

Profile of 2008 Minnesota Recreational Trail Users



Prepared for:
The Minnesota Recreational Trail Users Association

by
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EXECUTIVE SUMMARY

In 2008, the Minnesota Recreational Trail Users Association (MRTUA) embarked on an ambitious project to simultaneously identify both the expenditures and profiles of the various trails user groups they represent. Supported by funds administered by the Minnesota Department of Natural Resources and the Carlson Chair for Travel, Tourism and Hospitality, a series of mail questionnaires were developed and administered to their MRTUA represented groups.

Study Setting

Minnesota is home to about five million people (US Census Bureau, 2007), of whom 54.4% participate in walking/hiking, 29% participate in biking, 14.2% participate in running, 10.3% participate in ATV riding, 10% participate in snowmobiling, 6.3% participate in cross-country skiing, and 4.5% participate in horseback riding. Overall recreation participation in Minnesota is expected to decrease or plateau (given population increases) by 2014. However, ATV riding and, to a lesser extent, running and walking/hiking are expected to increase.

Methods

Based on previous trails research, an eight page mail questionnaire was developed, pre-tested and implemented fall 2008. The questionnaire included sections on trail user experiences, trail user trips and expenditures, as well as demographics. A modified Dillman (2000) technique that included an initial survey package, a postcard reminder one week later, and a replacement questionnaire package mailed two weeks after the postcard, resulted in response rates of 35.4%-61.1%.

Results Overview

Demographics

Ninety percent or more of trail survey respondents for all activities were white and of non-Hispanic/non-Latino background.

About half of the activities had more female participants than males: cross-country skiing, horseback riding, road biking, running, and walking/hiking. Activities with more male than female participants included ATV, OHM, ORV, mountain biking, and snowmobiling.

The average age for seven of ten trail activities was in the 40s, and the average age of the remaining three activities (cross-country skiing, road biking, and walking/hiking) was in the 50s.

ATV users, OHM users, and ORV users reported most often reported attaining a vocational or associate degree. Horseback riders, mountain bikers, road bikers, snowmobilers, and walkers/hikers most often reported a college degree. Lastly, cross-country skiers and runners most often reported attaining a postgraduate degree.

Trail User Experience

Respondents indicated a range of experience in their trail activity: twelve to 31 years, on average. Mountain bikers were the most experienced in their activity at 31 years of experience (30.74 years). However, five other user groups averaged more than 20 years of trail activity experience as well: horseback riders (26.90 years), walkers/hikers (26.81 years), road bikers (26.31 years), snowmobilers (25.80 years), and cross-country skiers (23.98 years). The majority of respondents for all user groups, except running, ORV and ATV, indicated 20 or more years of experience. The greatest percentage of respondents for ORV and ATV users were those with 5 or fewer years of experience.

Motivations

A combination of aesthetics, fitness and escape primarily motivates Minnesota's recreational trail users. However, the importance of these motivational factors varied by group. The importance of nature related experiences was important to all groups and had the least variation among groups as only two activity group significantly differed in the importance attributed to nature: equestrians indicated it was significantly more important than the other groups and runners attributed less importance than skiers and equestrians. The other motivational factors had a variety of differences among groups. Notable differences include the greater importance of physical activity and quiet for non-motorized recreation respondents and the greater importance of challenge to motorized activity participants (particularly OHM).

Sources of and responses to recreation conflict

The most frequently observed sources of conflict were "litter on or near the trail", "hearing other users on the trail" and "seeing evidence of off trail/road use." The potential sources of conflict that interfered most with recreational trail experiences were "litter on or near the trail" and "rude or discourteous users."

The most common strategies used to cope with interfering experiences were to "follow established rules for trail etiquette", "talk to other members of my group about the incident" and "Don't let it get to me; refuse to think about it too much".

Trail Use Days

Trail user activity was greatest in Central Minnesota where the number of days participating in recreational trail use ranged from 4-56 use days among trail user groups. Following the Central region in number of participation days was the metro, northwest Minnesota, northeast Minnesota and, finally, southern Minnesota. Trail user groups reported 0-6.5 trail use days outside of Minnesota but within 30 minutes of their primary home.

The median number of days individuals participated in their trail user activity within 30 minutes from their primary home ranged from one to 48. Runners reported the greatest number of days of activity close to home, with a median of 48 days per year. Mountain bikers, walkers/hikers,

and horseback riders reported a median of 20 days of trail activity. Respondents in the remaining six user groups reported a median of ten or fewer days of activity per year.

On average, 59.8% of respondents traveled more than 30 minutes for their recreational trail activity. The group that traveled most frequently more than 30 minutes for their activity was horseback riders (73.9%). Overall trail user activity 30 minutes from home was greatest outside of Minnesota with use days ranging from 2-7. Within Minnesota, trail usage more than 30 minutes was greatest in northeast Minnesota with 2-8 use days among trail user groups. Trail usage more than 30 minutes from home in northwest, southern, and central Minnesota was about the same with 2-5 use days among trail user groups. Finally, the metro area had the least number of use days amongst users traveling more than 30 minutes from their primary home for trail activity.

The median number of days individuals participated in their trail user activity more than 30 minutes from their primary home ranged from 0-7. Horseback riders reported the greatest number of days, with a median of 7 days per year. The remaining nine user groups reported five or fewer days per year.

Economic impacts are reported in a complementary report published by the Department of Employment and Economic Development.

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GENERAL PROJECT INTRODUCTION

Recreation trails provide a variety of personal, social and economic benefits. Documenting and understanding these benefits is important for trail planning, management and advocacy. While a variety of studies have been conducted in Minnesota about trail users, resource constraints have precluded all trail users included in studies. Similarly, a simultaneous study of a variety of trail users has never been implemented in Minnesota. To identify trail user interactions and economic impacts simultaneously and across user types, the Minnesota Recreational Trail Users Association (MRTUA) contracted with the University of Minnesota.

Subsequently, University personnel and research partners in the Department of Natural Resources (DNR) and Department of Employment and Economic Development (DEED) developed and implemented a mail questionnaire to Minnesota residents who engaged in at least one of eleven trail uses: all-terrain vehicle riding, bicycling (mountain and non-mountain), cross-country skiing, four by four off road driving, horseback riding, inline skating, off-highway motorcycling, snowmobiling, running/jogging outdoors, and walking/hiking outdoors. Questions focused on trail user characteristics, trips for the trail activity and expenditures related to those trips, as well as trail experiences and interactions. Data were analyzed to answer questions related to trail user characteristics, trail user interactions, and trail user expenditures.

METHODS

A mail questionnaire was administered during summer 2008 for winter activities and fall 2008 for summer activities. Individual samples for ATV users, cross-country skiers, horseback riders, OHM users, ORV users, and snowmobilers were obtained using DNR registration information.

To attain a representative sample of Minnesota trail mountain bikers, road bikers, walkers/hikers, and inline skaters, the research team determined a mail questionnaire to licensed drivers was the best of several options. As such, in spring of 2008 a sample of licensed Minnesota drivers was obtained. The sample focused on attaining 100 responses per activity per DNR region, with oversampling occurring in the metropolitan region. A total of 16,999 registered Minnesota drivers served as the sample.

A one page questionnaire was designed to elicit trail participation in a variety of trail activities. Specifically, the questionnaire asked participants to check any trail activities they had participated in during the last 12 months in Minnesota and, in a separate question, identify which of these activities was their main recreational trail activity. A modified Dillman (2000) technique was used where the sample received the one page questionnaire and a replacement questionnaire.

Of the 16,999 originally mailed, 621 were undeliverable or otherwise unusable leading to an adjusted sample of 16,378. While the overall response rate was 19.1 percent (n=3126), 2542 of these were trail users (Table 1). Of these 2542, 794 identified biking, 982 identified walking, and 306 identified running as an activity. An inadequate number of respondents selected inline skating as an activity in the initial survey query and thus, runners were used as a proxy.

Table 1. One-page questionnaire response rate

	Totals	Percent
Initial Sample	16999	
Respondents	3159	18.6
Do not use trails	584	
Trail users¹	2575	
Duplicates	33	
Trail users (adjusted)	2542	
Total unusable/undeliverable	621	
Undeliverable	559	
Unusable	43	
Deceased	18	
Asked to be taken off list	1	
Adjusted sample size	16378	
Adjusted total respondents (without duplicates)	3126	19.1

¹81.3% of respondent's indicated they were trail users

Study setting

Minnesota is home to about five million people (US Census Bureau, 2007), of whom 54.4% participate in walking/hiking, 29.0% participate in biking (of all types, including mountain biking), 11.3% participate in in-line skating, 10.3% participate in ATV riding, 9.8% participate

in snowmobiling, 6.3% participate in cross-country skiing, and 4.5% participate in horseback riding. Overall recreation participation in Minnesota is expected to decrease or plateau (given population increases) by 2014. However, ATV riding and, to a lesser extent, walking/hiking is expected to increase.

Questionnaire

A mail questionnaire was developed based on previous recreational trail user research and with the assistance of the Minnesota DNR, DEED, and the MRTUA members. Questionnaire sections included user experience, user conflicts, and demographics (Appendix A).

User experience

The user experience was assessed by experience history and motivations. Specifically, the year respondents began the recreational activity was queried with an open-ended question, as was the number of household members who participated in the activity. Motivations were assessed based on Driver's (1977) recreation experience preference scales, selecting twenty relevant items, on a five point scale where 1 equaled very unimportant and 5 equaled very important.

User conflicts

The observance of potential sources of conflict were identified based on previous trails research (Carothers, Vaske, Donnelly, 2001) and included twelve items such as rude users, litter, and seeing evidence of off trail/road use. Respondents identified how frequently they observed each potential source of conflict on a four point scale: never, sometimes, many times, and almost always. Respondents also had the option to indicate they did not know how often they had observed something. These potential sources of conflict were further explored as respondents had the opportunity to identify which of the twelve, if any, most interfered with their trails experience.

For those respondents who had something interfere most with their experience, they indicated if 1) the interference occurred within their user group or with people not in their user group, 2) if the interference was stressful (yes or no), 3) their ability to act or change the situation (four items measured on a 5 point Likert scale where 1 indicated strongly disagree and 5 indicated strongly agree), as well as 4) how they coped with the interference – 24 items based on coping research by Schneider and Hammitt (1995a, b) and Schuster, Hammitt, Moore & Schneider (2006). If nothing interfered with their experience, respondents skipped to the next section.

Demographics

Demographic questions included age, education level, race/ethnicity, number in household and household income.

Response rate

Selected recipients were mailed a questionnaire via the US postal service. A modified Dillman (2000) technique that included an initial survey package, a postcard reminder one week later, and a replacement questionnaire package mailed two weeks after the postcard, resulted in a range of

response rates from 34.8% to 61.1% (Table 2). A non-response check was completed for ATV, biking, OHM, ORV, running, snowmobiling, and walking/hiking.

Table 2. Response rate to a mail survey among Minnesota trail users, 2008

	n	%
ATV	417	43.0
Biking	404	53.4
Cross-country skiing	521	61.1
Horseback riding	473	59.9
OHM	335	34.8
ORV	471	50.4
Running	115	40.5
Snowmobiling	293	35.4
Walking/hiking	551	58.1

Analysis

Completed questionnaires were entered; the data were then cleaned and checked in SPSS version 15.0. Extreme outliers were winsorized to bring highly skewed variables into usable ranges. Descriptive analysis provided means, standard deviations, and frequencies to describe the sample and provide information on variables of interest.

RESULTS

Section 1 – ATV users

ATV specific information

ATVs (all-terrain vehicles) are designated off-highway vehicles (OHVs). Participation estimates for 2007 indicate nearly 20% of all Americans 16 or older (Cordell, Betz, Green & Stephens, 2008), engage in this activity. ATV sales grew more than 200% from 1995 to 2006, with 2006 sales estimated to have reached 856,000 ATVs (Specialty Vehicle Institute of America 2007). Exhibiting a similar trend, OHV riding on federal lands increased from 2005-2009 (US GAO, 2009). In Minnesota, there are more than forty ATV trails managed by the DNR (Minnesota Department of Natural Resources [DNR], 2008). As of 2005, 357,300 Minnesotans participated annually in ATV riding which represents 10.3% of the population (Kelly, 2005b). ATV riding is one of the few recreational activities expected to grow significantly in usage. A 304.7% increase is projected over 2004 levels by 2014 which will result in a total of 1,446,000 Minnesotans participating in ATV riding by 2014.

ATV Response rate

Minnesota residents who registered their ATV with the DNR were the universe. From this list, a systematic sample of 997 Minnesota residents was selected for the survey. Selected recipients were mailed a questionnaire via the US postal service using a random start. Of these, 22 were undeliverable, three addressees asked to be removed from the list, and two addressees were deceased. Removing these 27 questionnaires from the sample, adjusted its size to 970. Of these, 417 were returned resulting in a response rate of 43.0% (Table 1.1). A total of 99 surveys were unusable, and thus, 318 surveys were used for analysis.

Demographics

More than 8 of 10 (88.4%) respondents were male and most frequently were between the ages of 51-60 (29.1%; Table 1.2). Nearly all respondents were white (98.1%) and of non-Hispanic or non-Latino background (98.0%). The highest percentage (26.0%) of respondents reported an annual household income of between \$50,000-74,999, with the remainder relatively evenly distributed across all other income categories. The highest level of education attained by respondents was most frequently reported as a vocational or associate degree (24.9%), followed by a high school degree (21.7%).

ATV riding experience

Of the respondents who could remember what year they began ATV riding (n=292), the average year was 1996, resulting in an average of twelve (12.34) years of experience (Table 1.3). The median response was 1998 and respondents stated a range of start dates from 1960 to 2008.

Motivations

Of the 20 possible motivations for ATV riding, five were important or very important to 75% or more of respondents: “to view the scenery” (85.9%), “to experience nature” (83.0%), “to be

close to nature” (81.1%), “to explore and discover new things” (78.5%), “to get away from the usual demands of life” (77.8%; Table 1.4). Between 50% and 75% of respondents indicated the following seven motivations were important or very important for ATV riding: “to do something with my family” (71.6%), “to be with people who enjoy the same things I do” (66.1%), “to enjoy different experiences from home” (65.3%), “to relax physically” (64.9%), “to be physically active” (55.0%), “to rest mentally” (51.8%), and “to experience solitude” (51.3%).

Less than half of respondents indicated that “to be with members of my own group” (49.4%), “to have thrills & excitement” (48.9%), “to be on my own” (45.8%), “to experience silence & quiet” (45.3%), “to be away from other people” (36.5%), “to get/keep physically fit” (36.2%), “to challenge myself” (30.9%), and “to test my skills & abilities” (29.1%) were important or very important motivations for ATV riding.

Sources of and responses to potential conflict

The majority of ATV respondents did not frequently observe seven of the twelve sources of potential conflict identified in the questionnaire. However, more than one-half of respondents did report “seeing evidence of off trail/road use” (68.1%), “litter on or near the trail” (63.3%), “seeing off trail/road use” (62.9%) “hearing other users on the trail” (61.6%), and “others going too fast” (55.6%; Table 1.5). Between 25% and 50% of respondents observed the following seven potential sources of conflict “rude or discourteous users” (41.6%), “accessibility issue” (40.7%), “others not yielding” (37.8%), “others out of control” (35.3%), “too many others on the trail” (33.7%), and “others passing too closely (32.1%). A negligible number of ATV users reported “other” sources of conflict (1.9%).

Of those who reported anything that interfered most with their trails experience (n=165; 51.9%), about half (47.3%) indicated it was with other ATV riders (Table 1.6). Of the conflicts that most interfered, respondents identified “accessibility issue” and “other” sources of conflict (20.0% & 15.8% respectively). “Others going too fast” and “rude or discourteous users” were identified as interferences with other ATV riders by the greatest number of respondents (n=16 & n=13 respectively).

In response to the conflicts, the most common strategies used to cope with interfering experiences were to “follow established rules for trail etiquette” (\underline{M} =2.38, 43.4%), “talk to other members of my group about the incident” (\underline{M} =1.74; 36.5%), and “try not to burn bridges” (\underline{M} =1.52, 32.4%; Table 1.7).

Between 25 and 35% of respondents also responded in the following ways to the conflict: “refuse to get too serious about it” (\underline{M} =1.37, 32.1%), “don’t let it get to me; refuse to think about it too much” (\underline{M} =1.36, 31.8%), “think about why the incident occurred” (\underline{M} =1.36, 31.1%), “wish the situation would go away or be over with” (\underline{M} =1.40, 30.8%), “I know what has to be done so I double my efforts to make it work” (\underline{M} =1.37, 30.8%), “I make a plan of action and follow it” (\underline{M} =1.31, 29.6%), “make light of the situation” (\underline{M} =1.17, 29.2%), “I try to keep my feelings to myself” (\underline{M} =1.16, 29.2%), “come up with a couple of different solutions” (\underline{M} =1.17, 28.6%), “go on as if nothing bad happened” (\underline{M} =1.12, 27.4%), “try to forget the whole thing” (\underline{M} =1.09, 27.4%), and “talk to area personnel about the incident” (\underline{M} =1.07, 26.1%), “leave the area and go

to a different part of the area” ($\underline{M}=1.03$, 25.5%), and “try to get the person responsible to change their mind” ($\underline{M}=1.02$, 25.5%).

The least commonly employed coping strategies were, “stand my ground and fight for what I wanted” ($\underline{M}=0.93$, 24.5%), “keep others from knowing how bad things were” ($\underline{M}=0.81$, 23.9%), “alter my pace to avoid others” ($\underline{M}=0.79$, 22.3%), “plan to avoid the area on my next visit” ($\underline{M}=0.87$, 20.1%), “leave the area altogether” ($\underline{M}=0.77$, 20.1%) “express anger to the person who caused the incident” ($\underline{M}=0.69$, 19.5%), and “change the time I will ATV next time” ($\underline{M}=0.67$, 18.2%).

ATV riding days

Within 30 minutes of primary home

Within a 30-minute drive from their home, respondents went ATV riding most days in Northwest Minnesota (Median=10.0/ $\underline{M}=19.85$), followed by Central Minnesota (Median=8.5/ $\underline{M}=14.85$; Table 1.8). Respondents reported ATV riding a median of six to four days throughout the rest of Minnesota: six (Median=6.0/ $\underline{M}=24.70$) days per year in Northeast Minnesota, six (Median=6.0/ $\underline{M}=16.98$) days per year in Southern Minnesota, and four ($\underline{M}=17.24$ /Mdn 4.0) days per year in the metro area. The median number of ATV riding days within 30 minutes of primary home, but outside of Minnesota was zero (Median=0/ $\underline{M}=4.42$).

Beyond 30 minutes from primary home

When more than a 30-minute drive from their home, respondents went ATV riding most frequently in Northeast Minnesota (Median=6.0/ $\underline{M}=9.35$; Table 1.8). ATV riding was distributed fairly evenly among the other regions in Minnesota with about five days per year in Central Minnesota (Median=5.0/ $\underline{M}=9.46$), five days per year in Northwest Minnesota (Median=5.0/ $\underline{M}=9.16$), and four days per year in Southern Minnesota (Median=4.0/ $\underline{M}=9.20$). However, zero days were reported in the metro area (Median=0/ $\underline{M}=1.8$). Finally, about five days per year were also reported outside of Minnesota (Median=5.0/ $\underline{M}=9.17$).

ATV Tables

Table 1.1. Response rate to a mail survey among Minnesota ATV users, 2008

	n	%
Initial sample	997	
Respondents	417	41.8
Total usable/undeliverable	126	12.6
Undeliverable	22	2.2
Unusable	99	9.9
Deceased	2	0.2
Asked to be removed from list	3	0.3
Adjusted sample size	970	97.3
Adjusted response rate	417	43.0
Usable surveys	318	

Table 1.2. Demographics of ATV user respondents to a mail questionnaire in Minnesota, 2008

	Frequency	Percent
Gender		
Male	281	88.4
Female	37	11.6
Total	318	100.0
Ethnicity		
Non-Hispanic/Non-Latino	246	98.0
Hispanic/Latino	5	2.0
Total	251	100.0
Race		
White	312	98.1
American Indian/Alaskan	3	0.9
Other	3	0.9
Asian	1	0.3
Hawaiian/Pacific Islander	0	0
Black/African American	0	0
Total	N/A ¹	N/A ¹
Age (M=49.2, S.D.=12.743)		
18-30	30	9.5
31-40	45	14.2
41-50	90	28.5
51-60	92	29.1
61-70	46	14.6
71 or older	13	4.1
Total	316	100.0
Annual household income (U.S. Dollars)		
Less than \$25,000	20	6.9
\$25,000-34,999	15	5.2
\$35,000-49,999	41	14.2
\$50,000-74,999	75	26.0
\$75,000-99,999	53	18.4
\$100,000-124,999	36	12.5
\$125,000-149,999	21	7.3
\$150,000-174,999	10	3.5
\$175,000 or More	17	5.9
Total	288	100.0
Household Size includes these age groups		
Adults (18+)	304	95.6
Teens (13 to 17 years)	70	22.0
Children (12 or under)	77	24.2
Highest level of education		
Some high school	5	1.6
Graduated high school/GED	68	21.7
Some votech	21	6.7
Graduated from votech or completed associate degree	78	24.9
Some college	45	14.4
Graduated from college	61	19.5
Some postgraduate	12	3.8
Postgraduate degree(s)	23	7.3
Total	313	100.0

¹Due to possible selection of multiple categorical responses.

Table 1.3. ATV experience among respondents to a mail questionnaire in Minnesota, 2008

ATV experience	Mean	Med	S.D.	Range
Year began using an ATV (n=292)	1996	1998	9.108	1960-2008
Number of years using ATV (n=292)	12.34	10.0	9.108	0-48

Table 1.4. Reasons for using an ATV among respondents to a mail questionnaire in Minnesota, 2008

Reasons for participating	Mean ¹	S.D. ¹	Percent Identify as Important or Very Important
To view the scenery (n=311)	4.14	0.969	85.9
To experience nature (n=311)	4.04	0.961	83.0
To be close to nature (n=312)	4.03	0.942	81.1
To explore and discover new things (n=312)	4.02	1.014	78.5
To get away from the usual demands of life (n=311)	4.01	1.062	77.8
To do something with my family (n=313)	3.89	1.102	71.6
To be w/people who enjoy the same things I do (n=310)	3.67	1.113	66.1
To enjoy different experiences from home (n=311)	3.65	1.069	65.3
To relax physically (n=313)	3.71	1.007	64.9
To be physically active (n=313)	3.48	1.077	55.0
To rest mentally (n=309)	3.40	1.087	51.8
To experience solitude (n=308)	3.46	1.128	51.3
To be with members of my own group (n=308)	3.34	1.125	49.4
To have thrills & excitement (n=311)	3.25	1.246	48.9
To be on my own (n=310)	3.28	1.155	45.8
To experience silence & quiet (n=311)	3.30	1.094	45.3
To be away from other people (n=310)	3.10	1.099	36.5
To get/keep physically fit (n=312)	3.09	1.042	36.2
To challenge myself (n=311)	2.95	1.169	30.9
To test my skills & abilities (n=309)	2.85	1.155	29.1

¹Measured on a scale where 1=Very Unimportant; 2=Unimportant; 3=Neither; 4=Important; 5=Very important

Table 1.5. Observations of potential conflict among ATV respondents to a mail questionnaire, 2008

Source of conflict	% Observe at All (n)	% Don't Know (n)
Seeing evidence of off trail/road use (erosion, marks, etc.) (n=279)	68.1 (190)	7.3 (12)
Litter on or near the trail (n=278)	63.3 (176)	11.5 (19)
Seeing off trail/road use (n=278)	62.9 (175)	6.1 (10)
Hearing other users on the trail (n=276)	61.6 (170)	10.1 (28)
Others going too fast (n=279)	55.6 (155)	12.7 (21)
Rude or discourteous users (n=279)	41.6 (116)	10.9 (18)
Accessibility issue (n=275)	40.7 (112)	20.0 (33)
Others not yielding (n=278)	37.8 (105)	1.8 (3)
Others out of control (n=278)	35.3 (98)	3.0 (5)
Too many others on the trail (n=279)	33.7 (94)	6.7 (11)
Others passing too closely (n=277)	32.1 (89)	2.4 (4)
Other (n=96)	1.9 (6)	15.8 (26)

Table 1.6. Most interfering source of conflict among ATV respondents to a mail questionnaire, 2008

	% Most Interfering (n)	Interference w/ other ATV users % yes (n)
Overall	51.9 (318)	47.3 (78)
Accessibility issue	20.0 (33)	15.2 (5)
Other	15.8 (26)	11.5 (3)
Others going too fast	12.7 (21)	76.2 (16)
Litter on/near the trail	11.5 (19)	42.1 (8)
Rude or discourteous users	10.9 (18)	72.2 (13)
Seeing evidence of off road/trail use	7.3 (12)	50.0 (6)
Too many other users on the trail	6.7 (11)	90.9 (1)
Seeing off trail/road use	6.1 (10)	50.0 (5)
Others out of control	3.0 (5)	100.0 (5)
Others passing too closely	2.4 (4)	50.0 (2)
Hearing other users on the trail	1.8 (3)	100.0 (3)
Others not yielding	1.8 (3)	66.7 (2)

Table 1.7. Use of coping strategies among ATV users who experience an interference, 2008

Coping Strategies	% Use	Mean ¹	S.D. ¹
Follow established rules for trail etiquette (n=138)	43.4	2.38	1.098
Talk to other members of my group about the incident (n=116)	36.5	1.74	1.185
Try not to burn bridges (n=103)	32.4	1.52	1.205
Refuse to get too serious about it (n=102)	32.1	1.37	1.098
Don't let it get to me; refuse to think about it too much (n=101)	31.8	1.36	1.143
Think about why the incident occurred (n=99)	31.1	1.36	1.143
Wish the situation would go away or be over with (n=98)	30.8	1.40	1.228
I know what has to be done so I double my efforts to make it work (n=98)	30.8	1.37	1.166
I make a plan of action and follow it (n=94)	29.6	1.31	1.144
Make light of the situation (n=93)	29.2	1.17	1.065
I try to keep my feelings to myself (n=93)	29.2	1.16	1.095
Come up with a couple of different solutions (n=91)	28.6	1.17	1.089
Go on as if nothing bad happened (n=87)	27.4	1.12	1.131
Try to forget the whole thing (n=87)	27.4	1.09	1.093
Talk to area personnel about the incident (n=83)	26.1	1.07	1.138
Leave the area and go to a different part of the area (n=81)	25.5	1.03	1.102
Try to get the person responsible to change their mind (n=81)	25.5	1.02	1.124
Stand my ground and fight for what I wanted (n=78)	24.5	0.93	1.067
Keep others from knowing how bad things were (n=76)	23.9	0.81	0.950
Alter my pace to avoid others (n=71)	22.3	0.79	0.975
Plan to avoid the area on my next visit (n=64)	20.1	0.87	1.044
Leave the area altogether (n=64)	20.1	0.77	1.039
Express anger to the person who caused the incident (n=63)	19.5	0.69	0.956
Change the time I will ATV next time (n=58)	18.2	0.67	0.936

¹Measured on a scale where 1=Use infrequently; 2=Use occasionally; 3=Use frequently

Table 1.8. ATV region among respondents to a mail questionnaire, 2008

Trip Destination	Days within 30-minute drive from home			Days more than 30-minute drive from home		
	Median/Mean	S.D.	Range	Median /Mean	S.D.	Range
Northwest (n=55/55)	10.0/19.85	34.963	150	5.0/9.16	9.455	40
Central (n=54/37)	8.5/14.85	18.275	60	5.0/9.46	10.953	50
Northeast (n=61/89)	6.0/24.70	40.067	183	6.0/9.35	8.151	36
Southern (n=45/15)	6.0/16.98	26.150	120	4.0/9.20	10.758	30
Metro (n=25/5)	14.0/7.24	29.865	100	0/1.80	3.493	8
Outside MN (n=12/23)	0/4.42	9.885	30	5.0/9.17	9.267	30
Total	2.0/15.23	34.433	200	3.0/7.39	11.387	72

Section 2 – Cross country skiers

Cross country ski specific information

In Minnesota, more than 100 cross country ski trails exist and more than 1000 miles of trail are managed by the DNR (Minnesota Nordic Ski Association [MNSA], 2007 & Minnesota Department of Natural Resources [DNR], 2008). As of 2005, 227,000 Minnesotans participated annually in cross country skiing which represents 6.5% of the state's population (Kelly, 2005a). However, DNR forecasts suggest that by 2014 the number of annual participants will fall by 44.1% (Kelly, 2005b).

Cross country ski response rate

Minnesota residents who purchased a cross-country ski pass were the universe. From this list, a systematic sample of 864 Minnesota residents was selected for the survey. Selected recipients were mailed a questionnaire via the US postal service using a random start. Of these, eleven were undeliverable, one was returned as deceased, two addressees asked to be removed from the list and eight questionnaires were unusable. Removing these 21 questionnaires from the sample, adjusted its size to 843. Of these, 521 were returned in a usable form (61.1% response rate) (Table 2.1).

Demographics

More than half (52.0%) of respondents were female and most frequently were between the ages of 51-60 (38.8%; Table 2.2). Nearly all respondents were white (97.1%) and of non-Hispanic or non-Latino background (99.8%). The highest percentage (24.9%) of respondent's reported an annual household income of between \$50,000-74,999, with the remainder relatively evenly distributed across all other income categories. The highest level of education attained by respondents was most frequently reported as a postgraduate degree (33.3%), followed by a bachelor degree (30.6%).

Cross country skiing experience

Of the respondents who could remember what year they began cross country skiing (n=485), the average year was 1984, resulting in an average of 24 (23.98) years of experience (Table 2.3). The median response was 1980 and respondents stated a range of start dates from 1930 to 2008.

Motivations

Of the twenty possible motivations for skiing, seven were important or very important to three quarters or more of respondents: "to be physically active" (96.1%), "to get/keep physically fit" (94.4%), "to view the scenery" (94.2%), "to be close to nature" (94.1%), "to experience nature" (93.9%), "to get away from the usual demands of life" (81.1%), and "to experience silence and quiet" (77.0%, Table 2.4).

Between 50% and 75% of respondents indicated the following eight motivations were important or very important for skiing: “to relax physically” (74.7%), “to explore and discover new things” (74.0%), “to rest mentally” (70.4%), “to enjoy different experiences from home” (69.5%), “to experience solitude” (69.0%), “to do something with my family” (63.6%), “to challenge myself” (62.6%), and “to be w/people who enjoy the same things I do” (54.3%).

About one third or fewer of respondents indicated that “to test my skills & abilities” (42.6%), “to be on my own” (39.0%), “to be away from other people” (33.9%), “to have thrills & excitement” (34.0%) and “to be with members of my own group” (31.5%) were important or very important motivations for cross country skiing.

Sources of and responses to potential conflict

The majority of ski respondents did not frequently observe ten of the twelve sources of potential conflict identified in the questionnaire. However, more than one-half of respondents did report “hearing other users on the trail” (73.1%) and “seeing evidence of off trail/road use” (50.8%; Table 2.5). Between 25% and 50% of respondents observed “seeing off trail/road use” (45.7%), “litter on/near the trail” (41.8%), “too many others on the trail” (29.0%), and “other” sources of conflict (25.9%). The remaining six potential conflict items were observed by fewer than 25% of respondents.

About half of respondents reported something that interfered most with their trails experience (n=270; 51.8%), about one third (35.9%) indicated that it was with other cross country skiers and about one third (30.0%) indicated that it was stressful (Table 2.6). Of the conflicts that most interfered, respondents identified “other” sources of conflict and “seeing off trail/road use” (35.9% & 31.9% respectively). These two conflicts were also identified as stressful by the greatest number of respondents. “Other” sources of conflict was also identified as an interference with other cross country skiers by the greatest number of respondents along with “too many other users on the trail”.

In response to the conflicts, the most common belief about the ability to change the most interfering experience was “I have to accept it as it is” (52.0%; Table 2.7). Respondents also believed that “I need to know more before acting” (32.3%), “I can change or do something about it” (28.2%), and “I have to hold back from acting” (25.9%).

The most frequently employed coping strategies were to “follow established rules for trail etiquette” (87.0%), “refuse to get serious about it” (81.3%), and “not let it get to them; refuse to think about it too much” (80.8%; Table 2.8). Between 50 and 75% of respondents responded in the following ways to the conflict: go on as if nothing happened” (74.6%), “talk to other members of my group about the incident” (71.4%), “I try to keep my feelings to myself (70.6%), “think about why the incident occurred” (69.0%), “try to forget the whole thing” (68.8%), “make light of the situation” (65.9%), “try not to burn bridges (63.5%), “wish the situation would go away or be over with” 63.1%), “I know what has to be done so I double my efforts to make it work” (57.0%), “talk to area personnel about the incident” (52.4%), “alter pace to avoid others” (52.3%), “I make a plan of action and follow it” (50.2%), and “leave the area and go to a different part of the area” (50.2%).

Between 40 and 50% of respondents indicated using the following coping strategies: “plan to avoid the area on my next visit” (49.8%), “come up with a couple of different solutions (48.6%), “change the time I will ski next time” (45.5%), “keep others from knowing how bad things were” (44.2%), “leave the area altogether” (36.9%), “stand my ground and fight for what I wanted” (35.8%), “try to get the person responsible to change their mind” and “express anger to the person who caused the incident” (30.5%).

Cross country ski days

Within 30 minutes of primary home

Within a 30-minute drive from their home, respondents cross country skied most days in the Northeast (Median=8/M=15.74; Table 2.9) Skiing was distributed fairly evenly among the other regions with about seven days per year in the Northwest (Median=6.5/M=13.61), seven days per year in Central Minnesota (Median = 6.5/M=11.00), six days per year in the metro area (Median=6.0/M=12.00), and about six days per year in Southern Minnesota (Median 5.5/M=9.74). Respondents indicated less than 3 days per year were spent outside of Minnesota when skiing within a 30-minute drive from their home (Median=2.5/M=2.86).

Beyond 30 minutes from primary home

When cross country skiing more than a 30-minute drive from their home, respondents cross country skied most frequently outside of Minnesota (Median =3.0/M=4.40; Table 2.9). Skiing was distributed fairly evenly among the other regions with about three days per year in the Northwest (Median=3.0/M=3.80) and in the Northeast (Median=3.0/M=3.66) and about two days per year in Central Minnesota (Median=2.0/M=3.67), Southern Minnesota (Median=2.0/M=2.67) and the Metro area (M=2.54/Mdn=2.0).

Cross country ski tables

Table 2.2. Response rate to a mail survey among Minnesota cross-country skiers, 2008

	n	%
Initial Sample	864	
Respondents	542	62.7
Asked to be removed from list	2	0.2
Deceased	1	0.1
Undeliverable	11	1.2
Adjusted sample size	850	98.4
Unusable	8	0.9
Adjusted Response rate	542	
Usable surveys	521	61.1

Table 2.3. Demographics of cross-country ski respondents to a mail questionnaire in Minnesota, 2008

	Frequency	Percent
Gender		
Female	270	52.0
Male	249	48.0
Total	519	100.0
Ethnicity		
Non-Hispanic/Non-Latino	430	99.8
Hispanic/Latino	1	0.2
Total	431	100.0
Race		
White	506	97.1
American Indian/Alaskan	4	0.8
Other	3	0.6
Asian	2	0.4
Hawaiian/Pacific Islander	2	0.4
Black/African American	0	0
Total	N/A ¹	N/A ¹
Age (M=50.5, S.D.=11.894)		
18-30	48	9.4
31-40	47	9.2
41-50	125	24.4
51-60	199	38.8
61-70	80	15.6
71 or older	14	2.7
Total	513	100.0
Annual household income (U.S. Dollars)		
Less than \$25,000	14	2.9
\$25,000-34,999	24	4.9
\$35,000-49,999	45	9.3
\$50,000-74,999	121	24.9
\$75,000-99,999	93	19.2
\$100,000-124,999	84	17.3
\$125,000-149,999	36	7.4
\$150,000-174,999	19	3.9
\$175,000 or More	49	10.1
Total	485	100.0
Household Size includes these age groups		
Adults (18+)	507	97.3
Teens (13 to 17 years)	110	21.1
Children (12 or under)	110	21.1
Highest level of education		
Some high school	4	0.8
Graduated high school/GED	22	4.3
Some votech	4	0.8
Graduated from votech or completed associate degree	37	7.2
Some college	59	11.4
Graduated from college	158	30.6
Some postgraduate	60	11.6
Postgraduate degree(s)	172	33.3
Total	516	100.0

¹Due to possible selection of multiple categorical responses.

