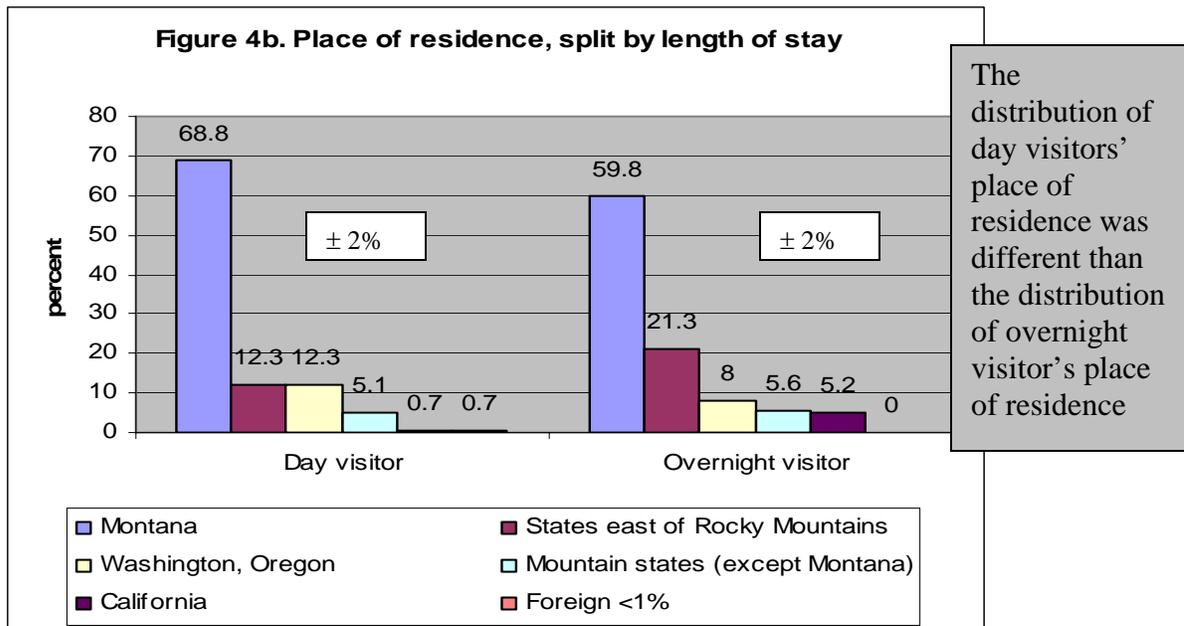
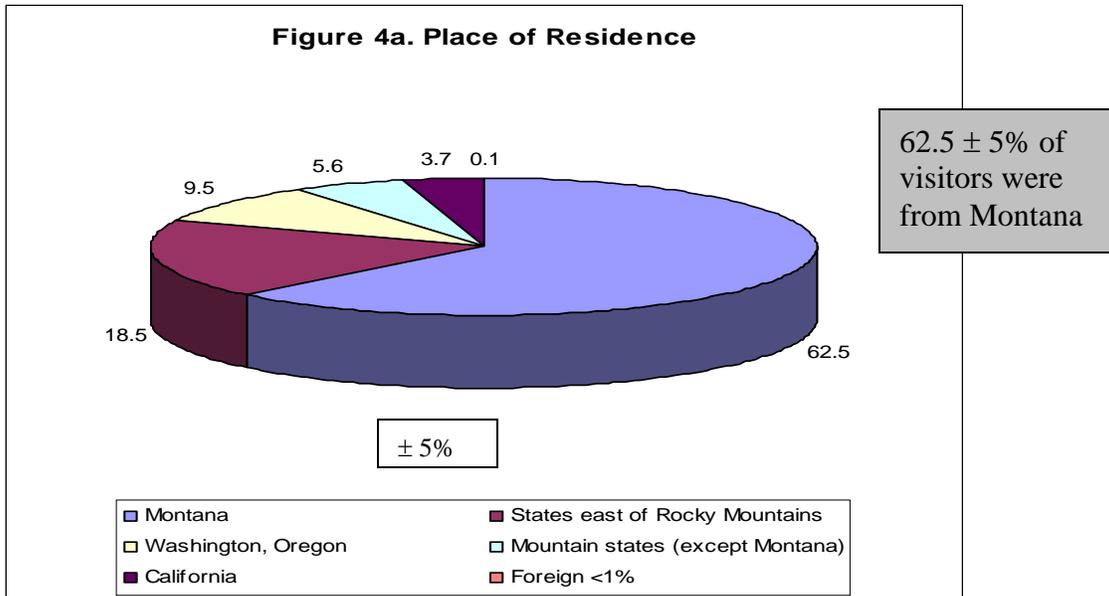
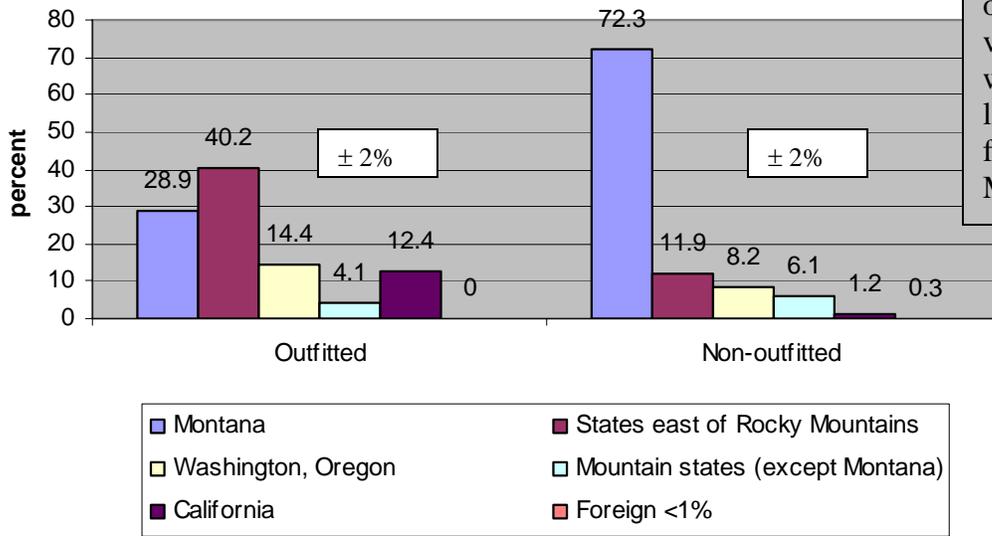


Figure 4c. Place of residence, split by use of outfitter



Non-outfitted visitors were more likely to be from Montana.

Place of residence, size of place of residence

Visitors were asked to indicate the size of both their current place of residence and place they lived most before the age of 18. The choices were: on a farm, rural or small town (under 1,000 population), town (1,001-5,000 population), small city (5,001-50,000 population), medium city (50,001-1 million), and large city (over 1 million).

Figure 5a. Size of current place of residence

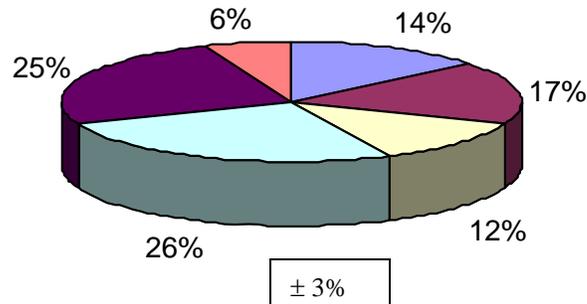
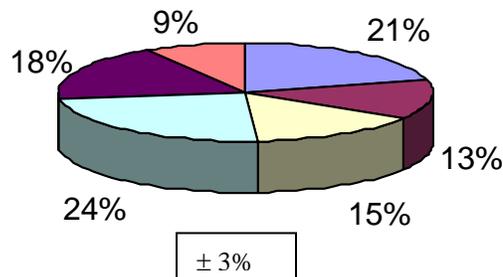
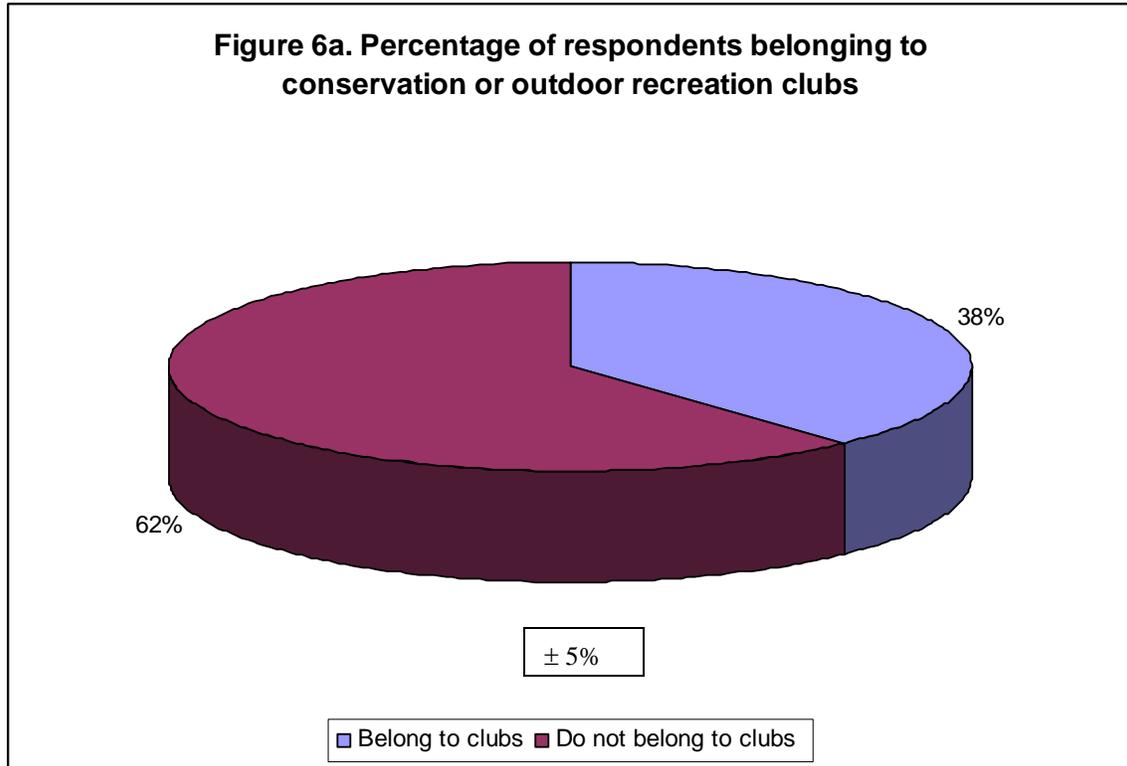


Figure 5b. Size of place of residence before age 18



Membership to conservation or outdoor recreation clubs

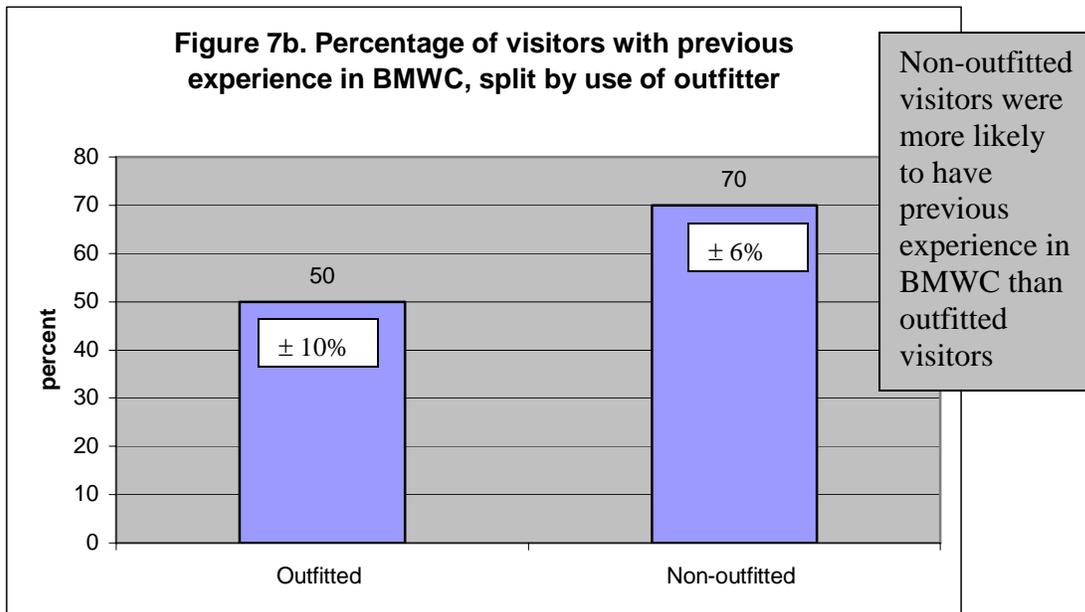
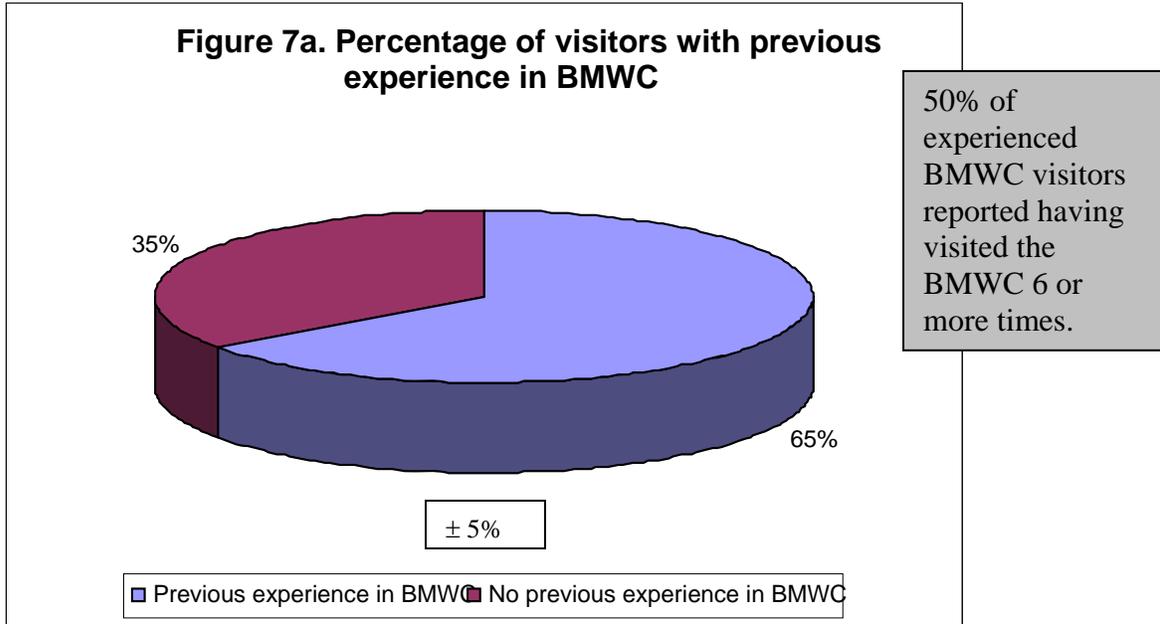
Visitors were asked if they belong to any conservation or outdoor recreation clubs. Those that indicated that they did belong to such clubs were asked to indicate which ones.



