

Minnesota

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STATE COMPREHENSIVE OUTDOOR RECREATION PLAN

DEPARTMENT OF  
NATURAL RESOURCES

MINNESOTA CROSS COUNTRY SKIERS

Report Number 2321

Research and Policy Section, Office of Planning

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MINNESOTA CROSS COUNTRY SKIERS

Compiled for

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### Summary

Based on the results of this survey, the following recommendations seem appropriate:

1. Cross-country ski trail development continue in Minnesota.
2. Trail emphasis be placed on short day and part day outings.
3. Network trails should receive higher priority than loop. Loop trails should receive higher priority than point to point.
4. Ski trails should provide variety in length of outing in miles. Loop lengths of 2.5, 5, 10, and 15 miles should be contained in network trail development.
5. Trail development should be placed as close as possible to population centers.
6. Rest shelters should be included in the majority of Minnesota ski trails. When developed, 5 mile intervals between shelters appear ideal.
7. Ideal trail locations:
  - a. pass beside water
  - b. run through wooded areas
  - c. have moderately hilly terrain, avoiding steep runs and narrow twisty turns
  - d. provide open areas for off trail skiing
  - e. lie in part in a state or county management unit
  - f. be signed
  - g. be groomed
  - h. provide learning opportunities
8. Trail management should provide both groomed and ungroomed trails.
9. Ski patrols should project a safety and first aid role rather than enforcement role.

10. The state should ascertain the attrition, replacement rate of cross-country skiers for the purpose of developing an estimate of the steady state experience structure of Minnesota's cross-country skiing population.

11. Ski trails should not be developed within areas open to motorized winter recreation.

## Minnesota-Cross Country Skiers

It is estimated that over one half million cross-country skiers live in Minnesota (Table 1). To meet the needs of these skiers, development and management decisions should be based on their habits and desires. This document seeks to present those habits and desires in a series of tables that promote easy reference.

These results come from data collected through the use of a prepaid return post card questionnaire distributed to known Minnesota cross country skiers by the Minnesota Department of Natural Resources, Bureau of Comprehensive Planning and Programming, Research and Policy Section. The sample frame for this survey was developed through a winter telephone survey of 10,000 plus Minnesota households. That survey provided the names of all cross-country skiers within those households. Questionnaires were mailed to a sample of cross-country skiers drawn utilizing a technique developed by Leslie Kish.<sup>1</sup> Each of the 13 Minnesota Development Districts were sampled separately at the level listed in Table 2.

The questionnaire contained fifty questions dealing with many aspects of cross-country skiing in Minnesota. General categories of questions were: skiers' feelings toward trail development; desired trail features; funding for trail development; respondents' cross-country skiing habits; compatibility between cross-country skiers and other winter trail users; skier gripes, skier comments; and basic demographic information pertaining to each skier respondent. A copy of the questionnaire appears in Appendix A. All data within this document are reported by Minnesota Development Region. A complete list of the counties which make up the individual regions can be found in Appendix B. Skier population did not enter into sample size;

therefore, regions received nearly equal emphasis in the sample. Given this situation, statewide tables required that regional results be weighted by skier population (Appendix C). Confidence intervals for selected data appear in Appendix D.

TABLE 1  
NUMBER OF MINNESOTA CROSS-COUNTRY SKIERS

REGION	NUMBER OF X-C SKIERS	PERCENT OF STATE'S X-C SKIERS	PERCENT OF REGIONAL POPULATION THAT CROSS-COUNTRY SKI
1	6,900	1.4	7
2	8,400	1.7	15
3	48,400	9.7	15
4	20,300	4.1	11
5	10,200	2.1	9
6E	7,000	1.4	7
6W	2,600	0.5	4
7E	8,100	1.6	9
7W	24,800	5.0	13
8	6,400	1.3	5
9	11,600	2.3	5
10	28,900	5.8	7
11	<u>316,900</u>	<u>63.3</u>	16
STATE TOTAL	500,500	100.2	

TABLE 2  
CROSS-COUNTRY SKI SURVEY SAMPLE SIZE AND RATE OF RETURN

REGION	MAILED	UNDELIVERABLE	RETURNED COMPLETED	ADJUSTED* RATE OF RETURN
1	55	7	23	48%
2	115	5	59	54%
3	122	5	72	62%
4	82	3	58	73%
5	77	3	48	65%
6E	65	2	39	62%
6W	32	2	21	70%
7E	72	5	44	66%
7W	110	10	66	66%
8	49	5	33	75%
9	48	3	29	64%
10	69	3	35	53%
11	294	25	161	60%
TOTAL	1190	78	688	62%

\* Adjusted Rate of Return =  $\frac{\text{Returned completed}}{\text{Mailed-Undeliverable}}$

#### Trail Development

The vast majority of respondents (over 82 percent) indicated a need for the development of new cross-country ski trails (Table 3). Skiers from Region 1 displayed the least interest in trail development. Yet over 70 percent of that region's respondents voiced a need for new trails.

Over 90 percent of the responding skiers from Regions 6 West and 7 West desired new trails. Those who felt a need for new trails were asked if they desired trails which would take a full day, a portion of a day, or 2 or 3 days to ski. Most responses fell in either the portion of a day category or the full day category with the shorter period being chosen by 8 percent more of the respondents (Table 4).

Other data give more insight into desired trail length. Minnesota cross-country skiers average nearly 6 miles per ski outing. Forty percent, however, usually ski over 8 miles per outing with more than 15 percent skiing over 10 miles. Residents of Regions 4 and 7W reported skiing distances considerably longer than others, with medians of 7.7 and 8.3 miles per outing, respectively. Over one half of the skiers from Region 7W reported average ski outings of 8 miles or longer (Table 5).

When asked the length of their most needed trail, skiers reported an average of 10.5 miles. Regional responses varied, ranging from an average desired trail length of 8.4 miles (Region 6E) to 12.3 miles (Region 4). It appears, then, a trail 10 miles in length would fit the needs of more cross-country skiers than any other single trail length (Table 6). Some designs offer alternatives that accommodate skiers with varying trail length desires. Respondents were asked to choose between three general trails designs, point to point, loop, and network. Over 80 percent chose the network type and over 16 percent the loop (Table 7). A network system could be designed that allows the desiring skier to ski in excess of 10 miles while giving skiers desiring a shorter outing shorter courses.

Network trails present further advantages over other trail designs. A network trail system allows access at several points and makes point to point skis available. At the same time, it provides loops for those users



who prefer to return to their point of origin. The data shows respondents felt a strong desire for trails which begin and end at the same point. As illustrated by Table 8, over 90 percent of the respondents agreed or agreed strongly with the statement, "My most needed trail would bring me back to my starting point." A network system would serve this desire, while making the point to point trip available to those who desire it.

#### Distance from Home

Cross-country skiers desire trails located relatively close to home. Over 67 percent indicated trails within 24 miles from their homes were suitably located. One third of the respondents felt trails should be located less than 15 miles from home. The average (median) desired distance was just over 20 miles (Table 9). This travel distance probably reflects the fact that most outings cover short distances, and people seldom invest in long auto trips for short duration recreation. The most interesting regional difference exists between Regions 1 and 2 with median distances of 50 and 30 miles, respectively. Respondents in Regions 3, 6E, 7E, 9, and 10 claimed the shortest median distances ranging from 14.8 to 15.3 miles.