Table 2.3. Cross country skiing experience among respondents to a mail questionnaire in Minnesota, 2008

	Mean	Med	S.D.	Range
Cross country ski experience				
Year began cross country skiing (n=485)	1984	1980	12.574	1930-2008
Number of years cross country skiing (n=485)	23.98	28.00	12.874	0-78

Table 2.4. Reasons for cross country skiing among respondents to a mail questionnaire in Minnesota, 2008

Reasons for participating	Mean¹	S.D.¹	Percent Identify as Important or Very Important
To be physically active (n=516)	4.62	0.823	96.1
To get/keep physically fit (n=516)	4.48	0.835	94.4
To be close to nature (n=512)	4.42	0.831	94.1
To view the scenery (n=514)	4.38	0.812	94.2
To experience nature (n=511)	4.37	0.837	93.9
To get away from the usual demands of life (n=514)	4.09	0.961	81.1
To experience silence & quiet (n=514)	3.93	0.944	77.0
To explore and discover new things (n=511)	3.93	0.938	74.0
To relax physically (n=514)	3.92	1.009	74.7
To experience solitude (n=509)	3.82	1.069	69.0
To enjoy different experiences from home (n=514)	3.78	0.902	69.5
To rest mentally (n=507)	3.77	0.970	70.4
To do something with my family (n=505)	3.68	1.197	63.6
To challenge myself (n=514)	3.63	1.016	62.6
To be w/people who enjoy the same things I do (n=510)	3.48	1.091	54.3
To test my skills & abilities (n=509)	3.19	1.007	42.6
To be on my own (n=497)	3.19	1.102	39.0
To be away from other people (n=511)	3.06	1.091	33.9
To have thrills & excitement (n=509)	3.05	1.028	34.0
To be with members of my own group (n=505)	2.94	1.044	31.5

¹Measured on a scale where 1=Very Unimportant; 2=Unimportant; 3=Neither; 4=Important; 5=Very important

Table 2.5. Observations of potential conflict among cross-country ski respondents to a mail questionnaire, 2008

Source of conflict	% Observe at All (n)	% Don't Know (n)
Hearing other users on the trail (n=506)	73.1 (370)	0.4 (2)
Seeing evidence of off trail/road use (erosion, marks, etc.) (n=502)	50.8 (255)	2.8 (14)
Seeing off trail/road use (n=503)	45.7 (230)	3.0 (15)
Litter on or near the trail (n=507)	41.8 (212)	0.4 (2)
Too many others on the trail (n=504)	29.0 (146)	0.6 (3)
Other (n=170)	25.9 (44)	9.4 (16)
Others not yielding (n=512)	23.8 (122)	0.8 (4)
Others out of control (n=510)	22.4 (114)	1.0 (5)
Rude or discourteous users (n=510)	21.6 (110)	1.0 (5)
Others passing too closely (n=511)	21.1 (108)	1.2 (6)
Others going too fast (n=505)	17.4 (88)	1.0 (5)
Accessibility issue (n=499)	11.4 (57)	3.4 (17)

¹NA = Not applicable

Table 2.6. Most interfering source of conflict among cross-country ski respondents to a mail questionnaire, 2008

	% Most Interfering (n)	Interference w/ other horseback riders % yes (n)	Interference stressful % yes (n)
Overall	51.8 (270)	26.3 (71)	30.0 (81)
Other	35.9 (97)	10.3 (10)	42.3 (41)
Seeing off trail/road use	21.9 (59)	3.4 (2)	28.8 (17)
Too many other users on the trail	13.7 (37)	75.7 (28)	18.9 (7)
Litter on/near the trail	10.7 (29)	13.8 (4)	3.4 (1)
Rude or discourteous users	8.5 (23)	39.1 (9)	47.8 (11)
Hearing other users on the trail	3.7 (10)	50.0 (5)	10.0 (1)
Others out of control	2.2 (6)	66.7 (4)	50.0 (3)
Others not yielding	1.5 (4)	100.0 (4)	0.0 (0)
Others passing too closely	1.1 (3)	100.0 (3)	0.0 (0)
Others riding too fast	0.7 (2)	100.0 (2)	0.0 (0)

Table 2.7. Beliefs about ability to change the most interfering experience among snowmobiling respondents to a mail questionnaire, 2008.¹

	Mean ¹	S.D. ¹	Percent Agree or Strongly Agree
I have to accept it as it is (n=271)	3.28	1.124	52.0
I need to know more before acting (n=254)	2.90	1.095	32.3
I can change or do something about it (n=266)	2.75	1.153	28.2
I have to hold back from acting (n=255)	2.71	1.116	25.9

¹Measured on a scale where 1=Strongly disagree; 2=Disagree; 3=Unsure; 4=Agree; 5=Strongly agree

Table 2.8. Use of coping strategies among cross-country skiers who experience an interference

Coping Strategies	% Use	Mean ¹	S.D. ¹
Follow established rules for trail etiquette (n=280)	87.0	2.80	.520
Refuse to get too serious about it (n=244)	81.3	2.39	.714
Don't let it get to me; refuse to think about it too much (n=253)	80.8	2.34	.720
Try not to burn bridges (n=183)	63.5	2.26	.795
Talk to other members of my group about the incident (n=222)	71.4	2.19	.779
Go on as if nothing bad happened (n=229)	74.6	2.16	.798
Wish the situation would go away or be over with (n=195)	63.1	2.16	.793
Try to forget the whole thing (n=212)	68.8	2.13	.768
Think about why the incident occurred (n=207)	69.0	2.02	.760
Make light of the situation (n=195)	65.9	2.00	.773
I try to keep my feelings to myself (n=207)	70.6	1.92	.753
Alter my pace to avoid others (n=158)	52.3	1.92	.727
I know what has to be done so I double my efforts to make it work (n=166)	57.0	1.84	.708
Change the time I will ski next time (n=137)	45.5	1.83	.763
Plan to avoid the area on my next visit (n=150)	49.8	1.81	.739
I make a plan of action and follow it (n=147)	50.2	1.78	.738
Leave the area and go to a different part of the area (n=150)	50.2	1.75	.675
Talk to area personnel about the incident (n=155)	52.4	1.72	.728
Come up with a couple of different solutions (n=140)	48.6	1.70	.686
Keep others from knowing how bad things were (n=126)	44.2	1.63	.688
Leave the area altogether (n=109)	36.9	1.50	.689
Stand my ground and fight for what I wanted (n=107)	35.8	1.50	.650
Try to get the person responsible to change their mind (n=93)	32.0	1.43	.597
Express anger to the person who caused the incident (n=91)	30.5	1.36	.587

¹Measured on a scale where 1=Use infrequently; 2=Use occasionally; 3=Use frequently

Table 2.9. Cross country ski region among respondents to a mail questionnaire, 2008

Trip Destination	Days within 30-minute drive from home			Days more than 30-minute drive from home		
	Median/Mean	S.D.	Range	Median/Mean	S.D.	Range
Northeast (n=123/192)	8.0/15.74	19.184	89	3.0/3.66	3.340	19
Northwest (n=94/65)	6.5/13.61	18.215	97	3.0/3.80	3.776	19
Central (n=90/39)	6.5/11.00	13.666	84	2.0/3.67	4.938	22
Metro (n=157/26)	6.0/12.00	15.828	104	2.0/2.54	2.353	9
Southern (n=72/12)	5.5/9.74	10.985	59	2.0/2.67	2.146	7
Outside MN (n=14/43)	2.5/2.86	1.916	5	3.0/4.40	3.776	15
Total	8.0/13.34	16.687	110	1.0/2.78	4.230	25

Section 3 – Horseback riders

Horseback riding specific information

In Minnesota, more than 1000 miles of horseback riding trails are managed by the DNR and more than 200 additional miles of trails are available on other lands (Minnesota Department of Natural Resources [DNR], 2008). As of 2005, 157,000 Minnesotans participated annually in horseback riding which represents 4.5% of the state's population (Kelly, 2005a).

Horseback riding response rate

Minnesota residents who purchased a Minnesota horse trail pass were the universe. From this list, a systematic sample of 804 Minnesota residents was selected for the survey. Selected recipients were mailed a questionnaire via the US postal service using a random start. Of these, fourteen were undeliverable and one addressee asked to be removed from the list. Removing these 15 questionnaires from the sample, adjusted its size to 789. Of these, 473 were returned resulting in a response rate of 59.9% (Table 3.1). A total of fifteen surveys were unusable, and thus, 458 surveys were used for analysis.

Demographics

About four of five (80.1%) respondents were female and most frequently were between the ages of 41-50 (55.4%; Table 3.2). Nearly all respondents were white (89.8%) and of non-Hispanic or non-Latino background (98.6%). The highest percentage (29.3%) of respondent's reported an annual household income of between \$50,000-74,999, with the remainder relatively evenly distributed across all other income categories. The highest level of education attained by respondents was most frequently reported as a bachelor degree (23.3%), followed by some college education (22.2%).

Horseback riding experience

Of the respondents who could remember what year they began horseback riding (n=410), the average year was 1981, resulting in an average of 27 (26.9) years of experience (Table 3.3). The median response was also 1981 and respondents stated a range of start dates from 1939 to 2008.

Motivations

Of the 20 possible motivations for horseback riding, eleven were important or very important to more than 75% of respondents: "to view the scenery" (96.4%), "to be close to nature" (94.0%), "to get away from the usual demands of life" (93.6%), "to experience nature" (93.1%), "to explore and discover new things" (90.0%), "to relax physically" (89.8%), "to be physically active" (88.0%), "to be with people who enjoy the same things I do" (85.7%), "to rest mentally" (81.8%), "to enjoy different experiences from home" (80.2%), and "to get /keep physically fit" (78.3%; Table 3.4).

Between 50% and 75% of respondents indicated the following seven motivations were important or very important for horseback riding: “to experience silence & quiet“ (74.9%), “to be with members of my own group” (71.9%), “to do something with my family” (70.8%), “to experience solitude” (70.2%), “to challenge myself” (60.3%), “to test my skills & abilities” (56.4%), and “to be on my own” (50.3%).

Less than half of respondents indicated that “to have thrills & excitement” (46.9%), and “to be away from other people” (37.9%) were important or very important motivations for horseback riding.

Sources of and responses to potential conflict

The majority of horseback riding respondents did not frequently observe eight of the twelve sources of potential conflict identified in the questionnaire. However, more than one-half of respondents did report “hearing other users on the trail” (75.6%), “litter on or near the trail” (70.3%), “seeing evidence of off trail/road use” (61.7%), and “seeing off trail/road use” (55.3%; Table 3.5). Between 25% and 50% of respondents observed the remaining eight potential sources of conflict “rude or discourteous users” (48.0%), “others going too fast” (41.4%), “others passing too closely” (41.4%), “others out of control” (40.0%), “accessibility issue” (35.1%), “others not yielding” (33.3%), “too many others on the trail” (31.6%), and “other” sources of conflict (30.2%).

Just over half of respondents reported something that interfered most with their trails experience (n=274; 55.0%). About one third (31.9%) indicated the interference was with other horseback riders and about half (54.6% indicated that it was stressful (Table 3.6). Of the conflicts that most interfered, respondents identified “other” sources of conflict and “litter on or near the trail” most frequently (27.0% & 18.2% respectively). These two conflicts were also identified as interferences with other horseback riders by the greatest number of respondents. “Other” sources of conflict were also identified as stressful by the greatest number of respondents along with “rude or discourteous users”.

Of the four possible responses related to respondents’ ability to change the most interfering conflict, the greatest percentage of respondents agreed or strongly agreed with the statement: “I need to know more before acting” (42.9%; Table 3.7). About one third of respondents agreed or strongly agreed with the remaining three statements: “I have to accept it as it is” (37.2%), “I can change or do something about it” (28.5%), and “I have to hold back from acting” (25.9%).

In response to the conflicts, the most common strategies used to cope with interfering experiences were to “talk to other members of my group about the incident” (\underline{M} =2.33; 47.0%), “follow established rules for trail etiquette” (\underline{M} =2.52, 46.6%), and “don’t let it get to me; refuse to think about it too much” (\underline{M} =1.75, 41.4%; Table 3.8).

Between 25 and 41% of respondents also responded in the following ways to the conflict: “refuse to get too serious about it” (\underline{M} =1.74, 41.0%), “think about why the incident occurred” (\underline{M} =1.77, 39.6%), “wish the situation would go away or be over with” (\underline{M} =1.78, 37.0%), “go on as if nothing bad happened” (\underline{M} =1.53, 38.6%), “try not to burn bridges” (\underline{M} =1.67, 35.5%), “try

to forget the whole thing” ($\underline{M}=1.40$, 35.1%), “I try to keep my feelings to myself” ($\underline{M}=1.40$, 33.1%), “come up with a couple of different solutions” ($\underline{M}=1.21$, 30.9%), “change the time I will horseback ride next time” ($\underline{M}=0.85$, 30.7%), “I make a plan of action and follow it” ($\underline{M}=1.25$, 30.1%), “talk to area personnel about the incident ” ($\underline{M}=1.17$, 30.1%), “stand my ground and fight for what I wanted” ($\underline{M}=0.90$, 27.3%), “I know what has to be done so I double my efforts to make it work” ($\underline{M}=1.35$, 25.3%), “leave the area and go to a different part of the area” ($\underline{M}=1.00$, 25.3%) and “plan to avoid the area on my next visit” ($\underline{M}=0.98$, 25.3%).

The least commonly employed coping strategies were “keep others from knowing how bad things were” ($\underline{M}=0.83$, 24.9%), “make light of the situation” ($\underline{M}=1.22$, 23.3%), “try to get the person responsible to change their mind” ($\underline{M}=0.84$, 23.3%), “express anger to the person who caused the incident” ($\underline{M}=0.71$, 21.5%), “alter my pace to avoid others” ($\underline{M}=0.92$, 20.1%), “leave the area altogether” ($\underline{M}=0.61$, 17.1%).

Horseback riding days

Within 30 minutes of primary home

Within a 30-minute drive from their home, respondents went horseback riding most days in the metro area (Median=16.5/ $\underline{M}=38.07$; Table 3.9). Respondents reported horseback riding a median of five to ten days throughout the rest of Minnesota: ten (Median=10.0/ $\underline{M}=27.03$) days per year in Central Minnesota, ten (Median=10.0/ $\underline{M}=20.69$) days per year in Southern Minnesota, eight (Median=8.0/ $\underline{M}=31.70$) days per year in Northeast Minnesota, and seven (Median=7.0/ $\underline{M}=21.52$) days per year in Northwest Minnesota. Respondents indicated five days per year (Median=5.0/ $\underline{M}=11.25$) were spent outside of Minnesota when horseback riding within a 30-minute drive from their home.

Beyond 30 minutes from primary home

When horseback riding more than a 30-minute drive from their home, respondents went horseback riding most frequently outside of Minnesota (Median=7.0/ $\underline{M}=10.66$; Table 3.9). Horseback riding was distributed fairly evenly among the other regions with about five days per year in Southern Minnesota (Median=5.0/ $\underline{M}=7.65$), four days per year in Northeast Minnesota (Median= 4.0/ $\underline{M}=6.74$), four days per year in Northwest Minnesota (Median= 4.0/ $\underline{M}=6.52$), four days per year in Central Minnesota (Median= 4.0/ $\underline{M}=5.78$) and three days per year in the metro area (Median= 3.02/ $\underline{M}=6.17$).

Horseback tables

Table 3.4. Response rate to a mail survey among Minnesota horseback riders, 2008

	n	%
Initial sample	804	
Respondents	473	58.8
Total unusable/undeliverable	30	3.7
Undeliverable	14	1.7
Unusable	15	1.9
Asked to be removed from list	1	0.1
Adjusted sample size	789	98.1
Adjusted response rate	473	59.9
Usable surveys	458	

Table 3.5. Demographics of horseback riding respondents to a mail questionnaire in Minnesota, 2008

	Frequency	Percent
Gender		
Female	363	80.1
Male	90	19.9
Total	453	100.0
Ethnicity		
Non-Hispanic/Non-Latino	362	98.6
Hispanic/Latino	5	1.4
Total	367	100.0
Race		
White	447	89.8
American Indian/Alaskan	1	.8
Other	3	.2
Hawaiian/Pacific Islander	1	.2
Black/African American	1	.2
Asian	0	0
Total	N/A ¹	N/A ¹
Age ($M=47.7$, $S.D.=11.503$)		
18-30	43	9.6
31-40	67	15.0
41-50	138	55.4
51-60	152	33.9
61-70	42	9.4
71 or older	6	1.3
Total	448	100.0
Annual household income (U.S. Dollars)		
Less than \$25,000	21	5.1
\$25,000-34,999	27	6.6
\$35,000-49,999	57	13.9
\$50,000-74,999	120	29.3
\$75,000-99,999	60	14.7
\$100,000-124,999	57	13.9
\$125,000-149,999	23	5.6
\$150,000-174,999	15	3.7
\$175,000 or More	29	7.1
Total	409	100.0
Household Size includes these age groups		
Adults (18+)	434	87.1
Teens (13 to 17 years)	113	22.7
Children (12 or under)	119	23.9
Highest level of education		
Some high school	9	2.0
Graduated high school/GED	61	13.6
Some votech	19	4.2
Graduated from votech or completed associate degree	82	18.2
Some college	100	22.2
Graduated from college	105	23.3
Some postgraduate	29	6.4
Postgraduate degree(s)	45	10.0
Total	450	100.0

¹Due to possible selection of multiple categorical responses.

Table 3.3. Horseback riding experience among respondents to a mail questionnaire in Minnesota, 2008

Horseback riding experience	Mean	Med	S.D.	Range
Year began horseback riding (n=410)	1981	1981	15.515	1939-2008
Number of years horseback riding (n=410)	26.90	27.50	15.515	0-69

Table 3.4. Reasons for horseback riding among respondents to a mail questionnaire in Minnesota, 2008

Reasons for participating	Mean ¹	S.D. ¹	Percent Identify as Important or Very Important
To view the scenery (n=450)	4.58	.692	96.4
To be close to nature (n=451)	4.50	.764	94.0
To get away from the usual demands of life (n=451)	4.61	.763	93.6
To experience nature (n=449)	4.45	.743	93.1
To explore and discover new things (n=451)	4.40	.812	90.0
To relax physically (n=452)	4.38	.795	89.8
To be physically active (n=450)	4.28	.886	88.0
To be w/people who enjoy the same things I do (n=448)	4.28	.864	85.7
To rest mentally (n=451)	4.14	.896	81.8
To enjoy different experiences from home (n=449)	4.11	.906	80.2
To get/keep physically fit (n=451)	4.03	.910	78.3
To experience silence & quiet (n=450)	3.90	.972	74.9
To be with members of my own group (n=452)	3.90	.982	71.9
To do something with my family (n=445)	3.99	1.136	70.8
To experience solitude (n=449)	3.95	1.029	70.2
To challenge myself (n=451)	3.68	1.025	60.3
To test my skills & abilities (n=450)	3.58	.996	56.4
To be on my own (n=449)	3.44	1.115	50.3
To have thrills & excitement (n=452)	3.37	1.109	46.9
To be away from other people (n=448)	3.18	1.177	37.9

¹Measured on a scale where 1=Very Unimportant; 2=Unimportant; 3=Neither; 4=Important; 5=Very important

Table 3.5. Observations of potential conflict among horseback rider respondents to a mail questionnaire, 2008

	% Observe at All (n)	% Don't Know (n)
Hearing other users on the trail (n=451)	75.6 (341)	2.0 (9)
Litter on or near the trail (n=448)	70.3 (315)	1.0 (5)
Seeing evidence of off trail/road use (erosion, marks, etc.) (n=444)	61.7 (274)	2.4 (12)
Seeing off trail/road use (n=443)	55.3 (245)	2.3 (10)
Rude or discourteous users (n=450)	48.0 (216)	0.7 (3)
Others going too fast (n=452)	41.4 (187)	1.3 (6)
Others passing too closely (n=452)	41.4 (187)	1.3 (6)
Others out of control (n=452)	40.0 (181)	1.8 (8)
Accessibility issue (n=439)	35.1 (154)	4.6 (20)
Others not yielding (n=450)	33.3 (150)	0.9 (4)
Too many others on the trail (n=452)	31.6 (143)	1.8 (8)
Other (n=139)	30.2 (42)	5.8 (29)

Table 3.6. Most interfering source of conflict among horseback riding respondents to a mail questionnaire, 2008

	% Most Interfering (n)	Interference w/ other horseback riders % yes (n)	Interference stressful % yes (n)
Overall	55.0 (274)	31.9 (87)	54.6 (142)
Other	27.0 (74)	27.4 (20)	69.9 (51)
Litter on or near the trail	18.2 (50)	36.0 (18)	20.0 (10)
Rude or discourteous users	14.6 (40)	35.0 (14)	67.5 (27)
Accessibility issue	12.0 (33)	9.1 (3)	39.4 (13)
Too many others on the trail	6.6 (18)	70.6 (12)	50.0 (9)
Seeing off trail/road use	5.8 (16)	18.8 (3)	43.8 (7)
Seeing evidence of off trail/road use (erosion, marks, etc.)	5.1 (14)	0.0 (0)	42.9 (6)
Others out of control	3.3 (9)	77.8 (7)	77.8 (7)
Others going too fast	2.9 (8)	75.0 (6)	87.5 (7)
Others passing too closely	2.6 (7)	42.9 (3)	42.9 (3)
Hearing other users on the trail	1.1 (3)	33.3 (1)	33.3 (1)
Others not yielding	0.7 (2)	0.0 (0)	50.0 (1)

Table 3.7. Beliefs about ability to change the most interfering experience among snowmobiling respondents to a mail questionnaire, 2008.¹

	Mean ¹	S.D. ¹	Percent Agree or Strongly Agree
I need to know more before acting (n=266)	3.23	1.080	42.9
I have to accept it as it is (n=271)	2.98	1.102	37.2
I can change or do something about it (n=277)	2.84	1.074	28.5
I have to hold back from acting (n=263)	2.82	1.017	25.9

¹Measured on a scale where 1=Strongly disagree; 2=Disagree; 3=Unsure; 4=Agree; 5=Strongly agree

Table 3.8. Use of coping strategies among horseback riders who experience an interference

	% Use	Mean ¹	S.D. ¹
Talk to other members of my group about the incident (n=234)	47.0	2.33	0.986
Follow established rules for trail etiquette (n=232)	46.6	2.52	0.954
Don't let it get to me; refuse to think about it too much (n=206)	41.4	1.75	1.059
Refuse to get too serious about it (n=204)	41.0	1.74	1.066
Think about why the incident occurred (n=197)	39.6	1.77	1.112
Wish the situation would go away or be over with (n=185)	37.0	1.78	1.206
Go on as if nothing bad happened (n=192)	38.6	1.53	1.074
Try not to burn bridges (n=177)	35.5	1.67	1.188
Try to forget the whole thing (n=175)	35.1	1.40	1.102
I try to keep my feelings to myself (n=184)	33.1	1.40	0.990
Come up with a couple of different solutions (n=154)	30.9	1.21	1.041
Change the time I will horseback ride next time (n=100)	30.7	0.85	1.116
I make a plan of action and follow it (n=153)	30.1	1.25	1.123
Talk to area personnel about the incident (n=150)	30.1	1.17	1.105
Stand my ground and fight for what I wanted (n=136)	27.3	0.90	0.966
I know what has to be done so I double my efforts to make it work (n=165)	25.3	1.35	1.124
Leave the area and go to a different part of the area (n=126)	25.3	1.00	1.109
Plan to avoid the area on my next visit (n=126)	25.3	0.98	1.091
Keep others from knowing how bad things were (n=124)	24.9	0.83	0.932
Make light of the situation (n=162)	23.3	1.22	1.046
Try to get the person responsible to change their mind (n=116)	23.3	0.84	1.013
Express anger to the person who caused the incident (n=107)	21.5	0.71	0.920
Alter my pace to avoid others (n=116)	20.1	0.92	1.084
Leave the area altogether (n=85)	17.1	0.61	0.946

¹Measured on a scale where 1=Use infrequently; 2=Use occasionally; 3=Use frequently

Table 3.9. Horseback riding region among respondents to a mail questionnaire, 2008

Trip Destination	Days within 30-minute drive from home			Days more than 30-minute drive from home		
	Median/Mean	S.D.	Range	Median/Mean	S.D.	Range
Metro (n=134/48)	38.07/16.5	48.999	300	3.0/6.17	9.196	40
Central (n=128/112)	10.0/27.03	40.952	196	4.0/5.78	5.734	30
Southern (n=104/148)	10.0/20.69	29.471	150	5.0/7.65	8.305	42
Northeast (n=83/107)	8.0/31.70	28.403	100	4.0/6.74	7.799	40
Northwest (n=97/122)	7.0/21.52	53.744	290	4.0/6.52	7.040	35
Outside MN (n=28/134)	5.0/11.25	13.946	50	7.0/10.66	12.945	72
Total	20.0/37.86	52.665	320	7.0/12.94	7.799	40

Section 4 – Inline Skaters

Running as proxy

Inline skating specific information

As of 2005, 393,800 Minnesotans participated in inline skating which represents 11.3% of the state's population (Kelly, 2005b). DNR forecasts suggest that by 2014 the number of inline skating participants will decrease to about 250,100 participants annually, representing a 36.5% decrease (Kelly, 2005b).

Running response rate

Minnesota residents who selected running as a main activity in an initial survey query were the universe. From this list, a systematic sample of 306 Minnesota residents was selected for the survey. Selected recipients were mailed a questionnaire via the US postal service using a random start. Of these, twenty were undeliverable and two addressees asked to be removed from the list. Removing these 22 questionnaires from the sample, adjusted its size to 284. Of these, 115 were returned resulting in a response rate of 40.5% (Table 4.1). A total of 24 surveys were unusable, and thus, 91 surveys were used for analysis.

Demographics

Slightly more than half (52.7%) of respondents were female and most frequently were between the ages of 41-50 (26.4%; Table 4.2). Nearly all respondents were white (96.7%) and of non-Hispanic or non-Latino background (96.3%). The highest percentage (19.2%) of respondents reported an annual household income of between \$50,000-74,999 and \$75,000-99,999, with the remainder relatively evenly distributed across all other income categories. The highest level of education attained by respondents was most frequently reported as a postgraduate degree (32.6%), followed by a bachelor degree (25.8%).

Running experience

Of the respondents who could remember what year they began running (n=292), the average year was 1992, resulting in an average of seventeen (16.5) years of experience (Table 4.3). The median response was 1996 and respondents stated a range of start dates from 1959 to 2008.

Motivations

Of the 20 possible motivations for running, seven were important or very important to more than 75% of respondents: "to be physically active" (100.0%), "to get/keep physically fit" (97.8%), "to get away from the usual demands of life" (87.8%), "to be close to nature" (80.9%), "to experience nature" (78.9%), and "to relax physically" (78.9%; Table 4.4).

Between 50% and 75% of respondents indicated the following seven motivations were important or very important for running: "to challenge myself" (72.2%), "to rest mentally" (68.9%), "to experience solitude" (65.2%), "to experience silence & quiet" (64.4%), "to enjoy different

experiences from home” (62.2%), “to be on my own” (58.4%), and “to explore and discover new things” (57.8%).

Less than one half of respondents indicated that “to test my skills & abilities” (46.1%), “to do something with my family” (41.6%), “to be away from other people” (34.4%), “to be with people who enjoy the same things I do” (22.2%), “to have thrills & excitement” (16.7%) and “to be with members of my own group” (11.2%) were important or very important motivations for running.

Sources of and responses to potential conflict

The majority of running respondents did not frequently observe nine of the twelve sources of potential conflict identified in the questionnaire. However, more than one-half of respondents did report “litter on or near the trail” (77.9%), “hearing other users on the trail” (75.9%) and “seeing evidence of off trail/road use” (65.1%; Table 4.5). Between 25% and 50% of respondents observed “seeing off trail/road use” (49.4%), “others passing too closely” (48.8%), “too many others on the trail” (48.3%), “others not yielding” (43.7%), “rude or discourteous users” (37.9%), and “others going too fast” (33.7%). The remaining three potential conflict items: “accessibility issue” (16.5%), “others out of control” (14.9%), and “other” (3.7%) were observed by fewer than 25% of respondents.

Of those who reported anything that interfered most with their trails experience (n=55; 60.4%), less than one tenth (9.1%) indicated that it was with other runners and about one quarter (25.5%) indicated that it was stressful (Table 4.6). Of the conflicts that most interfered, respondents most often identified “litter on or near the trail” and “too many other users on the trail” (32.7% & 14.5% respectively). “Too many other users on the trail” was also identified as an interference with other runners and stressful by the greatest number of respondents.

Of the four possible responses related to respondents’ ability to change the most interfering conflict, the greatest percentage of respondents agreed or strongly agreed with the statement: “I have to accept it as it is” (42.1%, Appendix B, Table 4.7). About one third of respondents agreed or strongly agreed with the remaining three statements: “I can change or do something about it” (38.2%), “I need to know more before acting” (36.4%), and “I have to hold back from acting” (23.6%).

The most common strategies used to cope with interfering experiences were to “follow established rules for trail etiquette” (\underline{M} =2.26; 47.3%), “don’t let it get to me; refuse to think about it too much” (\underline{M} =1.81, 47.3%), and “refuse to get too serious about it” (\underline{M} =1.74, 47.3%; Table 4.8).

Between 30 and 45% of respondents responded in the following ways to the conflict: “wish the situation would go away or be over with” (\underline{M} =1.58, 44.0%), “go on as if nothing had happened” (\underline{M} =1.49, 44.0%), “I try to keep my feelings to myself” (\underline{M} =1.45, 42.9%), “try to forget the whole thing” (\underline{M} =1.45, 41.8%), “think about why the incident occurred” (\underline{M} =1.44, 40.7%), “make light of the situation” (\underline{M} =1.08, 35.2%), “stand my ground and fight for what I wanted” (\underline{M} =0.88, 35.2%), “talk to other members of my group about the incident” (\underline{M} =1.37, 34.1%), “try

not to burn bridges” (\underline{M} =1.29, 33.0%), “I know what has to be done so I double my efforts to make it work” (\underline{M} =1.12, 33.0%), “plan to avoid the area on my next visit” (\underline{M} =0.84, 31.9%), and “alter pace to avoid others” (\underline{M} =1.02, 30.8%).

Less than 30% of respondents responded in the following ways to the conflict: “leave the area and go to a different part of the area” (\underline{M} =0.88, 28.6%), “change the time I will run next time” (\underline{M} =0.92, 27.5%), “I make a plan of action and follow it” (\underline{M} =0.86, 27.5%), “express anger to the person who caused the incident” (\underline{M} =0.67, 27.5%), “leave the area altogether” (\underline{M} =0.63, 27.5%), “come up with a couple of different solutions” (\underline{M} =0.83, 25.3%), “keep others from knowing how bad things were” (\underline{M} =0.77, 25.3%), “talk to area personnel about the incident” (\underline{M} =0.69, 20.9%), and “try to get the person responsible to change their mind” (\underline{M} =0.54, 19.8%).

Running days

Within 30 minutes of primary home

Within a 30-minute drive from their home, respondents ran most days in Central Minnesota (Median=56.0/ \underline{M} =76.65; Table 4.9). About twenty days of running were reported in the metro area (Median=20.0/ \underline{M} =53.5), about eight days in Northwest Minnesota (Median=7.5/ \underline{M} =36.06), about three days in Southern Minnesota (Median=2.5/ \underline{M} =43.21), and about two days in Northeast Minnesota (Median=2.0/ \underline{M} =8.91). The median days reported outside of Minnesota was zero (Median=0/ \underline{M} =1.44).

Beyond 30 minutes from primary home

When running in areas more than a 30-minute drive from their home, respondents ran most frequently in Northeast Minnesota (Median=8.0/ \underline{M} =6.14; Table 4.9). Running was distributed fairly evenly among the other regions with about four days per year in Southern Minnesota (median=4.0/ \underline{M} =9.30), about three days per year in Central Minnesota (Median=3.0/ \underline{M} =3.80), about three days per year in Northwest Minnesota (Median=2.5/ \underline{M} =4.93), about two days per year in the metro area (Median=1.5/ \underline{M} =5.17). About 2 days of running outside of Minnesota (Median=2.0/ \underline{M} =5.20).

Running Tables

Table 4.6. Response rate to a mail survey among Minnesota runners, 2008

	n	%
Initial sample	306	
Respondents	115	37.6
Total unusable/undeliverable	46	15.0
Undeliverable	20	6.5
Unusable	24	7.8
Asked to be removed from list	2	0.7
Adjusted sample size	284	92.8
Adjusted response rate	115	40.5
Usable surveys	91	

Table 4.7. Demographics of running respondents to a mail questionnaire in Minnesota, 2008

	Frequency	Percent
Gender		
Female	48	52.7
Male	43	47.3
Total	91	100.0
Ethnicity		
Non-Hispanic/Non-Latino	77	96.3
Hispanic/Latino	3	3.8
Total	80	100.0
Race		
White	88	96.7
American Indian/Alaskan	2	2.2
Asian	2	2.2
Black/African American	1	1.1
Other	1	1.1
Hawaiian/Pacific Islander	0	0
Total	N/A ¹	N/A ¹
Age (M=46.0, S.D.=14.877)		
18-30	14	15.4
31-40	20	22.0
41-50	24	26.4
51-60	19	20.9
61-70	7	7.7
71 or older	7	7.7
Total	91	100.0
Annual household income (U.S. Dollars)		
Less than \$25,000	1	1.3
\$25,000-34,999	5	6.4
\$35,000-49,999	10	12.8
\$50,000-74,999	15	19.2
\$75,000-99,999	15	19.2
\$100,000-124,999	14	17.9
\$125,000-149,999	5	6.4
\$150,000-174,999	3	3.8
\$175,000 or More	10	12.8
Total	78	100.0
Household Size includes these age groups		
Adults (18+)	87	95.6
Teens (13 to 17 years)	17	18.7
Children (12 or under)	24	26.4
Highest level of education		
Some high school	1	1.1
Graduated high school/GED	4	4.5
Some votech	3	3.4
Graduated from votech or completed associate degree	7	7.9
Some college	11	12.4
Graduated from college	23	25.8
Some postgraduate	11	12.4
Postgraduate degree(s)	29	32.6
Total	89	100.0

¹Due to possible selection of multiple categorical responses.

Table 4.3. Running experience among respondents to a mail questionnaire in Minnesota, 2008

Running user experience	Mean	Med	S.D.	Range
Year began running (n=72)	1992	1996	12.402	1959-2008
Number of years running (n=72)	16.5	12.5	12.402	1-49

Table 4.4. Reasons for running among respondents to a mail questionnaire in Minnesota, 2008

Reasons for participating	Mean ¹	S.D. ¹	Percent Identify as Important or Very Important
To be physically active (n=90)	4.79	0.410	100.0
To get/keep physically fit (n=90)	4.73	0.493	97.8
To get away from the usual demands of life (n=90)	4.16	0.820	87.8
To view the scenery (n=90)	4.18	0.712	86.7
To be close to nature (n=89)	4.15	0.860	80.9
To experience nature (n=90)	4.09	0.830	78.9
To relax physically (n=90)	4.00	0.912	78.9
To challenge myself (n=90)	3.80	0.889	72.2
To rest mentally (n=90)	3.78	0.992	68.9
To experience solitude (n=89)	3.82	0.960	65.2
To experience silence & quiet (n=90)	3.67	1.017	64.4
To enjoy different experiences from home (n=90)	3.67	0.936	62.2
To be on my own (n=89)	3.64	0.882	58.4
To explore and discover new things (n=90)	3.64	0.998	57.8
To test my skills & abilities (n=89)	3.29	0.932	46.1
To do something with my family (n=89)	3.12	1.223	41.6
To be away from other people (n=90)	3.14	1.087	34.4
To be w/people who enjoy the same things I do (n=90)	2.78	1.149	22.2
To have thrills & excitement (n=90)	2.70	0.977	16.7
To be with members of my own group (n=89)	2.51	1.046	11.2

¹Measured on a scale where 1=Very Unimportant; 2=Unimportant; 3=Neither; 4=Important; 5=Very important

Table 4.5. Observations of potential conflict among running respondents to a mail questionnaire, 2008

Source of conflict	% Observe at All (n)	% Don't Know (n)
Litter on or near the trail (n=86)	77.9 (67)	2.3 (2)
Hearing other users on the trail (n=87)	75.9 (66)	2.3 (2)
Seeing evidence of off trail/road use (erosion, marks, etc.) (n=86)	65.1 (56)	2.3 (2)
Seeing off trail/road use (n=85)	49.4 (42)	7.1 (6)
Others passing too closely (n=86)	48.8 (42)	2.3 (2)
Too many others on the trail (n=87)	48.3 (42)	3.4 (3)
Others not yielding (n=87)	43.7 (38)	2.3 (2)
Rude or discourteous users (n=87)	37.9 (33)	2.3 (2)
Others going too fast (n=86)	33.7 (29)	2.3 (2)
Accessibility issue (n=85)	16.5 (14)	5.9 (5)
Others out of control (n=87)	14.9 (13)	2.3 (2)
Other experience (n=27)	3.7 (1)	44.4 (12)

Table 4.6. Most interfering source of conflict among running respondents to a mail questionnaire, 2008

	% Most Interfering (n)	Interference w/ other horseback riders % yes (n)	Interference stressful % yes (n)
Overall	60.4 (55)	9.1 (5)	25.5 (14)
Litter on/near the trail	32.7 (18)	5.6 (1)	0.0 (0)
Too many other users on the trail	14.5 (8)	25.0 (2)	75.0 (6)
Rude or discourteous users	12.7 (7)	14.3 (1)	28.6 (2)
Others passing too closely	12.7 (7)	0.0 (0)	28.6 (2)
Other	9.1 (5)	20.0 (1)	40.0 (2)
Others not yielding	7.3 (4)	0.0 (0)	25.0 (1)
Seeing evidence of off road/trail use	3.6 (2)	0.0 (0)	50.0 (1)
Seeing off trail/road use	3.6 (2)	0.0 (0)	0.0 (0)
Accessibility issue	1.8 (1)	0.0 (0)	0.0 (0)
Hearing other users on the trail	1.8 (1)	0.0 (0)	0.0 (0)

Table 4.7. Beliefs about ability to change the most interfering experience among snowmobiling respondents to a mail questionnaire, 2008.¹

	Mean ¹	S.D. ¹	Percent Agree or Strongly Agree
I have to accept it as it is (n=57)	3.04	1.085	42.1
I can change or do something about it (n=55)	3.05	1.008	38.2
I need to know more before acting (n=55)	3.02	1.009	36.4
I have to hold back from acting (n=55)	2.75	1.040	23.6

¹Measured on a scale where 1=Strongly disagree; 2=Disagree; 3=Unsure; 4=Agree; 5=Strongly agree

Table 4.8. Use of coping strategies among runners who experience an interference

Source of conflict	% Use	Mean ¹	S.D. ¹
Follow established rules for trail etiquette (n=43)	47.3	2.26	1.179
Don't let it get to me; refuse to think about it too much (n=43)	47.3	1.81	1.057
Refuse to get too serious about it (n=43)	47.3	1.74	1.095
Wish the situation would go away or be over with (n=40)	44.0	1.58	1.109
Go on as if nothing bad happened (n=40)	44.0	1.49	1.067
I try to keep my feelings to myself (n=39)	42.9	1.45	1.026
Try to forget the whole thing (n=38)	41.8	1.45	1.119
Think about why the incident occurred (n=37)	40.7	1.44	1.074
Make light of the situation (n=32)	35.2	1.08	1.053
Stand my ground and fight for what I wanted (n=32)	35.2	0.88	0.840
Talk to other members of my group about the incident (n=31)	34.1	1.37	1.268
Try not to burn bridges (n=30)	33.0	1.29	1.242
I know what has to be done so I double my efforts to make it work (n=30)	33.0	1.12	1.143
Plan to avoid the area on my next visit (n=29)	31.9	0.84	0.857
Alter my pace to avoid others (n=28)	30.8	1.02	1.129
Leave the area and go to a different part of the area (n=26)	28.6	0.88	0.983
Change the time I will run next time (n=25)	27.5	0.92	1.082
I make a plan of action and follow it (n=25)	27.5	0.86	1.040
Express anger to the person who caused the incident (n=25)	27.5	0.67	0.810
Leave the area altogether (n=25)	27.5	0.63	0.768
Come up with a couple of different solutions (n=23)	25.3	0.83	1.098
Keep others from knowing how bad things were (n=23)	25.3	0.77	0.962
Talk to area personnel about the incident (n=19)	20.9	0.69	1.039
Try to get the person responsible to change their mind (n=18)	19.8	0.54	0.851

¹Measured on a scale where 1=Use infrequently; 2=Use occasionally; 3=Use frequently

Table 4.9. Running region among respondents to a mail questionnaire, 2008

Trip Destination	Days within 30-minute drive from home			Days more than 30-minute drive from home		
	Median/Mean	S.D.	Range	Median/Mean	S.D.	Range
Central (n=55/5)	56.0/76.65	70.773	300	3.0/3.80	3.962	10
Metro (n=18/6)	20.0/53.50	83.141	350	1.5/5.17	8.424	22
Northwest (n=16/14)	7.5/36.06	60.399	200	2.5/4.93	6.486	25
Southern (n=14/10)	2.5/43.21	94.563	340	4.0/9.30	11.567	35
Northeast (n=11/7)	2.0/8.91	16.146	50	8.0/6.14	4.220	10
Outside MN (n=9/15)	0.0/1.44	2.603	6	2.0/5.20	7.729	30
Total	48.0/71.58	77.831	340	0.0/3.61	7.578	35

Section 5 – Mountain Bikers

Mountain biking specific information

In Minnesota, there are more than 1800 miles of mountain bike trails available in state forests that are managed by the DNR, and an additional 400 miles of trails are available on other lands (Minnesota Department of Natural Resources [DNR], 2008). As of 2004, 1,010,500 Minnesotans participated annually in biking (bicycling outdoors of all types, including mountain biking) which represents 29.0% of the state's population (Kelly, 2005b). However, DNR forecasts suggest that by 2014 the number of annual participants will fall to 714,600 participants representing a 29.3% decline in number of participants (Kelly, 2005b).