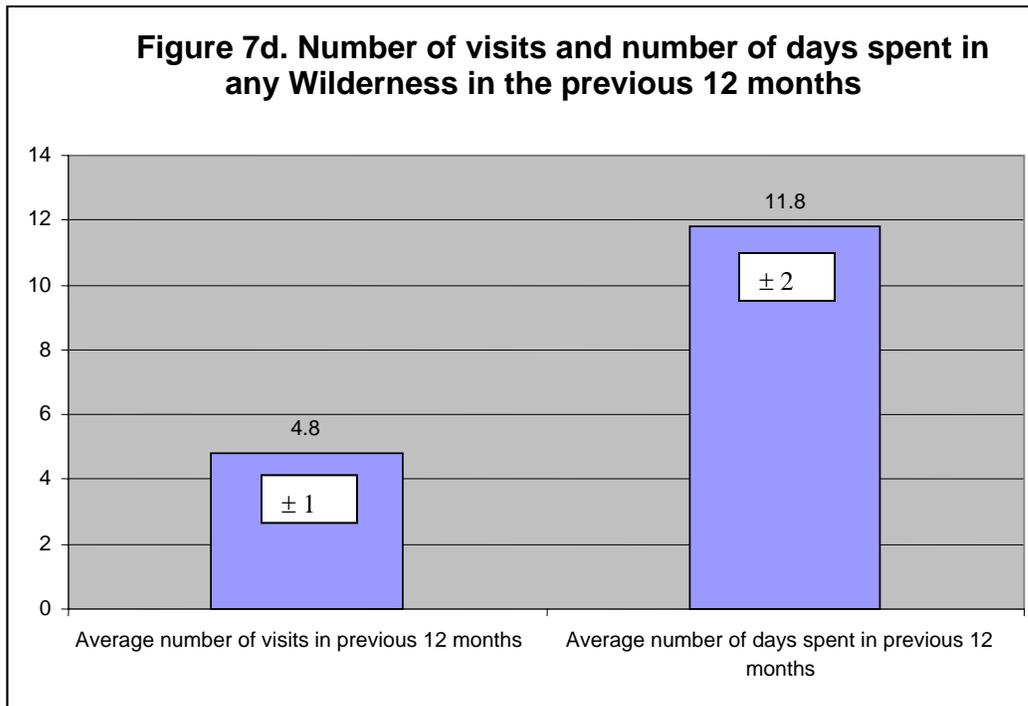
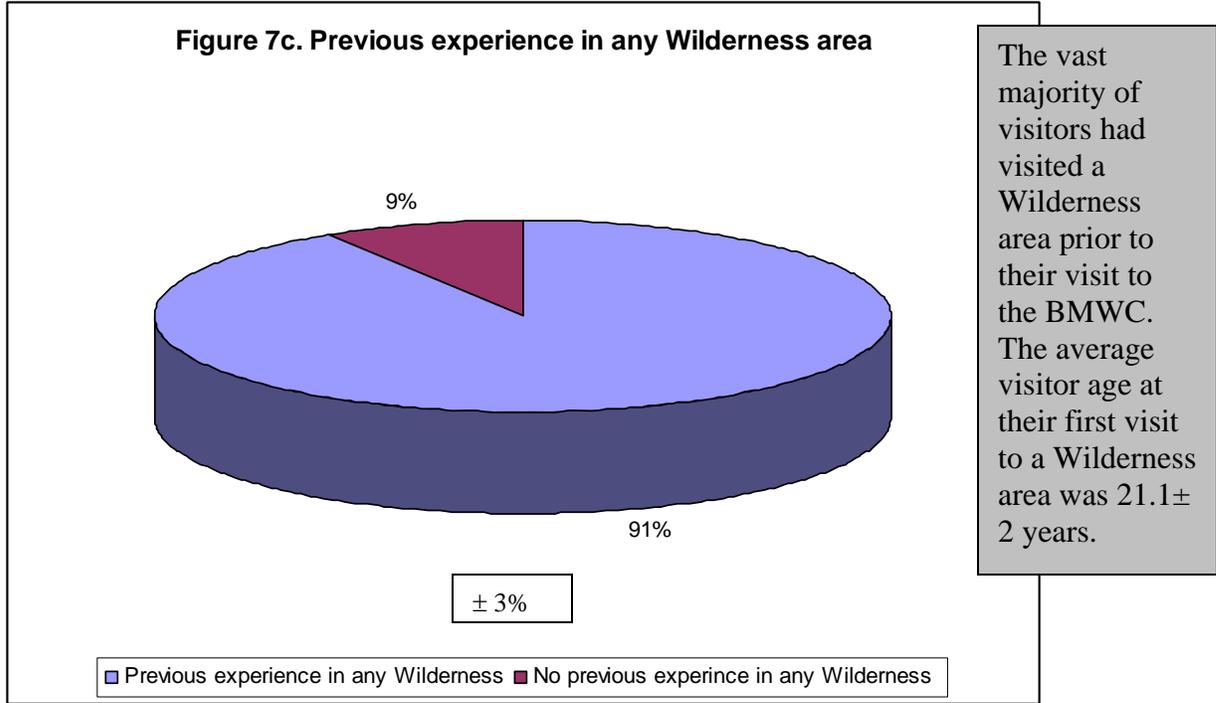
The most common clubs reported were: Rocky Mountain Elk Foundation, Montana Wilderness Association, Sierra Club, Nature Conservancy, Backcountry Horseman, Montana Wildlife Foundation, Audobon Society, Trout Unlimited, Ducks Unlimited, Quail unlimited, Natural Resource Defense Council, and the Wilderness Society.

Previous experience

Visitors were asked if they had ever been to the BMWC prior to the trip for which they were being questioned. The only significant difference in previous experience occurred when visitors were split by use of outfitter. No significant differences were found when visitors were split by mode of travel, length of stay, or season of use.



Visitors were also asked if they had visited any Wilderness before this trip and at what age they made their first visit to a Wilderness area. Visitors were asked to indicate how many times they visited a Wilderness area in the previous 12 months and how many days total they spent in Wilderness areas in the previous 12 months.

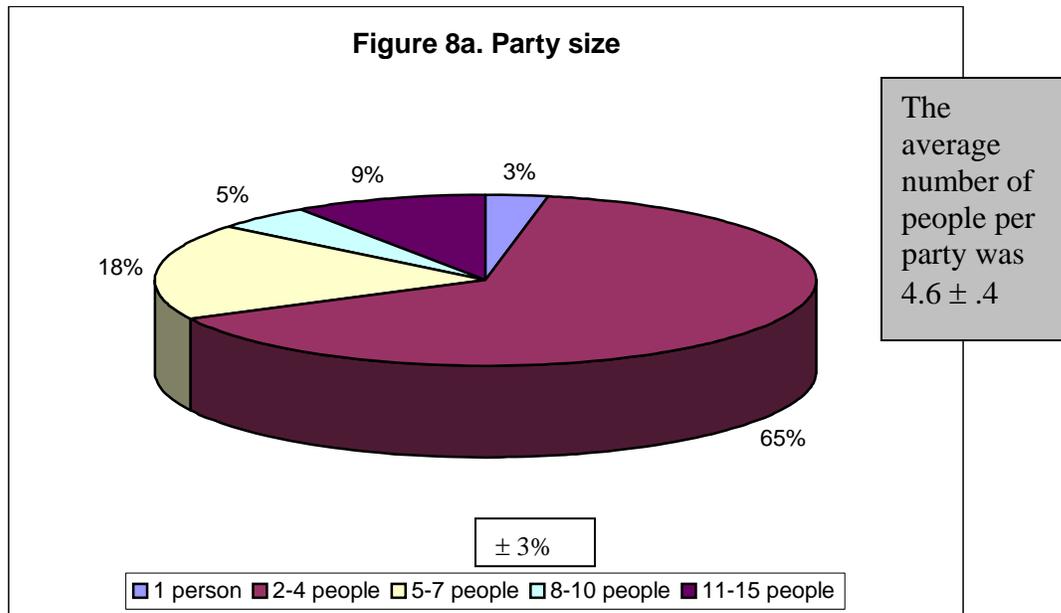


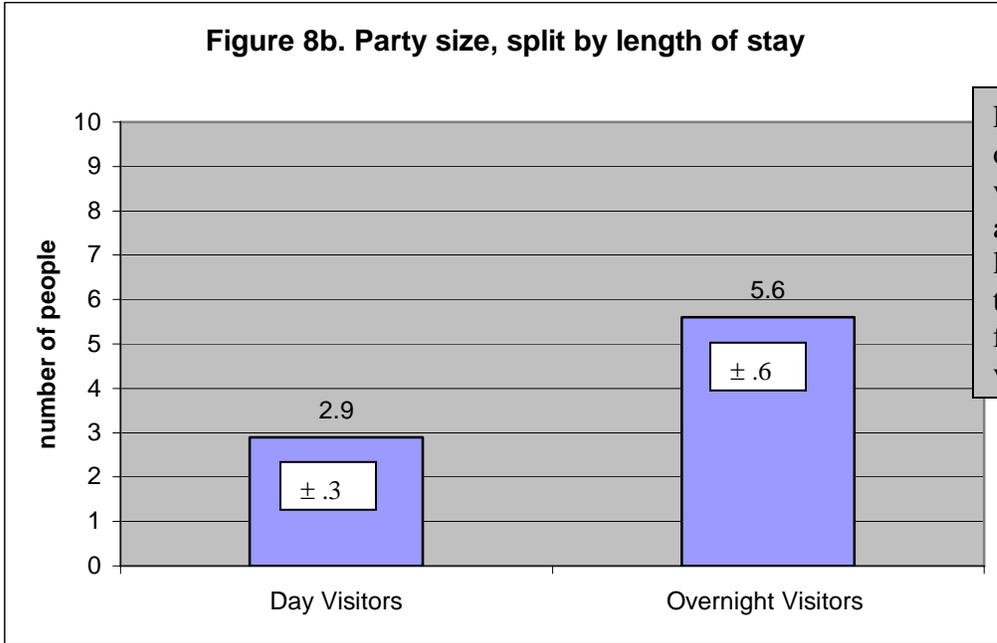
What are the characteristics of a 2004 BMWC visit?

Respondents were asked numerous questions on both the onsite and mail-return questionnaires that helped to illustrate characteristics of their visits to the BMWC. These characteristics included: party size; mode of travel; number of livestock used; activities participated in; length of stay; use of outfitters; and number of encounters with other groups. As with the visitor characteristic data, results from the onsite questionnaire are listed instead of results from the mail-return questionnaire whenever this was appropriate.