#### Rest Shelters

Over 60 percent of the skiers interviewed reported a desire for the development of rest shelters along cross-country ski trails, over 17 percent were not sure if they should be developed, and 22 percent were not in favor of development (Table 10). Nearly 60 percent of the respondents agreed or strongly agreed with the statement that there should be warming huts and toilets along trails (Table 11). Of those who indicated a need for rest shelter development, over one half felt shelters should be located less than 5 miles apart. Nearly 40 percent felt they should be over 5 miles but less than 10 miles apart. The median desired distance between shelters was 4.4 miles (Table 12). Regions showed minimal variations on these questions.

#### Repeat Trail Use

The average respondent stated he or she could ski the same trail over 6 times per year before losing enjoyment. But one third of the skiers stated 4 or fewer repeats would cause a decrease in enjoyment, while over 30 percent

indicated they could return 9 or more times per year before they would experience decreased enjoyment (Table 13).

### Trail Amenities

(See Appendix E for summary table).

Positive Items. Respondents agreed or agreed strongly with many statements describing specific features of an ideal cross-country ski trail. For example, over 86 percent agreed or agreed strongly that trails should parallel a stream or river (Table 14). (Over 50 percent of the respondents from Regions 7W and 9 strongly agreed with the statement). Over 86 percent of the respondents agreed or agreed strongly that trails ideally should be in wilderness areas (Table 15). Other responses to trail amenity questions were: pass mostly through forests or woods, 84 percent (Table 16); follow a lake shore, 74 percent (Table 17); pass through open areas where I can leave the trail, 70 percent (Table 18); pass through hilly terrain, 68 percent (Table 19); pass through a state forest recreation area, 64 percent (Table 20); be marked with frequent signs, 60 percent (Table 21); be a groomed trail, 57 percent (Table 22); connect major recreation areas such as county or state parks, 56 percent (Table 23); and have learning experiences and displays, 42 percent (Table 24).

Respondents felt very strongly that trails should be developed in areas which would offer a good chance to view wildlife. Over 50 percent agreed strongly with this statement, while 44 percent simply agreed, resulting in over 95 percent agreement (Table 25).

Neutral Items. Respondents appeared neutral or of split opinion about having tent campsites located along trails with 28 percent reacting positively, 48 percent neutrally, and 24 percent negatively (Table 26). Respondents also showed neutrality toward having trails located in resort areas, with 3 percent feeling positive, 44 percent neutral and 26 percent negative (Table 27). Region 9 stands as the exception with nearly 70 percent agreeing or strongly agreeing. Most skiers reacted in a neutral, or slightly negative fashion to the idea of having small cabins along trails available for overnight stays (Table 28). Region 5 showed the strongest resistance.

Negative Items. Respondents reacted most negatively about locating trails in city parks. In this case, over 46 percent disagreed or disagreed strongly (Table 29). Some of the negative expression may have been toward small urban parks. Large parks such as Morris T. Baker County Park Reserve and the Minneapolis Chain of Lakes Parks are currently being used by cross-country skiers. It seems that winter trail developments in these areas should be maintained but balanced with development in more primitive locations close to the state's population centers.

Trails which would pass primarily through open fields and meadows elicited negative responses from 40 percent of the respondents (Table 30). Trails which would not be signed, but would require the use of a map to negotiate them gained a less negative reaction, 33 percent (Table 31).

### Break Trail

Skiers generally rejected the idea of breaking their own trail through new snow. Over 36 percent stated they would not like to break trail (Table 32). However, respondents split nearly evenly between the statements, "I don't enjoy breaking trail," (48 percent) and "I enjoy making tracks through unbroken snow," (52 percent) (Table 33). The fact that their responses are inconsistent indicates a need for further investigation. As pointed out in Table 22, page 22, 57 percent indicated they preferred groomed trails, while 36 percent were neutral on the subject.

### Patrolled Trails

Respondents were receptive to the idea of having trails patrolled by some type of ski patrol offering assistance and first aid to trail users. Over 57 percent reacted affirmatively to this idea (Table 34). To the contrary, over 71 percent were opposed to the idea of having law enforcement officers on trail patrols (Table 35). It appears that any patrolling effort should present safety and first aid as the major purpose.

### Hills

The majority of skier respondents (52 percent) indicated they would most often choose trails with moderate hills. Nearly as desirable, gentle hills attracted 40 percent of the sample. Only 8 percent indicated a desire for steep hills (Table 36). Nearly 70 percent stated they avoided trails with narrow twisting downhill runs (Table 37). This sentiment was strongest in Region 8 where nearly 90 percent of the respondents agreed with the above statements.

### Funding Trail Development

The question of how to pay for cross country ski trail development deserves careful consideration. Although the desire of skiers may not be highly realistic in terms of governmental priorities or realities, they should be considered when examining various potential sources of funds. Statewide, cross-country skiers most often selected one of three sources of funds. Each attracted nearly one quarter of the respondents. There were: general taxes, special use fee paid at trail head, and yearly licenses to use state sponsored trails. The purchase of yearly decals for trail use and the payment of a special tax on cross country ski equipment were less widely accepted than the others. Table 38 list these responses.

Many respondents indicated a willingness to assist the state with the construction and/or maintenance of cross-country ski trails. Over 46 percent stated they would give one Saturday per year to a program of this type. Labor of this type need not be in lieu of any fee payment or user license scheme, but would effectively reduce construction and maintenance costs (Table 39).

### Skiing Habits

In order to understand the cross-country skiers of Minnesota, it helps to examine their skiing habits. Such facts as the number of years they have been engaged in the sport, their daily and yearly ski practices, and the longest distance they have skied during one ski outing form a picture of the Minnesota skier. Nearly one half of all respondents reported seldom skiing over five miles on a single day. Under good conditions, 35 percent reported that they could comfortably ski from five to ten miles. Over 83 percent of them could or would not ski over ten miles per day. Less than four percent stated that they could ski over fifteen miles in a day and only 13 percent indicated that they could ski from ten to fifteen miles (Table 40).

As previously discussed on page 5, Table 4, the average cross-country skier reported covering nearly six miles per outing. As the largest single response category with 32 percent a distance of four to four miles per outing deserves special consideration in the design of ski facilities. The longest distance ever skied was longer, averaging ten miles. However, 65 percent had never skied over ten miles, and 84 percent had reported never having skied over 15 miles (Table 41).

The average cross-country skier reported spending just over 2 hours per ski outing. Over 63 percent spent 3 or fewer hours. Outings of 7 or less hours accounted for 90 percent of the ski occasions (Table 42).