Mountain biking response rate

Minnesota residents who selected biking as a main activity in an initial survey query were the universe. From this list, a systematic sample of 794 Minnesota residents was selected for the survey. Selected recipients were mailed a questionnaire via the US postal service using a random start. Of these, 33 were undeliverable and four addressees asked to be removed from the list. Removing these 37 questionnaires from the sample, adjusted its size to 757. Of these, 404 were returned resulting in a response rate of 53.4% (Table 5.1). A total of 81 surveys were unusable, and thus, 323 surveys were used for analysis. Of those 323 surveys, 134 cases were categorized as mountain bikers.

Demographics

Slightly more than half (55.2%) of respondents were male and most frequently were between the ages of 41-50 (30.3%; Table 5.2). Nearly all respondents were white (99.3%) and of non-Hispanic or non-Latino background (97.4%). The highest percentage (32.9%) of respondent's reported an annual household income of between \$50,000-74,999, with the remainder relatively evenly distributed across all other income categories. The highest level of education attained by respondents was most frequently reported as a bachelor degree (30.1%), followed by an associate or vocational degree (18.0%).

Mountain biking experience

Of the respondents who could remember what year they began mountain bike riding (n=109), the average year was 1971, resulting in an average of 33 (30.74) years of experience (Table 5.3). The median response was 1975 and respondents stated a range of start dates from 1938 to 2008.

Motivations

Of the 20 possible motivations for mountain biking, eight were important or very important to more than 75% of respondents: "to be physically active" (94.8%), "to get/keep physically fit" (93.2%), "to experience nature" (91.6%), "to view the scenery" (90.3%), "to be close to nature" (89.6%), "to get away from the usual demands of life" (88.7%), "to explore and discover new things" (81.3%), and "to relax physically" (78.4%; Table 5.4).

Between 50% and 75% of respondents indicated the following seven motivations were important or very important for mountain bike riding: “to do something with my family” (73.1%), “to enjoy different experiences from home” (72.9%), “to rest mentally” (69.4%), “to experience solitude” (68.2%), “to experience silence & quiet” (63.2%), “to challenge myself” (59.0%), and “to be with people who enjoy the same things I do” (57.9%).

Less than half of respondents indicated that “to be on my own” (46.2%), “to be with members of my own group” (41.4%), “to test my skills & abilities” (40.2%), “to have thrills & excitement” (38.1%), and “to be away from other people” (37.9%) were important or very important motivations for mountain bike riding.

Sources of and responses to potential conflict

The majority of mountain bike respondents did not frequently observe six of the twelve sources of potential conflict identified in the questionnaire. However, more than one-half of respondents did report “litter on or near the trail” (80.9%), “hearing other users on the trail” (75.8%), “seeing evidence of off trail/road use” (60.6%), “seeing off trail/road use” (59.4%), “others not yielding” (54.1%), and “others passing too closely” (52.6%; Table 5.5). Between 25% and 50% of respondents observed five potential sources of conflict: “rude or discourteous users” (50.0%), “others going too fast” (39.1%), “too many others on the trail” (35.3%), “accessibility issue” (25.8%), and “others out of control” (25.6%). Less than 25% of respondents observed “other” sources of conflict (13.0%).

Nearly three-quarters of respondents reported something interfered most with their trails experience (n=134; 70.1%). About half (44.7%) indicated it was with other mountain bike riders and about one-third (34.0%) indicated that it was stressful (Table 5.6). Of the conflicts that most interfered, respondents identified “litter on or near the trail” and “rude or discourteous users” (23.4% & 17.0% respectively). “Litter on or near the trail” and “too many other users on the trail” were both identified as interferences with other mountain bike riders by the greatest number of respondents (n=8). “Rude or discourteous users” was identified as stressful by the greatest number of respondents (n=9).

In response to the conflicts, the most common strategies used to cope with interfering experiences were to “don’t let it get to me; refuse to think about it too much” (\underline{M} =1.85, 53.7%), “talk to other members of my group about the incident” (\underline{M} =1.75; 52.2%), “follow established rules for trail etiquette” (\underline{M} =2.25, 50.0%), and “go on as if nothing bad happened” (\underline{M} =1.62, 50.0%; Table 5.7).

Between 50% and 40% of respondents also responded in the following ways to the conflict: “refuse to get too serious about it” (\underline{M} =1.74, 47.8%), “make light of the situation” (\underline{M} =1.46, 47.8%), “try to forget the whole thing” (\underline{M} =1.64, 46.3%), “try not to burn bridges” (\underline{M} =1.66, 45.5%), “I try to keep my feelings to myself” (\underline{M} =1.44, 44.8%), “think about why the incident occurred” (\underline{M} =1.35, 44.8%), and “wish the situation would go away” (\underline{M} =1.43, 44.0%). Between 40% and 30% of respondents responded in the following ways to the conflict: “I know what has to be done so I double my efforts to make it work” (\underline{M} =1.12, 38.1%), “alter my pace to avoid others” (\underline{M} =1.11, 37.3%), “leave the area and go to a different part of the area” (\underline{M} =1.04,

37.3%) “I make a plan of action and follow it” (\underline{M} =1.09, 36.6%), “come up with a couple of different solutions” (\underline{M} =1.04, 35.8%), “keep others from knowing how bad things were” (\underline{M} =0.95, 35.1%), “plan to avoid the area on my next visit” (\underline{M} =0.86, 34.3%), “talk to area personnel about the incident” (\underline{M} =0.90, 33.6%), “leave the area altogether” (\underline{M} =0.80, 33.6%), “change the time I will bike next time” (\underline{M} =0.88, 32.8%), and “stand my ground and fight for what I wanted” (\underline{M} =0.83, 32.1%).

The least commonly employed coping strategies were “try to get the person responsible to change their mind” (\underline{M} =0.71, 27.6%), and “express anger to the person who caused the incident” (\underline{M} =0.61, 26.1%).

Mountain biking days

Within 30 minutes of primary home

Within a 30-minute drive from their home, respondents went mountain biking most days in Central Minnesota (Median=20.0/ \underline{M} =40.03), followed by the Northeast (Median=16.0/ \underline{M} =21.07; Appendix B, Table 8). Mountain biking days were relatively evenly distributed throughout the rest of Minnesota with twelve (Median=12.0/ \underline{M} =29.89) days per year in Northwest Minnesota, eleven (Median=11.0/ \underline{M} =44.88) days per year in the metro area, ten (Median=10.0/ \underline{M} =27.03) days per year in Central Minnesota, and eight (Median=8.0/ \underline{M} =21.06) days per year in Southern Minnesota. Respondents indicated that about three days per year (Median=3.0/ \underline{M} =6.31) were spent outside of Minnesota when mountain biking within a 30-minute drive from their home.

Beyond 30 minutes from primary home

When traveling more than a 30-minute drive from their home, respondents went mountain biking most frequently outside of Minnesota (Median=4.0/ \underline{M} =7.17; Appendix B, Table 8). Mountain biking was distributed fairly evenly among the other regions with about three days per year in Southern Minnesota (Median=3.0/ \underline{M} =4.88), two days per year in Northeast Minnesota (Median=2.0/ \underline{M} =3.50), two days per year in Northwest Minnesota (Median=2.0/ \underline{M} =3.36), two days per year in Central Minnesota (Median=2.0/ \underline{M} =2.12), and one day per year in the metro area (Median=1.0/ \underline{M} =1.75).

Mountain biking tables

Table 5.8. Response rate to a mail survey among Minnesota bikers, 2008

	n	%
Initial sample	794	
Respondents	404	50.9
Total unusable/undeliverable	118	14.9
Undeliverable	33	4.2
Unusable	81	10.2
Asked to be removed from list	4	0.5
Adjusted sample size	757	95.3
Adjusted response rate	404	53.4
Usable surveys	323	
Mountain bike responses	134	

Table 5.9. Demographics of mountain bike respondents to a mail questionnaire in Minnesota, 2008

	Frequency	Percent
Gender		
Male	74	55.2
Female	60	44.8
Total	134	100.0
Ethnicity		
Non-Hispanic/Non-Latino	114	97.4
Hispanic/Latino	3	2.6
Total	117	100.0
Race		
White	133	99.3
American Indian/Alaskan	2	1.5
Other	1	0.7
Asian	0	0.0
Hawaiian/Pacific Islander	0	0.0
Black/African American	0	0.0
Total	N/A ¹	N/A ¹
Age (M=47.5, S.D. 14.681)		
18-30	20	15.2
31-40	19	14.4
41-50	40	30.3
51-60	29	22.0
61-70	17	12.9
71 or older	7	5.3
Total	132	100.0
Annual household income (U.S. Dollars)		
Less than \$25,000	13	10.7
\$25,000-34,999	11	9.0
\$35,000-49,999	15	12.3
\$50,000-74,999	40	32.8
\$75,000-99,999	13	10.7
\$100,000-124,999	13	10.7
\$125,000-149,999	5	4.1
\$150,000-174,999	5	4.1
\$175,000 or More	7	5.7
Total	122	100.0
Household Size includes these age groups		
Adults (18+)	132	98.5
Teens (13 to 17 years)	17	12.7
Children (12 or under)	38	28.4
Highest level of education		
Some high school	3	2.3
Graduated high school/GED	9	6.8
Some votech	2	1.5
Graduated from votech or completed associate degree	24	18.0
Some college	12	9.0
Graduated from college	40	30.1
Some postgraduate	17	12.8
Postgraduate degree(s)	26	19.5
Total	133	100.0

¹Due to possible selection of multiple categorical responses.

Table 5.3. Mountain bike user experience among respondents to a mail questionnaire in Minnesota, 2008

	Mean	Median	S.D.	Range
Year began biking (n=109)	1971	1975	17.366	1938-2008
Number of years biking (n=109)	30.74	33	17.366	0-70

Table 5.4. Reasons for mountain biking among respondents to a mail questionnaire in Minnesota, 2008

	Mean ¹	S.D. ¹	Percent Identify as Important or Very Important
To be physically active (n=134)	4.60	0.757	94.8
To get/keep physically fit (n=133)	4.44	0.733	93.2
To experience nature (n=131)	4.14	0.811	91.6
To view the scenery (n=134)	4.17	0.854	90.3
To be close to nature (n=134)	4.25	0.847	89.6
To get away from the usual demands of life (n=133)	4.17	0.790	88.7
To explore and discover new things (n=134)	3.97	0.813	81.3
To relax physically (n=134)	3.95	0.852	78.4
To do something with my family (n=130)	3.92	1.104	73.1
To enjoy different experiences from home (n=133)	3.78	0.882	72.9
To rest mentally (n=134)	3.73	0.902	69.4
To experience solitude (n=132)	3.78	0.960	68.2
To experience silence & quiet (n=133)	3.65	0.947	63.2
To challenge myself (n=134)	3.57	1.021	59.0
To be w/people who enjoy the same things I do (n=133)	3.53	1.012	57.9
To be on my own (n=130)	3.37	1.050	46.2
To be with members of my own group (n=133)	3.11	0.959	41.4
To test my skills & abilities (n=132)	3.17	0.969	40.2
To have thrills & excitement (n=134)	3.18	1.061	38.1
To be away from other people (n=132)	3.15	0.984	37.9

¹Measured on a scale where 1=Very Unimportant; 2=Unimportant; 3=Neither; 4=Important; 5=Very important

Table 5.5. Observations of potential conflict among mountain bike respondents to a mail questionnaire, 2008

	% Observe at All (n)	% Don't Know (n)
Litter on or near the trail (n=131)	80.9 (106)	1.5 (2)
Hearing other users on the trail (n=132)	75.8 (100)	3.0 (4)
Seeing evidence of off trail/road use (erosion, marks, etc.) (n=132)	60.6 (80)	2.3 (3)
Seeing off trail/road use (n=128)	59.4 (76)	2.3 (3)
Others not yielding (n=133)	54.1 (72)	1.5 (2)
Others passing too closely (n=133)	52.6 (70)	1.5 (2)
Rude or discourteous users (n=132)	50.0 (66)	1.5 (2)
Others going too fast (n=133)	39.1 (52)	2.3 (3)
Too many others on the trail (n=133)	35.3 (47)	2.3 (3)
Accessibility issue (n=132)	25.8 (34)	6.8 (9)
Others out of control (n=133)	25.6 (34)	2.3 (3)
Other (n=54)	13.0 (7)	22.2 (12)

Table 5.6. Most interfering source of conflict among mountain bike respondents to a mail questionnaire, 2008

	% Most Interfering (n)	Interference w/ other bikers % yes (n)	Interference stressful % yes (n)
Overall	70.1 (134)	44.7 (42)	34.0 (32)
Litter on/near the trail	23.4 (22)	36.4 (8)	9.1 (2)
Rude or discourteous users	17.0 (16)	62.5 (1)	56.3 (9)
Other	11.7 (11)	9.1 (1)	45.5 (5)
Too many other users on the trail	10.6 (10)	80.0 (8)	50.0 (5)
Seeing evidence of off trail/road use	7.4 (7)	0.0 (0)	28.6 (2)
Others not yielding	6.4 (6)	66.7 (4)	50.0 (3)
Accessibility issue	6.4 (6)	16.7 (1)	16.7 (1)
Seeing off trail/road use	5.3 (5)	20.0 (1)	0.0 (0)
Others passing too closely	4.3 (4)	100.0 (4)	75.0 (3)
Hearing other users on the trail	4.3 (4)	50.0 (2)	0.0 (0)
Others riding too fast	2.1 (2)	100.0 (2)	50.0 (1)
Others out of control	1.1 (1)	100.0 (1)	100.0 (1)

Table 5.7. Use of coping strategies among mountain bikers who experience interference

	% Use	Mean ¹	S.D. ¹
Don't let it get to me; refuse to think about it too much (n=72)	53.7	1.85	1.008
Talk to other members of my group about the incident (n=70)	52.2	1.75	1.011
Follow established rules for trail etiquette (n=67)	50.0	2.25	1.131
Go on as if nothing bad happened (n=67)	50.0	1.62	1.032
Refuse to get too serious about it (n=64)	47.8	1.74	1.098
Make light of the situation (n=64)	47.8	1.46	0.935
Try to forget the whole thing (n=62)	46.3	1.64	1.150
Try not to burn bridges (n=61)	45.5	1.66	1.102
I try to keep my feelings to myself (n=60)	44.8	1.44	1.022
Think about why the incident occurred (n=60)	44.8	1.35	0.995
Wish the situation would go away or be over with (n=59)	44.0	1.43	1.095
I know what has to be done so I double my efforts to make it work (n=51)	38.1	1.12	0.950
Alter my pace to avoid others (n=50)	37.3	1.11	1.038
Leave the area and go to a different part of the area (n=50)	37.3	1.04	0.967
I make a plan of action and follow it (n=49)	36.6	1.09	1.028
Come up with a couple of different solutions (n=48)	35.8	1.04	0.952
Keep others from knowing how bad things were (n=47)	35.1	0.95	0.884
Plan to avoid the area on my next visit (n=46)	34.3	0.86	0.910
Talk to area personnel about the incident (n=45)	33.6	0.90	0.928
Leave the area altogether (n=45)	33.6	0.80	0.848
Change the time I will bike next time (n=44)	32.8	0.88	0.948
Stand my ground and fight for what I wanted (n=43)	32.1	0.83	0.897
Try to get the person responsible to change their mind (n=37)	27.6	0.71	0.856
Express anger to the person who caused the incident (n=35)	26.1	0.61	0.758

¹Measured on a scale where 1=Use infrequently; 2=Use occasionally; 3=Use frequently

Table 5.8. Mountain bike region among respondents to a mail questionnaire, 2008

	Days within 30-minute drive from home			Days more than 30-minute drive from home		
	Median/Mean	S.D.	Range	Median/Mean	S.D.	Range
Central (n=29/17)	20.0/40.03	50.653	192	2.0/2.12	1.364	5
Northeast (n=57/28)	16.0/21.07	20.367	100	2.0/3.50	4.005	20
Northwest (n=35/14)	12.0/29.89	42.149	200	2.0/3.36	4.971	20
Metro (n=32/8)	11.0/44.88	77.693	275	1.0/1.75	1.488	4
Southern (n=33/16)	8.0/21.06	29.967	120	3.0/4.88	5.328	20
Outside MN (n=16/18)	3.0/6.31	7.561	25	4.0/7.17	7.740	30
Total	20.0/42.59	48.871	200	1.0/4.07	6.706	30

Section 6 – OHM users

OHM specific information

OHMs (off-highway motorcycles) are a type of designated off-highway vehicles (OHVs). In Minnesota, there are sixteen OHM or OHV multi-use trails managed by the DNR (Minnesota Department of Natural Resources [DNR], 2008).

OHM Response rate

Minnesota residents who registered their OHM with the DNR were the universe. From this list, a systematic sample of 999 Minnesota residents was selected for the survey. Selected recipients were mailed a questionnaire via the US postal service using a random start. Of these, 31 were undeliverable and one addressee asked to be removed from the list. Removing these 32 questionnaires from the sample, adjusted its size to 967. Of these, 353 were returned resulting in a response rate of 36.5% (Table 6.1). A total of 39 surveys were unusable, and thus, 314 surveys were used for analysis.

Demographics

Nine of ten (91.4%) respondents were male and most frequently were between the ages of 41-50 (39.5%; Table 6.2). Nearly all respondents were white (93.9%) and of non-Hispanic or non-Latino background (98.9%). The highest percentage (23.1%) of respondent's reported an annual household income of between \$50,000-74,999 (Appendix B, Figure 2), with the remainder relatively evenly distributed across all other income categories. The highest level of education attained by respondents was most frequently reported as a votech or associate degree (23.9%), followed by a bachelor's degree (22.0%).

OHM riding experience

Of the respondents who could remember what year they began OHM riding (n=280), the average year was 1988, resulting in an average of 20 (19.88) years of experience (Appendix B, Table 6.3). The median response was 1987 and respondents stated a range of start dates from 1950 to 2008.

Motivations

Of the 20 possible motivations for OHM riding, six were important or very important to more than 75% of respondents: "to get away from the usual demands of life" (87.3%), "to explore and discover new things" (86.1%), "to be physically active" (82.8%), "to have thrills & excitement" (81.3%), "to view the scenery" (79.5%), and "to enjoy different experiences from home" (77.4%; Table 6.4).

Between 50% and 75% of respondents indicated the following ten motivations were important or very important for OHM riding: "to do something with my family" (74.7%), "to be with people who enjoy the same things I do" (74.7%), "to be close to nature" (72.9%), "to experience nature"

(72.3%), “to challenge myself” (71.9%), “to test my skills & abilities” (70.4%), “to get/keep physically fit” (68.9%), “to relax physically” (66.6%), “to be with members of my own group” (64.1%), and “to rest mentally” (59.7%).

Less than half of respondents indicated that “to experience solitude” (47.9%), “to be on my own” (45.9%), “to be away from other people” (32.7%), and “to experience silence & quiet” (30.2%) were important or very important motivations for OHM riding.

Sources of and responses to potential conflict

The majority of OHM respondents did not frequently observe seven of the twelve sources of potential conflict identified in the questionnaire. However, more than one-half of respondents did report “hearing other users on the trail” (68.8%), “seeing evidence of off trail/road use” (67.5%), “litter on or near the trail” (53.7%), “others going too fast” (53.1%) and “seeing off trail/road use” (51.4%; Table 6.5). Between 25% and 50% of respondents observed the following seven potential sources of conflict “accessibility issue” (45.0%), “rude or discourteous users” (42.0%), “others not yielding” (38.8%), “too many others on the trail” (38.3%), “others out of control” (37.8%), and “others passing too closely (34.6%). Less than one-fifth of OHM users reported “other” sources of conflict (19.2%).

Two-thirds of respondents reported something that interfered most with their trails experience (n=191; 60.8%). Just over one quarter (28.3%) indicated that it was with other OHM users (Table 6.6). Of the conflicts that most interfered, respondents most often identified “other” sources of conflict and “accessibility issue” (23.0% & 21.5% respectively). “Too many other users on the trail” “others going too fast” and “rude or discourteous users” were identified as interferences with other OHM riders by the greatest number of respondents (n=10, n=9, & n=9 respectively).

In response to the conflicts, the most common strategies used to cope with interfering experiences were to “follow established rules for trail etiquette” (\underline{M} =2.45, 46.8%), “talk to other members of my group about the incident” (\underline{M} =2.04; 45.9%), and “think about why the incident occurred” (\underline{M} =1.42, 37.3%; Table 6.7).

Between 30 and 37% of respondents also responded in the following ways to the conflict: “refuse to get too serious about it” (\underline{M} =1.38, 36.9%), “I know what has to be done so I double my efforts to make it work” (\underline{M} =1.43, 36.6%), “don’t let it get to me; refuse to think about it too much” (\underline{M} =1.35, 36.3%), “try not to burn bridges” (\underline{M} =1.45, 35.0%), “wish the situation would go away or be over with” (\underline{M} =1.42, 34.7%), “make light of the situation” (\underline{M} =1.22, 34.7%), “I try to keep my feelings to myself” (\underline{M} =1.16, 34.1%), “come up with a couple of different solutions” (\underline{M} =1.22, 34.1%), “I make a plan of action and follow it” (\underline{M} =1.21, 33.8%), “go on as if nothing bad happened” (\underline{M} =1.20, 33.1%), “try to forget the whole thing” (\underline{M} =1.12, 32.8%), “talk to area personnel about the incident” (\underline{M} =1.08, 32.8%), and “leave the area and go to a different part of the area” (\underline{M} =1.13, 31.8%).

The least commonly employed coping strategies were, “keep others from knowing how bad things were” (\underline{M} =0.81, 27.4%), “alter my pace to avoid others” (\underline{M} =1.10, 27.1%), “plan to avoid

the area on my next visit” ($\underline{M}=0.89$, 25.2%), “try to get the person responsible to change their mind” ($\underline{M}=0.95$, 24.9%) “stand my ground and fight for what I wanted” ($\underline{M}=0.81$, 24.5%), “leave the area altogether” ($\underline{M}=0.81$, 24.5%) “express anger to the person who caused the incident” ($\underline{M}=0.71$, 23.9%), and “change the time I will OHM next time” ($\underline{M}=0.71$, 20.7%).

OHM riding days

Within 30 minutes of primary home

Within a 30-minute drive from their home, respondents went OHM riding most days in Northeast Minnesota (Median=15.0/ \underline{M} =26.95), followed by Southern Minnesota (Median=11.0/ \underline{M} =15.37) and Central Minnesota (Median=11.0/ \underline{M} =18.25; Table 6.8). Respondents reported OHM riding a median of eight (Median=8.0/ \underline{M} =20.52) days per year in Northwest Minnesota and five (Median=5.0/ \underline{M} =13.87) days per year in the metro area. The median number of OHM riding days within 30 minutes of primary home, but outside of Minnesota was 3.5 (Median=3.5/ \underline{M} =12.40).

Beyond 30 minutes from primary home

When OHM riding more than a 30-minute drive from their home, respondents most frequently went OHM riding in Northwest Minnesota (Median=5.0/ \underline{M} =9.60), followed closely by Northeast Minnesota (Median=5.0/ \underline{M} =8.78; Table 6.8). OHM riding was distributed fairly evenly among the other regions in Minnesota with about three days per year in Southern Minnesota (Median=3.0/ \underline{M} =5.59), three days per year in Central Minnesota (Median=3.0/ \underline{M} =5.48), and two days per year in the metro area (Median=2.0/ \underline{M} =6.00). About five days per year were also reported outside of Minnesota (Median=5.0/ \underline{M} =7.83).

OHM tables

Table 6.10. Response rate to a mail survey among Minnesota OHM users, 2008

	n	%
Initial sample	999	
Respondents	353	35.3
Total unusable/undeliverable	71	7.1
Undeliverable	31	3.1
Unusable	39	3.9
Asked to be removed from list	1	0.1
Adjusted sample size	967	96.8
Adjusted response rate	353	36.5
Usable surveys	314	

Table 6.11. Demographics of OHM respondents to a mail questionnaire in Minnesota, 2008

	Frequency	Percent
Gender		
Male	287	91.4
Female	27	8.6
Total	314	100.0
Ethnicity		
Non-Hispanic/Non-Latino	260	98.9
Hispanic/Latino	3	1.1
Total	263	100.0
Race		
White	295	93.9
American Indian/Alaskan	7	2.2
Other	3	1.0
Asian	1	0.3
Hawaiian/Pacific Islander	1	0.3
Black/African American	0	0
Total	N/A ¹	N/A ¹
Age (M=41.7, S.D.=11.336)		
18-30	54	17.4
31-40	77	24.8
41-50	123	39.5
51-60	39	12.5
61-70	18	5.8
71 or older	0	0
Total	311	100.0
Annual household income (U.S. Dollars)		
Less than \$25,000	15	5.2
\$25,000-34,999	21	7.3
\$35,000-49,999	29	10.1
\$50,000-74,999	66	23.1
\$75,000-99,999	60	21.0
\$100,000-124,999	40	14.0
\$125,000-149,999	20	7.0
\$150,000-174,999	10	3.5
\$175,000 or More	25	8.7
Total	286	100.0
Household Size includes these age groups		
Adults (18+)	291	92.0
Teens (13 to 17 years)	116	36.9
Children (12 or under)	115	36.6
Highest level of education		
Some high school	9	2.9
Graduated high school/GED	57	18.4
Some votech	20	6.5
Graduated from votech or completed associate degree	74	23.9
Some college	49	15.9
Graduated from college	68	22.0
Some postgraduate	15	4.9
Postgraduate degree(s)	17	5.5
Total	309	100.0

¹Due to possible selection of multiple categorical responses.

Table 6.3. OHM experience among respondents to a mail questionnaire in Minnesota, 2008

OHM experience	Mean	Median	S.D.	Range
Year began using OHM (n=280)	1988	1987	14.005	1950-2008
Number of years using OHM (n=280)	19.88	21.0	14.005	0-58

Table 6.4. Reasons for using an OHM among respondents to a mail questionnaire in Minnesota, 2008

Reasons for participating	Mean ¹	S.D. ¹	Percent Identify as Important or Very Important
To get away from the usual demands of life (n=308)	4.31	0.905	87.3
To explore and discover new things (n=309)	4.22	0.891	86.1
To be physically active (n=308)	4.08	0.908	82.8
To have thrills & excitement (n=310)	4.13	0.912	81.3
To view the scenery (n=308)	3.97	0.948	79.5
To enjoy different experiences from home (n=310)	3.93	0.947	77.4
To do something with my family (n=308)	3.99	1.144	74.7
To be w/people who enjoy the same things I do (n=308)	3.94	1.021	74.7
To be close to nature (n=303)	3.85	0.984	72.9
To experience nature (n=307)	3.86	1.005	72.3
To challenge myself (n=310)	3.89	1.077	71.9
To test my skills & abilities (n=307)	3.82	1.065	70.4
To get/keep physically fit (n=309)	3.79	1.033	68.9
To relax physically (n=308)	3.75	1.047	66.6
To be with members of my own group (n=309)	3.70	1.080	64.1
To rest mentally (n=308)	3.67	1.034	59.7
To experience solitude (n=307)	3.37	1.105	47.9
To be on my own (n=307)	3.31	1.142	45.9
To be away from other people (n=309)	3.12	1.136	32.7
To experience silence & quiet (n=308)	2.88	1.154	30.2

¹Measured on a scale where 1=Very Unimportant; 2=Unimportant; 3=Neither; 4=Important; 5=Very important

Table 6.5. Observations of potential conflict among OHM respondents to a mail questionnaire, 2008

Source of conflict	% Observe at All (n)	% Don't Know (n)
Hearing other users on the trail (n=295)	68.8 (203)	6.1 (18)
Seeing evidence of off trail/road use (erosion, marks, etc.) (n=292)	67.5 (197)	4.8 (14)
Litter on or near the trail (n=294)	53.7 (158)	4.1 (12)
Others going too fast (n=292)	53.1 (155)	4.5 (13)
Seeing off trail/road use (n=286)	51.4 (147)	6.6 (19)
Accessibility issue (n=289)	45.0 (130)	7.3 (21)
Rude or discourteous users (n=295)	42.0 (124)	5.1 (15)
Others not yielding (n=294)	38.8 (114)	5.4 (16)
Too many others on the trail (n=295)	38.3 (113)	4.7 (14)
Others out of control (n=294)	37.8 (111)	4.8 (14)
Others passing too closely (n=292)	34.6 (101)	6.2 (18)
Other (n=104)	19.2 (20)	34.6 (36)

Table 6.6. Most interfering source of conflict among OHM respondents to a mail questionnaire, 2008

	% Most Interfering (n)	Interference w/ other OHM riders % yes (n)
Overall	60.8 (191)	28.3 (54)
Other	23.0 (44)	13.6 (6)
Accessibility issue	21.5 (41)	4.9 (2)
Too many other users on the trail	12.0 (23)	43.5 (10)
Rude or discourteous users	9.9 (19)	47.4 (9)
Litter on/near the trail	8.9 (17)	23.5 (4)
Seeing evidence of off road/trail use	8.4 (16)	37.5 (6)
Others going too fast	6.8 (13)	69.2 (9)
Others out of control	3.7 (7)	28.6 (2)
Seeing off trail/road use	2.1 (4)	50.0 (2)
Others passing too closely	1.6 (3)	100.0 (3)
Others not yielding	1.6 (3)	0.0 (0)
Hearing other users on the trail	0.5 (1)	100.0 (1)

Table 6.7. Use of coping strategies among OHM users who experience an interference

Coping Strategies	% Use	Mean ¹	S.D. ¹
Follow established rules for trail etiquette (n=147)	46.8	2.45	1.080
Talk to other members of my group about the incident (n=144)	45.9	2.04	1.076
Think about why the incident occurred (n=117)	37.3	1.42	1.132
Refuse to get too serious about it (n=116)	36.9	1.38	1.118
I know what has to be done so I double my efforts to make it work (n=115)	36.6	1.43	1.174
Don't let it get to me; refuse to think about it too much (n=114)	36.3	1.35	1.095
Try not to burn bridges (n=110)	35.0	1.45	1.205
Wish the situation would go away or be over with (n=109)	34.7	1.42	1.235
Make light of the situation (n=109)	34.7	1.22	1.077
I try to keep my feelings to myself (n=109)	34.7	1.16	1.029
Come up with a couple of different solutions (n=107)	34.1	1.22	1.087
I make a plan of action and follow it (n=106)	33.8	1.21	1.106
Go on as if nothing bad happened (n=104)	33.1	1.20	1.136
Try to forget the whole thing (n=103)	32.8	1.12	1.092
Talk to area personnel about the incident (n=103)	32.8	1.08	1.056
Leave the area and go to a different part of the area (n=100)	31.8	1.13	1.093
Keep others from knowing how bad things were (n=86)	27.4	0.81	0.923
Alter my pace to avoid others (n=85)	27.1	1.10	1.127
Plan to avoid the area on my next visit (n=79)	25.2	0.89	1.075
Try to get the person responsible to change their mind (n=94)	24.9	0.95	1.005
Stand my ground and fight for what I wanted (n=77)	24.5	0.81	1.005
Leave the area altogether (n=77)	24.5	0.81	1.058
Express anger to the person who caused the incident (n=75)	23.9	0.71	0.926
Change the time I will OHM next time (n=65)	20.7	0.71	1.019

¹Measured on a scale where 1=Use infrequently; 2=Use occasionally; 3=Use frequently

Table 6.8. OHM region among respondents to a mail questionnaire, 2008

Trip Destination	Days within 30-minute drive from home			Days more than 30-minute drive from home		
	Median/Mean	S.D.	Range	Median/Mean	S.D.	Range
Northeast (n=39/107)	15.0/26.95	34.755	150	5.0/8.78	10.199	50
Southern (n=46/58)	11.0/15.37	15.524	78	3.0/5.59	5.816	30
Central (n=48/61)	10.0/18.25	20.664	90	3.0/5.48	6.114	28
Northwest (n=48/70)	8.0/20.52	26.983	100	5.0/9.60	12.141	55
Metro (n=38/12)	5.0/13.87	17.093	66	2.0/6.00	11.144	40
Outside MN (n=10/54)	3.5/12.40	22.809	75	5.0/7.83	6.919	30
Total	2.5/13.58	23.813	130	4.0/8.95	13.924	100

Section 7 – ORV users

ORV specific information

ORVs (off-road vehicles) are designated off-highway vehicles (OHVs). In Minnesota, there are about five OHV multi-use trails managed by the DNR that ORVs are permitted to use (Minnesota Department of Natural Resources [DNR], 2008).

ORV Response rate

Minnesota residents who registered their ORV with the DNR were the universe. From this list, a systematic sample of 968 Minnesota residents was selected for the survey. Selected recipients were mailed a questionnaire via the US postal service using a random start. Of these, 28 were undeliverable, two were deceased, and three addressees asked to be removed from the list. Removing these 33 questionnaires from the sample, adjusted its size to 935. Of these, 471 were returned resulting in a response rate of 50.4% (Table 7.1). A total of 89 surveys were unusable, and thus, 382 surveys were used for analysis.

Demographics

Nine of ten (91.5%) respondents were male and most frequently were between the ages of 41-50 (23.9%; Table 7.2). Nearly all respondents were white (96.3%) and of non-Hispanic or non-Latino background (98.3%). The highest percentage (27.9%) of respondent's reported an annual household income of between \$50,000-74,999, with the remainder relatively evenly distributed across all other income categories. The highest level of education attained by respondents was most frequently reported as a votech or associate degree (23.5%), followed closely by a high school degree (23.0%)

ORV riding experience

Of the respondents who could remember what year they began ORV riding (n=339), the average year was 1996, resulting in an average of 12 (11.69) years of experience (Table 7.3). The median response was 1999 and respondents stated a range of start dates from 1940 to 2008.

Motivations

Of the 20 possible motivations for ORV riding, six were important or very important to more than 75% of respondents: "to view the scenery" (85.9%), "to get away from the usual demands of life" (82.7%), "to explore and discover new things" (81.6%), "to experience nature" (79.7%), "to do something with my family" (79.0%), and "to be close to nature" (78.7%; Table 7.4).

Between 50% and 75% of respondents indicated the following ten motivations were important or very important for ORV riding: "to enjoy different experiences from home" (73.8%), "to be with people who enjoy the same things I do" (71.6%), "to relax physically" (66.7%), "to have thrills & excitement" (61.6%), "to be with members of my own group" (60.7%), "to rest

mentally” (55.4%), “to be physically active” (54.7%), “to challenge myself” (53.1%), “to test my skills & abilities” (51.7%), and “to experience solitude” (50.8%).

Less than half of respondents indicated that “to be on my own” (41.5%), “to experience silence & quiet” (37.7%), “to get/keep physically fit” (30.9%), and “to be away from other people” (30.9%) were important or very important motivations for ORV riding.

Sources of and responses to potential conflict

The majority of ORV respondents did not frequently observe eight of the twelve sources of potential conflict identified in the questionnaire. However, more than one-half of respondents did report “hearing other users on the trail” (68.0%), “seeing evidence of off trail/road use” (63.4%), “litter on or near the trail” (61.3%), and “seeing off trail/road use” (50.2%; Table 7.5). Between 25% and 50% of respondents observed the following seven potential sources of conflict “others going too fast” (46.4%), “rude or discourteous users” (39.0%), “too many others on the trail” (36.9%), “accessibility issue” (35.8%), “others not yielding” (35.4%), “others out of control” (34.5%), and “others passing too closely” (31.5%). Less than one-fifth of ORV users reported “other” sources of conflict (18.5%).

About half of respondents reported something interfered most with their trails experience (n=198; 51.8%), about one third (33.8%) indicated that it was with other ORV users (Table 7.6). Of the conflicts that most interfered, respondents identified “accessibility issue” and “other” sources of conflict as the two to do so most often (23.7% & 22.7% respectively). “Others riding too fast” “too many other users on the trail” and “rude or discourteous users” were identified as interferences with other ORV riders by the greatest number of respondents (n=16, n=15, & n=13 respectively).

ORV riding days

Within 30 minutes of primary home

Within a 30-minute drive from their home, respondents went ORV riding most days in Northwest Minnesota (Median=13.0/M=40.32), followed by Northeast Minnesota (Median=10.0/M=22.97) and Southern Minnesota (Median=10.0/M=19.28; Table 7.8). Respondents reported ORV riding a median of four (Median=4.0/M=11.15) days per year in Central Minnesota and three (Median=3.0/M=21.38) days per year in the metro area. The median number of ORV riding days within 30 minutes of primary home, but outside of Minnesota was 6.5 (Median=6.5/M=7.69).

Beyond 30 minutes from primary home

When more than a 30-minute drive from their home, respondents most frequently went ORV riding outside of Minnesota (Median=7.0/M=7.46; Table 7.8). Within Minnesota, use days were relatively evenly spread throughout the state with about five days per year in Northeast (Median=5.0/M=9.36), Central (Median=5.0/M=7.37), and Northwest Minnesota

(Median=4.5/M=11.94), about four days per year in the metro area (Median=3.5/M=8.25), and about three days per year in Southern Minnesota (Median=3.0/M=7.51).

ORV tables

Table 7.12. Response rate to a mail survey among Minnesota ORV users, 2008

	n	%
Initial sample	968	
Respondents	471	48.7
Total unusable/undeliverable	122	12.6
Undeliverable	28	2.9
Unusable	89	9.2
Deceased	2	0.2
Asked to be removed from list	3	0.3
Adjusted sample size	935	96.6
Adjusted response rate	471	50.4
Usable surveys	382	

Table 7.13. Demographics of ORV user respondents to a mail questionnaire in Minnesota, 2008

	Frequency	Percent
Gender		
Male	345	91.5
Female	32	8.5
Total	377	100.0
Ethnicity		
Non-Hispanic/Non-Latino	225	98.3
Hispanic/Latino	4	1.7
Total	229	100.0
Race		
White	368	96.3
Other	4	1.0
American Indian/Alaskan	2	0.5
Asian	1	0.3
Hawaiian/Pacific Islander	1	0.3
Black/African American	1	0.3
Total	N/A ¹	N/A ¹
Age (M=47.5, S.D. 14.561)		
18-30	49	13.0
31-40	86	22.8
41-50	90	23.9
51-60	74	19.6
61-70	52	13.8
71 or older	26	6.9
Total	377	100.0
Annual household income (U.S. Dollars)		
Less than \$25,000	21	6.0
\$25,000-34,999	23	6.6
\$35,000-49,999	39	11.2
\$50,000-74,999	97	27.9
\$75,000-99,999	65	18.7
\$100,000-124,999	44	12.6
\$125,000-149,999	16	4.6
\$150,000-174,999	15	4.3
\$175,000 or More	28	8.0
Total	348	100.0
Household Size includes these age groups		
Adults (18+)	362	94.8
Teens (13 to 17 years)	57	14.9
Children (12 or under)	101	77.7
Highest level of education		
Some high school	13	3.5
Graduated high school/GED	86	23.0
Some votech	27	7.2
Graduated from votech or completed associate degree	88	23.5
Some college	60	16.0
Graduated from college	67	17.9
Some postgraduate	15	4.0
Postgraduate degree(s)	18	4.8
Total	374	100.0

¹Due to possible selection of multiple categorical responses.