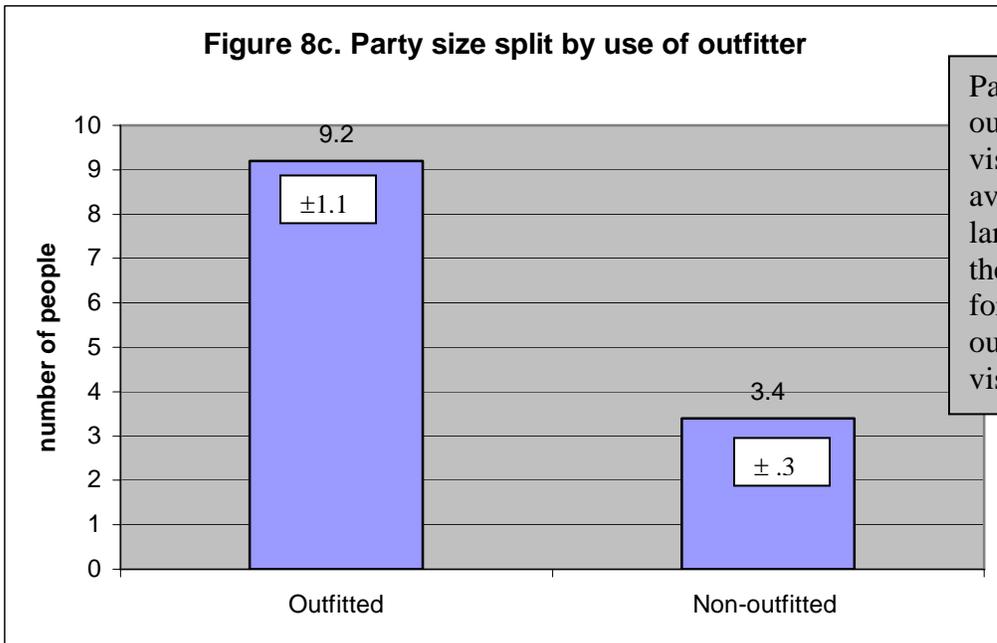
Party size

Respondents were asked how many people were in their party. There were significant differences in party size when visitors were split by length of stay, by use of outfitter, and by mode of travel. No significant differences were found when visitors were split by season of use.





Party size for overnight visitors, on average, was larger than the party size for day visitors.



Party size for outfitted visitors, on average, was larger than the party size for non-outfitted visitors.

Figure 8d. Party size split by mode of travel

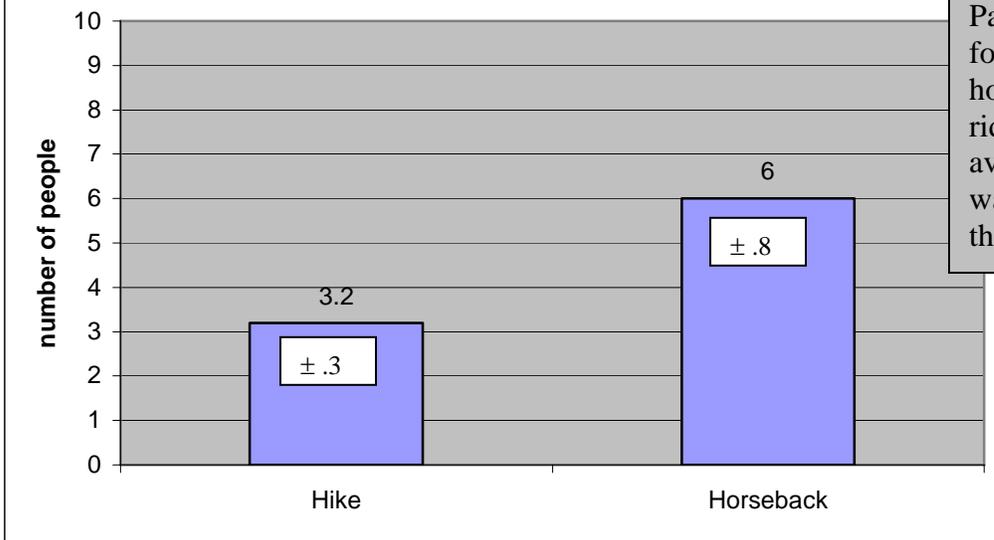
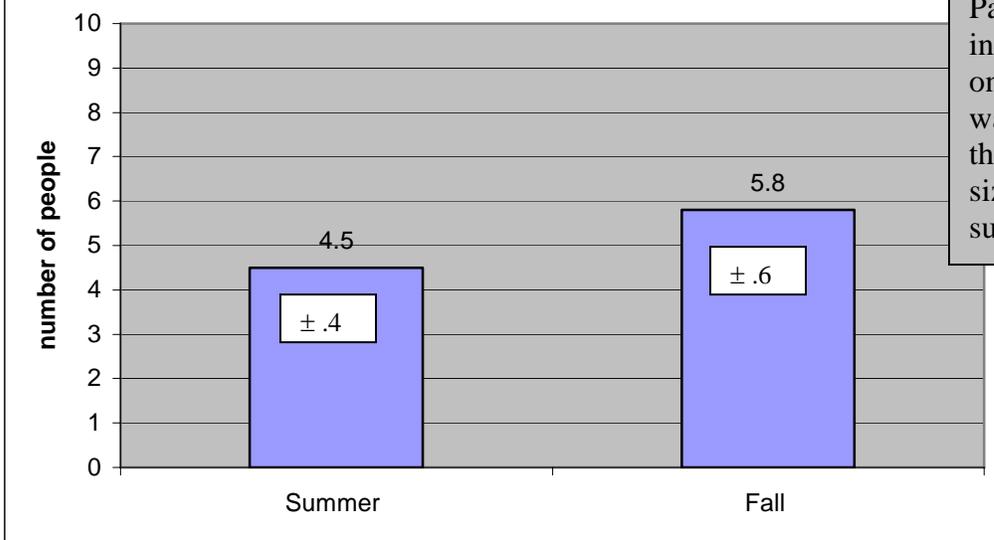
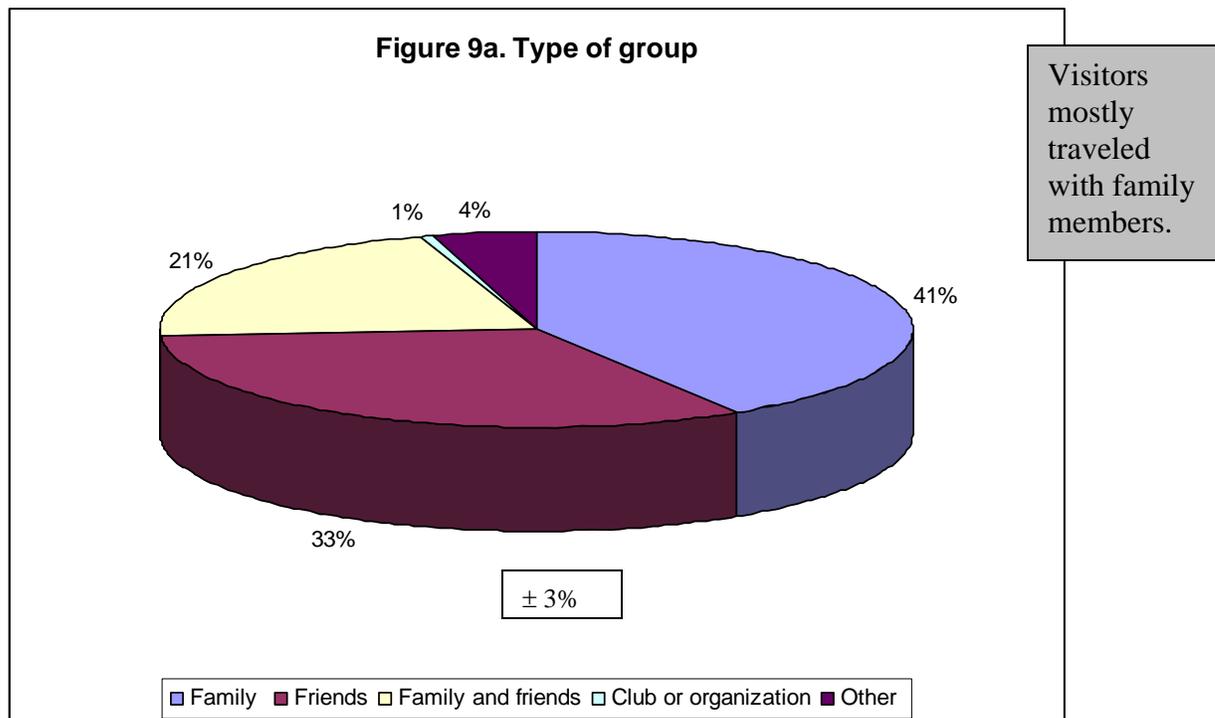


Figure 8e. Party size split by season of use



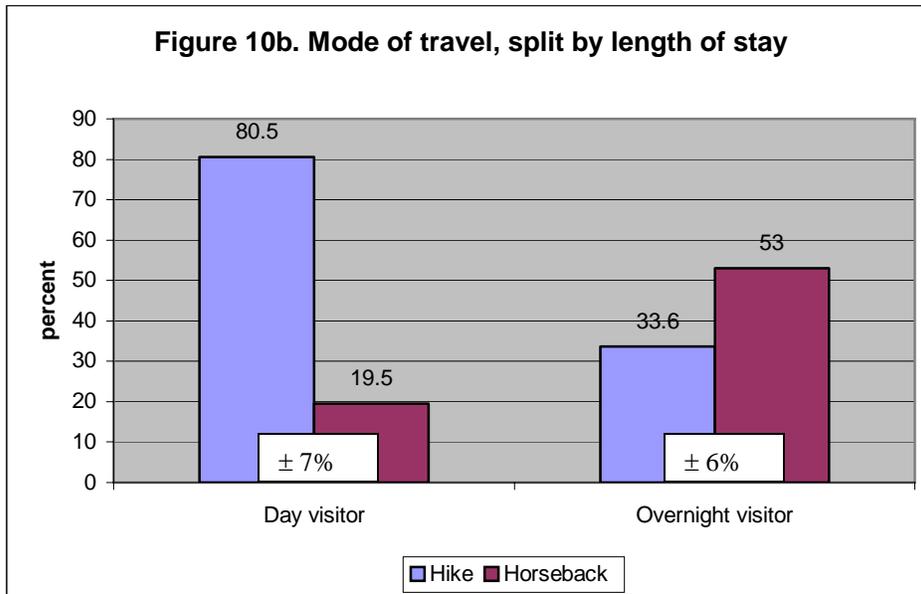
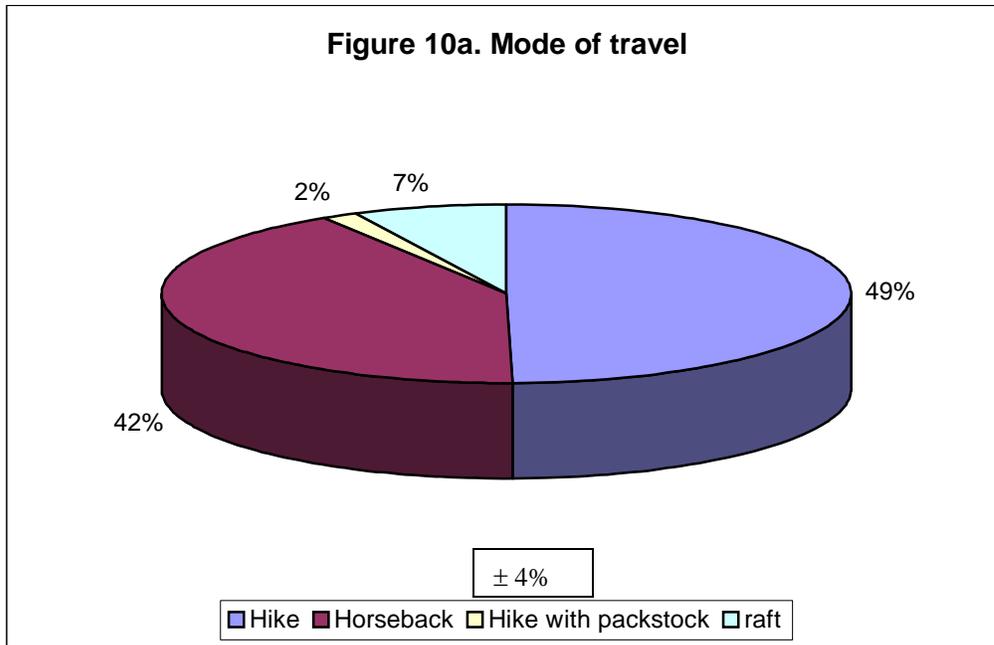
Type of group

Respondents that did not travel alone were asked to indicate the type(s) of people that made up their group. The choices were: a family or families (includes part of a family), a family plus friends (includes part of a family), friends and acquaintances (not related), and from an organization (scouts, club, etc.).



Mode of travel

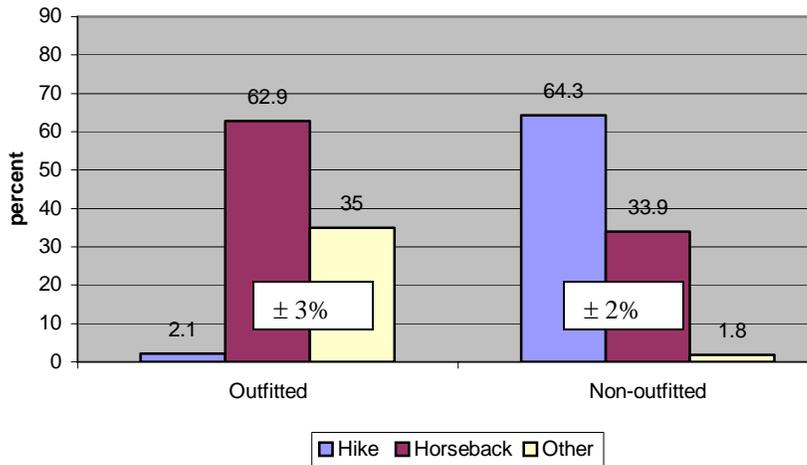
Respondents were asked to indicate their primary mode of travel in the Wilderness. The choices were; hike (carrying our equipment ourselves), boat (raft, canoe, kayak, etc.), hike (leading horses or other livestock), and horseback. All modes of travel are depicted in Figure 10a. Only hikers and horseback riders are used in the comparative analyses. There were significant differences in mode of travel when visitors were split between length of stay, use of outfitter, and season of use.