Most respondents were relative newcomers to cross country skiing. The average respondent had skied for only slightly over three years. Nearly one half reported skiing two years or less. Nearly 70 percent had skied three seasons or less (Table 43). These data can be valuable to long range management decisions. If, for example, most or all of the present cross-

country skiers remain in the skier population over time, they should become more experienced and exhibit some of the same trail desires as those who have been with the sport for some time and responded to this survey. This might mean such things as skiers would demand longer or more difficult trails, etc. Before decision based on this assumption direct long range policies, one extremely important question must be answered. At what rate and direction is participation in the sport actually changing? While many persons become new, active participants, what percentage of those persons entering the sport actually add to the existing numbers and what proportion actually replace those who drop out? This question warrants future study. Once the question receives a satisfactory answer, facility development can be directed by the habits and desires of the future user population. Representatives of this future population, identified in today's study will provide this direction.

Most skiers ski in groups. Over 43 percent indicated they usually skied in family groups and 40 percent stated that they skied with friends. Only 16 percent stated they usually skied along (Table 44).

The most enjoyed activity while cross-country skiing was nature observation. Nearly 90 percent of all respondents reported engaging in some type of nature observation. Nearly one half of the skiers reported picnicking. This is not surprising since meals are normally eaten during extended ski outings, both for needed nourishment and a rest break. The social aspects of the sport were the next most frequently reported activities. The change to visit friends drew 38 percent of the respondents and 36 percent selected the opportunity to meet new friends as an enjoyed activity. Only 6 percent did not indicate participation in other activities while on cross country ski outings (Table 45). Only three percent of the respondents indicated they camped while on cross-country ski outings. Only 17 percent

of the respondents said they had never winter camped in tent or similar shelter whether cross country skiing or not (Table 46).

The vast majority of respondents (94 percent) stated that they did not have a distance they attempted to ski each week. Of the 6 percent who did have a weekly quota, the average distance was just over ten miles (Table 47).

Respondents averaged ten ski outings per year. One third took five or fewer. In addition, one third went on from six to ten ski trips and one sixth, 11 to 15 (Table 48, page 54). A median of three or approximately one third of all skiing trips were taken on the groomed, marked trail (Table 49, page 55).

## Conflicts

The questionnaire asked respondents to indicate how meeting specific types of trail users would affect their decision to return to a trail. They could say they would definitely not return, probably not return, be neutral, probably return, or definitely return. Their responses should serve as a measure of skiers' feelings toward sharing trails with other types of users. Cross-country skiers expressed very positive feelings toward other cross-country skiers. Over 93 percent stated that they would definitely return or return to any trail used by cross-country skiers. Nearly 70 percent of the respondents were positive toward snowshoers, but not to the same degree as they were to other skiers, since only one half stated that they would definitely return. The most negative opinions were directed toward four-wheel drive vehicles. Over 93 percent would not return to that trail. Respondents were only slightly more tolerant of snowmobilers. In this case, over 84 percent stated that they would not return; 72 percent would definitely not return. On the subject of dog sledders, respondents were negative about trail sharing, but more neutral than with any of the other trail sharing types of uses. In this case, 43 percent stated that they would not return (Table 50). Speculation suggests that these findings reflect a lack of familiarity with dog sledders.

The vast majority of respondents indicated all types of use should not occur on the same trail. Over 80 percent of the respondents disagreed or disagreed strongly with the statement "allow all types of uses on the same segments." (Table 51). Only 9 percent agreed with the statement. Less than one half of the respondents agreed with the idea of providing parallel, but separate paths for different uses (Table 52). However, there appear to be serious problems with this question. Given the other data

discussed in this section of the report cross-country skiers should not desire separate parallel paths. The fact that this question's response fails to support that dislike may result from two problems. It could be there was a lack of understanding of the question and that its placement directly following the question concerning allowing all types of uses on the same trail biased respondents. This question should be examined in greater depth in the future. Until that time, it seems best to follow the guidance of the majority of the conflict questions.



### Complaints

In an open-ended section, respondents were given the opportunity to list any gripes concerning Minnesota cross-country skiing. Just over one half of the respondents did not list any. Because each gripe could be, and often was, worded differently, they were of necessity placed in categories when the questionnaires were coded. There are two sets of gripe responses listed in Table 53 for each region and the entire state. The first column of figures contains the percentage distribution of all responses including those persons who elected not to list any gripes. The second column lists the percentage distribution for only those persons who wrote in displeasures.

Statewide, the single most voiced gripe was a shortage of cross-country trails. The general subject of trails was most negatively commented upon with over 46 percent of the gripes. Concerns included a shortage of trails, overcrowding of the existing facilities, and their perceived inadequacy.

The subject of snowmobiles accounted for many of the gripes. Nearly 38 percent of the gripes stated snow machines should not be allowed either on or near ski trails. This information, coupled with the data in the conflict section leads to an important issue which needs to be addressed by the Minnesota Recreation Community. From this data it would appear that snowmobiling and cross-country skiing are not compatible activities when carried out close to one another. Therefore, separate facilities should be designed for each activity. While some economies of scale could be realized by sharing parking lots, rest rooms, etc., the actual trails, it would appear, should not be shared. In fact, where cross-country skiing and snowmobiling must occur near each other, natural physical barriers to separate them should be sought.

The subject of trail design was the third most griped about, however, only 10 percent of the gripes were concerned with this subject. Less than one percent of the sample stated trails should not be developed. These data for the entire statewide sample as well as for each region appear in Table 53.

### Comments

Only 30 percent of the returned survey instruments contained comments. These appear in Table 54. Since many of the comments were unique, they were placed in the "other" category. This, coupled with the fact that there were few comments, is reflected by 31 percent of all comments falling into the other category. The comments were generally similar to those covered in the gripe section of this report, with over 20 percent dealing with snowmobiles, 18 percent with the trails themselves, and 24 percent dealing with desired trail design. There was considerable regional variation. The single most commented about item was a desire to keep snowmobiles away from cross-country ski trails followed by a shortage of cross-country trails.

### Demographics

Three pieces of demographic information were collected from each respondent. These were age, education, and occupation. Demographic information on each household was collected during the telephone phase of the study, but does not appear in this report.

#### Age

The mean age for cross-country skier respondents was 31.4 years while the median age was 29.4 years. Nearly 70 percent were 34 years old or younger. It should be remembered that skiers under 16 years of age were not sampled (Table 55).

#### Education

The vast majority of respondents had completed some college (46.1 percent). In fact, nearly 30 percent had completed over 17 years of formal school (Table 56). The average respondent had attended school for 15 years which is normally the junior year of a four-year undergraduate program. Many persons were undoubtedly still in school, which over time could drive the average even higher.

#### Occupation

While respondents were from all occupation categories, nearly 40 percent were from the professional-technical ranks. This group was followed by students with 15 percent, housewives with 12 percent, clerical 7.1 percent, and managerial and sales with over 6 percent each.

This information is consistent with the education data. Cross-country skiers in the sample can be characterized as well-educated and employed in non-manual occupations (Table 57).