Table 7.3. ORV user experience among respondents to a mail questionnaire in Minnesota, 2008

ORV user experience	Mean	Median	S.D.	Range
Year began using ORV (n=339)	1996	1999	10.753	1940-2008
Number of years using ORV (n=339)	11.69	9.0	10.753	0-68

Table 7.4. Reasons for using ORV among respondents to a mail questionnaire in Minnesota, 2008

Reasons for participating	Mean ¹	S.D. ¹	Percent Identify as Important or Very Important
To view the scenery (n=376)	4.17	0.929	85.9
To get away from the usual demands of life (n=376)	4.20	1.026	82.7
To explore and discover new things (n=376)	4.14	1.024	81.6
To experience nature (n=370)	4.02	0.968	79.7
To do something with my family (n=372)	4.04	1.073	79.0
To be close to nature (n=375)	4.02	1.002	78.7
To enjoy different experiences from home (n=374)	3.83	1.073	73.8
To be w/people who enjoy the same things I do (n=373)	3.87	1.130	71.6
To relax physically (n=375)	3.73	1.103	66.7
To have thrills & excitement (n=372)	3.64	1.278	61.6
To be with members of my own group (n=374)	3.61	1.200	60.7
To rest mentally (n=370)	3.47	1.210	55.4
To be physically active (n=375)	3.48	1.135	54.7
To challenge myself (n=373)	3.47	1.294	53.1
To test my skills & abilities (n=373)	3.45	1.318	51.7
To experience solitude (n=374)	3.45	1.181	50.8
To be on my own (n=369)	3.21	1.247	41.5
To experience silence & quiet (n=374)	3.12	1.189	37.7
To get/keep physically fit (n=373)	3.10	1.084	35.9
To be away from other people (n=375)	2.97	1.119	30.9

¹Measured on a scale where 1=Very Unimportant; 2=Unimportant; 3=Neither; 4=Important; 5=Very important

Table 7.5. Observations of potential conflict among ORV user respondents to a mail questionnaire, 2008

Source of conflict	% Observe at All (n)	% Don't Know (n)
Hearing other users on the trail (n=331)	68.0 (225)	7.3 (24)
Seeing evidence of off trail/road use (erosion, marks, etc.) (n=328)	63.4 (208)	7.0 (23)
Litter on or near the trail (n=328)	61.3 (201)	6.7 (22)
Seeing off trail/road use (n=323)	50.2 (162)	8.7 (28)
Others going too fast (n=330)	46.4 (153)	6.7 (22)
Rude or discourteous users (n=328)	39.0 (128)	7.6 (25)
Too many others on the trail (n=331)	36.9 (122)	7.6 (25)
Accessibility issue (n=324)	35.8 (116)	12.0 (39)
Others not yielding (n=328)	35.4 (113)	7.6 (25)
Others out of control (n=328)	34.5 (113)	7.3 (24)
Others passing too closely (n=327)	31.5 (103)	8.0 (26)
Other (n=258)	18.5 (23)	33.1 (41)

Table 7.6. Most interfering source of conflict among ORV user respondents to a mail questionnaire, 2008

	% Most Interfering (n)	Interference w/ other ORV riders % yes (n)
Overall	51.8 (198)	33.8 (67)
Accessibility issue	23.7 (47)	2.1 (1)
Other	22.7 (45)	17.8 (8)
Litter on/near the trail	14.1 (28)	35.7 (1)
Rude or discourteous users	11.1 (22)	59.1 (13)
Others riding too fast	10.6 (21)	76.2 (16)
Too many other users on the trail	8.6 (17)	88.2 (15)
Seeing evidence of off road/trail use	4.5 (9)	11.1 (1)
Others out of control	2.0 (4)	25.0 (1)
Seeing off trail/road use	1.5 (3)	33.3 (1)
Others not yielding	0.5 (1)	100.0 (1)
Hearing other users on the trail	0.5 (1)	0.0 (0)

Table 7.7. ORV region among respondents to a mail questionnaire, 2008

Trip Destination	Days within 30-minute drive from home			Days more than 30-minute drive from home		
	Median/Mean	S.D.	Range	Median/Mean	S.D.	Range
Northwest (n=50/50)	13.0/40.32	76.748	350	4.5/11.94	19.730	90
Northeast (n=73/157)	10.0/22.97	35.489	150	5.0/9.36	12.286	60
Southern (n=46/47)	10.0/19.28	25.872	100	3.0/7.51	11.029	44
Outside MN (n=16/72)	6.5/7.69	7.427	30	7.0/7.46	6.105	30
Central (n=34/27)	4.0/11.15	20.228	80	5.0/7.37	7.667	30
Metro (n=21/8)	3.0/21.38	34.817	100	3.5/8.25	15.021	45
Total	1.0/14.49	34.641	200	3.0/9.15	16.144	86

Section 8 – Road bikers

Road biking specific information

In Minnesota, there are more than 500 miles of road bike trails available in state forests that are managed by the DNR and numerous other trails managed by cities and counties throughout the state (Minnesota Department of Natural Resources [DNR], 2008). As of 2004, 1,010,500 Minnesotans participated annually in biking (bicycling outdoors of all types, including mountain biking) which represents 29.0% of the state's population (Kelly, 2005b). However, DNR forecasts suggest that by 2014 the number of annual participants will fall to 714,600 participants representing a 29.3% decline in number of participants (Kelly, 2005b).

Road bike response rate

Minnesota residents who selected biking as a main activity in an initial survey query were the universe. From this list, a systematic sample of 794 Minnesota residents was selected for the survey. Selected recipients were mailed a questionnaire via the US postal service using a random start. Of these, 33 were undeliverable and four addressees asked to be removed from the list. Removing these 37 questionnaires from the sample, adjusted its size to 757. Of these, 404 were returned resulting in a response rate of 53.4% (Table 8.1). A total of 81 surveys were unusable, and thus, 323 surveys were used for analysis. Of those 323 surveys, 189 cases were categorized as road bikers.

Demographics

Slightly more than half (51.1%) of respondents were female and most frequently were between the ages of 51-60 (29.8%; Table 8.2). Nearly all respondents were white (97.9%) and of non-Hispanic or non-Latino background (97.9%). The highest percentage (28.8%) of respondent's reported an annual household income of between \$50,000-74,999, with the remainder relatively evenly distributed across all other income categories. The highest level of education attained by respondents was most frequently reported as a bachelor degree (29.7%), followed by a graduate degree (23.8%).

Road biking experience

Of the respondents who could remember what year they began road biking (n=146), the average year was 1982, resulting in an average of 26 (26.31) years of experience (Table 8.3). The median response was 1980 and respondents stated a range of start dates from 1938 to 2007.

Motivations

Of the 20 possible motivations for road biking, seven were important or very important to more than 75% of respondents: "to be physically active" (93.4%), "to get/keep physically fit" (89.1%), "to view the scenery" (87.9%), "to be close to nature" (79.7%), "to experience nature" (79.2%), "to get away from the usual demands of life" (77.3%), and "to do something with my family" (76.1%; Table 8.4).

Between 50% and 75% of respondents indicated the following seven motivations were important or very important for road biking: “to relax physically” (72.5%), “to explore and discover new things” (72.1%), “to enjoy different experiences from home” (65.3%), “to rest mentally” (63.9%), “to experience solitude” (58.3%), “to experience silence & quiet” (56.0%), and “to be with people who enjoy the same things I do” (53.0%).

Less than half of respondents indicated that “to challenge myself” (42.9%), “to be with members of my own group” (30.3%), “to be away from other people” (24.4%), “to have thrills & excitement” (22.0%), and “to test my skills and abilities” (17.3%) were important or very important motivations for road biking.

Sources of and responses to potential conflict

The majority of road bike respondents did not frequently observe eight of the twelve sources of potential conflict identified in the questionnaire. However, more than one-half of respondents did report “litter on or near the trail” (69.3%), “hearing other users on the trail” (68.0%), “seeing evidence of off trail/road use” (55.1%), and “others not yielding” (50.8%; Table 8.5). Between 25% and 50% of respondents observed five potential sources of conflict: “seeing off trail/road use” (44.3%), “others passing too closely” (40.2%), “rude or discourteous users” (38.0%), “others going too fast” (34.6%), and “too many others on the trail” (28.2%). Less than 25% of respondents observed “accessibility issue” (19.0%), “others out of control” (12.8%), and “other” sources of conflict (4.8%).

About half of respondents reported something that interfered most with their trails experience (n=92; 48.7%). Just less than half (46.7%) indicated it was with other bicyclists and about one-third (32.6%) indicated that it was stressful (Table 8.6). Of the conflicts that most interfered, respondents identified “litter on or near the trail” and “too many other users on the trail” as the two to do so most often (19.6% & 15.2% respectively). “Others passing too closely”, “others not yielding” and “too many other users on the trail” were identified as interferences with other road bicyclists by the greatest number of respondents (n=9, n=8, & n=8 respectively). “Others riding too fast” and “other” were identified as stressful by the greatest number of respondents (n=6 for both).

In response to the conflicts, the most common strategies used to cope with interfering experiences were to “follow established rules for trail etiquette” (\underline{M} =2.40, 40.2%), “don’t let it get to me; refuse to think about it too much” (\underline{M} =1.83, 38.1%), and “go on as if nothing bad happened” (\underline{M} =1.69, 36.0%; Table 8.7).

More than 25% of respondents also behaved in the following ways to the conflicts: “refuse to get too serious about it” (\underline{M} =1.75, 35.4%), “try to forget the whole thing” (\underline{M} =1.57, 33.3%), “I try to keep my feelings to myself” (\underline{M} =1.42, 33.3%), “talk to other members of my group about the incident” (\underline{M} =1.52, 32.3%), “think about why the incident occurred” (\underline{M} =1.36, 31.2%), “wish the situation would go away or be over with” (\underline{M} =1.41, 30.7%), “make light of the situation” (\underline{M} =1.18, 29.1%), “try not to burn bridges” (\underline{M} =1.40, 28.6%), and “I know what has to be done so I double my efforts to make it work” (\underline{M} =1.13, 28.0%).

Less than 25% of respondents responded in the following ways to the conflict: “I make a plan of action and follow it” (\underline{M} =0.99, 23.3%), “leave the area and go to a different part of the area” (\underline{M} =0.88, 22.8%), “alter my pace to avoid others” (\underline{M} =0.82, 22.8%), “change the time I will bike next time” (\underline{M} =0.80, 22.8%), “keep others from knowing how bad things were” (\underline{M} =0.76, 22.2%), “come up with a couple of different solutions” (\underline{M} =0.80, 21.7%), “talk to area personnel about the incident” (\underline{M} =0.71, 20.6%), “stand my ground and fight for what I wanted” (\underline{M} =0.67, 20.6%) “plan to avoid the area on my next visit” (\underline{M} =0.72, 18.5%), “express anger to the person who caused the incident” (\underline{M} =0.49, 18.0%) “leave the area altogether” (\underline{M} =0.67, 17.5%), and “try to get the person responsible to change their mind” (\underline{M} =0.48, 13.8%).

Road biking days

Within 30 minutes of primary home

Within a 30-minute drive from their home, respondents went road biking most days in Northwest Minnesota (Median=12.0/ \underline{M} =20.08), followed by the metro area (Median=10.0/ \underline{M} =37.57; Appendix B, Table 8.8). Road biking days were relatively evenly distributed throughout the rest of Minnesota with seven days per year in Central Minnesota (Median=7.0/ \underline{M} =16.53), six days per year in Northeast Minnesota (Median=6.0/ \underline{M} =13.49), and five days per year in Southern Minnesota (Median=5.0/ \underline{M} =15.40). Respondents indicated that about four days per year were spent outside of Minnesota when road biking within a 30-minute drive from their home (Median=4.0/ \underline{M} =6.36).

Beyond 30 minutes from primary home

When traveling more than a 30-minute drive from their home, respondents went road biking most frequently outside of Minnesota (Median=4.0/ \underline{M} =5.57; Appendix B, Table 8.8). Road biking was distributed fairly evenly among the other regions with about three days per year in Southern Minnesota (Median=3.0/ \underline{M} =4.79), three days per year in Northwest Minnesota (Median=2.5/ \underline{M} =4.20), two days per year in Northeast Minnesota (Median=2.0/ \underline{M} =3.76), two days per year in Central Minnesota (Median=2.0/ \underline{M} =2.00), and one day per year in the metro area (Median=1.0/ \underline{M} =1.55).

Road bike tables

Table 8.14. Response rate to a mail survey among Minnesota bikers, 2008

	n	%
Initial sample	794	
Respondents	404	50.9
Total unusable/undeliverable	118	14.9
Undeliverable	33	4.2
Unusable	81	10.2
Asked to be removed from list	4	0.5
Adjusted sample size	757	95.3
Adjusted response rate	404	53.4
Usable surveys	323	
Road bike responses	189	

Table 8.15. Demographics of road bike respondents to a mail questionnaire in Minnesota, 2008

	Frequency	Percent
Gender		
Female	96	51.1
Male	92	48.9
Total	188	100.0
Ethnicity		
Non-Hispanic/Non-Latino	158	97.9
Hispanic/Latino	3	1.9
Total	161	100.0
Race		
White	185	97.9
American Indian/Alaskan	1	0.5
Other	1	0.5
Asian	1	0.5
Hawaiian/Pacific Islander	0	0.0
Black/African American	0	0.0
Total	N/A ¹	N/A ¹
Age (M=51.69, S.D. 13.104)		
18-30	15	8.0
31-40	20	10.6
41-50	53	28.2
51-60	56	29.8
61-70	30	16.0
71 or older	14	7.4
Total	188	100.0
Annual household income (U.S. Dollars)		
Less than \$25,000	7	4.4
\$25,000-34,999	8	5.0
\$35,000-49,999	25	15.6
\$50,000-74,999	46	28.8
\$75,000-99,999	38	23.8
\$100,000-124,999	16	10.0
\$125,000-149,999	7	4.4
\$150,000-174,999	6	3.8
\$175,000 or More	7	4.4
Total	160	100.0
Household Size includes these age groups		
Adults (18+)	179	94.7
Teens (13 to 17 years)	38	20.1
Children (12 or under)	36	19.1
Highest level of education		
Some high school	1	0.5
Graduated high school/GED	16	8.6
Some votech	5	2.7
Graduated from votech or completed associate degree	21	11.4
Some college	32	17.3
Graduated from college	55	29.7
Some postgraduate	13	7.0
Postgraduate degree(s)	42	22.7
Total	185	100.0

¹Due to possible selection of multiple categorical responses.

Table 8.3. Road bike user experience among respondents to a mail questionnaire in Minnesota, 2008

	Mean	Median	S.D.	Range
Year began biking (n=146)	1982	1980	17.298	1938-2007
Number of years biking (n=146)	26.31	28	17.298	1-70

Table 8.4. Reasons for road biking among respondents to a mail questionnaire in Minnesota, 2008

	Mean ¹	S.D. ¹	Percent Identify as Important or Very Important
To be physically active (n=183)	4.42	0.974	93.4
To get/keep physically fit (n=183)	4.34	0.936	89.1
To view the scenery (n=182)	4.14	0.974	87.9
To be close to nature (n=182)	4.02	1.011	79.7
To experience nature (n=183)	3.97	1.021	79.2
To get away from the usual demands of life (n=181)	3.97	1.017	77.3
To do something with my family (n=180)	4.01	0.970	76.1
To relax physically (n=182)	3.84	1.096	72.5
To explore and discover new things (n=183)	3.86	1.047	72.1
To enjoy different experiences from home (n=182)	3.67	1.020	65.3
To rest mentally (n=180)	3.66	1.051	63.9
To experience solitude (n=180)	3.58	1.039	58.3
To experience silence & quiet (n=182)	3.48	1.096	56.0
To be w/people who enjoy the same things I do (n=183)	3.37	1.096	53.0
To challenge myself (n=182)	3.23	1.143	42.9
To be on my own (n=180)	3.14	1.139	36.1
To be with members of my own group (n=178)	2.85	1.120	30.3
To be away from other people (n=180)	2.92	0.991	24.4
To have thrills & excitement (n=182)	2.64	1.103	22.0
To test my skills & abilities (n=179)	2.56	1.006	17.3

¹Measured on a scale where 1=Very Unimportant; 2=Unimportant; 3=Neither; 4=Important; 5=Very important

Table 8.5. Observations of potential conflict among road bike respondents to a mail questionnaire, 2008

	% Observe at All (n)	% Don't Know (n)
Litter on or near the trail (n=179)	69.3 (124)	3.4 (6)
Hearing other users on the trail (n=178)	68.0 (121)	3.4 (6)
Seeing evidence of off trail/road use (erosion, marks, etc.) (n=178)	55.1 (98)	7.9 (14)
Others not yielding (n=179)	50.8 (91)	3.4 (6)
Seeing off trail/road use (n=176)	44.3 (78)	8.5 (15)
Others passing too closely (n=179)	40.2 (72)	4.5 (8)
Rude or discourteous users (n=179)	38.0 (68)	2.8 (5)
Others going too fast (n=179)	34.6 (62)	4.5 (8)
Too many others on the trail (n=181)	28.2 (51)	3.9 (7)
Accessibility issue (n=179)	19.0 (34)	8.9 (16)
Others out of control (n=179)	12.8 (23)	6.1 (11)
Other (n=84)	4.8 (4)	25.0 (21)

Table 8.6. Most interfering source of conflict among road bike respondents to a mail questionnaire, 2008

	% Most Interfering (n)	Interference w/ other bikers % yes (n)	Interference stressful % yes (n)
Overall	48.7 (92)	46.7 (43)	32.6 (30)
Litter on/near the trail	19.6 (18)	16.7 (3)	11.1 (2)
Too many other users on the trail	15.2 (14)	57.1 (8)	28.6 (4)
Others not yielding	10.9 (10)	80.0 (8)	10.0 (1)
Others passing too closely	9.8 (9)	100.0 (9)	55.6 (5)
Others riding too fast	9.8 (9)	77.8 (7)	66.7 (6)
Other	9.8 (9)	11.1 (1)	66.7 (6)
Rude or discourteous users	7.6 (7)	85.7 (6)	28.6 (2)
Accessibility issue	6.5 (6)	0.0 (0)	33.3 (2)
Seeing evidence of off trail/road use	5.4 (5)	0.0 (0)	0.0 (0)
Seeing off trail/road use	3.3 (3)	33.3 (1)	0.0 (0)
Hearing other users on the trail	1.1 (1)	0.0 (0)	100.0 (1)
Others out of control	1.1 (1)	0.0 (0)	100.0 (1)

Table 8.7. Use of coping strategies among road bikers who experience interference

	% Use	Mean ¹	S.D. ¹
Follow established rules for trail etiquette (n=76)	40.2	2.40	1.105
Don't let it get to me; refuse to think about it too much (n=72)	38.1	1.83	1.120
Go on as if nothing bad happened (n=68)	36.0	1.69	1.140
Refuse to get too serious about it (n=67)	35.4	1.75	1.154
Try to forget the whole thing (n=63)	33.3	1.57	1.211
I try to keep my feelings to myself (n=63)	33.3	1.42	1.101
Talk to other members of my group about the incident (n=61)	32.3	1.52	1.238
Think about why the incident occurred (n=59)	31.2	1.36	1.130
Wish the situation would go away or be over with (n=58)	30.7	1.41	1.190
Make light of the situation (n=55)	29.1	1.18	1.128
Try not to burn bridges (n=58)	28.6	1.40	1.271
I know what has to be done so I double my efforts to make it work (n=53)	28.0	1.13	1.067
I make a plan of action and follow it (n=44)	23.3	0.99	1.156
Leave the area and go to a different part of the area (n=43)	22.8	0.88	1.059
Alter my pace to avoid others (n=43)	22.8	0.82	0.977
Change the time I will bike next time (n=43)	22.8	0.80	0.967
Keep others from knowing how bad things were (n=42)	22.2	0.76	0.959
Come up with a couple of different solutions (n=41)	21.7	0.80	0.973
Talk to area personnel about the incident (n=39)	20.6	0.71	0.914
Stand my ground and fight for what I wanted (n=39)	20.6	0.67	0.872
Plan to avoid the area on my next visit (n=35)	18.5	0.72	0.996
Express anger to the person who caused the incident (n=34)	18.0	0.49	0.695
Leave the area altogether (n=33)	17.5	0.67	0.944
Try to get the person responsible to change their mind (n=26)	13.8	0.48	0.850

¹Measured on a scale where 1=Use infrequently; 2=Use occasionally; 3=Use frequently

Table 8.8. Road bike region among respondents to a mail questionnaire, 2008

	Days within 30-minute drive from home			Days more than 30-minute drive from home		
	Median/Mean	S.D.	Range	Median /Mean	S.D.	Range
Northwest (n=49/20)	12.0/20.08	25.643	125	2.5/4.20	4.652	20
Metro (n=21/11)	10.0/37.57	63.657	258	1.0/1.55	1.293	5
Central (n=36/11)	7.0/16.53	24.853	100	2.0/2.00	1.183	5
Northeast (n=45/21)	6.0/13.49	18.484	100	2.0/3.76	3.604	15
Southern (n=48/14)	5.0/15.40	20.364	100	3.0/4.79	5.323	20
Outside MN (n=11/7)	4.0/6.36	7.966	25	4.0/5.57	1.988	8
Total	10.0/19.96	29.857	200	0.0/1.91	4.629	30

Section 9 – Running

Running specific information

As of 2005, 496,500 Minnesotans participated annually in running which represents 14.2% of the state's population (Kelly, 2005b). However, DNR forecasts suggest that by 2014 the number of annual participants will increase modestly to about 609,600 participants annually, representing about 15.2% of the state's population (Kelly, 2005b).

Running response rate

Minnesota residents who selected running as a main activity in an initial survey query were the universe. From this list, a systematic sample of 306 Minnesota residents was selected for the survey. Selected recipients were mailed a questionnaire via the US postal service using a random start. Of these, twenty were undeliverable and two addressees asked to be removed from the list. Removing these 22 questionnaires from the sample, adjusted its size to 284. Of these, 115 were returned resulting in a response rate of 40.5% (Table 9.1). A total of 24 surveys were unusable, and thus, 91 surveys were used for analysis.

Demographics

Slightly more than half (52.7%) of respondents were female and most frequently were between the ages of 41-50 (26.4%; Table 9.2). Nearly all respondents were white (96.7%) and of non-Hispanic or non-Latino background (96.3%). The highest percentage (19.2%) of respondents reported an annual household income of between \$50,000-74,999 and \$75,000-99,999, with the remainder relatively evenly distributed across all other income categories. The highest level of education attained by respondents was most frequently reported as a postgraduate degree (32.6%), followed by a bachelor degree (25.8%).

Running experience

Of the respondents who could remember what year they began running (n=292), the average year was 1992, resulting in an average of seventeen (16.5) years of experience (Table 9.3). The median response was 1996 and respondents stated a range of start dates from 1959 to 2008.

Motivations

Of the 20 possible motivations for running, seven were important or very important to more than 75% of respondents: “to be physically active” (100.0%), “to get/keep physically fit” (97.8%), “to get away from the usual demands of life” (87.8%), “to be close to nature” (80.9%), “to experience nature” (78.9%), and “to relax physically” (78.9%; Table 9.4).

Between 50% and 75% of respondents indicated the following seven motivations were important or very important for running: “to challenge myself” (72.2%), “to rest mentally” (68.9%), “to experience solitude” (65.2%), “to experience silence & quiet” (64.4%), “to enjoy different

experiences from home” (62.2%), “to be on my own” (58.4%), and “to explore and discover new things” (57.8%).

Less than one half of respondents indicated that “to test my skills & abilities” (46.1%), “to do something with my family” (41.6%), “to be away from other people” (34.4%), “to be with people who enjoy the same things I do” (22.2%), “to have thrills & excitement” (16.7%) and “to be with members of my own group” (11.2%) were important or very important motivations for running.

Sources of and responses to potential conflict

The majority of running respondents did not frequently observe nine of the twelve sources of potential conflict identified in the questionnaire. However, more than one-half of respondents did report “litter on or near the trail” (77.9%), “hearing other users on the trail” (75.9%) and “seeing evidence of off trail/road use” (65.1%; Table 9.5). Between 25% and 50% of respondents observed “seeing off trail/road use” (49.4%), “others passing too closely” (48.8%), “too many others on the trail” (48.3%), “others not yielding” (43.7%), “rude or discourteous users” (37.9%), and “others going too fast” (33.7%). The remaining three potential conflict items: “accessibility issue” (16.5%), “others out of control” (14.9%), and “other” (3.7%) were observed by fewer than 25% of respondents.

Of those who reported anything that interfered most with their trails experience (n=55; 60.4%), less than one tenth (9.1%) indicated that it was with other runners and about one quarter (25.5%) indicated that it was stressful (Table 9.6). Of the conflicts that most interfered, respondents most often identified “litter on or near the trail” and “too many other users on the trail” (32.7% & 14.5% respectively). “Too many other users on the trail” was also identified as an interference with other runners and stressful by the greatest number of respondents.

Of the four possible responses related to respondents’ ability to change the most interfering conflict, the greatest percentage of respondents agreed or strongly agreed with the statement: “I have to accept it as it is” (42.1%, Appendix B, Table 9.7). About one third of respondents agreed or strongly agreed with the remaining three statements: “I can change or do something about it” (38.2%), “I need to know more before acting” (36.4%), and “I have to hold back from acting” (23.6%).

The most common strategies used to cope with interfering experiences were to “follow established rules for trail etiquette” (\underline{M} =2.26; 47.3%), “don’t let it get to me; refuse to think about it too much” (\underline{M} =1.81, 47.3%), and “refuse to get too serious about it” (\underline{M} =1.74, 47.3%; Table 9.8).

Between 30 and 45% of respondents responded in the following ways to the conflict: “wish the situation would go away or be over with” (\underline{M} =1.58, 44.0%), “go on as if nothing had happened” (\underline{M} =1.49, 44.0%), “I try to keep my feelings to myself” (\underline{M} =1.45, 42.9%), “try to forget the whole thing” (\underline{M} =1.45, 41.8%), “think about why the incident occurred” (\underline{M} =1.44, 40.7%), “make light of the situation” (\underline{M} =1.08, 35.2%), “stand my ground and fight for what I wanted” (\underline{M} =0.88, 35.2%), “talk to other members of my group about the incident” (\underline{M} =1.37, 34.1%), “try

not to burn bridges” (\underline{M} =1.29, 33.0%), “I know what has to be done so I double my efforts to make it work” (\underline{M} =1.12, 33.0%), “plan to avoid the area on my next visit” (\underline{M} =0.84, 31.9%), and “alter pace to avoid others” (\underline{M} =1.02, 30.8%).

Less than 30% of respondents responded in the following ways to the conflict: “leave the area and go to a different part of the area” (\underline{M} =0.88, 28.6%), “change the time I will run next time” (\underline{M} =0.92, 27.5%), “I make a plan of action and follow it” (\underline{M} =0.86, 27.5%), “express anger to the person who caused the incident” (\underline{M} =0.67, 27.5%), “leave the area altogether” (\underline{M} =0.63, 27.5%), “come up with a couple of different solutions” (\underline{M} =0.83, 25.3%), “keep others from knowing how bad things were” (\underline{M} =0.77, 25.3%), “talk to area personnel about the incident” (\underline{M} =0.69, 20.9%), and “try to get the person responsible to change their mind” (\underline{M} =0.54, 19.8%).

Running days

Within 30 minutes of primary home

Within a 30-minute drive from their home, respondents ran most days in Central Minnesota (Median=56.0/ \underline{M} =76.65; Table 9.9). About twenty days of running were reported in the metro area (Median=20.0/ \underline{M} =53.5), about eight days in Northwest Minnesota (Median=7.5/ \underline{M} =36.06), about three days in Southern Minnesota (Median=2.5/ \underline{M} =43.21), and about two days in Northeast Minnesota (Median=2.0/ \underline{M} =8.91). The median days reported outside of Minnesota was zero (Median=0/ \underline{M} =1.44).

Beyond 30 minutes from primary home

When running in areas more than a 30-minute drive from their home, respondents ran most frequently in Northeast Minnesota (Median=8.0/ \underline{M} =6.14; Table 9.9). Running was distributed fairly evenly among the other regions with about four days per year in Southern Minnesota (median=4.0/ \underline{M} =9.30), about three days per year in Central Minnesota (Median=3.0/ \underline{M} =3.80), about three days per year in Northwest Minnesota (Median=2.5/ \underline{M} =4.93), about two days per year in the metro area (Median=1.5/ \underline{M} =5.17). About 2 days of running outside of Minnesota (Median=2.0/ \underline{M} =5.20).

Running Tables

Table 9.16. Response rate to a mail survey among Minnesota runners, 2008

	n	%
Initial sample	306	
Respondents	115	37.6
Total unusable/undeliverable	46	15.0
Undeliverable	20	6.5
Unusable	24	7.8
Asked to be removed from list	2	0.7
Adjusted sample size	284	92.8
Adjusted response rate	115	40.5
Usable surveys	91	

Table 9.17. Demographics of running respondents to a mail questionnaire in Minnesota, 2008

	Frequency	Percent
Gender		
Female	48	52.7
Male	43	47.3
Total	91	100.0
Ethnicity		
Non-Hispanic/Non-Latino	77	96.3
Hispanic/Latino	3	3.8
Total	80	100.0
Race		
White	88	96.7
American Indian/Alaskan	2	2.2
Asian	2	2.2
Black/African American	1	1.1
Other	1	1.1
Hawaiian/Pacific Islander	0	0
Total	N/A ¹	N/A ¹
Age (M=46.0, S.D.=14.877)		
18-30	14	15.4
31-40	20	22.0
41-50	24	26.4
51-60	19	20.9
61-70	7	7.7
71 or older	7	7.7
Total	91	100.0
Annual household income (U.S. Dollars)		
Less than \$25,000	1	1.3
\$25,000-34,999	5	6.4
\$35,000-49,999	10	12.8
\$50,000-74,999	15	19.2
\$75,000-99,999	15	19.2
\$100,000-124,999	14	17.9
\$125,000-149,999	5	6.4
\$150,000-174,999	3	3.8
\$175,000 or More	10	12.8
Total	78	100.0
Household Size includes these age groups		
Adults (18+)	87	95.6
Teens (13 to 17 years)	17	18.7
Children (12 or under)	24	26.4
Highest level of education		
Some high school	1	1.1
Graduated high school/GED	4	4.5
Some votech	3	3.4
Graduated from votech or completed associate degree	7	7.9
Some college	11	12.4
Graduated from college	23	25.8
Some postgraduate	11	12.4
Postgraduate degree(s)	29	32.6
Total	89	100.0

¹Due to possible selection of multiple categorical responses.

Table 9.3. Running experience among respondents to a mail questionnaire in Minnesota, 2008

	Mean	Med	S.D.	Range
Year began running (n=72)	1992	1996	12.402	1959-2008
Number of years running (n=72)	16.5	12.5	12.402	1-49

Table 9.4. Reasons for running among respondents to a mail questionnaire in Minnesota, 2008

Reasons for participating	Mean ¹	S.D. ¹	Percent Identify as Important or Very Important
To be physically active (n=90)	4.79	0.410	100.0
To get/keep physically fit (n=90)	4.73	0.493	97.8
To get away from the usual demands of life (n=90)	4.16	0.820	87.8
To view the scenery (n=90)	4.18	0.712	86.7
To be close to nature (n=89)	4.15	0.860	80.9
To experience nature (n=90)	4.09	0.830	78.9
To relax physically (n=90)	4.00	0.912	78.9
To challenge myself (n=90)	3.80	0.889	72.2
To rest mentally (n=90)	3.78	0.992	68.9
To experience solitude (n=89)	3.82	0.960	65.2
To experience silence & quiet (n=90)	3.67	1.017	64.4
To enjoy different experiences from home (n=90)	3.67	0.936	62.2
To be on my own (n=89)	3.64	0.882	58.4
To explore and discover new things (n=90)	3.64	0.998	57.8
To test my skills & abilities (n=89)	3.29	0.932	46.1
To do something with my family (n=89)	3.12	1.223	41.6
To be away from other people (n=90)	3.14	1.087	34.4
To be w/people who enjoy the same things I do (n=90)	2.78	1.149	22.2
To have thrills & excitement (n=90)	2.70	0.977	16.7
To be with members of my own group (n=89)	2.51	1.046	11.2

¹Measured on a scale where 1=Very Unimportant; 2=Unimportant; 3=Neither; 4=Important; 5=Very important

Table 9.5. Observations of potential conflict among running respondents to a mail questionnaire, 2008

Source of conflict	% Observe at All (n)	% Don't Know (n)
Litter on or near the trail (n=86)	77.9 (67)	2.3 (2)
Hearing other users on the trail (n=87)	75.9 (66)	2.3 (2)
Seeing evidence of off trail/road use (erosion, marks, etc.) (n=86)	65.1 (56)	2.3 (2)
Seeing off trail/road use (n=85)	49.4 (42)	7.1 (6)
Others passing too closely (n=86)	48.8 (42)	2.3 (2)
Too many others on the trail (n=87)	48.3 (42)	3.4 (3)
Others not yielding (n=87)	43.7 (38)	2.3 (2)
Rude or discourteous users (n=87)	37.9 (33)	2.3 (2)
Others going too fast (n=86)	33.7 (29)	2.3 (2)
Accessibility issue (n=85)	16.5 (14)	5.9 (5)
Others out of control (n=87)	14.9 (13)	2.3 (2)
Other experience (n=27)	3.7 (1)	44.4 (12)

Table 9.6. Most interfering source of conflict among running respondents to a mail questionnaire, 2008

	% Most Interfering (n)	Interference w/ other horseback riders % yes (n)	Interference stressful % yes (n)
Overall	60.4 (55)	9.1 (5)	25.5 (14)
Litter on/near the trail	32.7 (18)	5.6 (1)	0.0 (0)
Too many other users on the trail	14.5 (8)	25.0 (2)	75.0 (6)
Rude or discourteous users	12.7 (7)	14.3 (1)	28.6 (2)
Others passing too closely	12.7 (7)	0.0 (0)	28.6 (2)
Other	9.1 (5)	20.0 (1)	40.0 (2)
Others not yielding	7.3 (4)	0.0 (0)	25.0 (1)
Seeing evidence of off road/trail use	3.6 (2)	0.0 (0)	50.0 (1)
Seeing off trail/road use	3.6 (2)	0.0 (0)	0.0 (0)
Accessibility issue	1.8 (1)	0.0 (0)	0.0 (0)
Hearing other users on the trail	1.8 (1)	0.0 (0)	0.0 (0)

Table 9.7. Beliefs about ability to change the most interfering experience among snowmobiling respondents to a mail questionnaire, 2008.¹

	Mean ¹	S.D. ¹	Percent Agree or Strongly Agree
I have to accept it as it is (n=57)	3.04	1.085	42.1
I can change or do something about it (n=55)	3.05	1.008	38.2
I need to know more before acting (n=55)	3.02	1.009	36.4
I have to hold back from acting (n=55)	2.75	1.040	23.6

¹Measured on a scale where 1=Strongly disagree; 2=Disagree; 3=Unsure; 4=Agree; 5=Strongly agree

Table 9.8. Use of coping strategies among runners who experience an interference

Source of conflict	% Use	Mean ¹	S.D. ¹
Follow established rules for trail etiquette (n=43)	47.3	2.26	1.179
Don't let it get to me; refuse to think about it too much (n=43)	47.3	1.81	1.057
Refuse to get too serious about it (n=43)	47.3	1.74	1.095
Wish the situation would go away or be over with (n=40)	44.0	1.58	1.109
Go on as if nothing bad happened (n=40)	44.0	1.49	1.067
I try to keep my feelings to myself (n=39)	42.9	1.45	1.026
Try to forget the whole thing (n=38)	41.8	1.45	1.119
Think about why the incident occurred (n=37)	40.7	1.44	1.074
Make light of the situation (n=32)	35.2	1.08	1.053
Stand my ground and fight for what I wanted (n=32)	35.2	0.88	0.840
Talk to other members of my group about the incident (n=31)	34.1	1.37	1.268
Try not to burn bridges (n=30)	33.0	1.29	1.242
I know what has to be done so I double my efforts to make it work (n=30)	33.0	1.12	1.143
Plan to avoid the area on my next visit (n=29)	31.9	0.84	0.857
Alter my pace to avoid others (n=28)	30.8	1.02	1.129
Leave the area and go to a different part of the area (n=26)	28.6	0.88	0.983
Change the time I will run next time (n=25)	27.5	0.92	1.082
I make a plan of action and follow it (n=25)	27.5	0.86	1.040
Express anger to the person who caused the incident (n=25)	27.5	0.67	0.810
Leave the area altogether (n=25)	27.5	0.63	0.768
Come up with a couple of different solutions (n=23)	25.3	0.83	1.098
Keep others from knowing how bad things were (n=23)	25.3	0.77	0.962
Talk to area personnel about the incident (n=19)	20.9	0.69	1.039
Try to get the person responsible to change their mind (n=18)	19.8	0.54	0.851

¹Measured on a scale where 1=Use infrequently; 2=Use occasionally; 3=Use frequently

Table 9.9. Running region among respondents to a mail questionnaire, 2008

Trip Destination	Days within 30-minute drive from home			Days more than 30-minute drive from home		
	Median/Mean	S.D.	Range	Median/Mean	S.D.	Range
Central (n=55/5)	56.0/76.65	70.773	300	3.0/3.80	3.962	10
Metro (n=18/6)	20.0/53.50	83.141	350	1.5/5.17	8.424	22
Northwest (n=16/14)	7.5/36.06	60.399	200	2.5/4.93	6.486	25
Southern (n=14/10)	2.5/43.21	94.563	340	4.0/9.30	11.567	35
Northeast (n=11/7)	2.0/8.91	16.146	50	8.0/6.14	4.220	10
Outside MN (n=9/15)	0.0/1.44	2.603	6	2.0/5.20	7.729	30
Total	48.0/71.58	77.831	340	0.0/3.61	7.578	35

Section 10 – Snowmobilers

Snowmobile specific information

In Minnesota, more than 20,000 miles of groomed snowmobile trails are managed by the DNR, with 18,000 miles of these trails maintained by local snowmobile club volunteers (Minnesota Department of Natural Resources [DNR], 2008). As of 2005, 342,000 Minnesotans participated annually in snowmobiling which represents 10% of the state's population (Kelly, 2005a). However, DNR forecasts suggest that by 2014 the number of annual participants will fall by 4.3% (Kelly, 2005b).

Snowmobile response rate

Minnesota residents who purchased a snowmobile permit were the universe. From this list, a systematic sample of 851 Minnesota residents was selected for the survey. Selected recipients were mailed a questionnaire via the US postal service using a random start. Of these, twenty-four were undeliverable. Removing these questionnaires from the sample, adjusted its size to 827. A total of 293 surveys were returned resulting in a response rate of 35.4%. A total of ten surveys were unusable and, and thus, 283 surveys were used for analysis (Table 10.1).

Demographics

More than four-fifths (88.2%) of respondents were male and most frequently were between the ages of 41-50 (38.5%; Table 10.2). Nearly all respondents were white (96.2%) and of non-Hispanic or non-Latino background (99.0%). The highest percentage (27.0%) of respondent's reported an annual household income of between \$50,000-74,999, with the remainder relatively evenly distributed across all other income categories. The highest level of education attained by respondents was most frequently reported as a bachelor degree (23.4%) followed by a vocational or associate degree (22.6%).

Snowmobiling experience

Of the respondents who could remember what year they began snowmobiling (n=248), the average year was 1982, resulting in an average of 26 (25.8) years of experience (Table 10.3). The median response was 1978 and respondents stated a range of start dates from 1960-2007.