Day visitors were much more likely to hike than ride horses.

Overnight visitors were more likely to ride horses than to hike.

Figure 10c. Mode of travel, split by use of outfitter

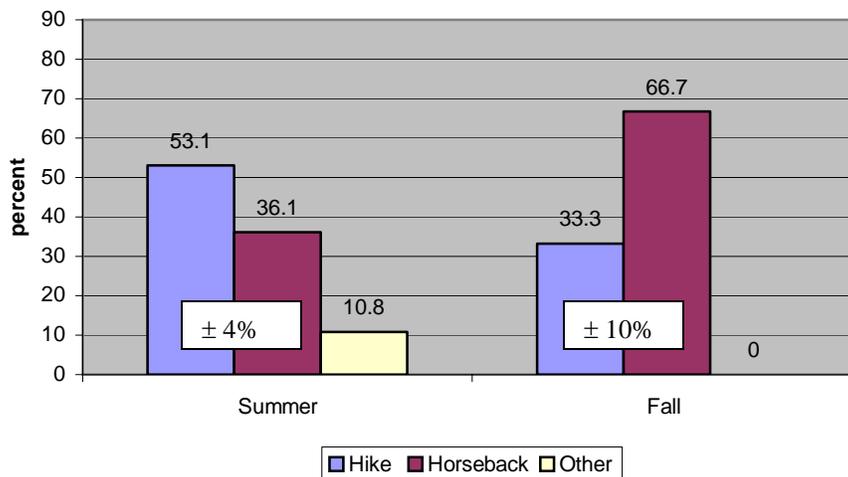


Non- outfitted visitors were more likely to hike than outfitted visitors.

Outfitted visitors were more likely to ride horses than non-outfitted visitors.

The other category for outfitted visitors was primarily composed of rafters.

Figure 10d, Mode of travel, split by season of use



Summer visitors were more likely to hike than fall visitors.

Fall visitors were more likely to ride horses than summer visitors.

Number of livestock

Respondents who were in parties that used horses or other livestock (n=139) were asked how many horses or other livestock their party used. There were significant differences in number of livestock used when visitors were split by length of stay and split by use of outfitter. There was not a significant difference between summer and fall visitors.

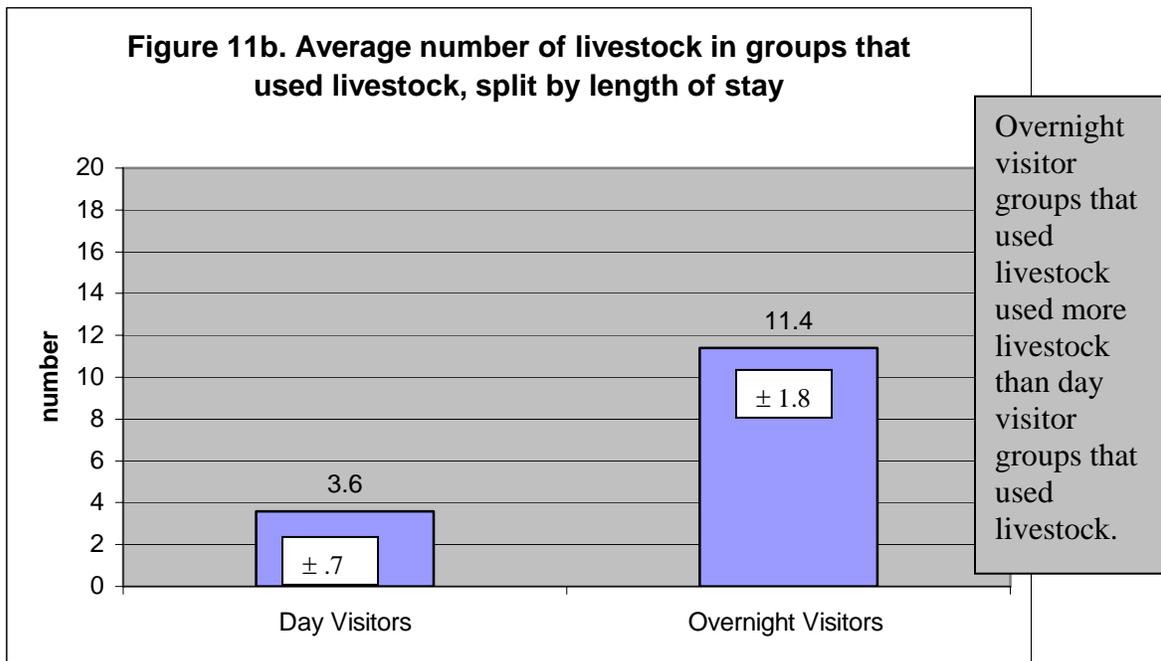
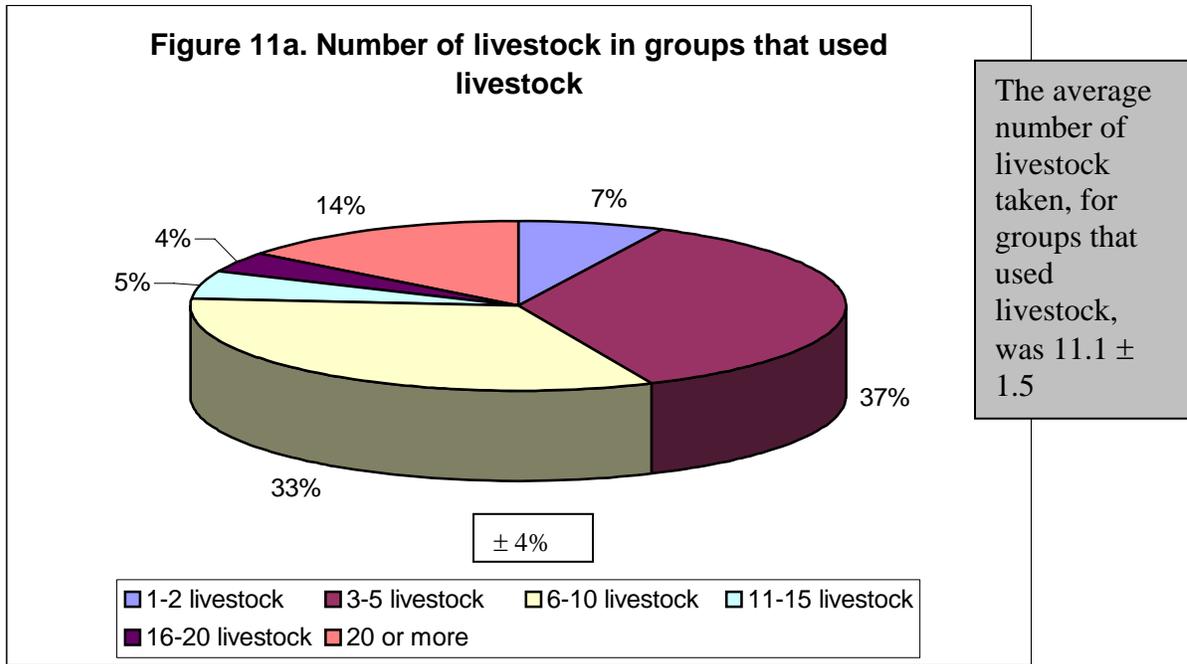
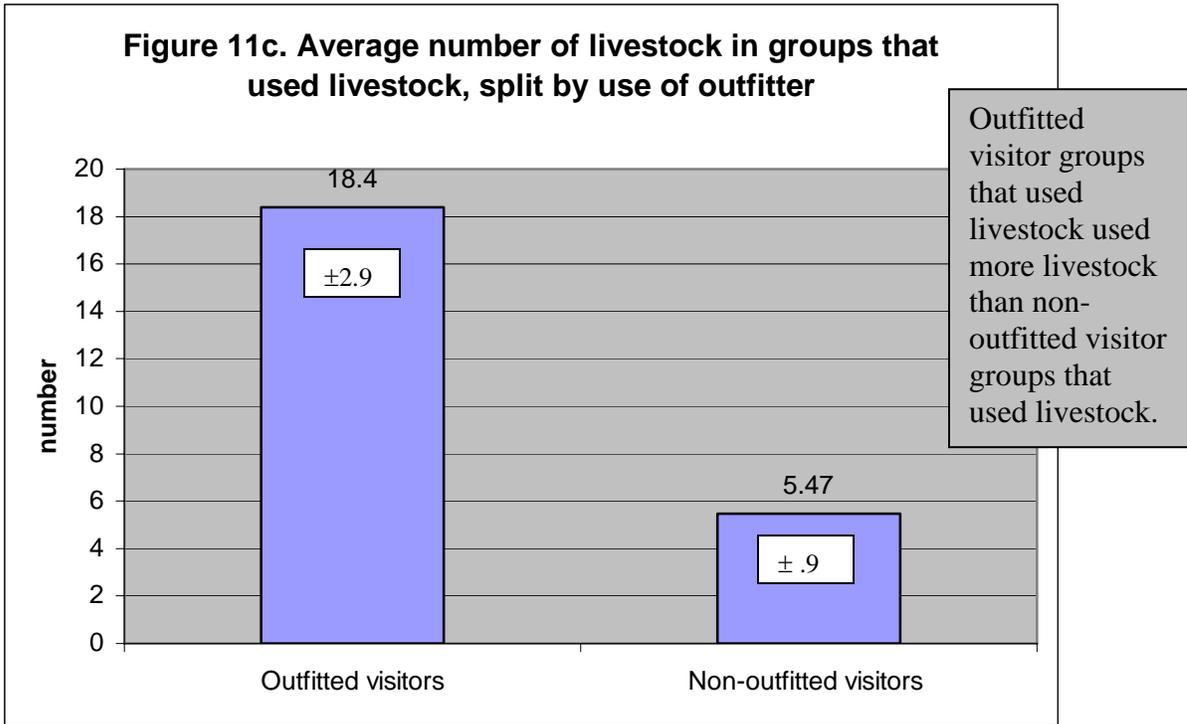


Figure 11c. Average number of livestock in groups that used livestock, split by use of outfitter



Activities

Respondents were asked to identify all of the activities in which they participated in the Wilderness on the specific trip for which they were questioned. Totals equal more than 100 because some respondents participated in more than one activity. There were significant differences in various activities when visitors were split by length of stay, use of outfitter, season of use, and mode of travel.