TABLE 3

## SHOULD NEW CROSS-COUNTRY TRAILS BE DEVELOPED

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
Yes	70.8	84.5	75.7	76.8	80.4	81.1	90.5	77.8	90.6	87.1	82.8	80.0	83.6	82.3
No	29.2	15.5	24.3	23.2	19.6	18.9	9.5	20.0	9.4	12.9	17.2	20.0	16.4	17.6
Don't Know	a	a	a	a	a	a	a	2.2	a	a	a	a	a	a

TABLE 4

## TYPE OF OUTINGS FOR WHICH CROSS-COUNTRY TRAIL SHOULD BE DESIGNED

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
Short	41.2	49.0	48.2	42.2	43.2	60.6	50.0	48.6	41.4	42.5	54.2	39.3	48.5	47.5
Full Day	52.9	38.8	39.3	35.6	48.6	39.4	40.0	42.9	51.7	50.0	25.0	53.6	38.6	40.3
2 or 3 days	5.9	12.2	10.7	17.8	5.4	a	10.0	2.9	6.9	7.7	12.5	7.1	10.6	9.7
Short & Full	a	a	1.8	2.2	2.7	a	a	2.9	a	a	4.2	a	1.5	1.9
All types	a	a	a	2.2	a	a	a	2.9	a	a	4.2	a	a	a

<sup>a</sup>Less than one percent.

TABLE 5

## DISTANCE COVERED DURING AVERAGE CROSS-COUNTRY SKI OUTING

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
Miles														
1 or less	4.8	1.9	1.6	a	a	5.9	a	a	a	8.0	4.3	a	a	1.0
2-3	23.8	16.7	14.3	6.6	11.9	20.6	26.6	17.0	9.0	8.0	26.0	25.0	13.7	14.5
4-5	23.8	24.1	28.6	17.8	28.6	41.1	40.0	36.6	19.6	40.0	13.0	21.9	35.9	31.9
6-7	9.6	11.2	17.4	24.5	11.9	17.7	13.4	19.5	14.3	20.0	17.4	21.9	10.7	13.3
8-10	23.8	33.4	19.0	37.8	33.4	8.8	20.0	17.1	32.1	12.0	30.4	22.0	23.6	24.1
10+	14.3	11.2	19.0	13.2	14.3	5.8	a	9.7	25.0	12.0	8.6	9.4	15.6	15.2
Median	6.0	6.3	6.0	7.7	6.5	4.8	5.3	5.3	8.3	5.2	5.9	5.6	5.5	5.8

<sup>a</sup>Less than one percent.

TABLE 6

## LENGTH OF MOST NEEDED TRAIL

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
5 or less (miles)	30.0	31.0	46.8	38.8	30.3	39.4	42.1	23.7	24.1	38.4	29.6	31.3	32.7	33.1
6-10	50.0	41.8	29.0	26.5	53.5	30.3	36.9	60.6	43.5	26.9	48.1	46.9	39.6	40.0
11-15	20.0	11.0	12.9	12.2	7.0	15.1	5.3	5.2	14.5	19.2	11.1	12.5	14.6	13.8
16-20	a	5.5	9.7	10.2	7.0	9.1	10.6	2.6	8.0	7.7	3.7	3.1	6.3	6.5
20+	a	10.8	1.6	12.3	2.3	a	5.3	7.8	9.6	3.8	7.4	6.2	7.0	6.4
Median	8.5	9.7	8.0	9.5	9.0	7.9	7.3	9.7	9.9	7.5	9.8	9.8	9.5	9.5
Mean	8.8	12.0	9.1	12.3	9.1	8.4	9.2	10.5	11.9	9.5	10.2	11.9	10.5	10.5

<sup>a</sup>Less than one percent.

TABLE 7

## WHICH TYPE IS MOST NEEDED TRAIL?

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
Type														
A (Point to Point)	a	1.8	4.4	3.4	a	5.7	a	2.4	a	3.4	3.6	2.9	3.3	3.7
B (Loop)	41.7	16.1	19.1	3.4	17.8	28.6	20.0	23.8	15.9	20.7	14.3	17.6	15.7	16.4
C (Network)	58.3	82.1	76.5	86.2	82.2	65.7	80.0	73.8	84.1	75.9	82.1	79.4	81.0	80.4

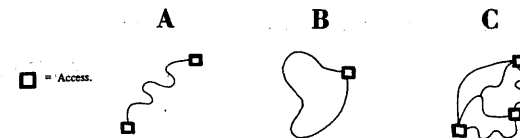
<sup>a</sup>Less than one percent.

TABLE 8

MOST NEEDED TRAIL SHOULD BEGIN AND END AT SAME POINT														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Agree Strongly	54.2	58.6	57.1	42.6	58.1	51.3	57.9	63.6	63.5	58.1	39.3	45.5	61.4	58.6
Agree	33.3	29.3	32.9	42.6	37.2	41.0	26.3	29.5	27.0	29.0	46.4	48.5	28.8	31.6
Neutral	12.5	12.1	8.6	14.8	2.3	5.1	15.8	2.3	9.5	6.5	14.3	6.1	8.5	8.6
Disagree	a	a	1.4	a	2.3	2.6	a	4.5	a	3.2	a	a	1.3	1.2
Disagree Strongly	a	a	a	a	a	a	a	a	a	3.2	a	a	a	a

<sup>a</sup>Less than one percent.

TABLE 9

DISTANCE CROSS-COUNTRY SKI TRAILS COULD BE LOCATED FROM SKIERS' HOMES														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Miles														
Less than 15	35.3	30.5	48.3	29.6	30.7	41.9	20.0	42.4	27.9	29.3	47.8	47.8	30.7	33.3
15-24	a	34.7	17.8	18.2	25.1	19.4	15.0	33.4	18.7	29.2	23.9	13.0	22.0	21.2
25-49	11.8	14.3	28.7	27.3	25.0	25.8	35.0	15.1	31.6	16.8	19.0	17.3	23.7	23.9
50-74	29.4	8.2	5.4	18.2	16.7	a	25.0	9.1	13.0	20.8	4.8	13.0	10.3	10.8
75-100	17.7	6.1	a	2.3	2.8	6.4	5.0	a	5.7	4.2	4.8	8.6	8.7	7.0
100+	5.9	6.1	a	4.6	a	6.4	a	a	3.7	a	a	a	4.8	3.8
Median	49.6	33.7	14.8	24.6	18.5	15.3	26.5	15.0	24.8	20.0	15.0	15.0	20.3	20.1

<sup>a</sup>Less than one percent.

TABLE 10

SHOULD REST SHELTERS BE DEVELOPED?														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Yes	60.9	67.8	58.0	50.0	56.5	55.0	65.0	52.3	69.8	67.7	65.5	60.6	61.4	60.9
No	21.7	16.9	29.0	27.6	21.7	22.5	15.0	27.3	20.6	22.6	17.2	18.2	20.9	21.9
Don't Know	17.4	15.3	13.0	22.4	21.7	22.5	20.0	20.5	9.5	9.7	17.2	21.2	17.6	17.2

TABLE 11

MOST NEEDED TRAIL SHOULD HAVE WARMING HUTS AND TOILETS														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Agree Strongly	16.7	20.7	17.4	21.4	20.9	34.2	10.0	18.6	28.6	16.7	22.2	14.7	15.7	17.3
Agree	45.8	44.8	34.8	33.9	30.2	44.7	60.0	41.9	34.9	43.3	48.1	44.1	42.5	41.2
Neutral	25.0	25.9	24.6	19.6	18.6	10.5	20.0	25.6	19.1	30.0	25.9	32.4	22.9	23.2
Disagree	8.3	5.2	11.6	16.1	16.3	7.9	5.0	7.0	11.1	10.0	3.7	5.9	14.4	12.8
Disagree Strongly	4.2	3.4	11.6	8.9	14.0	2.6	5.0	7.0	6.3	a	a	2.9	4.6	5.5

<sup>a</sup>Less than one percent.