Motivations

Of the 20 possible motivations for snowmobiling, seven were important or very important to more than 75% of respondents: "to view the scenery" (91.2%), "to experience nature" (84.7%), "to get away from the usual demands of life" (83.2%), "to be close to nature" (82.1%), "to explore and discover new things" (79.8%), "to do something with my family" (79.5%), and "to be with people who enjoy the same things I do" (75.3%; Table 10.4).

Between 50% and 75% of respondents indicated the following eight motivations were important or very important for snowmobiling: "to enjoy different experiences from home" (73.0%), "to

be with members of my own group” (68.1%), “to be physically active (67.3%), “to have thrills & excitement (62.4%), “to relax physically (61.7%), “to rest mentally” (54.6%), “to experience solitude” (53.3%), and to “to get/keep physically fit” (50.2%).

About one third or fewer of respondents indicated: “to challenge myself” (39.7%), “to be on my own” (37.5%), “to experience silence & quiet” (35.7%), “to test my skills & abilities” (32.7%) and “to be away from other people” (28.5%) were important or very important motivations for snowmobiling.

Sources of and responses to potential conflict

The majority of snowmobile respondents observed ten of the twelve sources of potential conflict identified in the questionnaire with more than three-quarters of respondents observing “others going too fast” (81.1%), “seeing off trail/road use (80.7%) and “hearing other users on the trail” (77.0%; Table 10.5). Between 50% and 75% of respondents observed “rude or discourteous users” (71.9%), “seeing evidence of off trail/road use” (71.7%), “others not yielding” (65.9), “others passing too closely” (62.7%), too many others on the trail (59.8%), litter on or near the trail (58.3%) and “others out of control” (53.4%). The remaining two potential conflict items were observed by fewer than 50% of respondents.

Two-thirds of respondents reported something that interfered most with their trails experience (n=179; 67.5%), three-quarters (74.9%) indicated it was with other snowmobilers and just about half (46.4%) indicated that it was stressful (Table 10.6). Of the conflicts that most interfered, respondents most often identified “others riding too fast” and “rude or discourteous users” (23.5% & 19.0 % respectively). These two conflicts were also identified as interferences with other snowmobilers and stressful by the greatest number of respondents.

In response to the conflicts, the most common belief about the ability to change the most interfering experience was “I have to accept it as it is” (46.7%; Table 10.7). Respondents also believed that “I need to know more before acting” (35.5%), “I have to hold back from acting” (26.7%), and “I can change or do something about it” (25.7%).

The most common strategies used to cope with interfering experiences were to “follow established rules for trail etiquette” (\underline{M} =2.83; 95.8%), “talk to other members of my group about it” (\underline{M} =2.38, 89.4%), and “refuse to get serious about it” (\underline{M} =2.10, 85.2%; Table 10.8). More than three quarters of respondents also responded in the following ways to the conflict: “don’t let it get to me; refuse to think about it too much” (\underline{M} =2.07, 84.0%), “I try to keep my feelings to myself” (\underline{M} =1.75, 78.9%), “go on as if nothing had happened” (\underline{M} =1.95, 78.6%), “try to forget the whole thing” (\underline{M} =1.91, 77.6%), “think about why the incident occurred” (\underline{M} =1.99, 77.4%), and “make light of the situation” (\underline{M} =1.79, 76.1%).

Between 50% and 75% of respondents used the following coping strategies when faced with conflict: “try not to burn bridges” (\underline{M} =2.22, 75.0%), “wish the situation would go away or be over with” (\underline{M} =2.08, 71.9%), “I know what has to be done so I double my efforts to make it work” (\underline{M} =1.82, 70.1%), “Come up with a couple of different solutions” (\underline{M} =1.75, 67.0%), “talk to area personnel about the incident” (\underline{M} =1.71, 66.5%), “I make a plan of action and follow it”

(\underline{M} =1.79, 62.4%), “alter my pace to avoid others” (\underline{M} =1.89, 62.1%), “stand my ground and fight for what I wanted” (\underline{M} =1.58, 60.1%), “keep others from knowing how bad things were” (\underline{M} =1.55, 58.7%), “leave the area and go to a different part of the area” (\underline{M} =1.79, 55.7%), “try to get the person responsible to change their mind” (\underline{M} =1.58, 54.4%), “change the time I will snowmobile next time” (\underline{M} =1.90, 52.5%), “plan to avoid the area on my next visit” (\underline{M} =1.76, 52.3%) and “express anger to the person who caused the incident” (\underline{M} =1.51, 51.0%) The only coping strategy used by less than half of respondents was to “leave the area altogether (\underline{M} =1.74, 46.2%).

Snowmobile days

Within 30 minutes of primary home

Within a 30-minute drive from their home, respondents went snowmobiling most days in the Northwest (Median=10.0/ \underline{M} =12.74). Snowmobiling was distributed fairly evenly among the other regions with six (Median=6.0/ \underline{M} =9.39; Appendix B, Table 10.9) days per year in the northeast, five (Median=5.0/ \underline{M} =8.57) days per year in Southern Minnesota, five (Median=5.0/ \underline{M} =7.00) days per year outside Minnesota, four (Median=5.0/ \underline{M} =6.68) days per year in Central Minnesota and six (Median=4.0/ \underline{M} =6.10) days per year in the metro area.

Beyond 30 minutes from primary home

When snowmobiling more than a 30-minute drive from their home, respondents went snowmobiling most frequently outside of Minnesota (Median=5.0/ \underline{M} =6.44) followed closely by Southern Minnesota (Median=3.0/ \underline{M} =6.36) and Northeast Minnesota (Median=4.0/ \underline{M} =5.85; Appendix B, Table 10.9). Snowmobiling was distributed fairly evenly among the other regions with three to five days of the activity in Central Minnesota (median=3.0/ \underline{M} =4.89), Northwest Minnesota (Median=3.0/ \underline{M} =4.53), and the metro area (Median=3.0/ \underline{M} =3.00).

Snowmobile Tables

Table 10.1. Response rate to a mail survey among Minnesota snowmobilers, 2008

	n	%
Initial Sample	851	
Respondents	293	35.4
Total Unusable/Undeliverable	34	4.0
Undeliverable	24	2.8
Unusable	10	1.2
Adjusted Sample Size	827	97.2
Adjusted response rate	293	35.4
Usable surveys	283	

Table 10.2. Demographics of snowmobile respondents to a mail questionnaire in Minnesota, 2008

	Frequency	Percent
Gender		
Male	232	88.2
Female	31	11.8
Total	263	100.0
Ethnicity		
Non-Hispanic/Non-Latino	207	99.0
Hispanic/Latino	2	1.0
Total	209	100.0
Race		
White	255	96.2
American Indian/Alaskan	3	1.1
Other	3	1.1
Hawaiian/Pacific Islander	2	0.8
Asian	0	0
Black/African American	0	0
Total	N/A ¹	N/A ¹
Age ($M=48.4$, $S.D.=12.793$)		
18-30	22	8.4
31-40	38	14.5
41-50	101	38.5
51-60	56	21.4
61-70	34	13.0
71 or older	11	4.2
Total	262	100.0
Annual household income (U.S. Dollars)		
Less than \$25,000	5	2.0
\$25,000-34,999	11	4.5
\$35,000-49,999	22	9.0
\$50,000-74,999	66	27.0
\$75,000-99,999	50	20.5
\$100,000-124,999	38	15.6
\$125,000-149,999	20	8.2
\$150,000-174,999	10	4.1
\$175,000 or More	22	9.0
Total	244	100.0
Household Size includes these age groups		
Adults (18+)	249	94.0
Teens (13 to 17 years)	65	24.5
Children (12 or under)	69	26.0
Highest level of education		
Some high school	5	0.8
Graduated high school/GED	46	17.6
Some votech	13	5.0
Graduated from votech or completed associate degree	59	22.6
Some college	44	16.9
Graduated from college	61	23.4
Some postgraduate	13	5.0
Postgraduate degree(s)	23	8.8
Total	261	100.0

¹Due to possible selection of multiple categorical responses.

Table 10.3. Snowmobile experience among respondents to a mail questionnaire in Minnesota, 2008

Snowmobile experience	Mean	Med	S.D.	Range
Year began snowmobiling (n=248)	1982	1978	12.762	1960-2007
Number of years snowmobiling (n=248)	25.8	30	12.762	1-48

Table 10.4. Reasons for snowmobiling among respondents to a mail questionnaire in Minnesota, 2008

Reasons for participating	Mean ¹	S.D. ¹	Percent Identify as Important or Very Important
To view the scenery (n=262)	4.26	0.760	91.2
To experience nature (n=262)	4.00	0.814	84.7
To get away from the usual demands of life (n=262)	4.15	0.952	83.2
To be close to nature (n=262)	3.97	0.804	82.1
To explore and discover new things (n=263)	4.05	0.927	79.8
To do something with my family (n=263)	4.08	0.942	79.5
To be w/people who enjoy the same things I do (n=263)	3.86	0.991	75.3
To enjoy different experiences from home (n=263)	3.79	0.832	73.0
To be with members of my own group (n=263)	3.65	1.022	68.1
To be physically active (n=263)	3.73	0.919	67.3
To have thrills & excitement (n=263)	3.63	1.029	62.4
To relax physically (n=261)	3.62	0.995	61.7
To rest mentally (n=262)	3.50	0.989	54.6
To experience solitude (n=261)	3.48	1.065	53.3
To get/keep physically fit (n=263)	3.38	0.972	50.2
To challenge myself (n=262)	3.13	1.089	39.7
To be on my own (n=261)	3.08	1.089	37.5
To experience silence & quiet (n=263)	3.07	1.066	35.7
To test my skills & abilities (n=260)	3.00	1.047	32.7
To be away from other people (n=263)	2.99	1.079	28.5

¹Measured on a scale where 1=Very Unimportant; 2=Unimportant; 3=Neither; 4=Important; 5=Very important

Table 10.5. Observations of potential conflict among snowmobile respondents to a mail questionnaire, 2008

Source of conflict	% Observe at All (n)	% Don't Know (n)
Others going too fast (n=249)	81.1 (202)	2.0 (5)
Seeing off trail/road use (n=243)	80.7 (196)	2.5 (6)
Hearing other users on the trail (n=244)	77.0 (188)	2.9 (7)
Rude or discourteous users (n=249)	71.9 (179)	2.0 (5)
Seeing evidence of off trail/road use (erosion, marks, etc.) (n=247)	71.7 (177)	3.2 (8)
Others not yielding (n=249)	65.9 (164)	1.6 (4)
Others passing too closely (n=249)	62.7 (156)	2.0 (5)
Too many others on the trail (n=249)	59.8 (149)	2.0 (5)
Litter on or near the trail (n=247)	58.3 (144)	2.0 (5)
Others out of control (n=249)	53.4 (133)	2.4 (6)
Accessibility issue (n=246)	38.6 (95)	6.1 (15)
Other (n=60)	26.7 (16)	20.0 (12)

¹NA = Not applicable

Table 10.6. Most interfering source of conflict among snowmobile respondents to a mail questionnaire, 2008

	% Most Interfering (n)	Interference w/ other snowmobilers % yes (n)	Interference stressful % yes (n)
Overall	67.5 (179)	74.9 (134)	46.4 (83)
Others riding too fast	23.5 (42)	85.7 (36)	52.4 (22)
Rude or discourteous users	19.0 (34)	94.1 (32)	47.1 (16)
Other	15.6 (28)	25.0 (7)	46.4 (13)
Too many other users on the trail	15.1 (27)	81.5 (22)	40.7 (11)
Seeing off trail/road use	8.4 (15)	66.7 (10)	33.3 (5)
Others out of control	7.8 (14)	92.9 (13)	42.9 (6)
Litter on/near the trail	4.5 (8)	37.5 (3)	50.0 (4)
Others passing too closely	2.8 (5)	100.0 (5)	60.0 (3)
Hearing other users on the trail	2.2 (4)	100.0 (4)	25.0 (1)
Others not yielding	1.1 (2)	100.0 (2)	100.0 (2)

Table 10.7. Beliefs about ability to change the most interfering experience among snowmobiling respondents to a mail questionnaire, 2008.¹

	Mean ¹	S.D. ¹	Percent Agree or Strongly Agree
I have to accept it as it is (n=180)	3.12	1.087	46.7
I need to know more before acting (n=172)	3.11	.939	35.5
I have to hold back from acting (n=172)	2.86	.932	26.7
I can change or do something about it (n=175)	2.77	1.020	25.7

¹Measured on a scale where 1=Strongly disagree; 2=Disagree; 3=Unsure; 4=Agree; 5=Strongly agree

Table 10.8. Use of coping strategies among snowmobilers who experience an interference

Source of conflict	% Use	Mean ¹	S.D. ¹
Follow established rules for trail etiquette (n=207)	95.8	2.83	.436
Talk to other members of my group about the incident (n=194)	89.4	2.38	.673
Refuse to get too serious about it (n=178)	85.2	2.10	.752
Don't let it get to me; refuse to think about it too much (n=178)	84.0	2.07	.764
I try to keep my feelings to myself (n=161)	78.9	1.75	.716
Go on as if nothing bad happened (n=165)	78.6	1.95	.775
Try to forget the whole thing (n=163)	77.6	1.91	.765
Think about why the incident occurred (n=161)	77.4	1.99	.766
Make light of the situation (n=153)	76.1	1.79	.675
Try not to burn bridges (n=153)	75.0	2.22	.769
Wish the situation would go away or be over with (n=151)	71.9	2.08	.780
I know what has to be done so I double my efforts to make it work (n=141)	70.1	1.82	.693
Come up with a couple of different solutions (n=134)	67.0	1.75	.722
Talk to area personnel about the incident (n=133)	66.5	1.71	.681
I make a plan of action and follow it (n=126)	62.4	1.79	.730
Alter my pace to avoid others (n=123)	62.1	1.89	.755
Stand my ground and fight for what I wanted (n=122)	60.1	1.58	.654
Keep others from knowing how bad things were (n=118)	58.7	1.55	.687
Leave the area and go to a different part of the area (n=112)	55.7	1.79	.788
Try to get the person responsible to change their mind (n=106)	54.4	1.58	.689
Express anger to the person who caused the incident (n=104)	51.0	1.51	.654
Change the time I will snowmobile next time (n=105)	52.5	1.90	.808
Plan to avoid the area on my next visit (n=104)	52.3	1.76	.794
Leave the area altogether (n=92)	46.2	1.74	.810

¹Measured on a scale where 1=Use infrequently; 2=Use occasionally; 3=Use frequently

Table 10.9. Snowmobile region among respondents to a mail questionnaire, 2008

Trip Destination	Days within 30-minute drive from home			Days more than 30-minute drive from home		
	Median/Mean	S.D.	Range	Median/Mean	S.D.	Range
Northwest (n=47/47)	10.0/12.74	11.724	44	3.0/4.53	5.856	29
Northeast (n=54/79)	6.0/9.39	9.667	44	4.0/5.85	5.199	30
Southern (n=30/11)	5.0/8.57	8.673	29	3.0/6.36	11.307	39
Outside MN (n=7/50)	5.0/7.00	4.320	11	5.0/6.44	4.700	19
Central (n=44/27)	4.0/6.68	6.716	29	3.0/4.89	3.755	14
Metro (n=31/3)	4.0/6.10	6.431	24	3.0/3.00	2.000	4
Total	7.0/10.49	47.531	181	5.0/7.19	32.817	135

Section 11 – Walkers/hikers

Walking/Hiking specific information

As of 2005, 1,896,400 Minnesotans participated annually in walking/hiking which represents 54.4% of the state's population (Kelly, 2005a). While the overall percentage of Minnesotans is expected to hold steady, taking into account predicted population increases results in an overall increase of users to 2,180,500 by 2014 (Kelly, 2005b).

Walker/Hiker Response Rate

Minnesota residents who selected walking/hiking as a main activity in an initial survey query were the universe. From this list, a systematic sample of 982 Minnesota residents was selected for the survey. Selected recipients were mailed a questionnaire via the US postal service using a random start. Of these, 22 were undeliverable and eleven addressees asked to be removed from the list. Removing these 33 questionnaires from the sample, adjusted its size to 949. Of these, 551 were returned resulting in a response rate of 58.1% (Table 11.1). A total of 100 surveys were unusable, and thus, 451 surveys were used for analysis.

Demographics

More than half (56.9%) of respondents were female and most frequently were between the ages of 51-60 (28.1%; Table 11.2). Nearly all respondents were white (96.0%) and of non-Hispanic or non-Latino background (99.4%). The highest percentage (24.6%) of respondent's reported an annual household income of between \$50,000-74,999, followed by \$75,000-99,999, with the remainder relatively evenly distributed across all other income categories. The highest level of education attained by respondents was most frequently reported as a bachelor's degree (24.4%), followed by a graduate degree (17.9%).

Walking/hiking experience

Of the respondents who could remember what year they began walking/hiking (n=279), the average year was 1981, resulting in an average of 27 (26.81) years of experience (Table 11.3). The median response was 1982 and respondents stated a range of start dates from 1927 to 2008.

Motivations

Of the 20 possible motivations for walking/hiking, seven were important or very important to more than 75% of respondents: "to be physically active" (94.0%), "to view the scenery" (91.7%), "to be close to nature" (89.9%), "to experience nature" (88.3%), "to get/keep physically fit" (87.2%), "to relax physically" (80.6%), and "to get away from the usual demands of life" (79.8%; Table 11.4).

Between 50% and 75% of respondents indicated the following six motivations were important or very important for walking/hiking: "to explore and discover new things" (73.2%), "to rest mentally" (71.8%), "to do something with my family" (70.1%), "experience silence & quiet"

(66.7%), “to enjoy different experiences from home” (65.4%) and “to experience solitude” (64.1%).

Less than half of respondents indicated that “to be with people who enjoy the same things I do” (48.3%), “to be on my own” (43.2%), “to be away from other people” (34.4%), “to challenge myself” (34.2%), “to be with members of my own group” (28.8%), “to test my skills & abilities” (23.9%), and “to have thrills & excitement” (18.8%) were important or very important motivations for walking/hiking.

Sources of and responses to potential conflict

The majority of walking/hiking respondents did not frequently observe nine of the twelve sources of potential conflict identified in the questionnaire. However, more than one-half of respondents did report “litter on or near the trail” (79.0%), “hearing other users on the trail” (74.0%) and “seeing evidence of off trail/road use” (63.1%; Table 11.5). Between 25% and 50% of respondents observed “seeing off trail/road use” (49.9%), “rude or discourteous users” (44.9%), “others passing too closely” (43.3%), “others going too fast” (42.3%), “others not yielding” (41.3%), and “too many others on the trail” (38.2%). The remaining three potential conflict items: “accessibility issue” (22.7%), “others out of control” (21.0%), and “other” sources of conflict (10.2%) were observed by fewer than 25% of respondents.

Of those who reported anything that interfered most with their trails experience (n=269; 59.6%) just over one third (36.4%) indicated that it was with other walkers/hikers and about one third (31.6%) indicated that it was stressful (Table 11.6). Of the conflicts that most interfered, respondents most often identified “litter on or near the trail” and “rude or discourteous users” (39.8% & 11.2% respectively). These two conflicts were also identified as interferences with other walkers/hikers and stressful by the greatest number of respondents.

Of the four possible responses related to respondents’ ability to change the most interfering conflict, the greatest percentage of respondents agreed or strongly agreed with the statement: “I can change or do something about it” (42.5%; Table 11.7). About one third of respondents agreed or strongly agreed with the remaining three statements: “I need to know more about acting” (40.3%), “I have to accept it as it is” (38.4%), and “I have to hold back from acting” (26.5%).

In response to the conflicts, the most frequently employed coping strategies were to “follow established rules for trail etiquette” (\underline{M} =2.36; 49.9%), “don’t let it get to me; refuse to think about it too much” (\underline{M} =1.82, 48.8%), and “refuse to get too serious about it” (\underline{M} =1.73, 48.1%; Table 11.8).

Between 30 and 45% of respondents responded in the following ways to the conflict: “talk to other members of my group about the incident” (\underline{M} =1.80, 44.3%), “try to forget the whole thing” (\underline{M} =1.62, 44.3%), “go on as if nothing had happened” (\underline{M} =1.54, 42.6%), “think about why the incident occurred” (\underline{M} =1.51, 40.8%), “make light of the situation” (\underline{M} =1.2, 35.9%), “try not to burn bridges” (\underline{M} =1.30, 34.1%), “I know what has to be done so I double my efforts to make it

work” (\underline{M} =1.11, 33.9%), “change the time I will walk next time” (\underline{M} =0.95, 30.4%), and “I make a plan of action and follow it” (\underline{M} =1.02, 30.2%).

Less than 30% of respondents responded in the following ways to the conflict: “talk to area personnel about the incident” (\underline{M} =0.94, 29.3%), “leave the area and go to a different part of the area” (\underline{M} =0.98, 29.0%), “alter my pace to avoid others” (\underline{M} =0.96, 28.8%), “keep others from knowing how bad things were” (\underline{M} =0.85, 28.6%), “come up with a couple of different solutions” (\underline{M} =0.88, 27.3%), “plan to avoid the area on my next visit” (\underline{M} =0.86, 27.3%), “stand my ground and fight for what I wanted” (\underline{M} = 0.78, 25.7%), “leave the area altogether” (\underline{M} =0.65, 22.6%), “express anger to the person who caused the incident” (\underline{M} =0.54, 21.7%), and “try to get the person responsible to change their mind” (\underline{M} =0.54, 19.5%).

Walking/hiking days

Within 30 minutes of primary home

Within a 30-minute drive from their home, respondents walked/hiked most days in the metro area (Median = 25.0/ \underline{M} =63.82), followed closely by Northeast Minnesota (Median = 15.0/ \underline{M} =52.04; Table 11.9). Respondents reported more than 30 days of walking/hiking per year in Southern (Median = 18.0/ \underline{M} =49.56), Northwest (Median = 10.0/ \underline{M} =41.13), and Central Minnesota (Median = 10.0/ \underline{M} =37.20). Respondents indicated 20 days per year (Median =3.0/ \underline{M} =20.25) were spent outside of Minnesota when walking/hiking within a 30-minute drive from their home.

Beyond 30 minutes from primary home

When walking/hiking more than a 30-minute drive from their home, respondents walked/hiked most frequently outside of Minnesota (Median=.5/ \underline{M} =13.46) followed by Northwest Minnesota (Median=3.0/ \underline{M} =8.62; Table 11.9). Walking/hiking was distributed fairly evenly among the other regions with about six days per year in the Northeast (median=4.0/ \underline{M} =6.31) and Central Minnesota (Median=2.5/ \underline{M} =5.45), and about three days per year in Southern Minnesota (Median = 2.5/ \underline{M} =3.11) and the Metro area (Median=2.0/ \underline{M} =2.77).

Walking/Hiking Tables

Table 11.1. Response rate to a mail survey among Minnesota walkers, 2008

	n	%
Initial sample	982	
Respondents	551	56.1
Total unusable/undeliverable	133	13.5
Undeliverable	22	2.2
Unusable	100	10.2
Asked to be removed from list	11	1.1
Adjusted sample size	949	96.6
Adjusted response rate	551	58.1
Usable surveys	451	

Table 10.2. Demographics of walking respondents to a mail questionnaire in Minnesota, 2008

	Frequency	Percent
Gender		
Female	255	56.9
Male	193	43.1
Total	448	100.0
Ethnicity		
Non-Hispanic/Non-Latino	356	99.4
Hispanic/Latino	2	0.6
Total	358	100.0
Race		
White	433	96.0
American Indian/Alaskan	0	0
Other	6	1.3
Asian	2	0.4
Hawaiian/Pacific Islander	0	0
Black/African American	3	0.7
Total	N/A ¹	N/A ¹
Age (M=56.1, S.D.=12.086)		
18-30	16	3.6
31-40	41	9.2
41-50	92	20.7
51-60	125	28.1
61-70	112	25.2
71 or older	59	13.3
Total	445	100.0
Annual household income (U.S. Dollars)		
Less than \$25,000	28	7.5
\$25,000-34,999	39	10.4
\$35,000-49,999	50	13.4
\$50,000-74,999	92	24.6
\$75,000-99,999	72	19.3
\$100,000-124,999	47	12.6
\$125,000-149,999	16	4.3
\$150,000-174,999	9	2.4
\$175,000 or More	21	5.6
Total	374	100.0
Household Size includes these age groups		
Adults (18+)	430	95.3
Teens (13 to 17 years)	55	12.2
Children (12 or under)	58	12.9
Highest level of education		
Some high school	7	1.6
Graduated high school/GED	62	13.9
Some votech	14	3.1
Graduated from votech or completed associate degree	63	14.1
Some college	77	17.3
Graduated from college	109	24.4
Some postgraduate	34	7.6
Postgraduate degree(s)	80	17.9
Total	446	100.0

¹Due to possible selection of multiple categorical responses.

Table 11.3. Walking user experience among respondents to a mail questionnaire in Minnesota, 2008

Walking user experience	Mean	Med	S.D.	Range
Year began walking (n=279)	1981	1982	15.633	1927-2008
Number of years walking (n=279)	26.81	26.00	15.633	0-81

Table 11.4. Reasons for walking among respondents to a mail questionnaire in Minnesota, 2008

Reasons for participating	Mean ¹	S.D. ¹	Percent Identify as Important or Very Important
To be physically active (n=447)	4.45	0.770	94.0
To view the scenery (n=447)	4.29	0.849	91.7
To be close to nature (n=444)	4.30	0.843	89.9
To experience nature (n=444)	4.21	0.869	88.3
To get/keep physically fit (n=445)	4.24	0.823	87.2
To relax physically (n=448)	4.04	0.870	80.6
To get away from the usual demands of life (n=444)	4.03	0.934	79.8
To explore and discover new things (n=441)	3.87	0.988	73.2
To rest mentally (n=444)	3.80	0.965	71.8
To do something with my family (n=437)	3.86	1.096	70.1
To experience silence & quiet (n=442)	3.72	0.989	66.7
To enjoy different experiences from home (n=434)	3.66	0.960	65.4
To experience solitude (n=443)	3.71	1.066	64.1
To be w/people who enjoy the same things I do (n=439)	3.34	1.092	48.3
To be on my own (n=438)	3.22	1.130	43.2
To be away from other people (n=439)	3.05	1.076	34.4
To challenge myself (n=436)	3.04	1.081	34.2
To be with members of my own group (n=431)	2.89	1.082	28.8
To test my skills & abilities (n=436)	2.71	1.096	23.9
To have thrills & excitement (n=437)	2.63	1.081	18.8

¹Measured on a scale where 1=Very Unimportant; 2=Unimportant; 3=Neither; 4=Important; 5=Very important

Table 11.5. Observations of potential conflict among walking respondents to a mail questionnaire, 2008

Source of conflict	% Observe at All (n)	% Don't Know (n)
Litter on or near the trail (n=438)	79.0	2.5
Hearing other users on the trail (n=438)	74.0	3.4
Seeing evidence of off trail/road use (erosion, marks, etc.) (n=439)	63.1	5.5
Seeing off trail/road use (n=437)	49.9	6.2
Rude or discourteous users (n=443)	44.9	4.7
Others passing too closely (n=443)	43.3	5.6
Others going too fast (n=440)	42.3	4.3
Others not yielding (n=438)	41.3	5.3
Too many others on the trail (n=442)	38.2	5.2
Accessibility issue (n=437)	22.7	7.1
Others out of control (n=439)	21.0	5.7
Other (n=177)	10.2	20.3

Table 11.6. Most interfering source of conflict among walking respondents to a mail questionnaire, 2008

	% Most Interfering (n)	Interference w/ other walkers/hikers % yes (n)	Interference stressful % yes (n)
Overall	59.6 (269)	36.4 (98)	31.6 (85)
Litter on/near the trail	39.8 (107)	29.9 (32)	24.3 (26)
Rude or discourteous users	11.2 (30)	63.3 (19)	40.0 (12)
Seeing evidence of off trail/road use	9.3 (25)	24.0 (6)	20.0 (5)
Others riding too fast	7.8 (21)	14.3 (3)	28.6 (6)
Too many other users on the trail	7.4 (20)	65.0 (13)	20.0 (4)
Other	5.9 (16)	37.5 (6)	50.0 (8)
Others passing too closely	5.6 (15)	40.0 (6)	60.0 (9)
Seeing off trail/road use	4.5 (12)	8.3 (1)	58.3 (7)
Others not yielding	3.0 (8)	75.0 (6)	62.5 (5)
Hearing other users on the trail	3.0 (8)	62.5 (5)	25.0 (2)
Accessibility issue	2.2 (6)	0.0 (0)	16.7 (1)
Others out of control	0.4 (1)	100.0 (1)	0.0 (0)

Table 11.7. Beliefs about ability to change the most interfering experience among snowmobiling respondents to a mail questionnaire, 2008.¹

	Mean ¹	S.D. ¹	Percent Agree or Strongly Agree
I can change or do something about it (n=266)	3.14	1.053	42.5
I need to know more before acting (n=258)	3.03	1.138	40.3
I have to accept it as it is (n=268)	2.97	1.140	38.4
I have to hold back from acting (n=257)	2.71	1.095	26.5

¹Measured on a scale where 1=Strongly disagree; 2=Disagree; 3=Unsure; 4=Agree; 5=Strongly agree

Table 11.8. Use of coping strategies among walkers who experience an interference

Source of conflict	% Use	Mean ¹	S.D. ¹
Follow established rules for trail etiquette (n=225)	49.9	2.36	1.059
Don't let it get to me; refuse to think about it too much (n=220)	48.8	1.82	1.045
Refuse to get too serious about it (n=217)	48.1	1.73	1.039
Talk to other members of my group about the incident (n=200)	44.3	1.80	1.135
Try to forget the whole thing (n=200)	44.3	1.62	1.110
Go on as if nothing had happened (n=192)	42.6	1.54	1.104
Think about why the incident occurred (n=184)	40.8	1.51	1.108
Wish the situation would go away or be over with (n=181)	40.1	1.54	1.166
I try to keep my feelings to myself (n=180)	39.9	1.41	1.078
Make light of the situation (n=162)	35.9	1.20	1.077
Try not to burn bridges (n=154)	34.1	1.30	1.181
I know what has to be done so I double my efforts to make it work (n=153)	33.9	1.11	1.041
Change the time I will walk next time (n=137)	30.4	0.95	1.026
I make a plan of action and follow it (n=136)	30.2	1.02	1.108
Talk to area personnel about the incident (n=132)	29.3	0.94	1.046
Leave the area and go to a different part of the area (n=131)	29.0	0.98	1.086
Alter my pace to avoid others (n=130)	28.8	0.96	1.069
Keep others from knowing how bad things were (n=129)	28.6	0.85	0.987
Come up with a couple of different solutions (n=123)	27.3	0.88	1.016
Plan to avoid the area on my next visit (n=123)	27.3	0.86	1.035
Stand my ground and fight for what I wanted (n=116)	25.7	0.78	0.960
Leave the area altogether (n=102)	22.6	0.65	0.912
Express anger to the person who caused the incident (n=98)	21.7	0.54	0.778
Try to get the person responsible to change their mind (n=88)	19.5	0.54	0.821

¹Measured on a scale where 1=Use infrequently; 2=Use occasionally; 3=Use frequently

Table 11.9. Walking region among respondents to a mail questionnaire, 2008

Trip Destination	Days within 30-minute drive from home			Days more than 30-minute drive from home		
	Median/Mean	S.D.	Range	Median/Mean	S.D.	Range
Metro (n=176/30)	25.0/63.82	83.150	365	2.0/2.77	2.738	10
Northeast (n=111/141)	15.0/52.04	91.244	365	4.0/6.31	6.713	30
Southern (n=55/44)	18.0/49.56	77.301	350	2.5/3.11	2.704	15
Northwest (n=69/61)	10.0/41.13	69.209	300	3.0/8.62	13.588	65
Central (n=82/40)	10.0/37.20	68.388	330	2.5/5.45	7.089	30
Outside MN (n=20/72)	3.0/20.25	37.025	140	6.5/13.46	21.480	103
Total	20.0/58.13	85.935	365	2.0/6.88	12.479	65

DISCUSSION

An ambitious and unique project simultaneously studied a variety of trail users in Minnesota regarding trail user interactions and economic impacts. Results indicate some commonalities in demographics, motivations and trail-related conflict. Building from those commonalities and addressing the differences among trail groups can lead to greater cohesion in trail planning and advocacy. Further, understanding how trail users perceive and respond to conflict can improve management and visitor experiences. A few key findings are highlighted in the discussion below.

Demographics

Ninety percent or more of trail users for all activities were white and of non-Hispanic/non-Latino background. The state Demographics center predicts that by 2025, seventeen percent of Minnesotans will be non-White (Picone, 2001). As the state of Minnesota grows increasingly diverse, efforts to expand trail activities to other races and ethnicities may help grow the activity.

Research indicates that non-white Minnesotans participate in outdoor recreation less often than white Minnesotans (Legislative-Citizen Commission on Minnesota Resources [LCCMR], 2007). A variety of constraints may be the cause for this. Constraints are defined by Jackson (2000) as “factors that are assumed by researchers and/or perceived or experienced by individuals to limit the formation of leisure preferences and/or to inhibit or prohibit participation and enjoyment in leisure” (p. 62). The majority of recreation research indicates that constraints to recreation in general are perceived differently by race/ethnicity. Understanding constraints to trail use among non-Whites is an important step and opportunity for other research.

Trail Use

Overall recreation participation in Minnesota is expected to decrease or plateau (given population increases) by 2014. However, ATV riding and, to a lesser extent, running and walking/hiking are expected to increase. Understanding various trends, external factors and motivations may help improve future trail use planning and usage.

ATV participation estimates for 2007 indicate nearly 20% of all Americans 16 or older (Cordell et al. 2008), engage in this activity. ATV sales grew more than 200% from 1995 to 2006, with 2006 sales estimated to have reached 856,000 ATVs (Specialty Vehicle Institute of America 2007). Exhibiting a similar trend, OHV riding on federal lands increased from 2005-2009 (US GAO, 2009). Based on the location of trails available for OHM and ORV use in Minnesota (largely Northeast Minnesota with some in Northwest and Central Minnesota) it is not surprising that use days are concentrated in those areas, or outside of the state. ORV users reported about seven days of riding outside of Minnesota and OHM users reported about 4 days of riding outside of Minnesota; capturing those experiences within the state can increase economic impact. Further, this concentration of trails likely contributes to the access issue that OHM and ORV users report.

Horseback riders reported ten to eleven days of horseback riding outside of Minnesota and the greatest number of participation days greater than 30 minutes from home. Understanding the pull and push factors of out of state travel may help retain their ridership within Minnesota as well as guide destination development for greater horse-related tourism.

Summer non-motorized trail activities report some of the highest number of use days within 30 minutes of home and few use days outside of Minnesota. Runners are the most frequent activity participants, followed distantly by mountain bikers, walkers/hikers and horseback riders. These close to home activities serve important social and physical benefits for participants.

Certainly a number of factors influence trails use, such as the aforementioned constraints. Climate change is another source of influence, most immediately with winter trail activities. Both snowmobiling and cross-country skiing are dependent upon winter snowfall and cold temperatures. The variability and seemingly decreasing longevity of snow in Minnesota creates instability in yearly activity rates (DNR, 2007). Future decreases in snow may displace snowmobilers and cross-country skiers to areas farther north within Minnesota, or altogether out of the state if adequate areas are not available. Also, snowmobilers and cross-country skiers may transition into other recreational activities that are less dependent on winter snowfall and cold temperatures. Monitoring of such activity substitutions or intended substitutions seems prudent. Snowmobilers spend about 5 days per year outside of Minnesota and cross-country skiers spend about 3 days per year outside of Minnesota when within a 30-minute drive from their home. Capturing those experiences within the state can increase its economic impact. Certainly weather and snow conditions play a role in this behavior. However, considering if and how these riders can be retained is worthwhile.

Motivations

A combination of aesthetics, fitness and escape primarily motivates Minnesota's recreational trail users. The importance of nature-related experiences was important to all groups and had the least variation among groups where equestrians indicated it was significantly more important than the other groups and runners attributed less importance than skiers and equestrians. Maintaining the natural beauty of the surroundings will enhance this natural experience.

Given the obesity epidemic in the U.S. and in Minnesota, encouraging active recreation is essential. In 2007, 63.0% of U.S. adults were either overweight or obese (Centers for Disease Control and Prevention [CDC], 2008a) and only 48.8% of the U.S. population met the recommended levels of physical activity: at least 30 minutes of moderate level physical activity five or more days of the week or 20 minutes of vigorous level physical activity three or more days per week (CDC, 2008b). Similarly, in Minnesota 62.0% of U.S. adults were either overweight or obese (CDC, 2008a) and less than half (48.8%) of the Minnesota population met the recommended levels of physical activity (CDC, 2008b). Among diverse populations, there are significant differences in physical activity levels: Whites are more active and less obese. In 2007 51.7% of White adults met physical activity recommendations and 10.8% were inactive (CDC, 2008b). However, only 40% of Blacks or Hispanics met physical activity recommendations and 20% were inactive and, not perhaps not surprisingly, 72.2% of Blacks and

65.3% of Hispanics were identified as overweight or obese compared to 62.3% of the White population (CDC, 2008a).

At both national and state levels, calls for physical activity on public lands have been mandated. Among the many outdoor recreation areas that provide opportunities for physical activity, trails provide a ‘green treadmill’ yet Minnesota city and county officials identified trail facilities among their top ten needs (LCCMR, 2007). As such, encouraging and expanding active opportunities is both an opportunity and an obligation.

Conflict

Managers have identified visitor conflict as a common problem for more than 20 years (Jakes, Gregerson, Lundgren, & Bengston, 1990). A review of visitor surveys indicate anywhere from five to 40 percent of visitors have something interfere with their experience (Schneider, 2004). Fortunately, the potential for conflict resolution among recreation visitors is high compared to conflict between other groups (Floyd, Germain, & ter Horst, 1996). Schneider (2004) found that “individuals frequently cope without the need for management intervention. Still, these seemingly unmanaged responses rely heavily on well communicated established rules.” Findings from this study support that supposition as observed by the reliance on ‘following rules for trail etiquette.’

As such, evaluating and possibly improving current visitor education techniques can improve visitor experiences and safety. Effective education can change behaviors and lead to less litter, adherence to trail etiquette and trail regulations. Litter was the most interfering source of conflict for summer non-motorized trails activities, similar to other research.

Interfering with motivations to experience nature in a quiet environment is the issue of visitor density and behavior. One-third to one-half of trail users identified “too many others on the trail” as interference. Crowding has been defined as a negative, personal, subjective evaluation of some use density level (Manning and Ciali 1980) and is influenced by a variety of factors that can be categorized into three groups – personal characteristics, characteristics of others, and situational factors (Manning 1999). Understanding how these factors influence trail density is of interest for trail design, planning and improved visitor experiences.

Like other conflict research, the majority of respondents (except snowmobiling) attributed conflict to other user groups. The source of this conflict, social versus person values for example (Carothers, et al 2001), remains unknown but a rich research area. For snowmobiling three quarters (74.9%) of interference was attributed to other snowmobilers. Accordingly, education related to appropriate personal behavior and snowmobile regulations may ease some of the conflict and interference. Efforts to further promote the snowmobiling code of ethics through local snowmobile associations may provide an additional venue to gain support and accountability from snowmobilers.