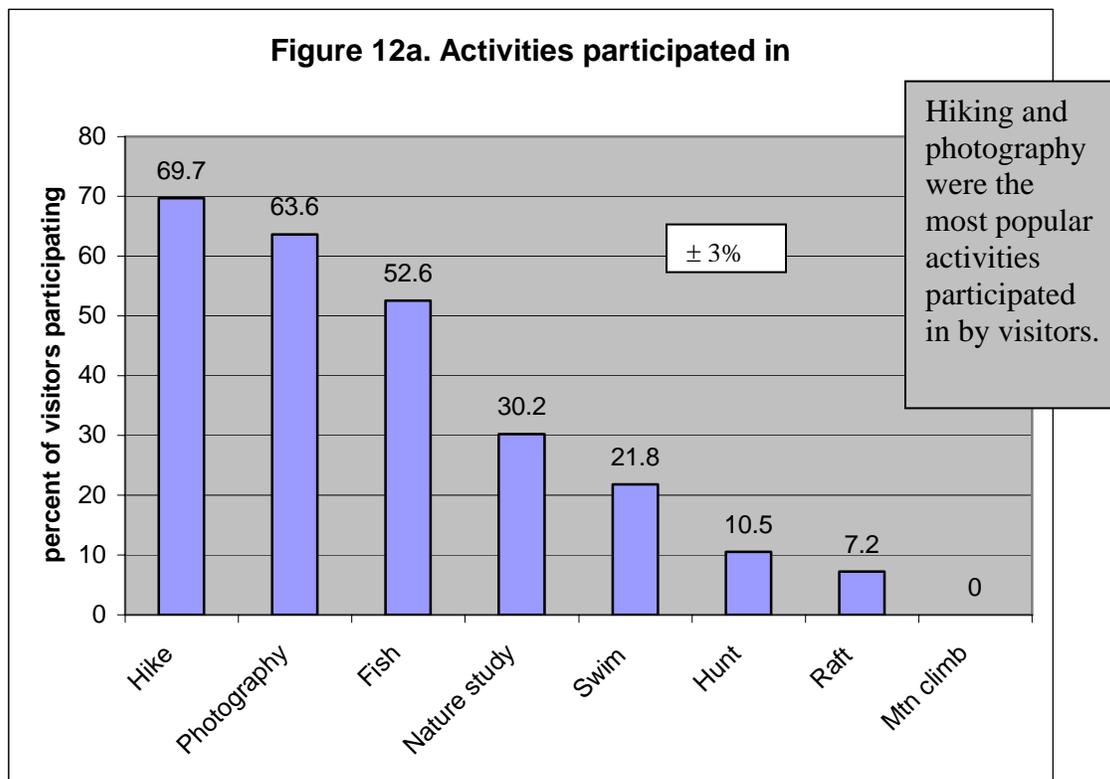
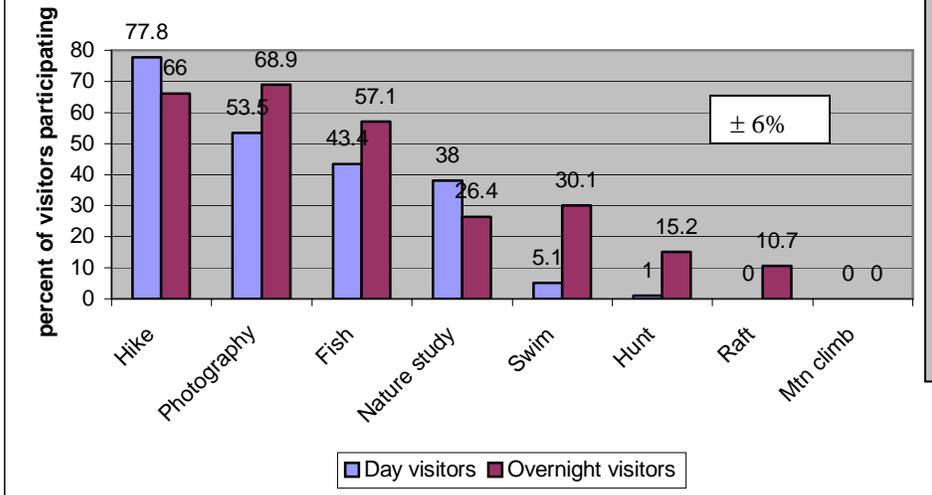
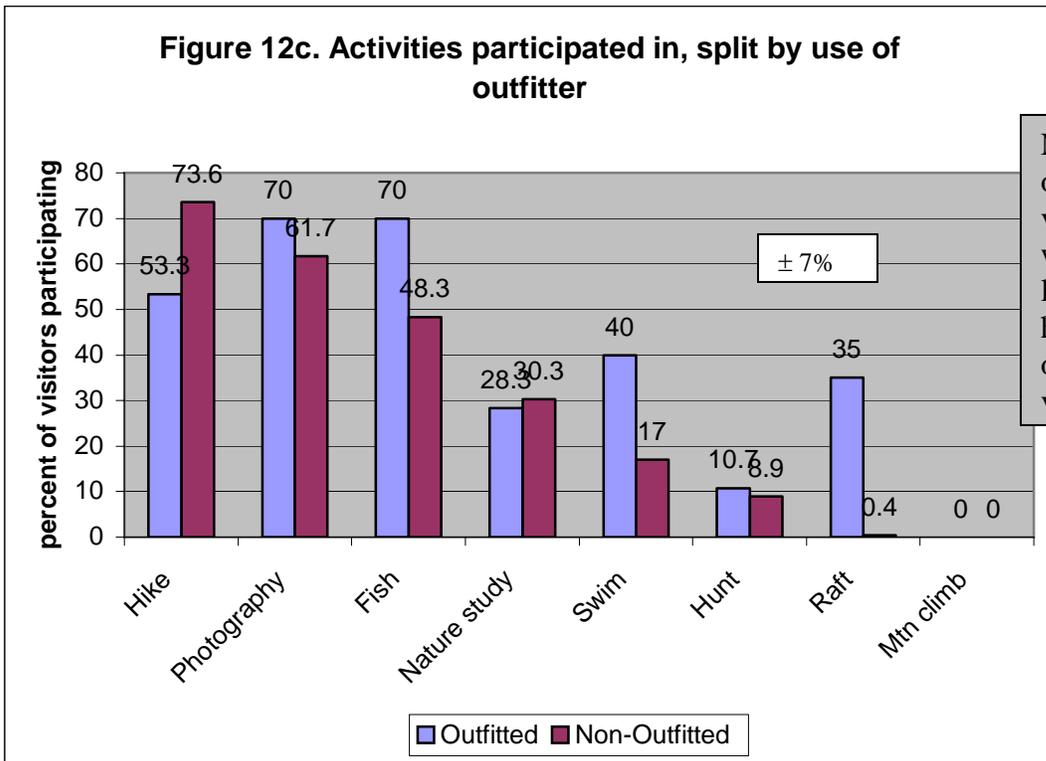


Figure 12b. Activities participated in, split by length of stay



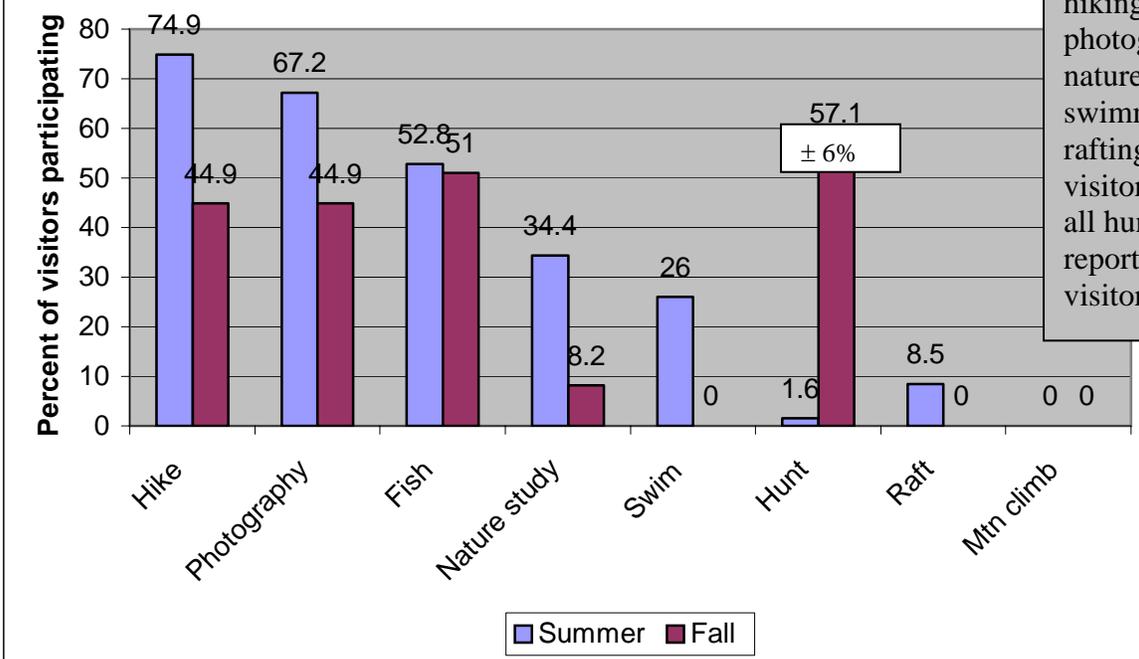
Day visitors were more likely to participate in hiking and nature study than overnight visitors. Overnight visitors were more likely to participate in fishing, swimming and photography than day visitors

Figure 12c. Activities participated in, split by use of outfitter



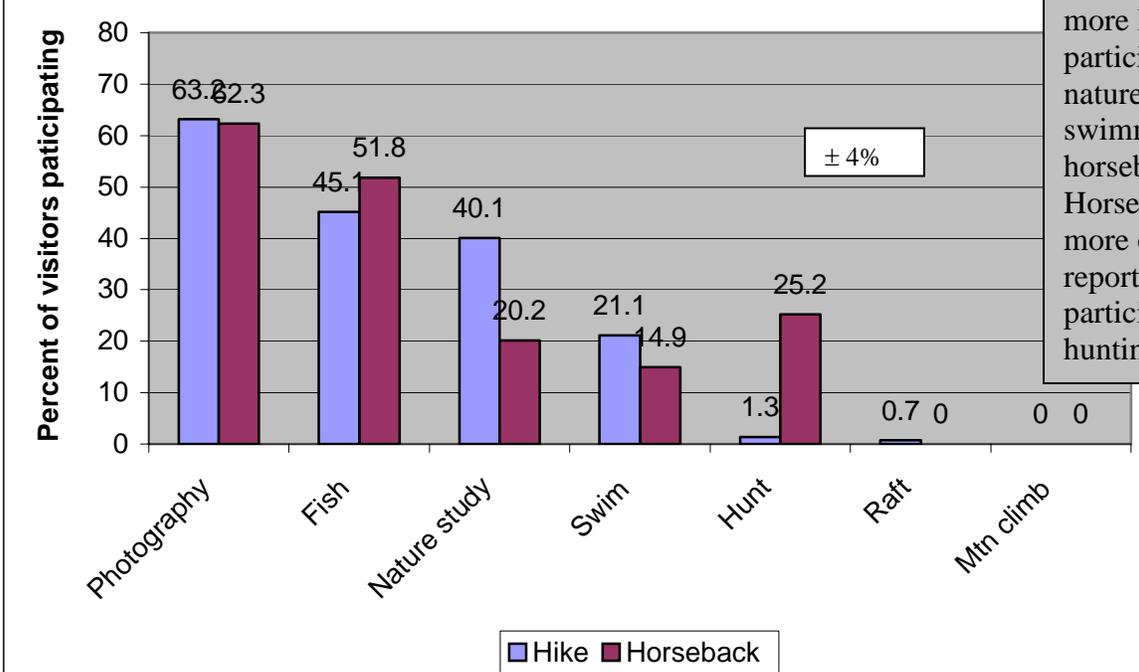
Non-outfitted visitors were more likely to hike than outfitted visitors.

Figure 12d. Activities participated in, split by season of use



Summer visitors were more likely to participate in hiking, photography, nature study, swimming, and rafting than fall visitors. Almost all hunting is reported by fall visitors

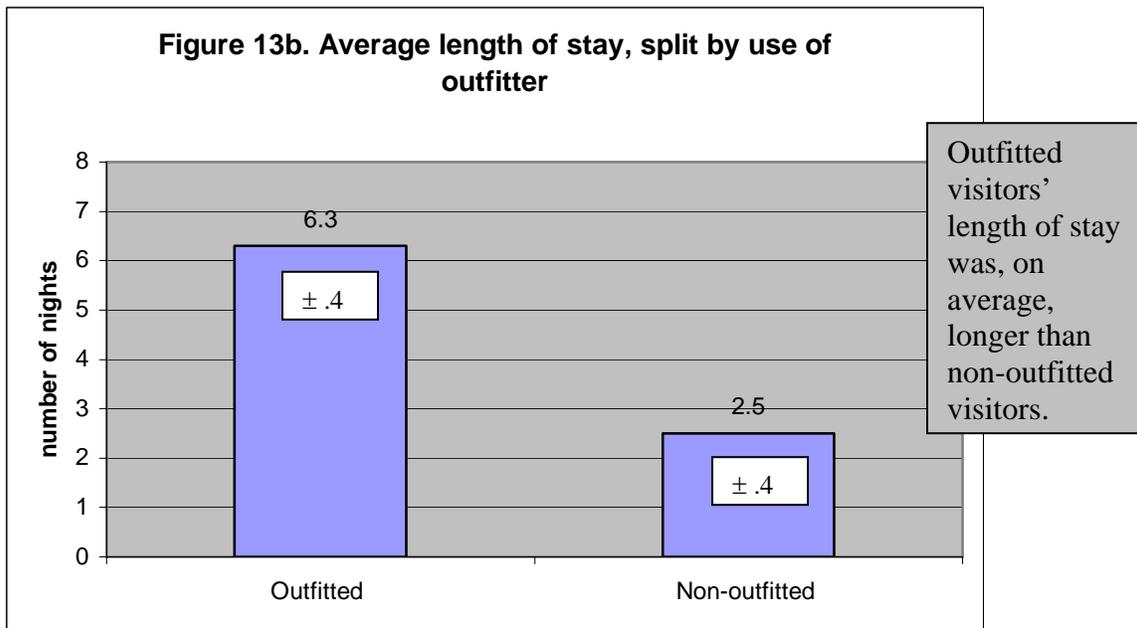
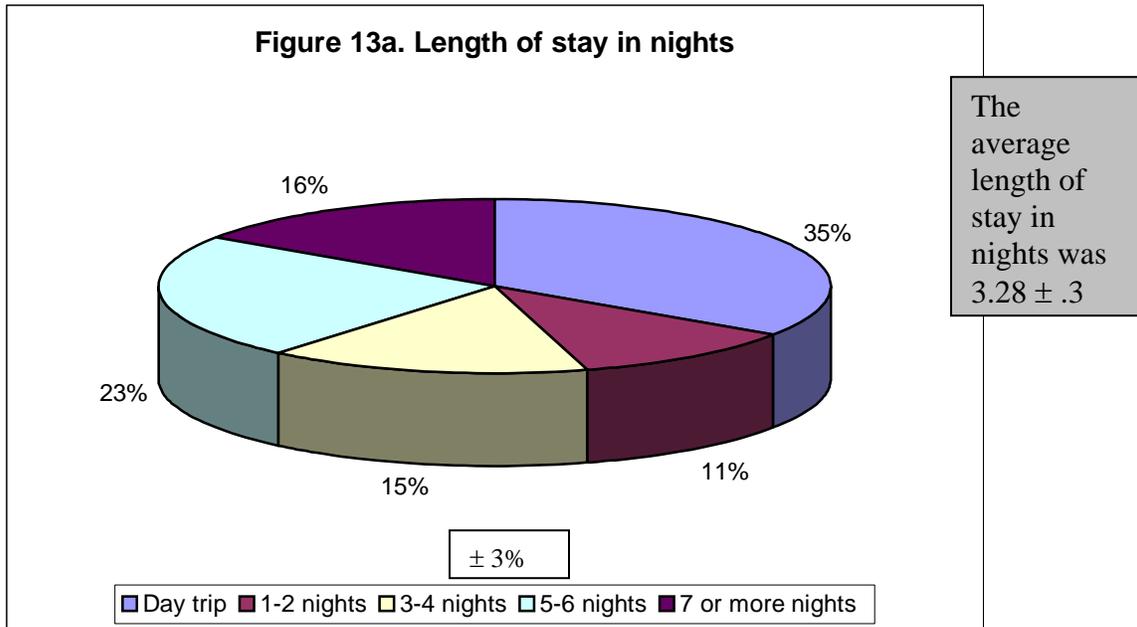
Figure 12e. Activities participated in, split by mode of travel