TABLE 12

DISTANCE BETWEEN REST SHELTERS														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Less than 5 miles	61.6	44.7	50.1	42.3	40.7	50.1	46.2	57.8	56.1	68.5	71.4	45.0	54.1	53.0
5-9	38.4	36.9	28.9	46.9	44.4	33.3	38.5	31.6	34.1	15.8	28.6	50.0	38.9	37.9
10-15	a	13.2	15.8	3.8	14.8	16.7	7.7	5.3	9.7	15.8	a	5.0	7.1	8.8
15+	a	5.3	5.3	3.8	a	a	7.7	5.3	a	a	a	a	a	a
Median	3.8	5.4	5.2	5.6	5.1	4.7	5.3	4.5	4.6	4.5	3.6	4.5	4.2	4.4

<sup>a</sup>Less than one percent.

TABLE 13

NUMBER OF SKI OUTINGS ON A TRAIL BEFORE ENJOYMENT DECREASES														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
<u>Outings</u>	<u>(Percent)</u>													
1-2	4.3	5.3	10.3	3.6	4.4	11.2	5.3	4.8	4.9	a	7.4	5.9	6.6	6.3
3-4	47.8	14.0	13.3	23.6	26.0	30.5	36.9	30.9	26.2	31.0	22.2	26.5	29.6	27.3
5-6	13.0	35.1	29.4	25.5	30.4	30.6	26.4	23.8	24.6	27.6	29.6	26.5	28.3	27.9
7-8	a	14.1	7.3	5.4	4.3	11.2	a	9.6	8.2	13.7	7.4	5.9	8.5	8.0
9-10+	34.7	31.6	44.1	41.8	4.8	16.7	31.6	30.8	36.0	27.6	33.3	34.3	27.0	30.5
Median	4.4	6.0	6.8	6.0	5.4	4.8	4.9	5.4	6.0	5.2	5.7	5.4	5.2	5.3
Mean	5.9	6.7	7.0	6.8	6.4	5.3	5.9	6.3	6.5	6.2	6.3	6.4	6.0	6.2

<sup>a</sup>Less than one percent.

TABLE 14

MOST NEEDED TRAIL SHOULD PASS ALONG A RIVER														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	<u>(Percent)</u>													
Agree Strongly	45.8	35.1	30.4	27.3	48.8	43.6	40.0	47.6	52.4	41.9	53.6	41.2	38.1	38.7
Agree	54.2	43.9	47.8	47.3	37.2	41.0	35.0	45.2	34.9	38.7	35.7	47.1	49.7	47.4
Neutral	a	21.1	18.8	25.5	14.0	15.4	25.0	7.1	12.7	16.1	3.6	11.8	11.6	12.9
Disagree	a	a	2.9	a	a	a	a	a	a	3.2	3.6	a	a	1.0
Disagree Strongly	a	a	a	a	a	a	a	a	a	a	3.6	a	a	a

TABLE 15

MOST NEEDED TRAIL SHOULD BE LOCATED IN A WILDERNESS-LIKE AREA														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	<u>(Percent)</u>													
Agree Strongly	39.1	46.0	41.9	46.8	31.7	43.6	36.8	43.9	48.3	43.3	51.9	45.2	42.7	43.2
Agree	52.2	42.0	35.5	40.4	51.2	41.0	36.8	46.3	41.4	40.0	37.0	45.2	44.1	43.0
Neutral	8.7	8.0	17.7	8.5	17.1	10.3	21.1	9.8	8.6	13.3	11.1	6.5	11.9	11.9
Disagree	a	4.0	3.2	2.1	a	5.1	5.3	a	1.7	a	a	3.2	1.4	1.5
Disagree Strongly	a	a	1.6	2.1	a	a	a	a	a	3.3	a	a	a	a

<sup>a</sup>Less than one percent.

TABLE 16

MOST NEEDED TRAIL SHOULD PASS MOSTLY THROUGH WOODS														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	<u>(Percent)</u>													
Agree Strongly	34.8	55.1	45.3	37.5	26.8	34.2	31.6	39.0	37.9	34.5	42.3	35.5	30.8	33.9
Agree	39.1	34.7	46.9	45.8	53.7	47.4	47.4	48.8	51.7	48.3	38.5	38.7	53.1	50.3
Neutral	21.7	10.2	7.8	16.7	19.5	15.8	21.1	12.2	8.6	17.2	15.4	22.6	14.7	14.5
Disagree	4.3	a	a	a	a	2.6	a	a	1.7	a	3.8	3.2	a	a
Disagree Strongly	a	a	a	a	a	a	a	a	a	a	a	a	a	a

TABLE 17

MOST NEEDED TRAIL SHOULD PASS ALONG A LAKE SHORE														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	<u>(Percent)</u>													
Agree Strongly	21.7	16.0	20.3	26.5	22.0	23.1	31.6	31.0	32.8	20.0	15.4	32.3	15.4	18.8
Agree	43.5	58.0	50.0	38.8	46.3	43.6	36.8	38.1	43.1	46.7	65.4	38.7	60.1	55.1
Neutral	34.8	26.0	28.1	30.6	26.8	28.2	31.6	26.2	24.1	30.0	11.5	29.0	23.1	24.4
Disagree	a	a	1.6	4.1	4.9	5.1	a	2.4	a	3.3	7.7	a	1.4	1.6
Disagree Strongly	a	a	a	a	a	a	a	2.4	a	a	a	a	a	a

<sup>a</sup>Less than one percent.

TABLE 18

MOST NEEDED TRAIL SHOULD PASS THROUGH OPEN AREAS WHERE TRAIL MAY BE LEFT														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Strongly Agree	25.0	11.9	13.0	29.1	11.6	34.2	30.0	23.8	23.8	16.1	32.1	23.5	18.8	19.7
Agree	45.8	45.8	47.8	47.3	60.5	42.1	25.0	57.1	52.4	74.2	46.4	41.2	50.0	49.5
Neutral	25.0	27.1	24.6	18.2	20.9	21.1	40.0	11.9	17.5	9.7	21.4	29.4	25.3	24.3
Disagree	a	13.6	11.6	1.8	2.3	2.6	5.0	7.1	4.8	a	a	2.9	4.5	4.9
Disagree Strongly	4.2	1.7	2.9	3.6	4.7	a	a	a	1.6	a	a	2.9	1.3	1.6

TABLE 19

MOST NEEDED TRAIL SHOULD PASS THROUGH HILLY TERRAIN														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Strongly Agree	30.4	34.5	18.8	30.9	30.2	21.1	42.1	28.6	28.6	10.0	39.3	20.6	31.0	28.9
Agree	26.1	27.6	37.7	41.8	32.6	28.9	26.3	33.3	31.7	43.3	35.7	44.1	40.0	38.8
Neutral	26.1	25.9	24.6	21.8	25.6	31.6	31.6	35.7	23.8	36.7	17.9	29.4	18.1	20.9
Disagree	17.4	10.3	18.8	5.5	9.3	15.8	a	2.4	9.5	6.7	7.1	2.9	10.3	10.3
Strongly Disagree	a	1.7	a	a	2.3	2.6	a	a	6.3	3.3	a	2.9	a	1.0

<sup>a</sup>Less than one percent.