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**APPENDIX A- Select Summary Tables of Minnesota
Recreational Trail Survey Respondents**

Table A1. Demographics of respondents to a mail survey among Minnesota trail users, 2008

(%)	ATV users	Road Bikers	Mountain Bikers	Cross-Country Skiers	Horseback Riders	OHM users	ORV users	Runners	Snowmobilers	Walkers/hikers
Gender										
Male	88.4	48.9	55.2	48.0	19.9	91.4	91.5	47.3	88.2	43.1
Female	11.6	51.1	44.8	52.0	80.1	8.6	8.5	52.7	11.8	56.9
Ethnicity										
Non-Hispanic/Non-Latino	98.0	97.9	97.4	99.8	98.6	98.9	98.3	96.3	99.0	99.4
Hispanic/Latino	2.0	1.9	2.6	0.2	1.4	1.1	1.7	3.8	1.0	0.6
Race										
White	98.1	97.9	99.3	97.1	89.8	93.9	96.3	96.7	96.2	96.0
American Indian/Alaskan	0.9	0.5	1.5	0.8	0.8	2.2	0.5	2.2	1.1	0.0
Other	0.9	0.5	0.7	0.6	0.2	1.0	1.0	1.1	1.1	1.3
Asian	0.3	0.5	0.0	0.4	0.0	0.3	0.3	2.2	0.0	0.4
Hawaiian/Pacific Islander	0.0	0.0	0.0	0.4	0.2	0.3	0.3	0.0	0.8	0.0
Black/African American	0.0	0.0	0.0	0.0	0.2	0.0	0.3	1.1	0.0	0.7
Age										
18-30	9.5	8.0	15.2	9.4	9.6	17.4	13.0	15.4	8.4	3.6
21-40	14.2	10.6	14.4	9.2	15.0	24.8	22.8	22.0	14.5	9.2
41-50	28.5	28.2	30.3	24.4	55.4	39.5	23.9	26.4	38.5	20.7
51-60	29.1	29.8	22.0	38.8	33.9	12.5	19.6	20.9	21.4	28.1
61-70	14.6	16.0	12.9	15.6	9.4	5.8	13.8	7.7	13.0	25.2
71 or older	4.1	7.4	5.3	2.7	1.3	0.0	6.9	7.7	4.2	13.3
Annual household income (U.S. Dollars)										
Less than \$25,000	6.9	4.4	10.7	2.9	5.1	5.2	6.0	1.3	2.0	7.5
\$25,000-34,999	5.2	5.0	9.0	4.9	6.6	7.3	6.6	6.4	4.5	10.4
\$35,000-49,999	14.2	15.6	12.3	9.3	13.9	10.1	11.2	12.8	9.0	13.4
\$50,000-74,999	26.0	28.8	32.8	24.9	29.3	23.1	27.9	19.2	27.0	24.6
\$75,000-99,999	18.4	23.8	10.7	19.2	14.7	21.0	18.7	19.2	20.5	19.3
\$100,000-124,999	12.5	10.0	10.7	17.3	13.9	14.0	12.6	17.9	15.6	12.6
\$125,000-149,999	7.3	4.4	4.1	7.4	5.6	7.0	4.6	6.4	8.2	4.3
\$150,000-174,999	3.5	3.8	4.1	3.9	3.7	3.5	4.3	3.8	4.1	2.4
\$175,000 or more	5.9	4.4	5.7	10.1	7.1	8.7	8.0	12.8	9.0	5.6
Household size includes these age groups										
Adults (18+)	95.6	94.7	98.5	97.3	87.1	92.0	94.8	95.6	94.0	95.3
Teens (13 to 17 years)	22.0	20.1	12.7	21.1	22.7	36.9	14.9	18.7	24.5	12.2
Children (12 or under)	24.2	19.1	28.4	21.1	23.9	36.6	77.7	26.4	26.0	12.9
Highest level of education										
Some high school	1.6	0.5	2.3	0.8	2.0	2.9	3.5	1.1	0.8	1.6
Graduated high school/GED	21.7	8.6	6.8	4.3	13.6	18.4	23.0	4.5	17.6	13.9
Some votech	6.7	2.7	1.5	0.8	4.2	6.5	7.2	3.4	5.0	3.1
Graduated from votech or completed associate degree	24.9	11.4	18.0	7.2	18.2	23.9	23.5	7.9	22.6	14.1
Some college	14.4	17.3	9.0	11.4	22.2	15.9	16.0	12.4	16.9	17.3
Graduated from college	19.5	29.7	30.1	30.6	23.3	22.0	17.9	25.8	23.4	24.4
Some postgraduate	3.8	7.0	12.8	11.6	6.4	4.9	4.0	12.4	5.0	7.6
Postgraduate degree(s)	7.3	22.7	19.5	33.3	10.0	5.5	4.8	32.6	8.8	17.9

Table A2. Motivational factors for recreational trail use among respondents to a mail questionnaire in Minnesota, 2008

Activity Group	Motivational Factor Mean Scores ¹			
	Close to nature with family	Physical activity	Solitude & quiet	Challenge
ATV users	4.02	3.29	3.30	3.02
Cross-Country Skiers	4.16	4.55	3.57	3.30
Horseback riders	4.43	4.15	3.72	3.54
Mountain bikers	4.1	4.5	3.5	3.3
OHM users	4.04	3.94	3.27	3.95
ORV users	4.11	3.29	3.25	3.52
Road bikers	4.0	4.4	3.4	2.8
Runners	3.89	4.76	3.60	3.27
Snowmobilers	4.07	3.55	3.22	3.26
Walkers/Hikers	4.11	4.34	3.51	2.79
F value	11.66	111	14.74	44.48
Significant difference highlights	Horse riders > all Runners < x-country ski & horse	Snowmobilers diff than all OHM differs from all ATV differs from all but ORV Horse differ from all but Road bike Walkers differ from all but bikers	x-country > snowmobilers, ATV, OHM, ORV	OHM > all Walkers differ from all but road bike

¹Measured on a scale where 1=Very Unimportant; 2=Unimportant; 3=Neither; 4=Important; 5=Very important

Table A3. Trail activity experience among respondents to a mail questionnaire in Minnesota, 2008

	Years of experience (Mean)	S.D.	Range
ATV users	12.34	9.108	0-48
Cross-Country Skiers	23.98	12.874	0-78
Horseback riders	26.90	15.515	0-69
Mountain Bikers	30.74	17.366	0-70
OHM users	19.88	14.005	0-58
ORV users	11.69	10.753	0-68
Road Bikers	26.31	17.298	1-70
Runners	16.50	12.402	1-49
Snowmobilers	25.80	12.762	1-48
Walkers/Hikers	26.81	15.633	0-81

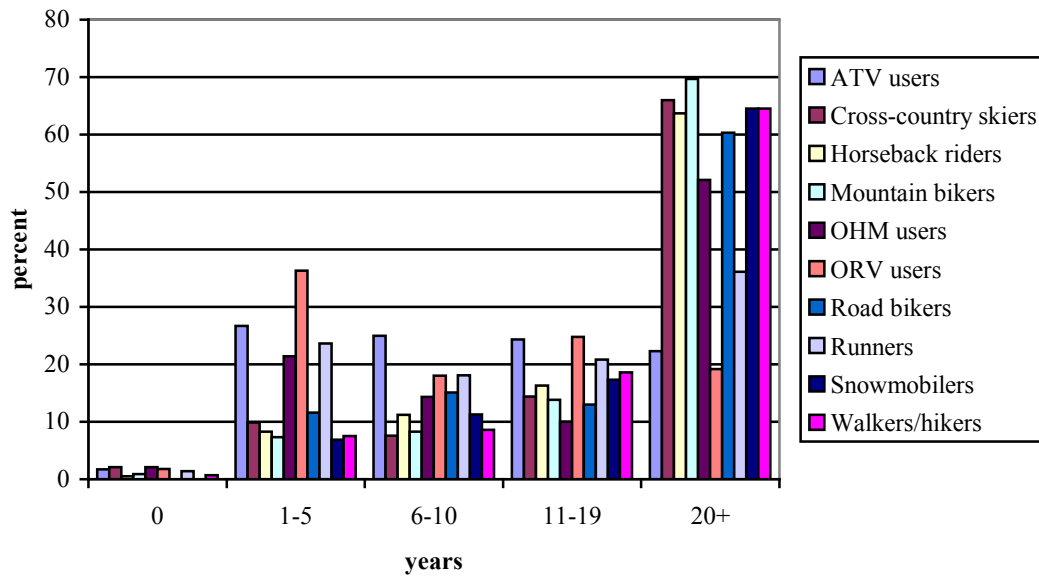
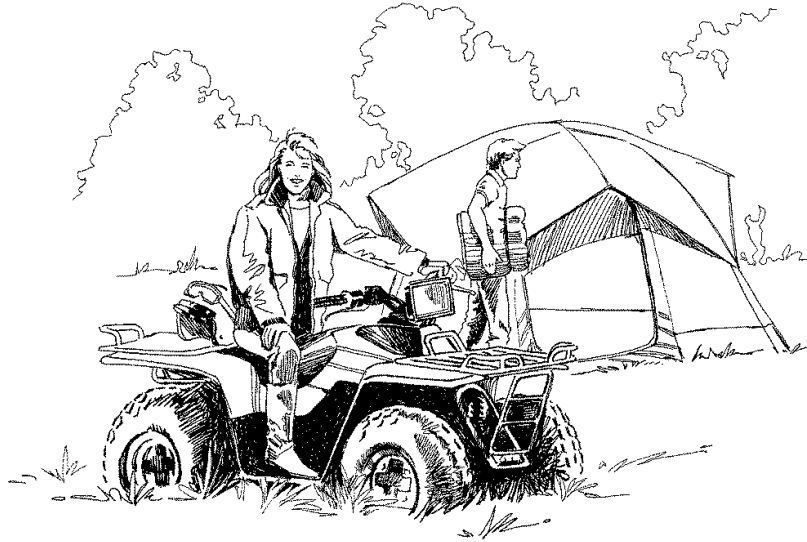


Figure 1a. Trail activity experience among respondents to a mail questionnaire in Minnesota, 2008

APPENDIX B – Minnesota Recreational Trail User Questionnaires

Minnesota Recreational Trail User Questionnaire



Greetings!

The University of Minnesota, in cooperation with the Minnesota Recreational Trail Users Association and Minnesota Department of Natural Resources, is interested in your all-terrain vehicle (ATV) recreational trail experiences. The information we get from this questionnaire will enhance the management of ATVs and your experiences at various trail areas across Minnesota.

We have selected a small number of ATV riders to share their views and therefore, every questionnaire is important. The enclosed survey should take just 15 minutes to complete. All the information you provide is completely voluntary, confidential, and anonymous. Once our mailing procedures are complete, your name will be removed.

If you have any questions or concerns about the survey, please feel free to phone me at 612.624.6719 or email me at bipe0002@umn.edu. Thank you in advance for your participation in this important project!

Sincerely,

Ingrid Schneider, Ph.D.
Project leader

Theresa Bipes
Graduate Research Assistant

First, a few questions about your ATV and recreational riding

1. What year did you begin riding ATVs for recreation (fill in one)?

19____ OR 200____ Can't remember

2. Including you, how many people in your household participated in the last 12 months in recreational ATV riding? _____ People

Of these people, how many are 20 or older? _____ People

3. Below is a list of possible reasons why people ride ATVs for recreation. Please circle the appropriate number that indicates how important each reason is to you for ATVing.

	Very unimportant	Unimportant	Neither	Important	Very important
To be close to nature	1	2	3	4	5
To do something with my family	1	2	3	4	5
To be physically active	1	2	3	4	5
To be on my own	1	2	3	4	5
To test my skills & abilities	1	2	3	4	5
To be with members of my own group	1	2	3	4	5
To view the scenery	1	2	3	4	5
To get away from the usual demands of life	1	2	3	4	5
To explore and discover new things	1	2	3	4	5
To relax physically	1	2	3	4	5
To experience solitude	1	2	3	4	5
To challenge myself	1	2	3	4	5
To experience nature	1	2	3	4	5
To be with people who enjoy the same things I do	1	2	3	4	5
To be away from other people	1	2	3	4	5
To experience silence & quiet	1	2	3	4	5
To have thrills & excitement	1	2	3	4	5
To rest mentally	1	2	3	4	5
To enjoy different experiences from home	1	2	3	4	5
To get/keep physically fit	1	2	3	4	5

Now, some questions about your recreational ATV riding & related expenditures

Experiences within a 30-minute drive of your primary home

4. How many days in the last 12 months did you recreationally ride an ATV within a 30-minute drive of your primary home (excluding days when the ATV was ridden in support of another recreation activity, such as hunting)?

___ Days (if 0, go to question 12)

5. Of these days, how many were in each region (see map below)?

___ Northwest

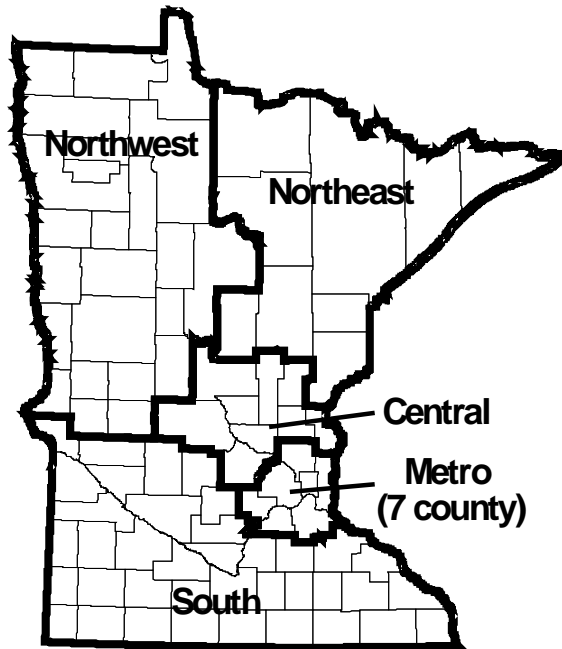
___ Northeast

___ Central

___ Metro

___ Southern

___ Outside MN (where? _____)



Now, think back to a recent recreational ATV riding trip that was within a 30-minute drive from your home, and answer the following questions about that trip (exclude trips when the ATV was primarily ridden in support of another recreational activity, such as hunting).

6. How many days in duration was this trip (count part of a day as 1 day)? ___ Days

7. How many miles did you travel one-way from home on this trip? ___ Miles

8. In what region was the destination area for this trip (see map; check one)?

___ Northwest

___ Northeast

___ Central

___ Metro

___ Southern

___ Outside MN

9. On this recreational riding trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the destination area where you rode ATVs for recreation. If you spent nothing on an item, please enter "0."

	At home spending (getting ready for trip)	Travel & destination area (to/from & in the area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels for automobile(s)		
Gasoline or other fuels for ATV		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Recreational equipment rentals		
Recreational equipment repair/maintenance		
Payments to public agencies (licenses, entrance fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

10. How many people were covered by these expenditures? _____ People

11. Of these people, how many were under 20 years of age? _____ People under 20 years

Experiences more than a 30-minute drive from your primary home

12. How many days in the last 12 months did you recreationally ride more than a 30-minute drive from your primary home (excluding days when the ATV was ridden in support of another recreation activity, such as hunting)? _____ Days (if 0, go to question 20)

13. Of these days, how many were in each region (see map on adjacent page)?

____ Northwest

____ Northeast

____ Central

____ Metro

____ Southern

____ Outside MN (where? _____)

Now, think back to a recent recreational ATV riding trip that was **more than a 30-minute drive** from your home, and answer the following questions about that trip (exclude trips when the ATV was primarily ridden in support of another recreational activity, such as hunting).

14. How many days in duration was this trip (count part of a day as 1 day)? ____ Days

15. How many miles did you travel one-way from home on this trip? ____ Miles

16. In what region was the destination area for this trip (see adjacent map; check one)?

Northwest Northeast Central
 Metro Southern Outside MN

17. On this recreational riding trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the destination area where you rode ATVs for recreation. If you spent nothing on an item, please enter "0."

	At home spending (getting ready for trip)	Travel & destination area (to/from & in area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels for automobile(s)		
Gasoline or other fuels for ATV		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Recreational equipment rentals		
Recreational equipment repair/maintenance		
Payments to public agencies (licenses, entrance fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

18. How many people were covered by these expenditures? ____ People

19. Of these people, how many were under 20 years of age? ____ Under 20 years

20. Beyond travel and expenses covered above, what were your household’s expenses in the last 12 months for recreational ATV riding? If you spent nothing on an item, enter “0.”

	Expenses in last 12 months
Purchase of new equipment	\$
Purchase of previously owned equipment	\$
Recreational equipment repair/maintenance not done during a trip	\$
Insurance on your ATV equipment	\$
Off season storage costs	\$
Other (explain)	\$

Now, some questions about your trail experiences.

21. When ATV riding on a trail, how often do you observe each of the following?

	Never	Sometimes	Many times	Almost always	Don’t know
Rude or discourteous users	0	1	2	3	DK
Others not yielding	0	1	2	3	DK
Others passing too closely	0	1	2	3	DK
Others out of control	0	1	2	3	DK
Others going too fast	0	1	2	3	DK
Litter on or near the trail	0	1	2	3	DK
Seeing off trail/road use	0	1	2	3	DK
Seeing evidence of off trail/road use (erosion, marks, etc.)	0	1	2	3	DK
Too many other users on the trail	0	1	2	3	DK
Hearing other users on the trail	0	1	2	3	DK
Accessibility issue	0	1	2	3	DK
Other (explain)	0	1	2	3	DK

22. Which of these interferes the most with your trails experience (check one)?

- | | |
|---|--|
| <input type="checkbox"/> Rude or discourteous users | <input type="checkbox"/> Seeing off trail/road use |
| <input type="checkbox"/> Others not yielding | <input type="checkbox"/> Too many other users on the trail |
| <input type="checkbox"/> Others passing too closely | <input type="checkbox"/> Hearing other users on the trail |
| <input type="checkbox"/> Others out of control | <input type="checkbox"/> Litter on/near the trail |
| <input type="checkbox"/> Others riding too fast | <input type="checkbox"/> Other (explain: _____) |
| <input type="checkbox"/> Accessibility Issue | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Seeing evidence of off | <input type="checkbox"/> Nothing interferes most |

(Go to Question 25)

23. Was this interference in #22 with other ATV riders (circle one)? Yes No
Please share any details or comments on this interference.

24. When this most interfering experience happens, how often do you use the following responses?

	Do not use	Use infrequently	Use occasionally	Use frequently
Follow establish rules for trail etiquette	0	1	2	3
Talk to other members of my group about the incident	0	1	2	3
Wish the situation would go away or be over with	0	1	2	3
Think about why the incident occurred	0	1	2	3
Don't let it get to me; refuse to think about it too much	0	1	2	3
Try to forget the whole thing	0	1	2	3
Go on as if nothing had happened	0	1	2	3
Refuse to get too serious about it	0	1	2	3
Stand my ground and fight for what I wanted	0	1	2	3
I try to keep my feelings to myself	0	1	2	3
I know what has to be done so I double my efforts to make things work	0	1	2	3
Express anger to the person who caused the incident	0	1	2	3
I make a plan of action and follow it	0	1	2	3
Try not to burn bridges	0	1	2	3
Make light of the situation	0	1	2	3
Keep others from knowing how bad things were	0	1	2	3
Talk to area personnel about the incident	0	1	2	3
Come up with a couple of different solutions	0	1	2	3
Plan to avoid the area on my next visit	0	1	2	3
Leave the area and go to a different part of the area	0	1	2	3
Try to get the person responsible to change their mind	0	1	2	3
Leave the area altogether	0	1	2	3
Change the time I will cross country ski next time	0	1	2	3
Alter my pace to avoid others	0	1	2	3

Finally, a few questions about you.

25. Are you...? ___ Male or ___ Female

26. What year were you born? 19_____

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

- | | |
|--|---|
| <input type="checkbox"/> Some high school | <input type="checkbox"/> Some college |
| <input type="checkbox"/> Graduated high school/GED | <input type="checkbox"/> Graduated from college |
| <input type="checkbox"/> Some votech | <input type="checkbox"/> Some postgraduate |
| <input type="checkbox"/> Graduated from votech or completed associate degree | <input type="checkbox"/> Postgraduate degree(s) |

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

Ethnicity (check one): ___ Hispanic or Latino
 ___ Not Hispanic or Latino

Race (check all that apply):

<input type="checkbox"/>	American Indian or Alaska native
<input type="checkbox"/>	Asian
<input type="checkbox"/>	Black or African American
<input type="checkbox"/>	Native Hawaiian or other pacific islander
<input type="checkbox"/>	White
<input type="checkbox"/>	Other (explain: _____)

29. Including you, how many adults, teens, and children live in your household?

 ___ Adults (18+) ___ Teens (13 to 17 years) ___ Children (12 or under)

30. What is your annual household income before taxes (check one)?

- | | | |
|---|---|--|
| <input type="checkbox"/> LESS THAN \$25,000 | <input type="checkbox"/> \$50,000-74,999 | <input type="checkbox"/> \$125,000-149,999 |
| <input type="checkbox"/> \$25,000-34,999 | <input type="checkbox"/> \$75,000-99,999 | <input type="checkbox"/> \$150,000-174,999 |
| <input type="checkbox"/> \$35,000-49,999 | <input type="checkbox"/> \$100,000 -124,999 | <input type="checkbox"/> \$175,000 OR MORE |

Please mail the completed questionnaire back in the postage-paid envelope provided.

THANK YOU FOR YOUR PARTICIPATION!

If you want more information about this study, contact Dr. Ingrid Schneider,
115 Green Hall, 1530 Cleveland Avenue North, St. Paul, MN 55108-1027;
612-624-2250; ingridss@umn.edu.

Minnesota Recreational Trail User Questionnaire



Greetings!

The University of Minnesota, in cooperation with the Minnesota Recreational Trail Users Association and Minnesota Department of Natural Resources, is interested in your cross county skiing recreational trail experiences. The information we get from this questionnaire will enhance the management of, and your experiences at, various trail areas across Minnesota.

We have selected a small number of cross county skiers to share their views and therefore, every questionnaire is important. The enclosed survey should take just 15 minutes to complete. All the information you provide is completely voluntary, confidential, and anonymous. Once our mailing procedures are complete, your name will be removed.

If you have any questions or concerns about the survey, please feel free to phone me at 612.624.2250 or email me at ingridss@umn.edu. Thank you in advance for your participation in this important project!

Sincerely,

Ingrid Schneider, Ph.D.
Project leader

First, a few questions about your cross-country skiing.

1. What year did you begin cross country skiing (fill in one)? 19__ OR 200__
 __ Can't remember

2. Including you, how many people in your household participated in the last 12 months in cross country skiing?

__ People

Of these people, how many are 20 or older? __ People

3. Below is a list of possible reasons why people cross country ski. Please circle the appropriate number that indicates how important each reason is to you for to cross country ski.

	Very unimportant	Unimportant	Neither	Important	Very important
To be close to nature	1	2	3	4	5
To do something with my family	1	2	3	4	5
To be physically active	1	2	3	4	5
To be on my own	1	2	3	4	5
To test my skills & abilities	1	2	3	4	5
To be with members of my own group	1	2	3	4	5
To view the scenery	1	2	3	4	5
To get away from the usual demands of life	1	2	3	4	5
To explore and discover new things	1	2	3	4	5
To relax physically	1	2	3	4	5
To experience solitude	1	2	3	4	5
To challenge myself	1	2	3	4	5
To experience nature	1	2	3	4	5
To be with people who enjoy the same things I do	1	2	3	4	5
To be away from other people	1	2	3	4	5
To experience silence & quiet	1	2	3	4	5
To have thrills & excitement	1	2	3	4	5
To rest mentally	1	2	3	4	5
To enjoy different experiences from home	1	2	3	4	5
To get/keep physically fit	1	2	3	4	5

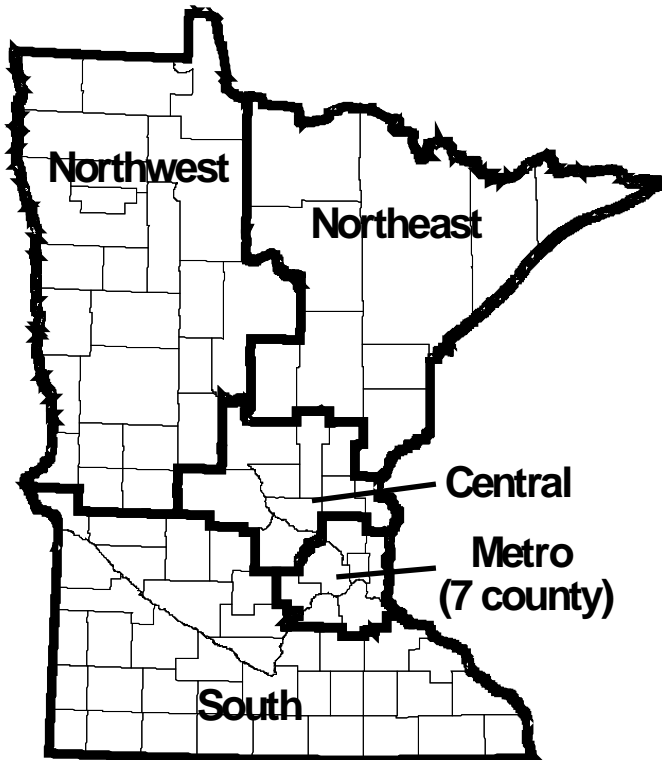
Now, some questions about your cross country skiing and related expenditures

Experiences within a 30-minute drive of your primary home

4. How many days in the last 12 months did you cross country ski within a 30-minute drive of your primary home? _____ Days (if 0, go to question 13)

5. Of these days, how many were in each region?

___ Northwest ___ Northeast ___ Central
___ Metro ___ Southern ___ Outside MN (where? _____)



6. Now, think back to a recent cross country skiing trip that was within a 30-minute drive from your home, and answer the following questions about that trip.

7. How many days in duration was this trip (count part of a day as 1 day)? _____ Days

8. How many miles did you travel one-way from home on this trip? _____ Miles

9. In what region was the destination area for this trip (see map; check one)?

___ Northwest ___ Northeast ___ Central
___ Metro ___ Southern ___ Outside MN

10. On this trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the

destination area where you cross county skied. If you spent nothing on an item, please leave it blank.

	At home spending (getting ready for trip)	Travel & destination area (to/from & in the area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Recreational equipment rentals		
Recreational equipment repair/maintenance		
Payments to public agencies (licenses, entrances fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

11. How many people are covered by these expenditures? _____ People

12. Of these people, how many are under 20 years of age? _____ People under 20 years

Experiences more than a 30-minute drive from your primary home

13. How many days in the last 12 months did you cross country ski more than a 30-minute drive from your primary home? _____ Days (if 0, go to question 21)

14. Of these days, how many were in each region (see map on adjacent page)?

___ Northwest ___ Northeast ___ Central
 ___ Metro ___ Southern ___ Outside MN (where? _____)

Now, think back to a recent cross country ski trip that was more than a 30-minute drive from your home, and answer the following questions about that trip.

15. How many days in duration was this trip (count part of a day as 1 day)? _____ Days

16. How many miles did you travel one-way from home on this trip? _____ Miles

17. In what region was the destination area for this trip (see map on adjacent page; check one)?

___ Northwest ___ Northeast ___ Central

___ Metro

___ Southern

___ Outside MN

18. On this trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and where you cross country skied. If you spend nothing on an item, please leave it blank.

	At home spending (getting ready for trip)	Travel & destination area (to/from & in area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Recreational equipment rentals		
Recreational equipment repair/maintenance		
Payments to public agencies (licenses, entrances fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

19. How many people are covered by these expenditures? ___ People

20. Of these people, how many are under 20 years of age? ___ Under 20 years

21. Beyond travel and expenses covered above, what were your households expenses in the last 12 months for cross country skiing (if 0, leave blank)?

	Expenses in last 12 months
Purchase of new equipment	\$
Purchase of previously owned equipment	\$
Recreational equipment repair/maintenance not done during a trip	\$
Insurance on your cross country ski equipment	\$
Off season storage costs	\$
Other (explain)	\$

Now, some questions about your trail experiences.

22. When cross country skiing on a trail, how often do you observe each of the following?

	Never	Sometimes	Many times	Almost always	Don't know
Rude or discourteous users	0	1	2	3	DK
Others not yielding	0	1	2	3	DK
Others passing too closely	0	1	2	3	DK
Others out of control	0	1	2	3	DK
Others going too fast	0	1	2	3	DK
Litter on or near the trail	0	1	2	3	DK
Seeing off trail/road use	0	1	2	3	DK
Seeing evidence of off trail/road use (erosion, marks, etc.)	0	1	2	3	DK
Too many other users on the trail	0	1	2	3	DK
Hearing other users on the trail	0	1	2	3	DK
Accessibility issue	0	1	2	3	DK
Other (explain)	0	1	2	3	DK

23. Which of these interferes the most with your trails experience (check one)?

- | | |
|---|---|
| <input type="checkbox"/> Rude or discourteous users | <input type="checkbox"/> Seeing off trail/road use |
| <input type="checkbox"/> Others not yielding | <input type="checkbox"/> Too many other users on the trail |
| <input type="checkbox"/> Others passing too closely | <input type="checkbox"/> Hearing other users on the trail |
| <input type="checkbox"/> Others out of control | <input type="checkbox"/> Litter on/near the trail |
| <input type="checkbox"/> Others riding too fast | <input type="checkbox"/> Other (explain: _____) |
| | <input type="checkbox"/> Nothing interferes most
(Go to Question 27) |

24. Was this interference in #23 with other cross country skiers (circle one)? Yes No
Please share any details or comments on this interference.

25. Was this interference in #23 stressful (circle one)? Yes No

26. Indicate how much you agree with the following statements about what interferes the most with your cross country skiing experience.

	Strongly disagree	Disagree	Unsure	Agree	Strongly Agree
I can change or do something about it	1	2	3	4	5
I have to accept it as it is	1	2	3	4	5
I have to hold back from acting	1	2	3	4	5
I need to know more before acting	1	2	3	4	5

27. When this most interfering experience happens, how often do you use the following responses?

	Do not use	Use infrequently	Use occasionally	Use frequently
Follow establish rules for trail etiquette	0	1	2	3
Talk to other members of my group about the incident	0	1	2	3
Wish the situation would go away or be over with	0	1	2	3
Think about why the incident occurred	0	1	2	3
Don't let it get to me; refuse to think about it too much	0	1	2	3
Try to forget the whole thing	0	1	2	3
Go on as if nothing had happened	0	1	2	3
Refuse to get too serious about it	0	1	2	3
Stand my ground and fight for what I wanted	0	1	2	3
I try to keep my feelings to myself	0	1	2	3
I know what has to be done so I double my efforts to make things work	0	1	2	3
Express anger to the person who caused the incident	0	1	2	3
I make a plan of action and follow it	0	1	2	3
Try not to burn bridges	0	1	2	3
Make light of the situation	0	1	2	3
Keep others from knowing how bad things were	0	1	2	3
Talk to area personnel about the incident	0	1	2	3
Come up with a couple of different solutions	0	1	2	3
Plan to avoid the area on my next visit	0	1	2	3
Leave the area and go to a different part of the area	0	1	2	3
Try to get the person responsible to change their mind	0	1	2	3
Leave the area altogether	0	1	2	3
Change the time I will cross country ski next time	0	1	2	3
Alter my pace to avoid others	0	1	2	3

Finally, a few questions about you.

28. Are you...? Male or Female

29. What year were you born? 19_____

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

- | | |
|--|---|
| <input type="checkbox"/> Some high school | <input type="checkbox"/> Some college |
| <input type="checkbox"/> Graduated high school/GED | <input type="checkbox"/> Graduated from college |
| <input type="checkbox"/> Some votech | <input type="checkbox"/> Some postgraduate |
| <input type="checkbox"/> Graduated from votech or completed associate degree | <input type="checkbox"/> Postgraduate degree(s) |

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

Ethnicity (check one): Hispanic or Latino
 Not Hispanic or Latino

Race (check all that apply):

- American Indian or Alaska native
- Asian
- Black or African American
- Native Hawaiian or other pacific islander
- White
- Other (explain: _____)

32. Including you, how many adults, teens, and children live in your household?

Adults (18+) Teens (13 to 17 years) Children (12 or under)

33. What is your annual household income before taxes (check one)?

- | | | |
|---|---|--|
| <input type="checkbox"/> LESS THAN \$25,000 | <input type="checkbox"/> \$50,000-74,999 | <input type="checkbox"/> \$125,000-149,999 |
| <input type="checkbox"/> \$25,000-34,999 | <input type="checkbox"/> \$75,000-99,999 | <input type="checkbox"/> \$150,000-174,999 |
| <input type="checkbox"/> \$35,000-49,999 | <input type="checkbox"/> \$100,000 -124,999 | <input type="checkbox"/> \$175,000 OR MORE |

Please mail the completed questionnaire back in the postage-paid envelope provided.

THANK YOU FOR YOUR PARTICIPATION!

If you want more information about this study, contact Dr. Ingrid Schneider,
115 Green Hall, 1530 Cleveland Avenue North, St. Paul, MN 55108-1027;
612-624-2250; ingridss@umn.edu.

Minnesota Recreational Trail User Questionnaire



Greetings!

The University of Minnesota, in cooperation with the Minnesota Recreational Trail Users Association and Minnesota Department of Natural Resources, is interested in your recreational horseback trail experiences. The information we get from this questionnaire will enhance the management of, and your experiences at, various trail areas across Minnesota.

We have selected a small number of horseback riders to share their views and therefore, every questionnaire is important. The enclosed survey should take just 15 minutes to complete. All the information you provide is completely voluntary, confidential, and anonymous. Once our mailing procedures are complete, your name will be removed.

If you have any questions or concerns about the survey, please feel free to phone me at 612.624.6719 or email me at bipe0002@umn.edu. Thank you in advance for your participation in this important project!

Sincerely,

Ingrid Schneider, Ph.D.
Project leader

Theresa Bipes
Graduate Research Assistant

First, a few questions about your horseback riding.

1. What year did you begin horseback riding outdoors (fill in one)?

19 ___ OR 200 ___ ___ Can't remember

2. Including you, how many people in your household participated in the last 12 months in horseback riding outdoors? ___ People

Of these people, how many are 20 or older? ___ People

3. How many horses do you own? ___ Horses

4. How many horses do you board? ___ Horses boarded

5. Below is a list of possible reasons why people ride horses outdoors. Please circle the appropriate number that indicates how important each reason is to you for horseback riding outdoors.

	Very unimportant	Unimportant	Neither	Important	Very important
To be close to nature	1	2	3	4	5
To do something with my family	1	2	3	4	5
To be physically active	1	2	3	4	5
To be on my own	1	2	3	4	5
To test my skills & abilities	1	2	3	4	5
To be with members of my own group	1	2	3	4	5
To view the scenery	1	2	3	4	5
To get away from the usual demands of life	1	2	3	4	5
To explore and discover new things	1	2	3	4	5
To relax physically	1	2	3	4	5
To experience solitude	1	2	3	4	5
To challenge myself	1	2	3	4	5
To experience nature	1	2	3	4	5
To be with people who enjoy the same things I do	1	2	3	4	5
To be away from other people	1	2	3	4	5
To experience silence & quiet	1	2	3	4	5
To have thrills & excitement	1	2	3	4	5
To rest mentally	1	2	3	4	5
To enjoy different experiences from home	1	2	3	4	5
To get/keep physically fit	1	2	3	4	5

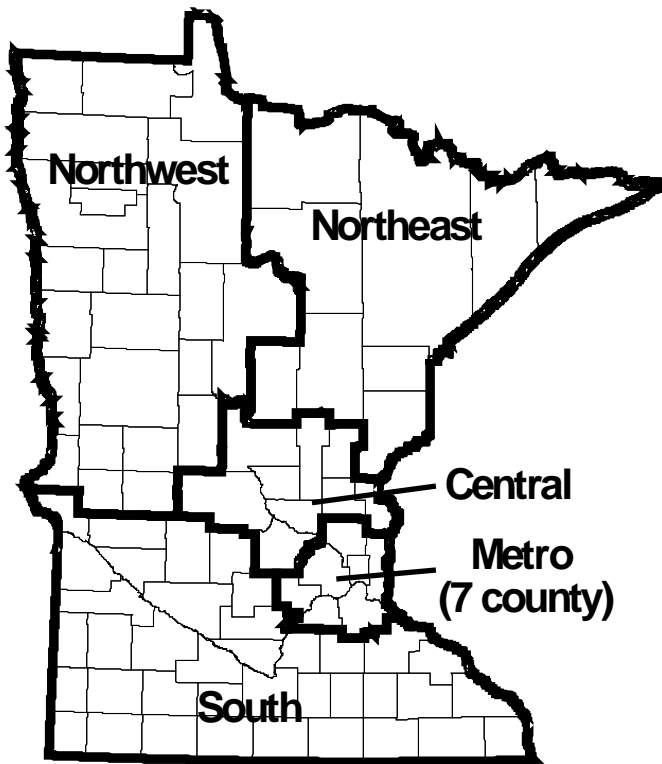
Now, some questions about your horseback riding and related expenditures

Experiences within a 30-minute drive of your primary home

6. How many days in the last 12 months did you horseback ride outdoors within a 30-minute drive of your primary home? ___ Days (if 0, go to question 14)

7. Of these days, how many were in each region?

___ Northwest ___ Northeast ___ Central
___ Metro ___ Southern ___ Outside MN (where? _____)



Now, think back to a recent outdoor horseback riding trip that was within a 30-minute drive from your home, and answer the following questions about that trip.

8. How many days in duration was this trip (count part of a day as 1 day)? ___ Days

9. How many miles did you travel one-way from home on this trip (including travel to a boarding facility, if applicable?) ___ Miles

10. In what region was the destination area for this trip (see map; check one)?

___ Northwest ___ Northeast ___ Central
___ Metro ___ Southern ___ Outside MN

11. On this outdoor recreational horseback riding trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the destination area where you were horseback riding outdoors. If you spent nothing on an item, please enter "0."

	At home spending (getting ready for trip)	Travel & destination area (to/from & in the area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Recreational equipment rentals		
Recreational equipment repair/maintenance		
Payments to public agencies (licenses, entrance fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

12. How many people were covered by these expenditures? _____ People

13. Of these people, how many were under 20 years of age? _____ People under 20 years

Experiences more than a 30-minute drive from your primary home

14. How many days in the last 12 months did you horseback ride more than a 30-minute drive from your primary home? _____ Days (if 0, go to question 22)

15. Of these days, how many were in each region (see map on adjacent page)?

___ Northwest

___ Northeast

___ Central

___ Metro

___ Southern

___ Outside MN (where? _____)

Now, think back to a recent horseback riding trip that was more than a 30-minute drive from your home, and answer the following questions about that trip.

16. How many days in duration was this trip (count part of a day as 1 day)? _____ Days

17. How many miles did you travel one-way from home on this trip (including travel to a boarding facility, if applicable)? _____ Miles

18. In what region was the destination area for this trip (see map on adjacent page; check one)?

Northwest Northeast Central
 Metro Southern Outside MN

19. On this outdoor recreational horseback riding trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the destination area where you were horseback riding outdoors. If you spent nothing on an item, please enter "0."