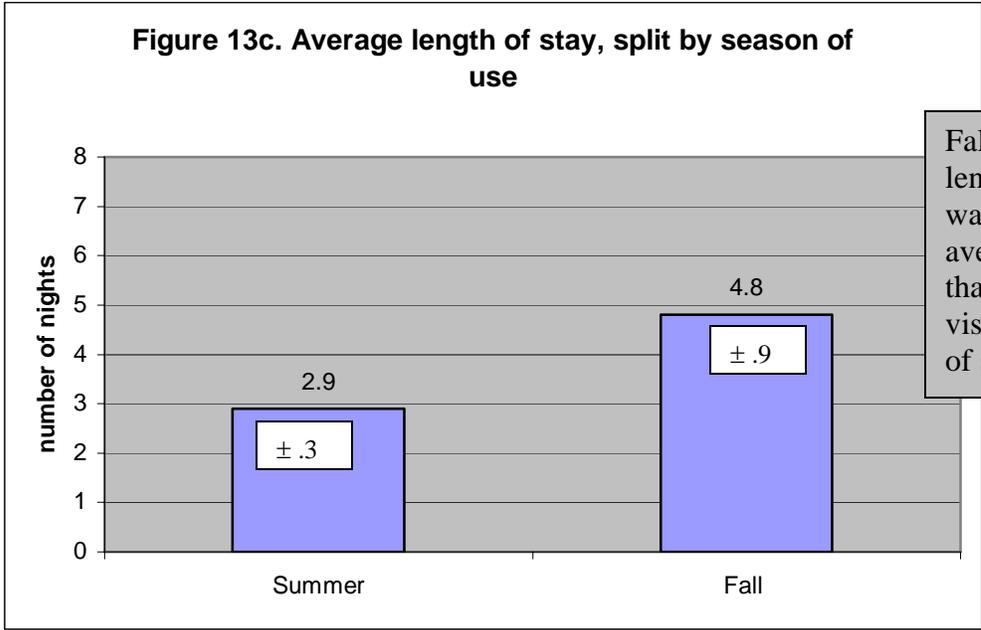


Hikers were more likely to participate in nature study and swimming than horseback riders. Horseback riders more often reported participating in hunting.

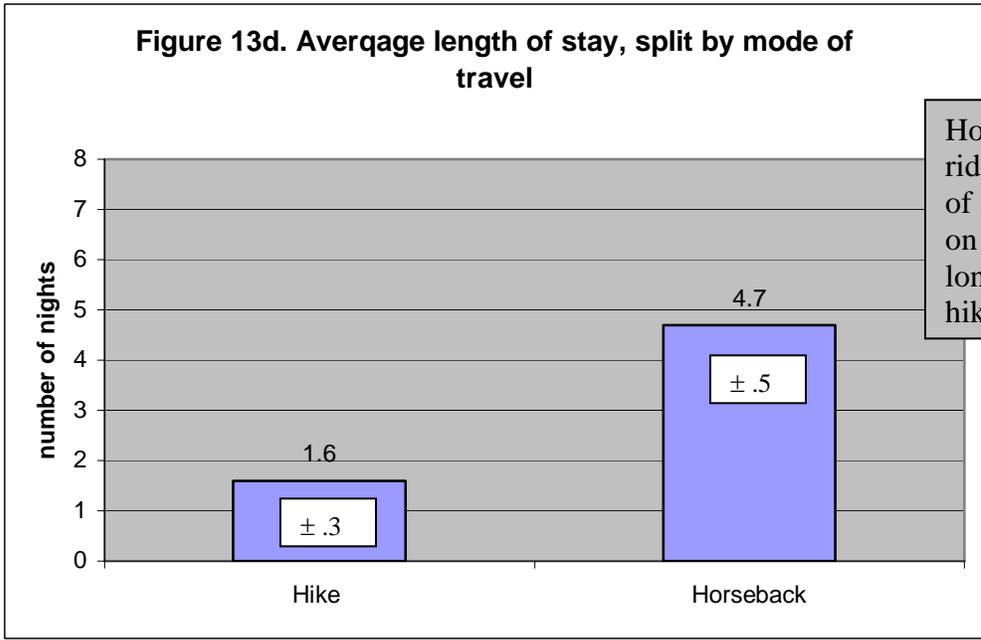
Length of stay

Respondents were asked how many nights their party stayed in the Wilderness, beyond the road, on this particular visit. Day visitors were recorded as zero. There were significant differences in length of stay when visitors were split by use of outfitter, season of use, and mode of travel.





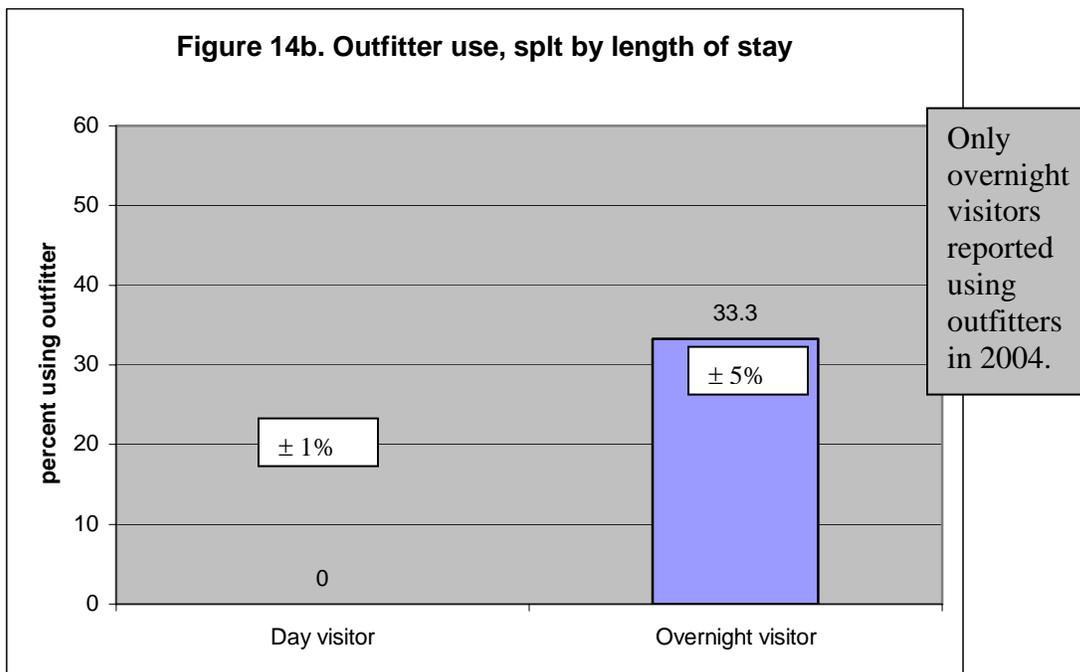
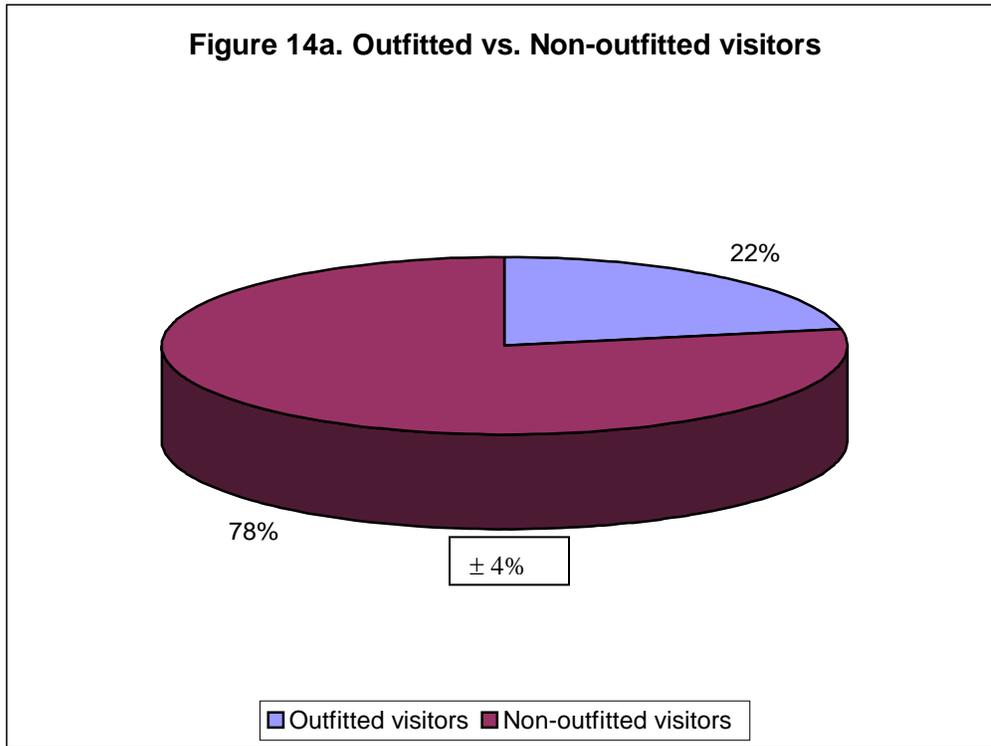
Fall visitors' length of stay was, on average, longer than summer visitors' length of stay

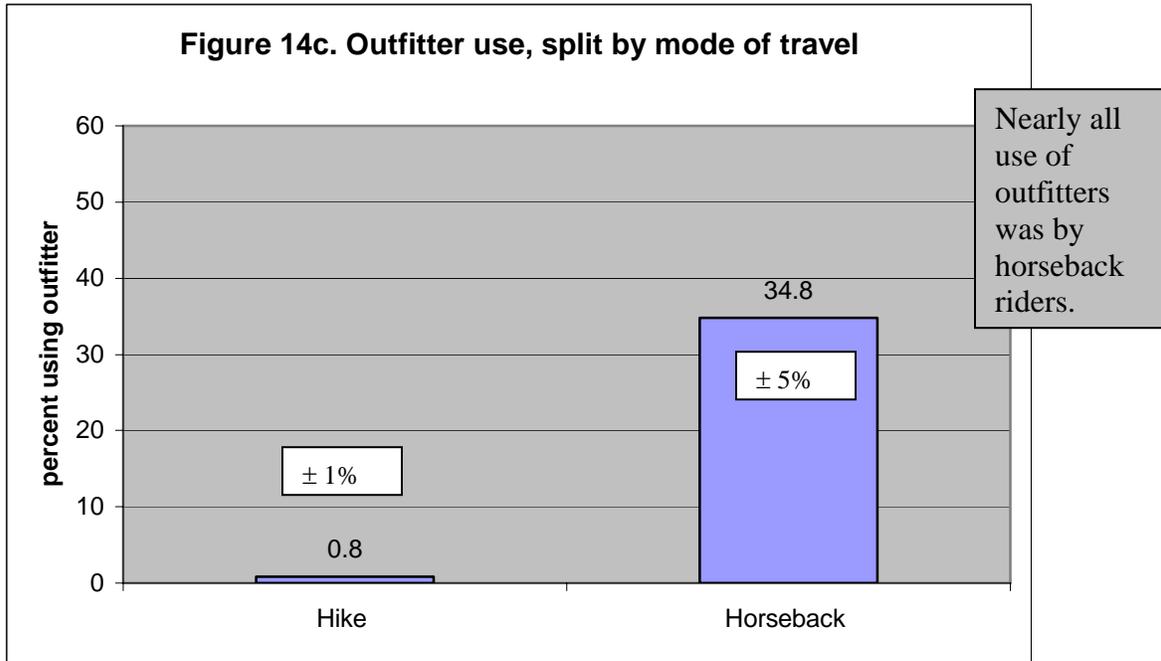


Horseback riders' length of stay was, on average, longer than hikers.