TABLE 20

MOST NEEDED TRAIL SHOULD PASS THROUGH STATE FOREST RECREATION AREA														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Agree Strongly	25.0	29.3	14.5	23.2	25.6	20.5	36.8	29.5	30.2	23.3	25.9	26.5	25.7	24.9
Agree	41.7	34.5	27.5	39.3	41.9	41.0	26.3	36.4	38.1	40.0	44.4	29.4	41.4	38.9
Neutral	29.2	36.2	44.9	32.1	25.6	35.9	31.6	31.8	28.6	33.3	29.6	38.2	28.9	31.4
Disagree	a	a	8.7	5.4	7.0	2.6	5.3	2.3	3.2	3.3	a	5.9	3.3	3.6
Disagree Strongly	4.2	a	4.3	a	a	a	a	a	a	a	a	a	a	1.2

TABLE 21

MOST NEEDED TRAIL SHOULD BE MARKED BY FREQUENT SIGNS														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Agree Strongly	4.3	26.0	22.2	24.5	10.0	10.3	21.1	20.0	19.0	20.7	3.8	26.7	16.2	17.5
Agree	52.2	32.0	36.5	38.8	45.0	43.6	47.4	27.5	43.1	41.4	46.2	40.0	44.4	42.8
Neutral	30.4	30.0	22.2	32.7	25.0	33.3	21.1	22.5	19.0	27.6	30.8	16.7	25.4	24.9
Disagree	13.0	12.0	12.7	4.1	12.5	7.7	10.5	15.0	15.5	6.9	11.5	16.7	9.2	10.3
Disagree Strongly	a	a	6.3	a	7.5	5.1	a	5.0	3.4	3.4	7.7	a	4.9	4.5

<sup>a</sup>Less than one percent.

TABLE 22

MOST NEEDED TRAIL SHOULD BE GROOMED														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Agree Strongly	21.7	24.0	23.4	27.1	20.0	15.4	21.1	16.7	24.6	20.7	7.7	12.9	23.2	22.2
Agree	30.4	44.0	34.4	35.4	37.5	41.0	47.4	45.2	47.4	27.6	46.2	29.0	33.8	35.1
Neutral	47.8	30.0	34.4	35.4	32.5	33.3	31.6	33.3	21.1	44.8	42.3	48.4	36.6	36.4
Disagree	a	2.0	7.8	2.1	2.5	7.7	a	a	5.3	6.9	3.8	9.7	3.5	4.2
Disagree Strongly	a	a	a	a	7.5	2.6	a	4.8	1.8	a	a	a	2.8	2.2

TABLE 23

MOST NEEDED TRAIL SHOULD CONNECT RECREATION AREAS														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Agree Strongly	4.3	14.3	10.9	20.8	20.0	7.7	26.3	16.7	12.1	10.3	8.0	16.1	13.5	13.5
Agree	56.5	44.9	34.4	33.3	30.0	53.8	42.1	40.5	48.3	51.7	40.0	41.6	44.0	42.8
Neutral	30.4	40.8	43.8	37.5	47.5	35.9	31.6	40.5	39.7	31.0	48.0	29.0	36.2	37.2
Disagree	8.7	a	9.4	6.3	2.5	2.6	a	a	a	6.9	4.0	9.7	5.7	5.7
Disagree Strongly	a	a	1.6	2.1	a	a	a	2.4	a	a	a	3.2	a	a

<sup>a</sup>Less than one percent.

TABLE 24

MOST NEEDED TRAIL SHOULD HAVE LEARNING EXPERIENCES AND DISPLAYS ALONG TRAIL														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Agree Strongly	13.0	14.0	4.8	10.6	10.0	10.3	10.5	14.3	13.8	20.7	15.4	16.7	8.5	9.5
Agree	17.4	22.0	28.6	38.3	20.0	46.3	15.8	33.3	37.9	37.9	34.6	46.7	31.7	32.4
Neutral	43.5	42.0	44.4	25.5	52.5	28.2	47.4	38.1	25.9	24.1	24.6	23.3	39.4	37.8
Disagree	21.7	16.0	11.1	23.4	10.0	12.8	15.8	9.5	17.2	13.8	11.5	10.0	15.5	14.9
Disagree Strongly	4.3	6.0	11.1	2.1	7.5	2.6	10.5	4.8	5.2	3.4	3.8	3.3	4.9	5.3

TABLE 25

MOST NEEDED TRAIL SHOULD OFFER A CHANCE TO VIEW WILDLIFE														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Agree Strongly	56.5	56.0	47.6	49.0	53.7	56.4	47.4	58.5	53.4	53.3	73.1	64.5	49.7	51.6
Agree	34.8	40.0	39.7	40.8	43.9	35.9	47.4	39.0	43.1	43.3	23.1	29.0	47.6	44.0
Neutral	8.7	4.0	12.7	10.2	2.4	7.7	a	2.4	3.4	3.3	3.8	3.2	2.8	4.2
Disagree	a	a	a	a	a	a	5.3	a	a	a	a	3.2	a	a
Disagree Strongly	a	a	a	a	a	a	a	a	a	a	a	a	a	a

<sup>a</sup>Less than one percent.

TABLE 26

## MOST NEEDED TRAIL SHOULD HAVE TENT CAMPSITES ALONG TRAIL

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
Agree Strongly	12.5	10.3	7.2	8.9	7.0	5.3	10.0	9.3	9.5	10.0	7.1	11.8	10.3	9.8
Agree	20.8	19.0	18.8	14.3	25.6	10.5	20.0	25.6	27.0	20.0	21.4	14.7	17.4	18.1
Neutral	45.8	46.6	42.0	50.0	41.9	60.5	40.0	46.5	42.9	53.3	53.6	44.1	49.0	47.8
Disagree	12.5	13.8	17.4	17.9	11.6	15.8	15.0	14.0	12.7	10.0	10.7	20.6	16.8	16.4
Disagree Strongly	8.3	10.3	14.5	8.9	14.0	7.9	15.0	4.7	7.9	6.7	7.1	8.8	6.5	7.8

TABLE 27

## MOST NEEDED TRAIL SHOULD BE LOCATED IN A RESORT AREA

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
Agree Strongly	a	4.1	4.8	8.5	2.5	5.1	a	a	3.4	10.0	38.5	3.3	2.1	2.8
Agree	18.2	34.7	20.6	14.9	30.0	25.6	15.8	12.2	24.1	16.7	30.8	23.3	29.4	27.0
Neutral	40.9	36.7	46.0	48.9	45.0	38.5	57.9	63.4	43.1	40.0	15.4	50.0	43.4	44.0
Disagree	27.3	24.5	27.0	21.3	10.0	23.1	21.1	19.5	20.7	30.0	15.4	16.7	19.6	20.3
Disagree Strongly	13.6	a	1.6	6.4	12.5	7.7	5.3	4.9	8.6	3.3	a	6.7	5.6	5.8

<sup>a</sup>Less than one percent.