	At home spending (getting ready for trip)	Travel & destination area (to/from & in area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Recreational equipment rentals		
Recreational equipment repair/maintenance		
Payments to public agencies (licenses, entrance fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

20. How many people were covered by these expenditures? People

21. Of these people, how many were under 20 years of age? Under 20 years

22. Beyond travel and expenses covered above, what were your household's expenses in the last 12 months for horseback riding? If you spent nothing on an item, please enter "0."

	Expenses in last 12 months
Purchase of new equipment	\$
Purchase of previously owned equipment	\$
Purchase of a horse or horses	\$
Boarding for horse or horses	\$
Veterinarian bills for horse or horses	\$
Farrier costs (shoeing/trimming)	\$
Horse food or related costs	\$
Recreational equipment repair/maintenance not done during a trip	\$
Insurance on your horseback riding equipment	\$
Purchase of new, or repair to, truck/trailer for horses	\$
Off season storage costs for trucks/trailers	\$
Other (explain)	\$

Now, some questions about your trail experiences.

23. When horseback riding on a trail, how often do you observe each of the following?

	Never	Sometimes	Many times	Almost always	Don't know
Rude or discourteous users	0	1	2	3	DK
Others not yielding	0	1	2	3	DK
Others passing too closely	0	1	2	3	DK
Others out of control	0	1	2	3	DK
Others going too fast	0	1	2	3	DK
Litter on or near the trail	0	1	2	3	DK
Seeing off trail/road use	0	1	2	3	DK
Seeing evidence of off trail/road use (erosion, marks, etc.)	0	1	2	3	DK
Too many other users on the trail	0	1	2	3	DK
Hearing other users on the trail	0	1	2	3	DK
Accessibility issue	0	1	2	3	DK
Other (explain)	0	1	2	3	DK

24. Which of these interferes the most with your trails experience (check one)?

- | | |
|---|---|
| <input type="checkbox"/> Rude or discourteous users | <input type="checkbox"/> Seeing off trail/road use |
| <input type="checkbox"/> Others not yielding | <input type="checkbox"/> Too many other users on the trail |
| <input type="checkbox"/> Others passing too closely | <input type="checkbox"/> Hearing other users on the trail |
| <input type="checkbox"/> Others out of control | <input type="checkbox"/> Litter on/near the trail |
| <input type="checkbox"/> Others riding too fast | <input type="checkbox"/> Other (explain: _____) |
| <input type="checkbox"/> Accessibility Issue | |
| <input type="checkbox"/> Seeing evidence of off | <input type="checkbox"/> Nothing interferes most
(Go to Question 29) |

25. Was this interference in #24 with other horseback riders (circle one)? Yes No
Please share any details or comments on this interference.

26. Was this interference in #24 stressful (circle one)? Yes No

27. Indicate how much you agree with the following statements about what interferes the most with your horseback trail riding experience.

	Strongly disagree	Disagree	Unsure	Agree	Strongly Agree
I can change or do something about it	1	2	3	4	5
I have to accept it as it is	1	2	3	4	5
I have to hold back from acting	1	2	3	4	5
I need to know more before acting	1	2	3	4	5

28. When this most interfering experience happens, how often do you use the following responses?

	Do not use	Use infrequently	Use occasionally	Use frequently
Follow establish rules for trail etiquette	0	1	2	3
Talk to other members of my group about the incident	0	1	2	3
Wish the situation would go away or be over with	0	1	2	3
Think about why the incident occurred	0	1	2	3
Don't let it get to me; refuse to think about it too much	0	1	2	3
Try to forget the whole thing	0	1	2	3
Go on as if nothing had happened	0	1	2	3
Refuse to get too serious about it	0	1	2	3
Stand my ground and fight for what I wanted	0	1	2	3
I try to keep my feelings to myself	0	1	2	3
I know what has to be done so I double my efforts to make things work	0	1	2	3
Express anger to the person who caused the incident	0	1	2	3
I make a plan of action and follow it	0	1	2	3
Try not to burn bridges	0	1	2	3
Make light of the situation	0	1	2	3
Keep others from knowing how bad things were	0	1	2	3
Talk to area personnel about the incident	0	1	2	3
Come up with a couple of different solutions	0	1	2	3
Plan to avoid the area on my next visit	0	1	2	3
Leave the area and go to a different part of the area	0	1	2	3
Try to get the person responsible to change their mind	0	1	2	3
Leave the area altogether	0	1	2	3
Change the time I will horseback ride next time	0	1	2	3
Alter my pace to avoid others	0	1	2	3

Finally, a few questions about you.

29. Are you...? Male or Female

30. What year were you born? 19_____

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

- | | |
|--|---|
| <input type="checkbox"/> Some high school | <input type="checkbox"/> Some college |
| <input type="checkbox"/> Graduated high school/GED | <input type="checkbox"/> Graduated from college |
| <input type="checkbox"/> Some votech | <input type="checkbox"/> Some postgraduate |
| <input type="checkbox"/> Graduated from votech or completed associate degree | <input type="checkbox"/> Postgraduate degree(s) |

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

Ethnicity (check one): Hispanic or Latino
 Not Hispanic or Latino

Race (check all that apply):

- American Indian or Alaska native
 Asian
 Black or African American
 Native Hawaiian or other pacific islander
 White
 Other (explain: _____)

33. What is your marital status?

Single Co-habiting Married Divorced

34. Including you, how many adults, teens, and children live in your household?

Adults (18+) Teens (13 to 17 years) Children (12 or under)

35. What is your annual household income before taxes (check one)?

- | | | |
|---|---|--|
| <input type="checkbox"/> LESS THAN \$25,000 | <input type="checkbox"/> \$50,000-74,999 | <input type="checkbox"/> \$125,000-149,999 |
| <input type="checkbox"/> \$25,000-34,999 | <input type="checkbox"/> \$75,000-99,999 | <input type="checkbox"/> \$150,000-174,999 |
| <input type="checkbox"/> \$35,000-49,999 | <input type="checkbox"/> \$100,000 -124,999 | <input type="checkbox"/> \$175,000 OR MORE |

Please mail the completed questionnaire back in the postage-paid envelope provided.

THANK YOU FOR YOUR PARTICIPATION!

If you want more information about this study, contact Theresa Bipes,
115 Green Hall, 1530 Cleveland Avenue North, St. Paul, MN 55108-1027;
612-624-6719; bipe0002@umn.edu

Minnesota Recreational Trail User Questionnaire



Greetings!

The University of Minnesota, in cooperation with the Minnesota Recreational Trail Users Association and Minnesota Department of Natural Resources, is interested in your recreational outdoor trail running/jogging experiences. The information we get from this questionnaire will enhance the management of, and your experiences at, various areas across Minnesota.

We have selected a small number of runners/joggers to share their views and therefore, every questionnaire is important. The enclosed survey should take just 15 minutes to complete. All the information you provide is completely voluntary, confidential, and anonymous. Once our mailing procedures are complete, your name will be removed.

If you have any questions or concerns about the survey, please feel free to phone me at 612.624.6719, or email me at bipe0002@umn.edu. Thank you in advance for your participation in this important project!

Sincerely,

Ingrid Schneider, Ph.D.
Project leader

Theresa Bipes
Graduate Research Assistant

First, a few questions about your recreational **outdoor** running/jogging.

1. What year did you begin running/jogging outdoors (fill in one)?

19____ OR 200____ ___ Can't remember

2. Including you, how many people in your household participated in the last 12 months in outdoor running/jogging? _____ People

Of these people, how many are 20 or older? _____ People

3. Below is a list of possible reasons why people run/jog outdoors. Please circle the appropriate number that indicates how important each reason is to you for running/jogging outdoors.

	Very unimportant	Unimportant	Neither	Important	Very important
To be close to nature	1	2	3	4	5
To do something with my family	1	2	3	4	5
To be physically active	1	2	3	4	5
To be on my own	1	2	3	4	5
To test my skills & abilities	1	2	3	4	5
To be with members of my own group	1	2	3	4	5
To view the scenery	1	2	3	4	5
To get away from the usual demands of life	1	2	3	4	5
To explore and discover new things	1	2	3	4	5
To relax physically	1	2	3	4	5
To experience solitude	1	2	3	4	5
To challenge myself	1	2	3	4	5
To experience nature	1	2	3	4	5
To be with people who enjoy the same things I do	1	2	3	4	5
To be away from other people	1	2	3	4	5
To experience silence & quiet	1	2	3	4	5
To have thrills & excitement	1	2	3	4	5
To rest mentally	1	2	3	4	5
To enjoy different experiences from home	1	2	3	4	5
To get/keep physically fit	1	2	3	4	5

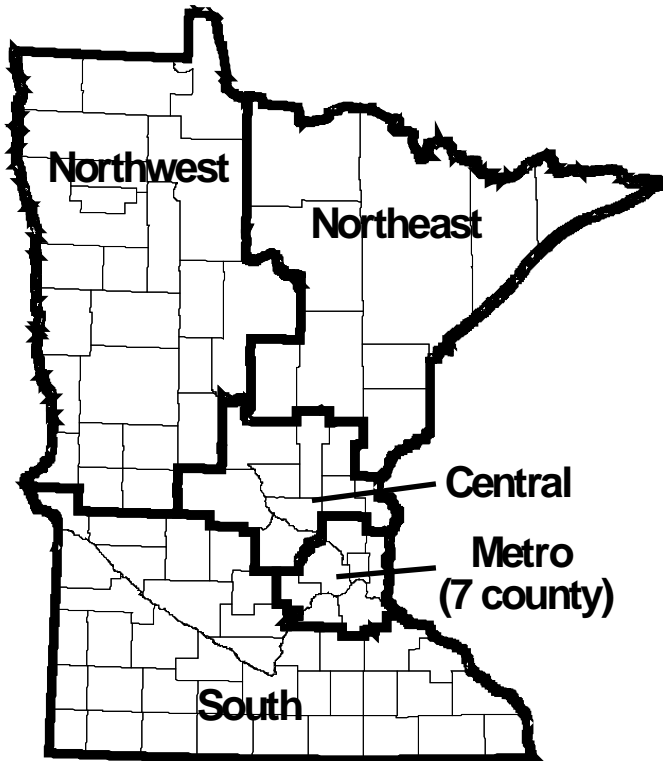
Now, some questions about your *outdoor* running/jogging and related expenditures.

Experiences within a 30-minute drive of your primary home

4. How many days in the last 12 months did you run/jog outdoors within a 30-minute drive of your primary home? ___ Days (if 0, go to question 12)

5. Of these days, how many were in each region?

___ Northwest ___ Northeast ___ Central
___ Metro ___ Southern ___ Outside MN (where? _____)



Now, think back to a recent outdoor running/jogging trip that was within a 30-minute drive from your home and answer the following questions about that trip.

6. How many days in duration was this trip (count part of a day as 1 day)? ___ Days

7. How many miles did you travel one-way from home on this trip? ___ Miles

8. In what region was the destination area for this trip (see map; check one)?

___ Northwest ___ Northeast ___ Central
___ Metro ___ Southern ___ Outside MN

9. On this outdoor recreational running/jogging trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the destination area where you ran/jogged outdoors. If you spent nothing on an item, please enter "0."

	At home spending (getting ready for trip)	Travel & destination area (to/from & in the area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels		
Other transportation related costs		
Payments to public agencies (licenses, entrance fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

10. How many people were covered by these expenditures? _____ People

11. Of these people, how many were under 20 years of age? _____ People under 20 years

Experiences more than a 30-minute drive from your primary home

12. How many days in the last 12 months did you run/jog outdoors more than a 30-minute drive from your primary home? _____ Days (if 0, go to question 20)

13. Of these days, how many were in each region (see map on adjacent page)?

_____ Northwest _____ Northeast _____ Central
 _____ Metro _____ Southern _____ Outside MN (where? _____)

Now, think back to a recent outdoor running/jogging trip that was more than a 30-minute drive from your home, and answer the following questions about that trip.

14. How many days in duration was this trip (count part of a day as 1 day)? _____ Days

15. How many miles did you travel one-way from home on this trip? _____ Miles

16. In what region was the destination area for this trip (see map on adjacent page; check one)?

_____ Northwest _____ Northeast _____ Central
 _____ Metro _____ Southern _____ Outside MN

17. On this outdoor recreational running/jogging trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the destination area where you ran/jogged outdoors. If you spent nothing on an item, please enter "0."

	At home spending (getting ready for trip)	Travel & destination area (to/from & in area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Payments to public agencies (licenses, entrance fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

18. How many people were covered by these expenditures? ____ People

19. Of these people, how many were under 20 years of age? ____ Under 20 years

20. Beyond travel and expenses covered above, what were your household's expenses in the last 12 months for outdoor running/jogging? If you spent nothing on an item, please enter "0."

	Expenses in last 12 months
Purchase of new equipment	\$
Purchase of previously owned equipment	\$
Other (explain)	\$

Now, some questions about your outdoor running/jogging trail experiences.

21. When running/jogging on an outdoor trail, how often do you observe each of the following?

	Never	Sometimes	Many times	Almost always	Don't know
Rude or discourteous users	0	1	2	3	DK
Others not yielding	0	1	2	3	DK
Others passing too closely	0	1	2	3	DK
Others out of control	0	1	2	3	DK
Others going too fast	0	1	2	3	DK
Litter on or near the trail	0	1	2	3	DK
Seeing off trail/road use	0	1	2	3	DK
Seeing evidence of off trail/road use (erosion, marks, etc.)	0	1	2	3	DK
Too many other users on the trail	0	1	2	3	DK
Hearing other users on the trail	0	1	2	3	DK
Accessibility issue	0	1	2	3	DK
Other (explain)	0	1	2	3	DK

22. Which of these interferes the most with your outdoor trail experience (check one)?

- | | |
|---|--|
| <input type="checkbox"/> Rude or discourteous users | <input type="checkbox"/> Seeing off trail/road use |
| <input type="checkbox"/> Others not yielding | <input type="checkbox"/> Too many other users on the trail |
| <input type="checkbox"/> Others passing too closely | <input type="checkbox"/> Hearing other users on the trail |
| <input type="checkbox"/> Others out of control | <input type="checkbox"/> Litter on/near the trail |
| <input type="checkbox"/> Others riding too fast | <input type="checkbox"/> Other (explain: _____) |
| <input type="checkbox"/> Accessibility Issue | |
| <input type="checkbox"/> Seeing evidence of off | <input type="checkbox"/> Nothing interferes most |
| | (Go to Question 27) |

23. Was this interference in #22 with other runners/joggers (circle one)? Yes No
Please share any details or comments on this interference.

24. Was this interference in #22 stressful (circle one)? Yes No

25. Indicate how much you agree with the following statements about what interferes the most with your outdoor trail running/jogging experience.

	Strongly disagree	Disagree	Unsure	Agree	Strongly Agree
I can change or do something about it	1	2	3	4	5
I have to accept it as it is	1	2	3	4	5
I have to hold back from acting	1	2	3	4	5
I need to know more before acting	1	2	3	4	5

26. When this most interfering experience happens, how often do you use the following responses?

	Do not use	Use infrequently	Use occasionally	Use frequently
Follow establish rules for trail etiquette	0	1	2	3
Talk to other members of my group about the incident	0	1	2	3
Wish the situation would go away or be over with	0	1	2	3
Think about why the incident occurred	0	1	2	3
Don't let it get to me; refuse to think about it too much	0	1	2	3
Try to forget the whole thing	0	1	2	3
Go on as if nothing had happened	0	1	2	3
Refuse to get too serious about it	0	1	2	3
Stand my ground and fight for what I wanted	0	1	2	3
I try to keep my feelings to myself	0	1	2	3
I know what has to be done so I double my efforts to make things work	0	1	2	3
Express anger to the person who caused the incident	0	1	2	3
I make a plan of action and follow it	0	1	2	3
Try not to burn bridges	0	1	2	3
Make light of the situation	0	1	2	3
Keep others from knowing how bad things were	0	1	2	3
Talk to area personnel about the incident	0	1	2	3
Come up with a couple of different solutions	0	1	2	3
Plan to avoid the area on my next visit	0	1	2	3
Leave the area and go to a different part of the area	0	1	2	3
Try to get the person responsible to change their mind	0	1	2	3
Leave the area altogether	0	1	2	3
Change the time I will run next time	0	1	2	3
Alter my pace to avoid others	0	1	2	3

Finally, a few questions about you.

27. Are you...? Male or Female

28. What year were you born? 19_____

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

- | | |
|--|---|
| <input type="checkbox"/> Some high school | <input type="checkbox"/> Some college |
| <input type="checkbox"/> Graduated high school/GED | <input type="checkbox"/> Graduated from college |
| <input type="checkbox"/> Some votech | <input type="checkbox"/> Some postgraduate |
| <input type="checkbox"/> Graduated from votech or completed associate degree | <input type="checkbox"/> Postgraduate degree(s) |

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

Ethnicity (check one): Hispanic or Latino
 Not Hispanic or Latino

Race (check all that apply):
 American Indian or Alaska native
 Asian
 Black or African American
 Native Hawaiian or other pacific islander
 White
 Other (explain: _____)

31. Including you, how many adults, teens, and children live in your household?

Adults (18+) Teens (13 to 17 years) Children (12 or under)

32. What is your annual household income before taxes (check one)?

<input type="checkbox"/> LESS THAN \$25,000	<input type="checkbox"/> \$50,000-74,999	<input type="checkbox"/> \$125,000-149,999
<input type="checkbox"/> \$25,000-34,999	<input type="checkbox"/> \$75,000-99,999	<input type="checkbox"/> \$150,000-174,999
<input type="checkbox"/> \$35,000-49,999	<input type="checkbox"/> \$100,000 -124,999	<input type="checkbox"/> \$175,000 OR MORE

Please mail the completed questionnaire back in the postage-paid envelope provided.

THANK YOU FOR YOUR PARTICIPATION!

If you want more information about this study, contact Dr. Ingrid Schneider,
115 Green Hall, 1530 Cleveland Avenue North, St. Paul, MN 55108-1027;
612-624-2250; ingridss@umn.edu.

Minnesota Recreational Trail User Questionnaire



Greetings!

The University of Minnesota, in cooperation with the Minnesota Recreational Trail Users Association and Minnesota Department of Natural Resources, is interested in your recreational biking trail experiences. The information we get from this questionnaire will enhance the management of, and your experiences at, various trail areas across Minnesota.

We have selected a small number of bicyclists to share their views and therefore, every questionnaire is important. The enclosed survey should take just 15 minutes to complete. All the information you provide is completely voluntary, confidential, and anonymous. Once our mailing procedures are complete, your name will be removed.

If you have any questions or concerns about the survey, please feel free to phone me at 612.624.6719 or email me at bipe0002@umn.edu. Thank you in advance for your participation in this important project!

Sincerely,

Ingrid Schneider, Ph.D.
Project leader

Theresa Bipes
Graduate Research Assistant

First, a few questions about your biking outdoors.

1. **What year did you begin biking outdoors (fill in one)?** 19____ OR 200____ ____ Can't remember
2. **Including you, how many people in your household participated in the last 12 months in biking outdoors?**
 ____ People
- Of these people, how many are 20 or older?** ____ People

3. Below is a list of possible reasons why people bike outdoors. Please circle the appropriate number that indicates how important each reason is to you for biking outdoors.

	Very unimportant	Unimportant	Neither	Important	Very important
To be close to nature	1	2	3	4	5
To do something with my family	1	2	3	4	5
To be physically active	1	2	3	4	5
To be on my own	1	2	3	4	5
To test my skills & abilities	1	2	3	4	5
To be with members of my own group	1	2	3	4	5
To view the scenery	1	2	3	4	5
To get away from the usual demands of life	1	2	3	4	5
To explore and discover new things	1	2	3	4	5
To relax physically	1	2	3	4	5
To experience solitude	1	2	3	4	5
To challenge myself	1	2	3	4	5
To experience nature	1	2	3	4	5
To be with people who enjoy the same things I do	1	2	3	4	5
To be away from other people	1	2	3	4	5
To experience silence & quiet	1	2	3	4	5
To have thrills & excitement	1	2	3	4	5
To rest mentally	1	2	3	4	5
To enjoy different experiences from home	1	2	3	4	5
To get/keep physically fit	1	2	3	4	5

Now, some questions about your outdoor biking activity and related expenditures.

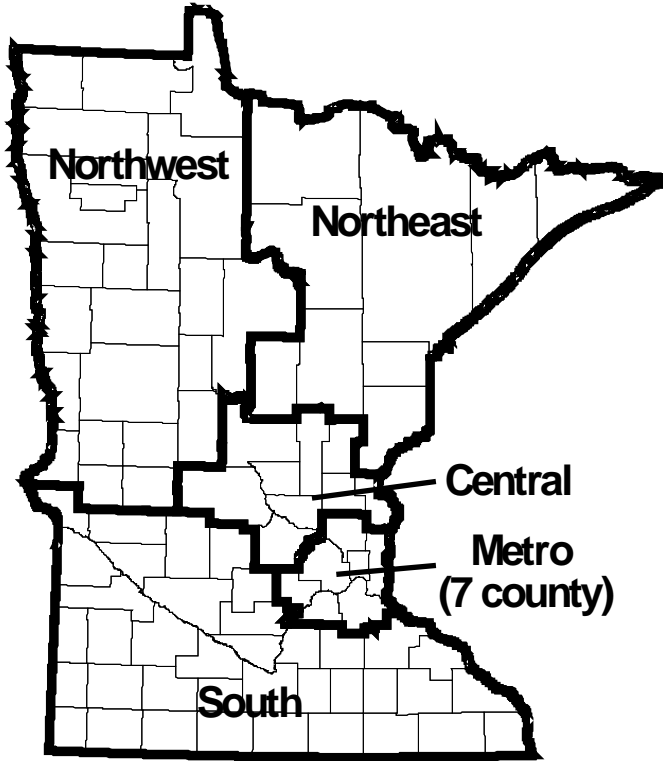
Experiences within a 30-minute drive of your primary home

4. How many days in the last 12 months did you bike outdoors within a 30-minute drive of your primary home? ___ Days (if 0, go to question 12)

4a. Of these days, how many were mostly on a natural surface (e.g., on grass or dirt) with a single track? ___ Days

5. Of these days biking outdoors, how many were in each region?

___ Northwest ___ Northeast ___ Central
___ Metro ___ Southern ___ Outside MN (where? _____)



Now, think back to a recent outdoor biking trip that was within a 30-minute drive from your home, and answer the following questions about that trip.

6. How many days in duration was this trip (count part of a day as 1 day)? ___ Day

7. How many miles did you travel one-way from home on this trip? ___ Miles

8. In what region was the destination area for this trip (see map; check one)?

___ Northwest ___ Northeast ___ Central
___ Metro ___ Southern ___ Outside MN

9. On this outdoor biking trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the destination area where you biked for recreation outdoors. If you spent nothing on an item, please enter "0."

	At home spending (getting ready for trip)	Travel & destination area (to/from & in the area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Recreational equipment rentals		
Recreational equipment repair/maintenance		
Payments to public agencies (licenses, entrance fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

10. How many people were covered by these expenditures? _____ People

11. Of these people, how many were under 20 years of age? _____ People under 20 years

Experiences more than a 30-minute drive from your primary home

12. How many days in the last 12 months did you bike outdoors more than a 30-minute drive from your primary home? _____ Days (if 0, go to question 20)

12a. Of these days, how many were mostly on a natural surface (e.g., on grass or dirt) with a single track? _____ Days

13. Of these days, how many were in each region (see map on adjacent page)?

____ Northwest

____ Northeast

____ Central

____ Metro

____ Southern

____ Outside MN (where? _____)

Now, think back to a recent outdoor biking trip that was more than a 30-minute drive from your home and answer the following questions about that trip.

14. How many days in duration was this trip (count part of a day as 1 day)? _____ Days

15. How many miles did you travel one-way from home on this trip? _____ Miles

16. In what region was the destination area for this trip (see map on adjacent page; check one)?

Northwest Northeast Central
 Metro Southern Outside MN

17. On this outdoor biking trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the destination area where you biked outdoors for recreation. If you spent nothing on an item, please enter "0."

	At home spending (getting ready for trip)	Travel & destination area (to/from & in area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Recreational equipment rentals		
Recreational equipment repair/maintenance		
Payments to public agencies (licenses, entrance fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

18. How many people were covered by these expenditures? People

19. Of these people, how many were under 20 years of age? Under 20 years

20. Beyond travel and expenses covered above, what were your household's expenses in the last 12 months for biking? If you spent nothing on an item, please enter "0."

	Expenses in last 12 months
Purchase of new equipment	\$
Purchase of previously owned equipment	\$
Recreational equipment repair/maintenance not done during a trip	\$
Insurance on your bicycling equipment	\$
Off season storage costs	\$
Other (explain)	\$

Now, some questions about your trail experiences.

21. When biking outdoors on a trail, how often do you observe each of the following?

	Never	Sometimes	Many times	Almost always	Don't know
Rude or discourteous users	0	1	2	3	DK
Others not yielding	0	1	2	3	DK
Others passing too closely	0	1	2	3	DK
Others out of control	0	1	2	3	DK
Others going too fast	0	1	2	3	DK
Litter on or near the trail	0	1	2	3	DK
Seeing off trail/road use	0	1	2	3	DK
Seeing evidence of off trail/road use (erosion, marks, etc.)	0	1	2	3	DK
Too many other users on the trail	0	1	2	3	DK
Hearing other users on the trail	0	1	2	3	DK
Accessibility issue	0	1	2	3	DK
Other (explain)	0	1	2	3	DK

22. Which of these interferes the most with your trails experience (check one)?

- | | |
|---|---|
| <input type="checkbox"/> Rude or discourteous users | <input type="checkbox"/> Seeing off trail/road use |
| <input type="checkbox"/> Others not yielding | <input type="checkbox"/> Too many other users on the trail |
| <input type="checkbox"/> Others passing too closely | <input type="checkbox"/> Hearing other users on the trail |
| <input type="checkbox"/> Others out of control | <input type="checkbox"/> Litter on/near the trail |
| <input type="checkbox"/> Others riding too fast | <input type="checkbox"/> Other (explain: _____) |
| <input type="checkbox"/> Accessibility Issue | |
| <input type="checkbox"/> Seeing evidence of off | <input type="checkbox"/> Nothing interferes most
(Go to Question 27) |

23. Was this interference in #22 with other bicyclists (circle one)? Yes No
Please share any details or comments on this interference.

24. Was this interference in #22 stressful (circle one)? Yes No

25. Indicate how much you agree with the following statements about what interferes the most with your trail biking experience.

Strongly disagree	Disagree	Unsure	Agree	Strongly Agree
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

26. When this most interfering experience happens, how often do you use the following responses?

	Do not use	Use infrequently	Use occasionally	Use frequently
Follow establish rules for trail etiquette	0	1	2	3
Talk to other members of my group about the incident	0	1	2	3
Wish the situation would go away or be over with	0	1	2	3
Think about why the incident occurred	0	1	2	3
Don't let it get to me; refuse to think about it too much	0	1	2	3
Try to forget the whole thing	0	1	2	3
Go on as if nothing had happened	0	1	2	3
Refuse to get too serious about it	0	1	2	3
Stand my ground and fight for what I wanted	0	1	2	3
I try to keep my feelings to myself	0	1	2	3
I know what has to be done so I double my efforts to make things work	0	1	2	3
Express anger to the person who caused the incident	0	1	2	3
I make a plan of action and follow it	0	1	2	3
Try not to burn bridges	0	1	2	3
Make light of the situation	0	1	2	3
Keep others from knowing how bad things were	0	1	2	3
Talk to area personnel about the incident	0	1	2	3
Come up with a couple of different solutions	0	1	2	3
Plan to avoid the area on my next visit	0	1	2	3
Leave the area and go to a different part of the area	0	1	2	3
Try to get the person responsible to change their mind	0	1	2	3
Leave the area altogether	0	1	2	3
Change the time I will bike next time	0	1	2	3
Alter my pace to avoid others	0	1	2	3

Finally, a few questions about you.

28. Are you...? Male or Female

29. What year were you born? 19_____

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

- | | |
|--|---|
| <input type="checkbox"/> Some high school | <input type="checkbox"/> Some college |
| <input type="checkbox"/> Graduated high school/GED | <input type="checkbox"/> Graduated from college |
| <input type="checkbox"/> Some votech | <input type="checkbox"/> Some postgraduate |
| <input type="checkbox"/> Graduated from votech or completed associate degree | <input type="checkbox"/> Postgraduate degree(s) |

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

Ethnicity (check one): Hispanic or Latino
 Not Hispanic or Latino

Race (check all that apply):
 American Indian or Alaska native
 Asian
 Black or African American
 Native Hawaiian or other pacific islander
 White
 Other (explain: _____)

32. Including you, how many adults, teens, and children live in your household?

Adults (18+) Teens (13 to 17 years) Children (12 or under)

33. What is your annual household income before taxes (check one)?

<input type="checkbox"/> LESS THAN \$25,000	<input type="checkbox"/> \$50,000-74,999	<input type="checkbox"/> \$125,000-149,999
<input type="checkbox"/> \$25,000-34,999	<input type="checkbox"/> \$75,000-99,999	<input type="checkbox"/> \$150,000-174,999
<input type="checkbox"/> \$35,000-49,999	<input type="checkbox"/> \$100,000 -124,999	<input type="checkbox"/> \$175,000 OR MORE

Please mail the completed questionnaire back in the postage-paid envelope provided.

THANK YOU FOR YOUR PARTICIPATION!

If you want more information about this study, contact Dr. Ingrid Schneider,
115 Green Hall, 1530 Cleveland Avenue North, St. Paul, MN 55108-1027;
612-624-2250; ingridss@umn.edu.

Minnesota Recreational Trail User Questionnaire



Greetings!

The University of Minnesota, in cooperation with the Minnesota Recreational Trail Users Association and Minnesota Department of Natural Resources, is interested in your off-highway motor (OHM) recreational trail experiences. The information we get from this questionnaire will enhance the management of OHMs and your experiences at various trail areas across Minnesota.

We have selected a small number of OHM riders to share their views and therefore, every questionnaire is important. The enclosed survey should take just 15 minutes to complete. All the information you provide is completely voluntary, confidential, and anonymous. Once our mailing procedures are complete, your name will be removed.

If you have any questions or concerns about the survey, please feel free to phone me at 612.624.6719 or email me at bipe0002@umn.edu. Thank you in advance for your participation in this important project!

Sincerely,

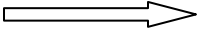
Ingrid Schneider, Ph.D.
Project leader

Theresa Bipes
Graduate Research Assistant

First, a few questions about your off-highway motorcycle recreational riding.

NOTE:

For the purposes of this survey, OHMs are off highway vehicles traveling on two wheels. OHMs have a seat or saddle designed to be straddled by the operator and have handlebars for steering control. Motorcycles may be legal for highway use and still considered to be OHMs if used for off-highway operation on trails or natural terrain.

Survey questions on this page (1, 2, 3) pertain only to the use of the OHM identified by the label shown to the right.  **DO NOT** give answers for any other OHM.

Registration #:	«REG_NBR»
Make:	«MAKE»
Year:	«MODEL_YR»
Survey #:	«ID»

1. Do you still own this OHM shown on the label above? (check one)
 Yes No (If NO go to question 4)

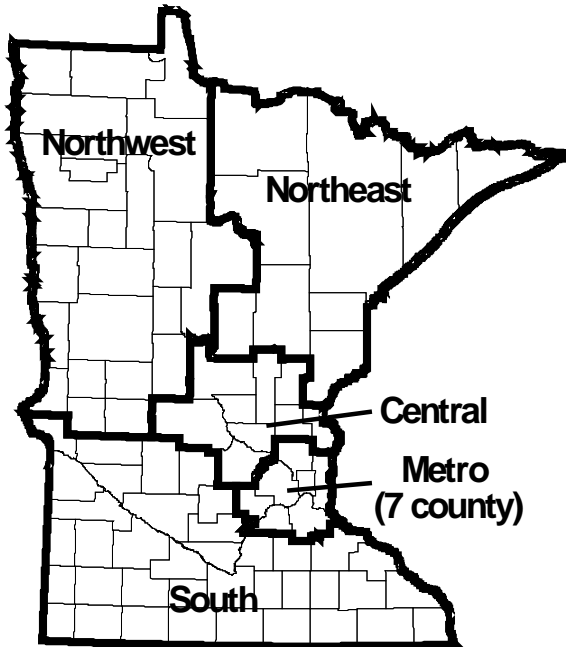
2. Did you purchase the OHM on the label above within the last 12 months? (check one)
 Yes No

2a. If YES, did you purchase this OHM new or used? (check one)
 New Used

3. For the last 12 months, how many total days did you or others ride the OHM on the label above (count part of one day as 1 day—exclude days when the OHM was ridden in support of another recreation activity, such as hunting)? Total days

3a. Of these total days, how many were in each Minnesota region and outside Minnesota?

Northwest Northeast Central
 Metro Southern Outside Minnesota



Now, some questions about your recreation OHM riding & related expenditures (these and all other questions refer to any OHM).

4. What year did you begin riding OHMs for recreation (fill in one)?

19 ____ OR 200 ____ Can't remember

5. Including you, how many people in your household participated in the last 12 months in recreational off-highway OHM riding? ____ People

Of these people, how many are 20 or older? ____ People

6. In total, how many OHMs are registered in Minnesota for off-highway recreational use by you and other members of your household (if none, write 0)? ____ # of other OHMs

7. Below is a list of possible reasons why people ride OHMs for recreation. Please circle the appropriate number that indicates how important each reason is to you for riding OHMs.

	Very unimportant	Unimportant	Neither	Important	Very important
To be close to nature	1	2	3	4	5
To do something with my family	1	2	3	4	5
To be physically active	1	2	3	4	5
To be on my own	1	2	3	4	5
To test my skills & abilities	1	2	3	4	5
To be with members of my own group	1	2	3	4	5
To view the scenery	1	2	3	4	5
To get away from the usual demands of life	1	2	3	4	5
To explore and discover new things	1	2	3	4	5
To relax physically	1	2	3	4	5
To experience solitude	1	2	3	4	5
To challenge myself	1	2	3	4	5
To experience nature	1	2	3	4	5
To be with people who enjoy the same things I do	1	2	3	4	5
To be away from other people	1	2	3	4	5
To experience silence & quiet	1	2	3	4	5
To have thrills & excitement	1	2	3	4	5
To rest mentally	1	2	3	4	5
To enjoy different experiences from home	1	2	3	4	5
To get/keep physically fit	1	2	3	4	5

Experiences within a 30-minute drive of your primary home

8. How many days in the last 12 months did you ride OHMs for recreation within a 30-minute drive of your primary home (exclude days when the OHM was ridden in support of another recreation activity, such as hunting)? _____ Days (if 0, go to question 16)

9. Of these days, how many were in each region (see map on adjacent page)?

Northwest Northeast Central
 Metro Southern Outside MN (where? _____)

Now, think back to a recent recreational OHM riding trip that was within a 30-minute drive from your home, and answer the following questions about that trip (exclude trips when the OHM was primarily ridden in support of another recreational activity, such as hunting).

10. How many days in duration was this trip (count part of a day as 1 day)? _____ Days

11. How many miles did you travel one-way from home on this trip? _____ Miles

12. In what region was the destination area for this trip (see map on adjacent page; check one)?

Northwest Northeast Central
 Metro Southern Outside MN

13. On this recreational riding trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the destination area where you rode OHMs for recreation. If you spent nothing on an item, enter "0."

	At home spending (getting ready for trip)	Travel & destination area (to/from & in the area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels for automobile(s)		
Gasoline or other fuels for OHM		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Recreational equipment rentals		
Recreational equipment repair/maintenance		
Payments to public agencies (licenses, entrance fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

14. How many people were covered by these expenditures? _____ People

15. Of these people, how many were under 20 years of age? _____ People under 20

Experiences more than a 30-minute drive from your primary home

16. How many days in the last 12 months did you recreationally ride OHMs more than a 30-minute drive from your primary home (exclude days when the OHM was ridden in support of another recreation activity, such as hunting)? _____ Days (if 0, go to question 24)

17. Of these days, how many were in each region (see map on adjacent page)?

Northwest Northeast Central
 Metro Southern Outside MN (where? _____)

Now, think back to a recent recreational OHM riding trip that was more than a 30-minute drive from your home, and answer the following questions about that trip (exclude trips when the OHM was primarily ridden in support of another recreational activity, such as hunting).

18. How many days in duration was this trip (count part of a day as 1 day)? _____ Days

19. How many miles did you travel one-way from home on this trip? _____ Miles

20. In what region was the destination area for this trip (see adjacent map; check one)?

Northwest Northeast Central
 Metro Southern Outside MN

21. On this recreational riding trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the destination area where you rode OHMs for recreation. If you spent nothing on an item, enter "0."

	At home spending (getting ready for trip)	Travel & destination area (to/from & in area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels for automobile(s)		
Gasoline or other fuels for OHM		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Recreational equipment rentals		
Recreational equipment repair/maintenance		
Payments to public agencies (licenses, entrance fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

22. How many people were covered by these expenditures? _____ People

23. Of these people, how many were under 20 years of age? _____ Under 20 years

24. Beyond travel and expenses covered above, what were your household’s expenses in the last 12 months for recreational OHM riding? If you spent nothing on an item, please enter “0.”

	Expenses in last 12 months
Purchase of new equipment	\$
Purchase of previously owned equipment	\$
Recreational equipment repair/maintenance not done during a trip	\$
Insurance on your OHM equipment	\$
Off season storage costs	\$
Other (explain)	\$

Now, some questions about your trail experiences.

25. When OHM riding on a trail, how often do you observe each of the following?

	Never	Sometimes	Many times	Almost always	Don't know
Rude or discourteous users	0	1	2	3	DK
Others not yielding	0	1	2	3	DK
Others passing too closely	0	1	2	3	DK
Others out of control	0	1	2	3	DK
Others going too fast	0	1	2	3	DK
Litter on or near the trail	0	1	2	3	DK
Seeing off trail/road use	0	1	2	3	DK
Seeing evidence of off trail/road use (erosion, marks, etc.)	0	1	2	3	DK
Too many other users on the trail	0	1	2	3	DK
Hearing other users on the trail	0	1	2	3	DK
Accessibility issue	0	1	2	3	DK
Other (explain)	0	1	2	3	DK

26. Which of these interferes the most with your trails experience (check one)?

- | | |
|---|--|
| <input type="checkbox"/> Rude or discourteous users | <input type="checkbox"/> Seeing off trail/road use |
| <input type="checkbox"/> Others not yielding | <input type="checkbox"/> Too many other users on the trail |
| <input type="checkbox"/> Others passing too closely | <input type="checkbox"/> Hearing other users on the trail |
| <input type="checkbox"/> Others out of control | <input type="checkbox"/> Litter on/near the trail |
| <input type="checkbox"/> Others riding too fast | <input type="checkbox"/> Other (explain: _____) |
| <input type="checkbox"/> Accessibility Issue | <input type="checkbox"/> Nothing interferes most |
| <input type="checkbox"/> Seeing evidence of off | (Go to Question 29) |

27. Was this interference in #26 with other OHM riders (circle one)? **Yes** **No**
Please share any details or comments on this interference.