Outfitter use

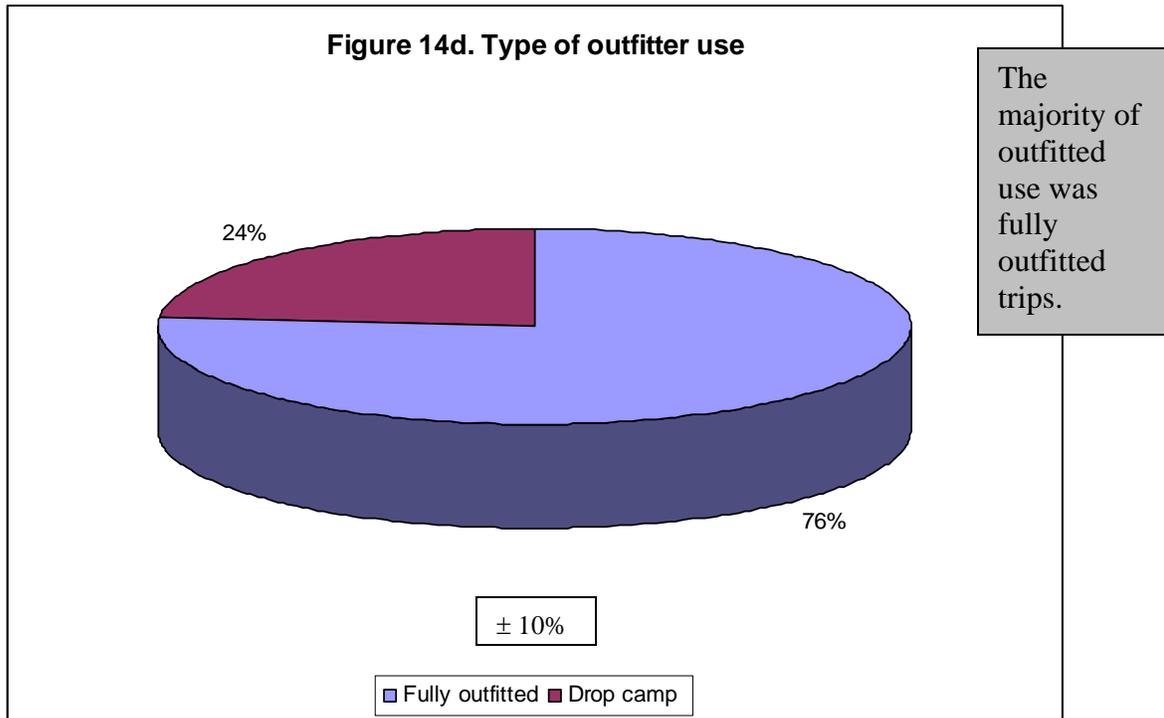
Visitors were asked if an outfitter or guide accompanied them on their trip. There were significant differences in outfitter use when visitors were split by length of stay and mode of travel.





Type of outfitter use

Visitors that used outfitters were also asked what type of outfitted service they used. Was it a (1) fully outfitted trip or (2) a “drop camp” (brought in and left)?



Encounters

Visitors were asked to indicate the total number of other groups they saw in the Wilderness on the trip about which they were being questioned. They were also asked how many of these were groups of ten or more people and how many of the groups had horses or other livestock. There were significant differences in encounters with all groups when visitors were split by length of stay, season of use, and mode of travel.

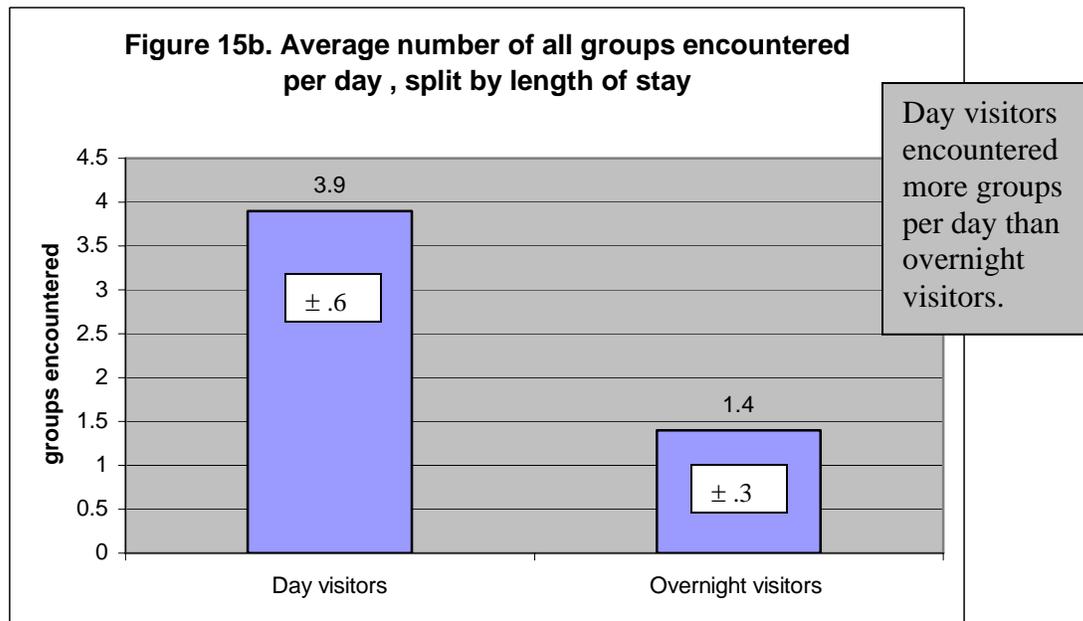
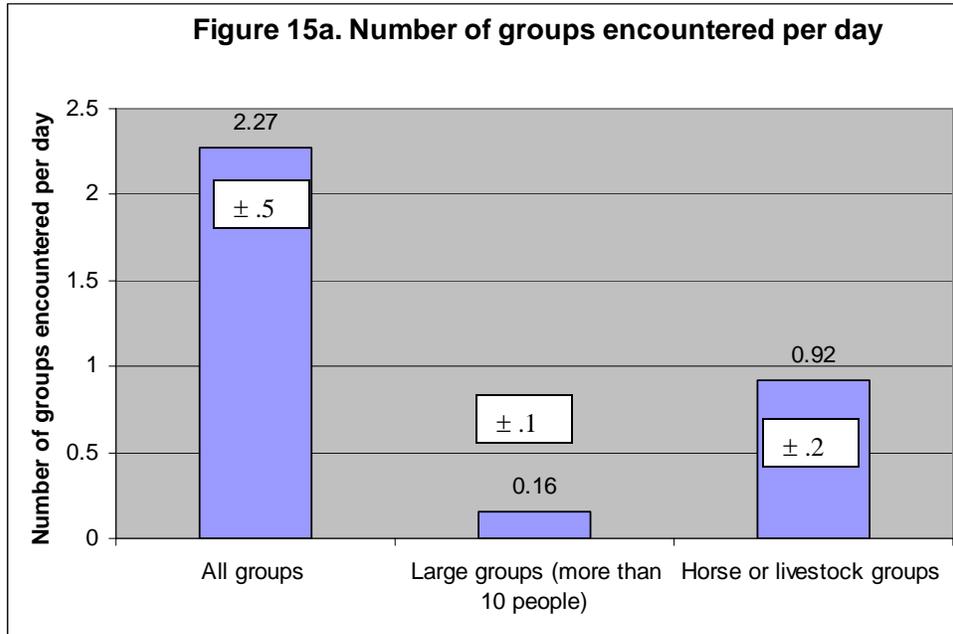


Figure 15c. Average number of all groups encountered per day, split by season of use

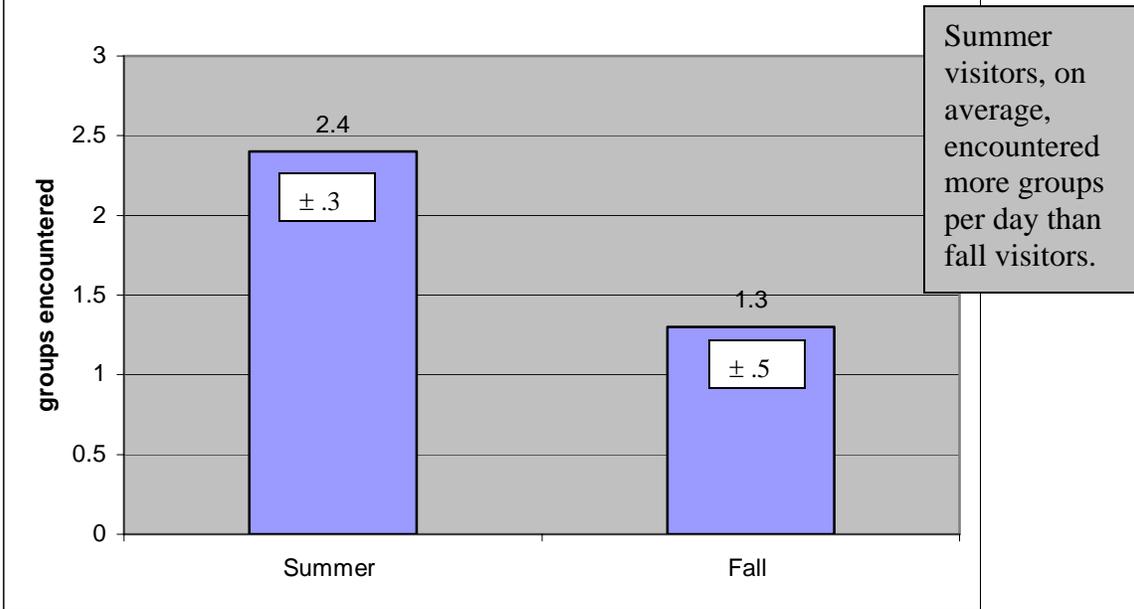
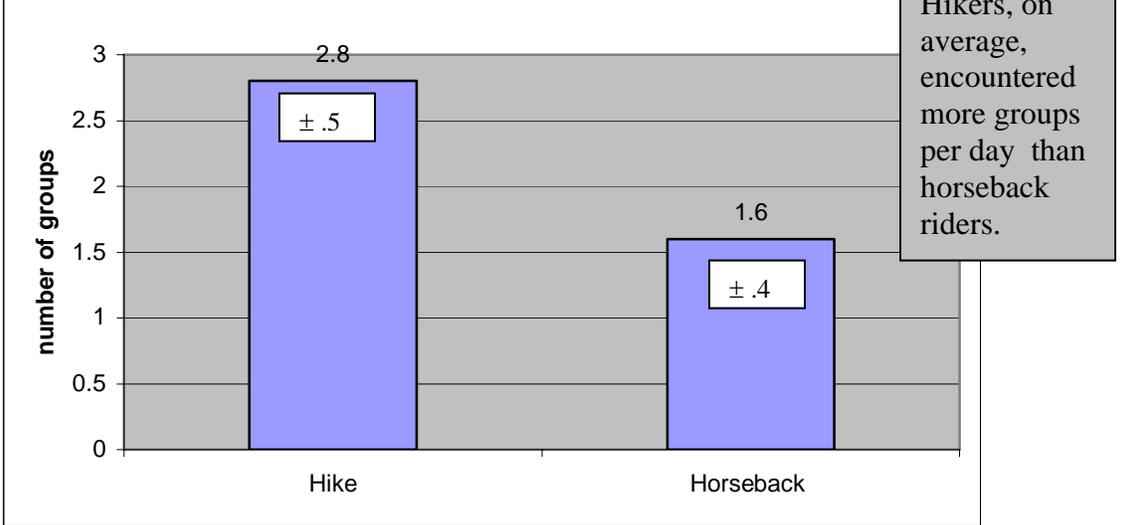


Figure 15d. Average number of all groups encountered per day, split by mode of travel

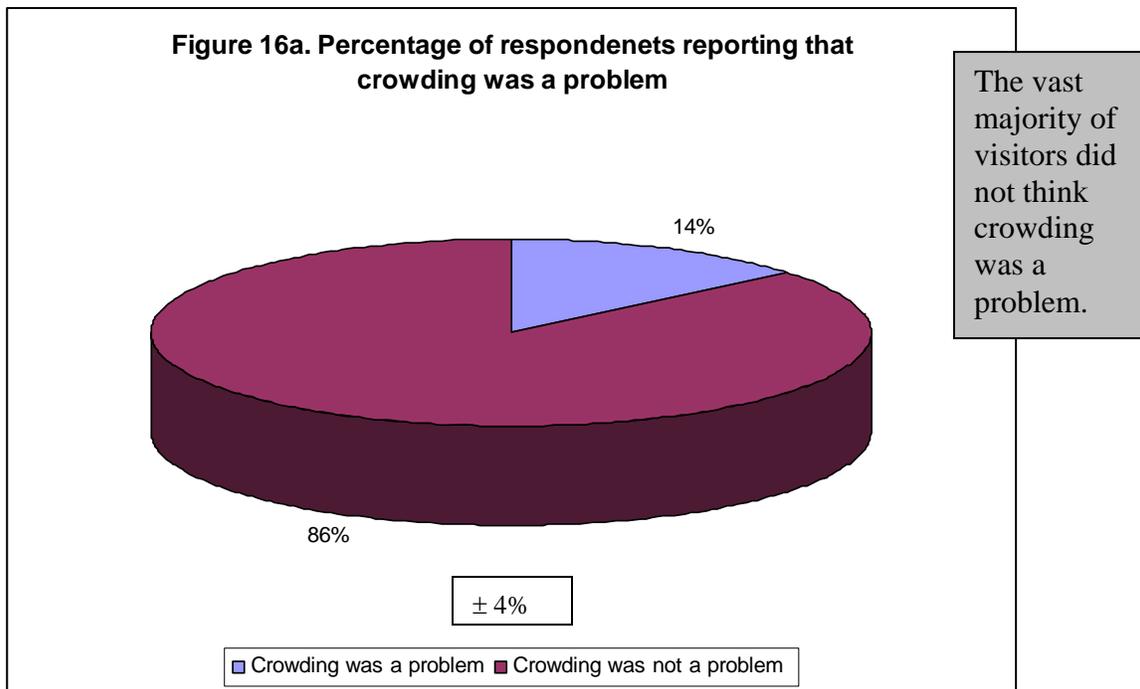


What were 2004 BMWC visitor attitudes?