TABLE 28

## MOST NEEDED TRAIL SHOULD HAVE CABINS ALONG TRAIL FOR OVERNIGHT STAYS

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
Agree Strongly	8.3	10.3	5.8	10.9	7.0	20.5	10.0	6.8	15.9	16.7	7.1	14.7	8.4	9.2
Agree	20.8	25.9	14.5	10.9	14.0	15.4	10.0	25.0	33.3	23.3	17.9	14.7	18.7	18.5
Neutral	37.5	32.8	37.7	41.8	27.9	43.6	45.0	34.1	30.2	40.0	39.3	44.1	39.4	38.9
Disagree	12.5	17.2	17.4	21.8	23.3	15.4	25.0	22.7	12.7	16.7	28.6	20.6	21.3	20.4
Disagree Strongly	20.8	13.8	24.6	14.5	27.9	5.1	10.0	11.4	7.9	3.3	7.1	5.9	12.3	13.0

TABLE 29

## MOST NEEDED SKI TRAIL SHOULD BE LOCATED IN A CITY PARK

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
Agree Strongly	a	2.0	1.6	4.2	a	2.6	a	2.4	a	3.6	7.7	6.5	3.5	3.0
Agree	9.1	4.0	7.8	10.4	7.5	2.6	5.3	36.6	5.2	35.7	30.8	3.2	18.9	14.4
Neutral	40.9	38.0	36.5	37.5	30.0	38.5	42.1	39.0	31.0	39.3	46.2	38.7	36.4	36.3
Disagree	18.2	40.0	36.5	31.3	37.5	23.1	36.8	a	39.7	21.4	15.4	25.8	30.1	31.6
Disagree Strongly	31.8	16.0	17.5	16.7	25.0	33.3	15.8	22.0	24.1	a	a	25.8	11.2	14.8

TABLE 30

## MOST NEEDED TRAIL SHOULD PASS PRIMARILY THROUGH OPEN FIELDS

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
Agree Strongly	a	a	1.6	a	5.0	7.7	10.5	2.4	1.7	3.4	8.0	3.2	3.5	3.0
Agree	17.4	2.0	14.3	8.3	7.5	10.3	52.6	12.2	17.2	6.9	44.0	19.4	14.0	13.7
Neutral	34.8	44.0	33.3	43.8	35.0	56.4	21.1	48.8	34.5	48.3	32.0	58.1	43.4	43.0
Disagree	39.1	42.0	47.6	39.6	47.5	25.6	a	31.7	44.8	41.4	16.0	16.1	32.2	34.1
Disagree Strongly	8.7	12.0	3.2	8.3	5.0	a	15.8	4.9	1.7	a	a	3.2	7.0	6.3

<sup>a</sup>Less than one percent.

TABLE 31

## MOST NEEDED TRAIL SHOULD HAVE NO SIGNS, BUT A SELF-GUIDING MAP SHOULD BE AVAILABLE

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
Agree Strongly	4.3	8.3	9.5	6.4	7.3	7.7	10.5	15.0	14.0	6.9	4.0	3.2	7.0	7.5
Agree	34.8	25.0	19.0	19.1	34.1	20.5	15.8	27.5	21.1	31.0	20.0	25.8	17.6	19.5
Neutral	30.4	29.2	38.1	31.9	26.8	38.5	21.1	30.0	28.1	27.6	32.0	35.5	44.4	40.3
Disagree	26.1	29.2	25.4	34.0	24.4	25.6	42.1	15.0	29.8	27.6	40.0	29.0	22.5	24.6
Disagree Strongly	4.3	8.3	7.9	8.5	7.3	7.7	10.5	12.5	7.0	6.9	4.0	6.5	8.5	8.1

<sup>a</sup>Less than one percent.

TABLE 32

## MOST NEEDED TRAIL WOULD REQUIRE ME TO BREAK TRAIL

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Agree Strongly	8.3	1.7	4.3	a	7.0	a	a	9.1	1.6	26.7	a	2.9	4.5	4.0
Agree	25.0	10.3	12.9	20.0	11.6	23.7	5.0	11.4	22.2	36.7	21.4	35.3	13.5	15.8
Neutral	37.5	44.8	41.4	54.5	53.5	55.3	60.0	47.7	41.3	26.7	57.1	41.2	43.2	44.1
Disagree	20.8	32.8	30.0	21.8	20.9	15.8	25.0	29.5	27.0	10.0	21.4	14.7	31.6	29.0
Disagree Strongly	8.3	10.3	11.4	3.6	7.0	5.3	10.0	2.3	7.9	a	a	5.9	7.1	7.2

TABLE 33

## DESIRE TO BREAK TRAIL

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Yes	39.1	48.1	55.9	33.3	38.6	37.8	42.1	47.5	51.6	40.7	48.1	41.2	51.4	48.2
No	60.9	51.9	42.6	66.7	56.8	62.2	57.9	52.5	46.9	59.3	51.9	55.9	48.6	51.8

TABLE 34

## TRAIL PATROLLED BY LAW ENFORCEMENT OFFICERS

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Yes	13.0	17.5	23.4	28.3	13.3	32.4	30.0	26.8	27.0	34.5	26.9	27.3	30.6	28.6
No	87.0	82.5	76.6	71.7	86.7	67.6	70.0	73.2	73.0	65.5	73.1	72.7	69.4	71.4

TABLE 35

## TRAIL PATROLLED BY SKI PATROL

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Yes	47.8	51.8	34.8	54.7	41.9	59.5	52.6	60.5	58.3	54.8	70.4	47.1	61.7	57.1
No	52.2	48.2	65.2	45.3	58.1	40.5	47.4	39.5	41.7	45.2	29.6	52.9	38.3	42.9

TABLE 36

## DESIRE HILLS

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Gentle	43.5	33.3	35.3	36.5	48.8	47.4	26.3	52.4	26.6	50.0	27.6	50.0	40.4	39.8
Moderate	43.5	50.9	58.8	57.7	46.5	47.4	73.7	40.5	60.9	39.3	72.4	32.4	52.3	52.3
Steep	13.0	15.8	5.9	5.8	4.7	5.3	a	7.1	12.5	10.7	a	17.6	7.3	8.0

<sup>a</sup>Less than one percent.