28. When this most interfering experience happens, how often do you use the following responses?

	Do not use	Use infrequently	Use occasionally	Use frequently
Follow establish rules for trail etiquette	0	1	2	3
Talk to other members of my group about the incident	0	1	2	3
Wish the situation would go away or be over with	0	1	2	3
Think about why the incident occurred	0	1	2	3
Don't let it get to me; refuse to think about it too much	0	1	2	3
Try to forget the whole thing	0	1	2	3
Go on as if nothing had happened	0	1	2	3
Refuse to get too serious about it	0	1	2	3
Stand my ground and fight for what I wanted	0	1	2	3
I try to keep my feelings to myself	0	1	2	3
I know what has to be done so I double my efforts to make things work	0	1	2	3
Express anger to the person who caused the incident	0	1	2	3
I make a plan of action and follow it	0	1	2	3
Try not to burn bridges	0	1	2	3
Make light of the situation	0	1	2	3
Keep others from knowing how bad things were	0	1	2	3
Talk to area personnel about the incident	0	1	2	3
Come up with a couple of different solutions	0	1	2	3
Plan to avoid the area on my next visit	0	1	2	3
Leave the area and go to a different part of the area	0	1	2	3
Try to get the person responsible to change their mind	0	1	2	3
Leave the area altogether	0	1	2	3
Change the time I will cross country ski next time	0	1	2	3
Alter my pace to avoid others	0	1	2	3

Finally, a few questions about you.

29. Are you...? Male or Female

30. What year were you born? 19_____

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

- | | |
|--|---|
| <input type="checkbox"/> Some high school | <input type="checkbox"/> Some college |
| <input type="checkbox"/> Graduated high school/GED | <input type="checkbox"/> Graduated from college |
| <input type="checkbox"/> Some votech | <input type="checkbox"/> Some postgraduate |
| <input type="checkbox"/> Graduated from votech or completed associate degree | <input type="checkbox"/> Postgraduate degree(s) |

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

Ethnicity (check one): Hispanic or Latino
 Not Hispanic or Latino

Race (check all that apply):
 American Indian or Alaska native
 Asian
 Black or African American
 Native Hawaiian or other pacific islander
 White
 Other (explain: _____)

33. Including you, how many adults, teens, and children live in your household?

Adults (18+) Teens (13 to 17 years) Children (12 or under)

34. What is your annual household income before taxes (check one)?

- | | | |
|---|---|--|
| <input type="checkbox"/> LESS THAN \$25,000 | <input type="checkbox"/> \$50,000-74,999 | <input type="checkbox"/> \$125,000-149,999 |
| <input type="checkbox"/> \$25,000-34,999 | <input type="checkbox"/> \$75,000-99,999 | <input type="checkbox"/> \$150,000-174,999 |
| <input type="checkbox"/> \$35,000-49,999 | <input type="checkbox"/> \$100,000 -124,999 | <input type="checkbox"/> \$175,000 OR MORE |

Please mail the completed questionnaire back in the postage-paid envelope provided.

THANK YOU FOR YOUR PARTICIPATION!

If you want more information about this study, contact Dr. Ingrid Schneider,
115 Green Hall, 1530 Cleveland Avenue North, St. Paul, MN 55108-1027;
612-624-2250; ingridss@umn.edu

Minnesota Recreational Trail User Questionnaire



Greetings!

The University of Minnesota, in cooperation with the Minnesota Recreational Trail Users Association and Minnesota Department of Natural Resources, is interested in your off-road vehicle (ORV) recreational trail experiences. The information we get from this questionnaire will enhance the management of ORVs and your experiences at various trail areas across Minnesota.

We have selected a small number of ORV riders to share their views and therefore, every questionnaire is important. The enclosed survey should take just 15 minutes to complete. All the information you provide is completely voluntary, confidential, and anonymous. Once our mailing procedures are complete, your name will be removed.

If you have any questions or concerns about the survey, please feel free to phone me at 612.624.6719 or email me at bipe0002@umn.edu. Thank you in advance for your participation in this important project!

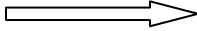
Sincerely,

Ingrid Schneider, Ph.D.
Project leader

Theresa Bipes
Graduate Research Assistant

First, a few questions about your off-road vehicle (ORV) recreational riding.

NOTE: For the purposes of this survey, ORVs are motorized recreational vehicles capable of cross-country travel on natural terrain, such as four- wheel-drive trucks.

Survey questions on this page (1, 2, 3) pertain only to the use of the ORV identified by the label shown to the right.  DO NOT give answers for any other ORV.

Registration #:	«REG_NBR»
Make:	«MAKE»
Year:	«MODEL_YR»
Survey #:	«ID»

1. Do you still own the ORV shown on the label above? (check one)

Yes No (If NO, go to question 4.)

2. Did you purchase this ORV within the last 12 months? (check one)

Yes No

2a. If YES, did you purchase this ORV new or used? (check one)

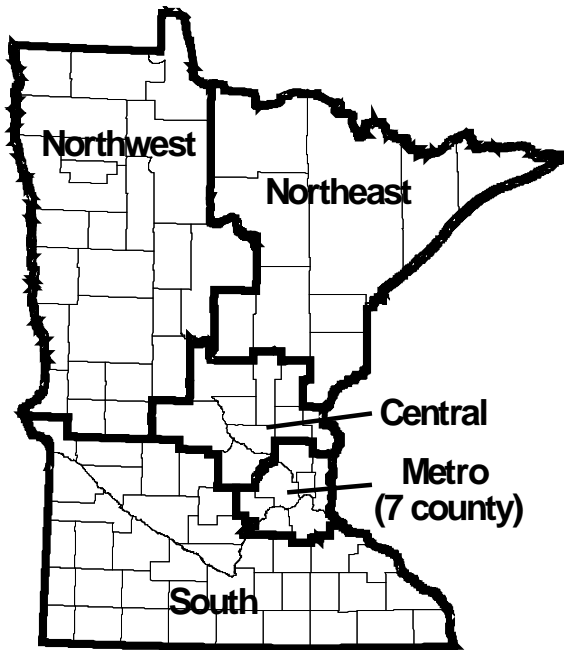
New Used

3. For the last 12 months, how many total days did you or others ride the ORV on the label above off-highway for recreation (count part of one day as 1 day— exclude days when the ORV was ridden in support of another recreation activity, such as hunting)?

Total days

3a. Of these total days, how many were in each Minnesota region and outside Minnesota?

Northwest Northeast Central
 Metro Southern Outside Minnesota



Now, some questions about your recreational ORV riding & related expenditures (these and all other questions refer to **any** ORV).

4. What year did you begin riding ORVs for recreation (fill in one)?

19 ____ OR 200 ____ Can't remember

5. Including you, how many people in your household participated in the last 12 months in recreational off-highway ORV riding? ____ People

Of these people, how many are 20 or older? ____ People

6. In total, how many ORVs are registered in Minnesota for off-highway recreational use by you and other members of your household (if none, write 0)? ____ # of other ORVs

7. Below is a list of possible reasons why people ride ORVs for recreation. Please circle the appropriate number that indicates how important each reason is to you for riding ORVs.

	Very unimportant	Unimportant	Neither	Important	Very important
To be close to nature	1	2	3	4	5
To do something with my family	1	2	3	4	5
To be physically active	1	2	3	4	5
To be on my own	1	2	3	4	5
To test my skills & abilities	1	2	3	4	5
To be with members of my own group	1	2	3	4	5
To view the scenery	1	2	3	4	5
To get away from the usual demands of life	1	2	3	4	5
To explore and discover new things	1	2	3	4	5
To relax physically	1	2	3	4	5
To experience solitude	1	2	3	4	5
To challenge myself	1	2	3	4	5
To experience nature	1	2	3	4	5
To be with people who enjoy the same things I do	1	2	3	4	5
To be away from other people	1	2	3	4	5
To experience silence & quiet	1	2	3	4	5
To have thrills & excitement	1	2	3	4	5
To rest mentally	1	2	3	4	5
To enjoy different experiences from home	1	2	3	4	5
To get/keep physically fit	1	2	3	4	5

Experiences within a 30-minute drive of your primary home

8. How many days in the last 12 months did you ride ORVs for recreation within a 30-minute drive of your primary home (exclude days when the ORV was ridden in support of another recreation activity, such as hunting)? _____ Days (if 0, go to question 16)

9. Of these days, how many were in each region (see map on adjacent page)?

Northwest Northeast Central
 Metro Southern Outside MN (where? _____)

Now, think back to a recent recreational ORV riding trip that was within a 30-minute drive from your home, and answer the following questions about that trip (exclude trips when the ORV was primarily ridden in support of another recreational activity, such as hunting).

10. How many days in duration was this trip (count part of a day as 1 day)? _____ Days

11. How many miles did you travel one-way from home on this trip? _____ Miles

12. In what region was the destination area for this trip (see map on adjacent page; check one)?

Northwest Northeast Central
 Metro Southern Outside MN

13. On this recreational riding trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the destination area where you rode ORVs for recreation. If you spent nothing on an item, please enter "0."

	At home spending (getting ready for trip)	Travel & destination area (to/from & in the area)
Lodging, including camping at a privately-owned campground		
Grocery/convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels for automobile(s)		
Gasoline or other fuels for ORV		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Recreational equipment rentals		
Recreational equipment repair/maintenance		
Payments to public agencies (licenses, entrance fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

14. How many people were covered by these expenditures? _____ People

15. Of these people, how many were under 20 years of age? _____ People under 20 years

Experiences more than a 30-minute drive from your primary home

16. How many days in the last 12 months did you recreationally ride ORVs for more than a 30-minute drive of your primary home (exclude trips when the ORV was primarily ridden in support of another recreational activity, such as hunting). _____ Days (if 0, go to question 24)

17. Of these days, how many were in each region (see map on other page)?

Northwest Northeast Central
 Metro Southern Outside MN (where? _____)

Now, think back to a recent recreational ORV riding trip that was more than a 30-minute drive from your home, and answer the following questions about that trip.

18. How many days in duration was this trip (count part of a day as 1 day)? _____ Days

19. How many miles did you travel one-way from home on this trip? _____ Miles

20. In what region was the destination area for this trip (see adjacent map; check one)?

Northwest Northeast Central
 Metro Southern Outside MN

21. On this recreational riding trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the destination area where you rode ORVs for recreation. If you spent nothing on an item, please enter "0."

	At home spending (getting ready for trip)	Travel & destination area (to/from & in area)
Lodging, including camping at a privately-owned campground		
Grocery/convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels for automobile(s)		
Gasoline or other fuels for ORV		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Recreational equipment rentals		
Recreational equipment repair/maintenance		
Payments to public agencies (licenses, entrance fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

22. How many people were covered by these expenditures? _____ People

23. Of these people, how many were under 20 years of age? _____ Under 20 years

24. Beyond travel and expenses covered above, what were your household's expenses in the last 12 months for recreational ORV riding? If you spent nothing on an item, enter "0."

	Expenses in last 12 months
Purchase of new equipment	\$
Purchase of previously owned equipment	\$
Recreational equipment repair/maintenance not done during a trip	\$
Insurance on your ORV equipment	\$
Off season storage costs	\$
Other (explain)	\$

Now, some questions about your trail experiences.

25. When ORV riding on a trail, how often do you observe each of the following?

	Never	Sometimes	Many times	Almost always	Don't know
Rude or discourteous users	0	1	2	3	DK
Others not yielding	0	1	2	3	DK
Others passing too closely	0	1	2	3	DK
Others out of control	0	1	2	3	DK
Others going too fast	0	1	2	3	DK
Litter on or near the trail	0	1	2	3	DK
Seeing off trail/road use	0	1	2	3	DK
Seeing evidence of off trail/road use (erosion, marks, etc.)	0	1	2	3	DK
Too many other users on the trail	0	1	2	3	DK
Hearing other users on the trail	0	1	2	3	DK
Accessibility issue	0	1	2	3	DK

26. Which of these interferes the most with your trails experience (check one)?

- | | |
|---|--|
| <input type="checkbox"/> Rude or discourteous users | <input type="checkbox"/> Seeing off trail/road use |
| <input type="checkbox"/> Others not yielding | <input type="checkbox"/> Too many other users on the trail |
| <input type="checkbox"/> Others passing too closely | <input type="checkbox"/> Hearing other users on the trail |
| <input type="checkbox"/> Others out of control | <input type="checkbox"/> Litter on/near the trail |
| <input type="checkbox"/> Others riding too fast | <input type="checkbox"/> Other (explain: _____) |
| <input type="checkbox"/> Accessibility Issue | |
| <input type="checkbox"/> Seeing evidence of off | <input type="checkbox"/> Nothing interferes most question #28) |

27. Was this interference in #26 with other ORV riders (circle one)? **Yes** **No**
Please share any details or comments on this interference.

Finally, a few questions about you.

28. Are you...? Male or Female

29. What year were you born? 19_____

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

- | | |
|--|---|
| <input type="checkbox"/> Some high school | <input type="checkbox"/> Some college |
| <input type="checkbox"/> Graduated high school/GED | <input type="checkbox"/> Graduated from college |
| <input type="checkbox"/> Some votech | <input type="checkbox"/> Some postgraduate |
| <input type="checkbox"/> Graduated from votech or completed associate degree | <input type="checkbox"/> Postgraduate degree(s) |

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

Ethnicity (check one): Hispanic or Latino
 Not Hispanic or Latino

Race (check all that apply):
 American Indian or Alaska native
 Asian
 Black or African American
 Native Hawaiian or other pacific islander
 White
 Other (explain: _____)

32. Including you, how many adults, teens, and children live in your household?

Adults (18+) Teens (13 to 17 years) Children (12 or under)

33. What is your annual household income before taxes (check one)?

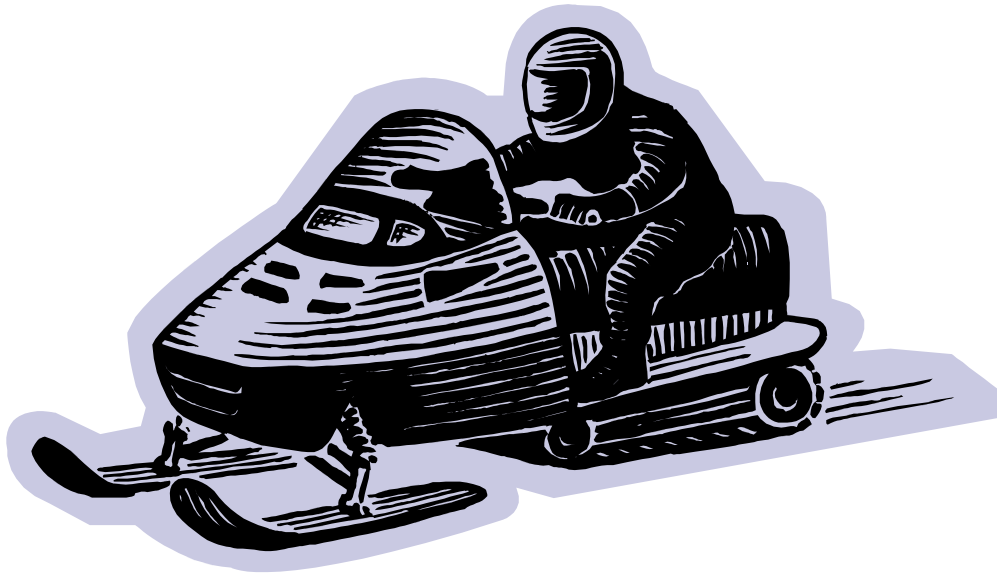
<input type="checkbox"/> LESS THAN \$25,000	<input type="checkbox"/> \$50,000-74,999	<input type="checkbox"/> \$125,000-149,999
<input type="checkbox"/> \$25,000-34,999	<input type="checkbox"/> \$75,000-99,999	<input type="checkbox"/> \$150,000-174,999
<input type="checkbox"/> \$35,000-49,999	<input type="checkbox"/> \$100,000 -124,999	<input type="checkbox"/> \$175,000 OR MORE

Please mail the completed questionnaire back in the postage-paid envelope provided.

THANK YOU FOR YOUR PARTICIPATION!

If you want more information about this study, contact Dr. Ingrid Schneider,
115 Green Hall, 1530 Cleveland Avenue North, St. Paul, MN 55108-1027;
612-624-2250; ingridss@umn.edu

Minnesota Recreational Trail User Questionnaire



Greetings!

The University of Minnesota, in cooperation with the Minnesota Recreational Trail Users Association and Minnesota Department of Natural Resources, is interested in your snowmobile recreational trail experiences. The information we get from this questionnaire will enhance the management of, and your experiences at, various trail areas across Minnesota.

We have selected a small number of snowmobilers to share their views and therefore, every questionnaire is important. The enclosed survey should take just 15 minutes to complete. All the information you provide is completely voluntary, confidential, and anonymous. Once our mailing procedures are complete, your name will be removed.

If you have any questions or concerns about the survey, please feel free to phone me at 612.624.2250 or email me at ingridss@umn.edu. Thank you in advance for your participation in this important project!

Sincerely,

Ingrid Schneider, Ph.D.
Project leader

First, a few questions about your snowmobiling.

1. What year did you begin snowmobiling (fill in one)? 19____ OR 200____ ___ Can't remember

2. Including you, how many people in your household participated in the last 12 months in snowmobiling?
 _____ People

Of these people, how many are 20 or older? _____ People

3. Below is a list of possible reasons why people snowmobile. Please circle the appropriate number that indicates how important each reason is to you for to snowmobile.

	Very unimportant	Unimportant	Neither	Important	Very important
To be close to nature	1	2	3	4	5
To do something with my family	1	2	3	4	5
To be physically active	1	2	3	4	5
To be on my own	1	2	3	4	5
To test my skills & abilities	1	2	3	4	5
To be with members of my own group	1	2	3	4	5
To view the scenery	1	2	3	4	5
To get away from the usual demands of life	1	2	3	4	5
To explore and discover new things	1	2	3	4	5
To relax physically	1	2	3	4	5
To experience solitude	1	2	3	4	5
To challenge myself	1	2	3	4	5
To experience nature	1	2	3	4	5
To be with people who enjoy the same things I do	1	2	3	4	5
To be away from other people	1	2	3	4	5
To experience silence & quiet	1	2	3	4	5
To have thrills & excitement	1	2	3	4	5
To rest mentally	1	2	3	4	5
To enjoy different experiences from home	1	2	3	4	5
To get/keep physically fit	1	2	3	4	5

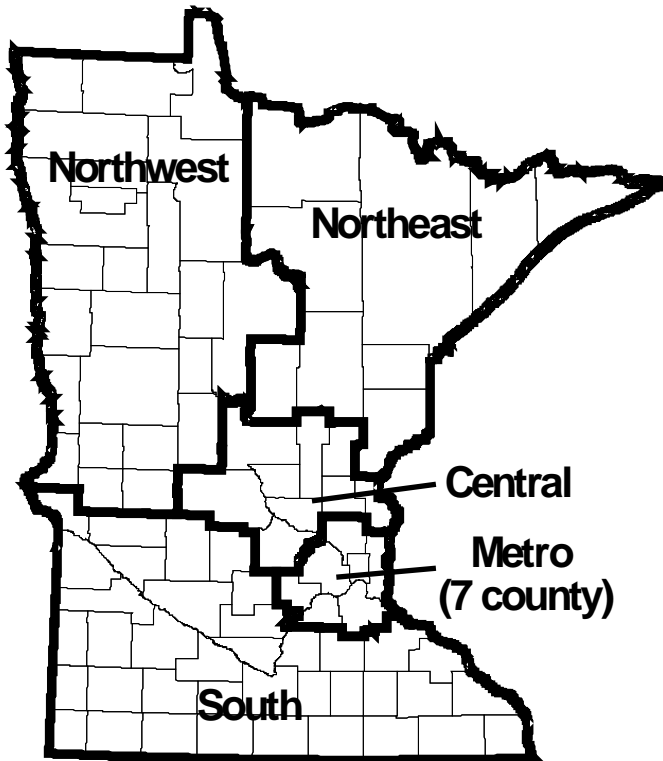
Now, some questions about your snowmobiling and related expenditures

Experiences within a 30-minute drive of your primary home

4. How many days in the last 12 months did you snowmobile within a 30-minute drive of your primary home? _____ Days (if 0, go to question 13)

5. Of these days, how many were in each region?

___ Northwest ___ Northeast ___ Central
___ Metro ___ Southern ___ Outside MN (where? _____)



6. Now, think back to a recent snowmobiling trip that was within a 30-minute drive from your home, and answer the following questions about that trip.

7. How many days in duration was this trip (count part of a day as 1 day)? _____ Days

8. How many miles did you travel one-way from home on this trip? _____ Miles

9. In what region was the destination area for this trip (see map; check one)?

___ Northwest ___ Northeast ___ Central
___ Metro ___ Southern ___ Outside MN

10. On this trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the destination area where you snowmobiled. If you spent nothing on an item, please leave it blank.

	At home spending (getting ready for trip)	Travel & destination area (to/from & in the area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Recreational equipment rentals		
Recreational equipment repair/maintenance		
Payments to public agencies (licenses, entrances fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

11. How many people are covered by these expenditures? _____ People

12. Of these people, how many are under 20 years of age? _____ People under 20 years

Experiences more than a 30-minute drive from your primary home

13. How many days in the last 12 months did you snowmobile more than a 30-minute drive from your primary home? _____ Days (if 0, go to question 21)

14. Of these days, how many were in each region (see map on adjacent page)?

___ Northwest ___ Northeast ___ Central
 ___ Metro ___ Southern ___ Outside MN (where? _____)

Now, think back to a recent snowmobile trip that was more than a 30-minute drive from your home, and answer the following questions about that trip.

15. How many days in duration was this trip (count part of a day as 1 day)? _____ Days

16. How many miles did you travel one-way from home on this trip? _____ Miles

17. In what region was the destination area for this trip (see map on adjacent page; check one)?

Northwest Northeast Central
 Metro Southern Outside MN

18. On this trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and where you snowmobiled. If you spend nothing on an item, please leave it blank.

	At home spending (getting ready for trip)	Travel & destination area (to/from & in area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Recreational equipment rentals		
Recreational equipment repair/maintenance		
Payments to public agencies (licenses, entrances fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

19. How many people are covered by these expenditures? _____ People

20. Of these people, how many are under 20 years of age? _____ Under 20 years

21. Beyond travel and expenses covered above, what were your households expenses in the last 12 months for snowmobiling (if 0, leave blank)?

	Expenses in last 12 months
Purchase of new equipment	\$
Purchase of previously owned equipment	\$
Recreational equipment repair/maintenance not done during a trip	\$
Insurance on your snowmobile equipment	\$
Off season storage costs	\$
Other (explain)	\$

Now, some questions about your trail experiences.

22. When snowmobiling on a trail, how often do you observe each of the following?

	Never	Sometimes	Many times	Almost always	Don't know
Rude or discourteous users	0	1	2	3	DK
Others not yielding	0	1	2	3	DK
Others passing too closely	0	1	2	3	DK
Others out of control	0	1	2	3	DK
Others going too fast	0	1	2	3	DK
Litter on or near the trail	0	1	2	3	DK
Seeing off trail/road use	0	1	2	3	DK
Seeing evidence of off trail/road use (erosion, marks, etc.)	0	1	2	3	DK
Too many other users on the trail	0	1	2	3	DK
Hearing other users on the trail	0	1	2	3	DK
Accessibility issue	0	1	2	3	DK
Other (explain)	0	1	2	3	DK

23. Which of these interferes the most with your trails experience (check one)?

- | | |
|---|---|
| <input type="checkbox"/> Rude or discourteous users | <input type="checkbox"/> Seeing off trail/road use |
| <input type="checkbox"/> Others not yielding | <input type="checkbox"/> Too many other users on the trail |
| <input type="checkbox"/> Others passing too closely | <input type="checkbox"/> Hearing other users on the trail |
| <input type="checkbox"/> Others out of control | <input type="checkbox"/> Litter on/near the trail |
| <input type="checkbox"/> Others riding too fast | <input type="checkbox"/> Other (explain: _____) |
| | <input type="checkbox"/> Nothing interferes most
(Go to Question 27) |

24. Was this interference in #23 with other snowmobilers (circle one)? **Yes** **No**
Please share any details or comments on this interference.

25. Was this interference in #23 stressful (circle one)? **Yes** **No**

26. Indicate how much you agree with the following statements about what interferes the most with your snowmobiling experience.

	Strongly disagree	Disagree	Unsure	Agree	Strongly Agree
I can change or do something about it	1	2	3	4	5
I have to accept it as it is	1	2	3	4	5
I have to hold back from acting	1	2	3	4	5
I need to know more before acting	1	2	3	4	5

27. When this most interfering experience happens, how often do you use the following responses?

	Do not use	Use infrequently	Use occasionally	Use frequently
Follow establish rules for trail etiquette	0	1	2	3
Talk to other members of my group about the incident	0	1	2	3
Wish the situation would go away or be over with	0	1	2	3
Think about why the incident occurred	0	1	2	3
Don't let it get to me; refuse to think about it too much	0	1	2	3
Try to forget the whole thing	0	1	2	3
Go on as if nothing had happened	0	1	2	3
Refuse to get too serious about it	0	1	2	3
Stand my ground and fight for what I wanted	0	1	2	3
I try to keep my feelings to myself	0	1	2	3
I know what has to be done so I double my efforts to make things work	0	1	2	3
Express anger to the person who caused the incident	0	1	2	3
I make a plan of action and follow it	0	1	2	3
Try not to burn bridges	0	1	2	3
Make light of the situation	0	1	2	3
Keep others from knowing how bad things were	0	1	2	3
Talk to area personnel about the incident	0	1	2	3
Come up with a couple of different solutions	0	1	2	3
Plan to avoid the area on my next visit	0	1	2	3
Leave the area and go to a different part of the area	0	1	2	3
Try to get the person responsible to change their mind	0	1	2	3
Leave the area altogether	0	1	2	3
Change the time I will snowmobile next time	0	1	2	3
Alter my pace to avoid others	0	1	2	3

Finally, a few questions about you.

28. Are you...? Male or Female

29. What year were you born? 19_____

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

Some high school Some college
 Graduated high school/GED Graduated from college
 Some votech Some postgraduate
 Graduated from votech or completed associate degree Postgraduate degree(s)

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

Ethnicity (check one): Hispanic or Latino
 Not Hispanic or Latino

Race (check all that apply):

American Indian or Alaska native
 Asian
 Black or African American
 Native Hawaiian or other pacific islander
 White
 Other (explain: _____)

32. Including you, how many adults, teens, and children live in your household?

Adults (18+) Teens (13 to 17 years) Children (12 or under)

33. What is your annual household income before taxes (check one)?

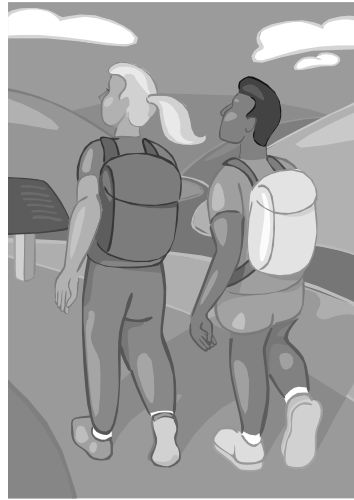
LESS THAN \$25,000 \$50,000-74,999 \$125,000-149,999
 \$25,000-34,999 \$75,000-99,999 \$150,000-174,999
 \$35,000-49,999 \$100,000 -124,999 \$175,000 OR MORE

Please mail the completed questionnaire back in the postage-paid envelope provided.

THANK YOU FOR YOUR PARTICIPATION!

If you want more information about this study, contact Dr. Ingrid Schneider,
115 Green Hall, 1530 Cleveland Avenue North, St. Paul, MN 55108-1027;
612-624-2250; ingridss@umn.edu.

Minnesota Recreational Trail User Questionnaire



Greetings!

The University of Minnesota, in cooperation with the Minnesota Recreational Trail Users Association and Minnesota Department of Natural Resources, is interested in your recreational outdoor walking/hiking trail experiences. The information we get from this questionnaire will enhance the management of, and your experiences at, various trail areas across Minnesota.

We have selected a small number of walkers/hikers to share their views and therefore, every questionnaire is important. The enclosed survey should take just 15 minutes to complete. All the information you provide is completely voluntary, confidential, and anonymous. Once our mailing procedures are complete, your name will be removed.

If you have any questions or concerns about the survey, please feel free to phone me at 612.624.6719 or email me at bipe0002@umn.edu. Thank you in advance for your participation in this important project!

Sincerely,

Ingrid Schneider, Ph.D.
Project leader

Theresa Bipes
Graduate Research Assistant

First, a few questions about your outdoor walking/hiking.

1. What year did you begin recreational walking/hiking outdoors (fill in one)?

19__ OR 200__ ___ Can't remember

2. Including you, how many people in your household participated in the last 12 months in recreational walking/hiking outdoors _____ People

Of these people, how many are 20 or older? _____ People

3. Below is a list of possible reasons why people walk/hike outdoors. Please circle the appropriate number that indicates how important each reason is to you for walking/hiking outdoors.

	Very unimportant	Unimportant	Neither	Important	Very important
To be close to nature	1	2	3	4	5
To do something with my family	1	2	3	4	5
To be physically active	1	2	3	4	5
To be on my own	1	2	3	4	5
To test my skills & abilities	1	2	3	4	5
To be with members of my own group	1	2	3	4	5
To view the scenery	1	2	3	4	5
To get away from the usual demands of life	1	2	3	4	5
To explore and discover new things	1	2	3	4	5
To relax physically	1	2	3	4	5
To experience solitude	1	2	3	4	5
To challenge myself	1	2	3	4	5
To experience nature	1	2	3	4	5
To be with people who enjoy the same things I do	1	2	3	4	5
To be away from other people	1	2	3	4	5
To experience silence & quiet	1	2	3	4	5
To have thrills & excitement	1	2	3	4	5
To rest mentally	1	2	3	4	5
To enjoy different experiences from home	1	2	3	4	5
To get/keep physically fit	1	2	3	4	5

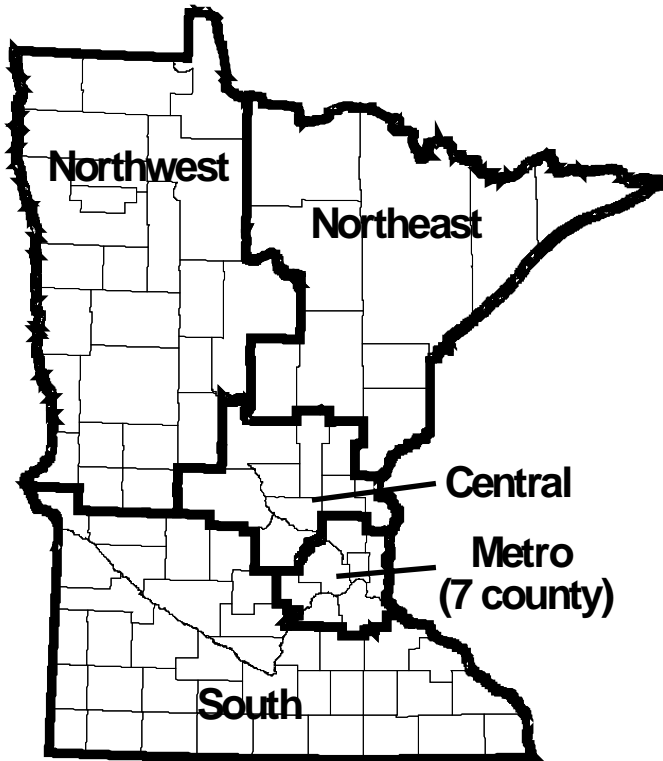
Now, some questions about your outdoor walking/hiking and related expenditures

Experiences within a 30-minute drive of your primary home

4. How many days in the last 12 months did you walk/hike outdoors for recreation within a 30-minute drive of your primary home? ____ Days (if 0, go to question 12)

5. Of these days, how many were in each region?

____ Northwest ____ Northeast ____ Central
____ Metro ____ Southern ____ Outside MN (where? _____)



Now, think back to a recent walking/hiking trip that was within a 30-minute drive from your home, and answer the following questions about that trip.

6. How many days in duration was this trip (count part of a day as 1 day)? ____ Days

7. How many miles did you travel one-way from home on this trip? ____ Miles

8. In what region was the destination area for this trip (see map; check one)?

____ Northwest ____ Northeast ____ Central
____ Metro ____ Southern ____ Outside MN

9. On this recreational walking/hiking trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the destination area where you walked/hiked outdoors. If you spent nothing on an item, please enter "0."

	At home spending (getting ready for trip)	Travel & destination area (to/from & in the area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Payments to public agencies (licenses, entrance fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

10. How many people were covered by these expenditures? _____ People

11. Of these people, how many were under 20 years of age? _____ People under 20 years

Experiences more than a 30-minute drive from your primary home

12. How many days in the last 12 months did you walk/hike outdoors more than a 30-minute drive from your primary home? _____ Days (if 0, go to question 20)

13. Of these days, how many were in each region (see map on adjacent page)?

___ Northwest ___ Northeast ___ Central
 ___ Metro ___ Southern ___ Outside MN (where? _____)

Now, think back to a recent outdoor walking/hiking trip that was more than a 30-minute drive from your home, and answer the following questions about that trip.

14. How many days in duration was this trip (count part of a day as 1 day)? _____ Days

15. How many miles did you travel one-way from home on this trip? _____ Miles

16. In what region was the destination area for this trip (see map on adjacent page; check one)?

Northwest Northeast Central
 Metro Southern Outside MN

17. On this recreational outdoor walking/hiking trip, how much money did you and your party spend? Please complete the table below for spending at home getting ready for the trip, while traveling to/from the area, and in the destination area where you walked/hiked outdoors. If you spent nothing on an item, please enter "0."

	At home spending (getting ready for trip)	Travel & destination area (to/from & in area)
Lodging, including camping at a privately-owned campground		
Grocery or convenience store food & drink		
Restaurant/bar meals & drinks	NA	
Gasoline or other fuels		
Other transportation related costs		
Recreational equipment purchases (including sporting goods)		
Payments to public agencies (licenses, entrance fees, etc.)		
Entertainment (including casinos)		
Shopping		
Other (please specify)		
TOTAL		

18. How many people were covered by these expenditures? People

19. Of these people, how many were under 20 years of age? Under 20 years

20. Beyond travel and expenses covered above, what were your household's expenses in the last 12 months for walking/hiking outdoors? If you spent nothing on an item, enter "0."

	Expenses in last 12 months
Purchase of new equipment	\$
Purchase of previously owned equipment	\$
Other (explain)	\$

Now, some questions about your trail experiences.

21. When walking/hiking outdoors on a trail, how often do you observe each of the following?

	Never	Sometimes	Many times	Almost always	Don't know
Rude or discourteous users	0	1	2	3	DK
Others not yielding	0	1	2	3	DK
Others passing too closely	0	1	2	3	DK
Others out of control	0	1	2	3	DK
Others going too fast	0	1	2	3	DK
Litter on or near the trail	0	1	2	3	DK
Seeing off trail/road use	0	1	2	3	DK
Seeing evidence of off trail/road use (erosion, marks, etc.)	0	1	2	3	DK
Too many other users on the trail	0	1	2	3	DK
Hearing other users on the trail	0	1	2	3	DK
Accessibility issue	0	1	2	3	DK
Other (explain)	0	1	2	3	DK

22. Which of these interferes the most with your trails experience (check one)?

- | | |
|---|---|
| <input type="checkbox"/> Rude or discourteous users | <input type="checkbox"/> Seeing off trail/road use |
| <input type="checkbox"/> Others not yielding | <input type="checkbox"/> Too many other users on the trail |
| <input type="checkbox"/> Others passing too closely | <input type="checkbox"/> Hearing other users on the trail |
| <input type="checkbox"/> Others out of control | <input type="checkbox"/> Litter on/near the trail |
| <input type="checkbox"/> Others riding too fast | <input type="checkbox"/> Other (explain: _____) |
| <input type="checkbox"/> Accessibility Issue | |
| <input type="checkbox"/> Seeing evidence of off | <input type="checkbox"/> Nothing interferes most
(Go to Question 27) |

23. Was this interference in #22 with other walkers/hikers (circle one)? **Yes** **No**
Please share any details or comments on this interference.

24. Was this interference in #22 stressful (circle one)? **Yes** **No**

25. Indicate how much you agree with the following statements about what interferes the most with your walking/hiking experience on trails.

	Strongly disagree	Disagree	Unsure	Agree	Strongly Agree
I can change or do something about it	1	2	3	4	5
I have to accept it as it is	1	2	3	4	5
I have to hold back from acting	1	2	3	4	5
I need to know more before acting	1	2	3	4	5

26. When this most interfering experience happens, how often do you use the following responses?

	Do not use	Use infrequently	Use occasionally	Use frequently
Follow establish rules for trail etiquette	0	1	2	3
Talk to other members of my group about the incident	0	1	2	3
Wish the situation would go away or be over with	0	1	2	3
Think about why the incident occurred	0	1	2	3
Don't let it get to me; refuse to think about it too much	0	1	2	3
Try to forget the whole thing	0	1	2	3
Go on as if nothing had happened	0	1	2	3
Refuse to get too serious about it	0	1	2	3
Stand my ground and fight for what I wanted	0	1	2	3
I try to keep my feelings to myself	0	1	2	3
I know what has to be done so I double my efforts to make things work	0	1	2	3
Express anger to the person who caused the incident	0	1	2	3
I make a plan of action and follow it	0	1	2	3
Try not to burn bridges	0	1	2	3
Make light of the situation	0	1	2	3
Keep others from knowing how bad things were	0	1	2	3
Talk to area personnel about the incident	0	1	2	3
Come up with a couple of different solutions	0	1	2	3
Plan to avoid the area on my next visit	0	1	2	3
Leave the area and go to a different part of the area	0	1	2	3
Try to get the person responsible to change their mind	0	1	2	3
Leave the area altogether	0	1	2	3
Change the time I will walk/hike next time	0	1	2	3
Alter my pace to avoid others	0	1	2	3

Finally, a few questions about you.

27. Are you...? Male or Female

28. What year were you born? 19_____

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

- | | |
|--|---|
| <input type="checkbox"/> Some high school | <input type="checkbox"/> Some college |
| <input type="checkbox"/> Graduated high school/GED | <input type="checkbox"/> Graduated from college |
| <input type="checkbox"/> Some votech | <input type="checkbox"/> Some postgraduate |
| <input type="checkbox"/> Graduated from votech or completed associate degree | <input type="checkbox"/> Postgraduate degree(s) |

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

Ethnicity (check one): Hispanic or Latino
 Not Hispanic or Latino

Race (check all that apply):
 American Indian or Alaska native
 Asian
 Black or African American
 Native Hawaiian or other pacific islander
 White
 Other (explain: _____)

31. Including you, how many adults, teens, and children live in your household?

Adults (18+) Teens (13 to 17 years) Children (12 or under)

32. What is your annual household income before taxes (check one)?

- | | | |
|---|---|--|
| <input type="checkbox"/> LESS THAN \$25,000 | <input type="checkbox"/> \$50,000-74,999 | <input type="checkbox"/> \$125,000-149,999 |
| <input type="checkbox"/> \$25,000-34,999 | <input type="checkbox"/> \$75,000-99,999 | <input type="checkbox"/> \$150,000-174,999 |
| <input type="checkbox"/> \$35,000-49,999 | <input type="checkbox"/> \$100,000 -124,999 | <input type="checkbox"/> \$175,000 OR MORE |

Please mail the completed questionnaire back in the postage-paid envelope provided.

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