Visitors were asked numerous questions about their attitudes towards social and physical conditions and management actions.

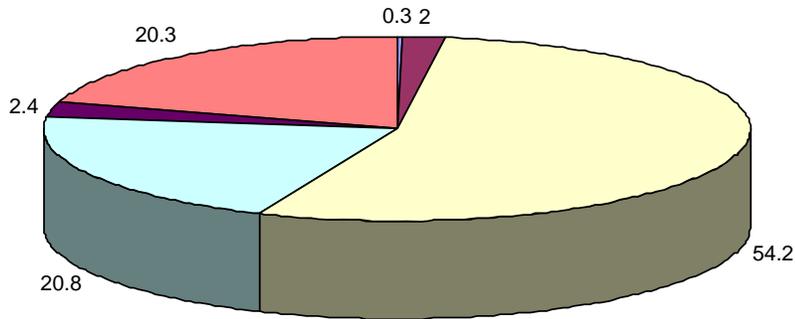
Reactions to encounters

Visitors were asked if they thought crowding was a problem in the places they visited and if so, where. Visitors were also asked their reactions to the number of other people encountered. The options were: saw way too few, saw too few, about right, saw too many, saw way too many, or did not matter to me one way or the other.



The most common places listed as having a problem with crowding were: the trail to Benchmark, around Our Lake near Headquarters Pass, Indian Meadows, North Fork of the Sun River, South Fork of the Flathead trail between Meadow Creek and Mid Creek, Upper Holland Lake, Pretty Prairie, and around Hodag Flats.

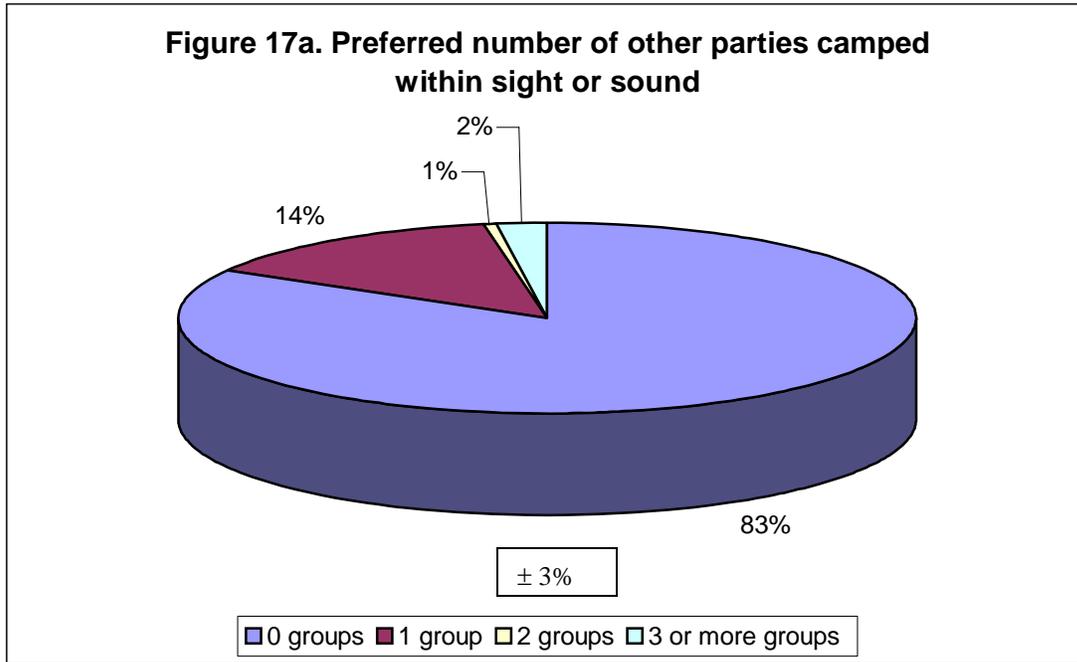
Figure 16b. Reactions to the number of other people encountered



Most visitors thought that the number of people they encountered was about right.

Campsite conditions

Overnight visitors were asked to report the number of groups they preferred to be camped within sight or sound of them. There were no significant differences in preferred campsite conditions when visitors were split between use of outfitter, season of use, or mode of travel.

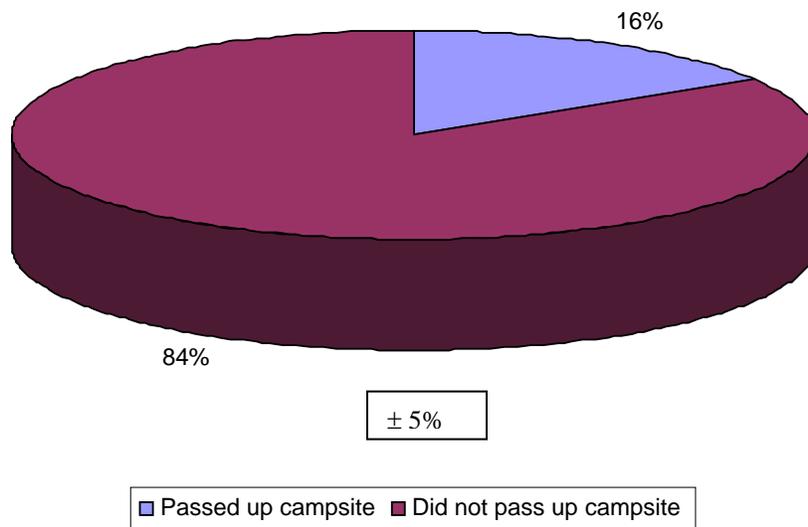


Overnight visitors were also asked how frequently they were able to camp within this preferred number. 63% of respondents indicated that they were able to do this always. 31% reported being able to do this usually (at least half the time). Only 6% reported that they were able to do this sometimes or never.

Overnight visitors were asked if they camped near the Middle Fork of the Flathead or the South Fork of the Flathead. 29% of overnight visitors reported camping near the South Fork, while only 4% reported camping near the Middle Fork.

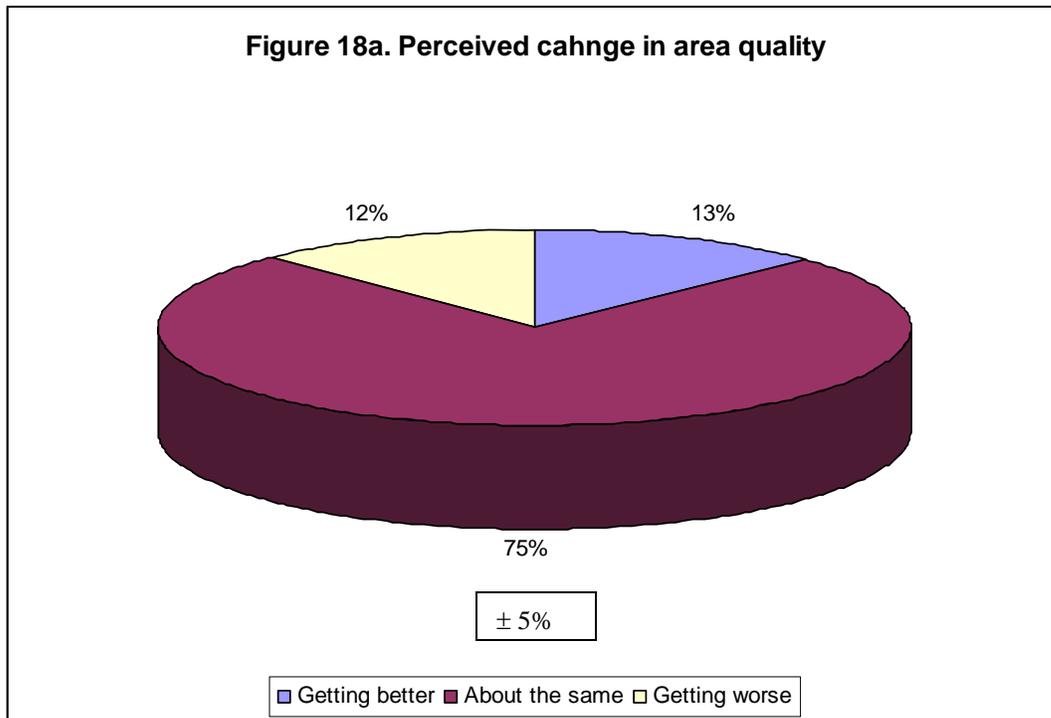
Overnight visitors were asked if they passed up an available campsite because they didn't like the condition it was in. If so they were asked to choose from a selection of reasons why they passed it up. The breakdown of these reasons and the location of these campsites can be found in appendix 1.

Figure 17b. Percentage of overnight visitors that passed up a campsite because they didn't like the condition it was in



Perceived change in area quality

Visitors that had visited the BMWC previously were asked if they thought the quality of the area was: getting better, about the same, or was getting worse. No significant differences were found when perceived change in area quality was split by length of stay, by use of outfitter, by season of use, or by mode of travel.



Management actions

Visitors were asked how desirable or undesirable they considered various trail, campsite, visitor, and resource management actions. Management actions are listed in Tables 2a through 2d with the least desirable management actions first and the most desirable management actions last.

Table 1a. Desirability of trail management actions (listed in rank order by level of undesirability)

Management Action	Undesirable	Don't care	Desirable	Desirable in more heavily used parts of Wilderness, but not in more lightly used parts
A few trees blown down across the trail, maybe 1 or 2 per mile	35	48	13	3
Signs along the trail explaining natural features or early history	34	21	31	13
Use of chain saws by the administrators to clear trails of trees	23	27	41	7
Bridges over creeks where hikers could get their feet wet	23	36	25	16
Low standard trails (somewhat like a game trail--narrow, grade varies, winding, not the shortest route)	22	29	45	4
Leaving some areas with no trails	17	13	66	4
High standard trails (wide, steady grades, fairly straight)	12	14	32	42
Bridges over rivers that are dangerous for hikers to wade or for horses to ford	4	7	75	15

Table 1b. Desirability of campsite management actions (listed in rank order by level of undesirability)

Management Action	Undesirable	Don't care	Desirable	Desirable in more heavily used parts of Wilderness, but not in more lightly used parts
Burying unburnable trash	76	4	19	2
Cemented rock fireplaces with metal grates	71	15	5.5	8.6
Split log picnic tables at campsites	62	19	11	8
Prohibiting camping within 200 feet of lakes, Wild and Scenic Rivers, or streams	40	12	38	10
Pole corrals at campsites for horses	38	28	21	13
Outhouses (pit toilets)	37	28	19	17
Prohibiting wood fires where dead wood is scarce	34	21	36	10
Small, loose rock fireplaces (fire rings)	30	25	34	11
Encouraging visitors to remove fire rings and all evidence of campfires when breaking camp	19	20	57	4
Expect campers to use only dead wood on the ground for campfires	18	12	65	5
A detailed, accurate map	1	10	87	1.6

Table 1c. Desirability of visitor management actions (listed in rank order by level of undesirability)

Management Action	Undesirable	Don't care	Desirable	Desirable in more heavily used parts of Wilderness, but not in more lightly used parts
Issue trip permits so visitors could only camp each night in the area assigned to them	72	11	8	9
Closing some areas to use by horse parties	37	14	45	4
Mandatory human waste pack out policy for boaters on the river	30	22	41	8
Require all visitors to register when entering	29	33	36	3
Limiting the size of parties to 12 people	19	18	57	6
Restricting the number of visitors to an area if it is being used beyond capacity	18	8	64	10
Allow visitors to catch fish to eat in the Wilderness but not to bring out	13	21	63	3
Rangers in the backcountry	7	29	56	9
A guidebook to the Wilderness	5	29	64	2
Packing unburnable garbage back out of the Wilderness	3	2	92	3

Table 1d. Desirability of resource management actions (listed in rank order by level of undesirability)

Management Action	Undesirable	Don't care	Desirable	Desirable in more heavily used parts of Wilderness, but not in more lightly used parts
Eliminating grazing by visitors' horses (require carrying horse feed)	<i>44</i>	<i>22</i>	<i>21</i>	<i>14</i>
A natural fishery-no stocking and barren lakes left barren	<i>29</i>	<i>28</i>	<i>40</i>	<i>3</i>
Natural forest fires started by lightning	<i>12</i>	<i>20</i>	<i>66</i>	<i>2</i>