TABLE 37

## AVOID OR LOOK FOR TRAILS WITH TWISTING DOWNHILL RUNS

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Avoid	68.0	59.3	64.1	69.2	73.8	72.7	64.7	65.8	60.7	88.0	81.5	80.0	68.2	68.5
Look for	32.0	40.7	35.9	30.8	26.2	27.3	35.3	34.2	39.3	12.0	18.5	20.0	31.8	31.5

TABLE 38

## METHODS TO OBTAIN FUNDS FOR SKI TRAIL DEVELOPMENT

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
General Taxes	28.0	24.2	30.6	31.2	31.1	16.7	29.2	25.0	35.3	9.1	25.0	26.8	21.5	23.9
Local	8.0	15.2	15.3	11.5	18.8	26.2	20.8	14.6	14.7	18.2	15.6	12.2	18.1	17.0
Yearly License	24.0	19.7	16.7	24.6	20.8	23.8	29.2	16.7	10.3	21.2	28.1	22.0	26.0	23.7
Equipment Sales Tax	12.0	21.1	18.1	3.3	18.8	7.1	12.5	4.1	14.7	12.1	12.5	12.2	7.3	9.3
Special Use Fee	28.0	24.2	15.3	26.2	8.3	21.4	8.3	37.5	22.1	36.7	18.8	19.5	25.4	23.8
Other <sup>b</sup>	a	4.6	4.2	3.3	2.1	4.8	a	2.1	2.9	3.0	a	4.9	1.7	2.3

<sup>a</sup>Less than one percent.

<sup>b</sup>Includes volunteer labor, no charge, state surplus revenue.



TABLE 39

WILLING TO SPEND ONE SATURDAY PER YEAR WORKING ON TRAIL MAINTENANCE														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Yes	29.1	55.9	51.5	49.1	41.3	45.0	61.9	40.9	46.9	51.6	58.6	45.5	44.9	46.2
No	21.7	6.8	19.1	12.7	23.9	27.5	9.5	27.3	9.4	3.2	20.7	12.1	12.2	13.6
Don't Know	39.1	37.3	29.4	38.2	34.8	27.5	28.6	31.8	43.8	45.2	20.7	42.4	42.9	40.3

TABLE 40

SKIING ABILITY IN MILES WHICH CAN BE SKIED COMFORTABLY IN ONE DAY														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Less than 5 miles	47.8	43.1	48.6	30.9	45.7	69.2	63.2	63.6	31.3	58.6	44.8	54.3	49.3	48.2
5-10	39.1	43.1	28.6	52.7	43.5	25.6	26.3	20.5	51.6	31.0	34.5	37.1	33.3	35.0
10-15	8.7	10.3	17.1	12.7	10.9	5.1	10.5	9.1	12.5	6.9	13.8	8.6	14.0	13.3
15-30	4.3	3.4	5.7	3.6	a	a	a	6.8	4.7	3.4	6.9	a	3.3	3.4

TABLE 41

LONGEST DISTANCE SKIED IN A SINGLE DAY														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
5 miles or less	38.0	21.7	22.7	18.6	22.7	34.2	33.4	41.4	20.0	28.0	26.9	25.8	24.5	24.6
6-10	14.3	40.0	40.9	31.6	45.5	44.9	39.0	31.8	36.3	40.0	38.5	51.6	41.3	40.5
11-15	28.6	16.3	18.2	26.0	18.2	15.7	16.7	7.2	23.6	16.8	7.6	13.0	18.9	18.6
16-20	9.5	7.2	9.1	20.5	9.1	a	11.2	12.1	9.1	8.0	23.0	6.5	8.4	9.1
20+	9.5	14.5	9.0	3.8	4.5	5.2	a	7.2	10.8	8.0	3.8	3.2	6.3	7.2
Median	10.3	9.8	9.8	10.5	9.5	7.0	7.5	6.4	10.0	9.9	7.5	7.7	9.9	9.7
Mean	10.7	12.3	11.7	12.3	10.2	8.3	9.1	9.6	12.3	12.6	10.5	9.1	10.7	10.8

<sup>a</sup>Less than one percent.

TABLE 42

TIME SPENT DURING AVERAGE CROSS-COUNTRY SKI OUTING														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
1 hour or less	8.3	8.5	10.1	7.3	6.5	7.5	10.5	2.3	4.7	16.7	3.4	3.0	7.3	7.2
2-3 hours	66.7	59.3	56.5	43.7	47.8	72.5	52.7	77.3	46.9	53.4	51.7	48.5	58.0	56.4
4-5 hours	16.7	25.4	26.1	36.4	30.4	17.5	36.8	15.9	32.8	10.0	37.9	33.3	28.7	28.6
6-7 hours	4.2	a	1.4	9.1	10.8	a	a	2.3	10.9	16.6	6.9	15.2	5.4	6.0
8-10 hours	4.2	3.4	4.3	3.6	2.2	2.5	a	2.3	4.7	3.3	a	a	a	1.5
10+	3.0	3.6	3.4	3.5	3.6	2.8	3.1	2.8	3.6	3.2	3.3	3.4	3.1	3.2

<sup>a</sup>Less than one percent.

TABLE 43

NUMBER OF YEARS RESPONDENTS HAVE CROSS-COUNTRY SKIED														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
1 year	20.8	22.4	21.4	32.1	37.0	32.5	25.0	24.4	30.2	33.3	21.4	20.6	23.7	24.3
2	16.7	32.8	22.9	23.2	23.9	20.0	30.0	24.4	27.0	13.3	7.1	38.2	23.7	24.1
3	20.8	19.0	21.4	25.0	15.2	25.0	10.0	19.5	22.2	36.7	35.7	32.4	17.8	20.2
4	20.8	8.6	12.9	7.1	8.7	10.0	5.0	17.1	6.3	10.0	17.9	a	20.4	16.4
5	8.3	6.9	7.1	5.4	4.3	5.0	20.0	9.8	6.3	a	7.1	2.9	6.6	6.4
5+	12.6	10.2	14.0	7.2	10.9	7.5	10.0	4.9	8.0	6.6	10.7	5.8	7.9	8.6
Median	3.1	2.3	2.8	2.3	2.0	2.4	2.3	2.3	2.2	2.6	3.1	2.3	2.6	2.6
Mean	3.7	3.4	5.4	2.7	3.0	3.0	3.1	2.8	2.7	3.8	3.2	2.8	3.0	3.2

<sup>a</sup>Less than one percent.

TABLE 44

TYPE OF GROUP SKIED WITH														
REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Group														
Alone	23.1	36.4	18.1	14.5	30.9	21.7	12.5	15.2	17.1	13.9	9.8	12.8	12.9	16.4
Family	30.1	34.1	33.7	34.8	27.3	17.4	45.8	39.7	27.1	38.9	34.2	33.3	44.4	43.6
Friends	46.2	29.5	48.2	50.7	41.8	60.1	41.7	44.8	55.7	47.2	56.1	53.8	42.7	40.0

TABLE 45

## OTHER ACTIVITIES ENJOYED WHILE SKIING

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent) <sup>a</sup>													
Picknicking	56.0	45.8	51.4	41.4	48.9	30.0	52.4	44.4	46.9	56.3	55.2	50.0	45.2	46.5
Camping	24.0	10.1	6.9	15.5	14.9	7.5	9.5	13.3	12.5	18.8	20.7	11.1	9.6	10.1
Nature Observation	84.0	94.9	77.8	86.2	93.6	85.0	81.0	91.1	84.4	53.1	96.6	83.3	87.9	86.7
Hunting	20.0	8.5	12.5	13.8	14.9	15.0	b	4.4	6.3	21.9	10.3	16.7	5.1	6.7
Racing	8.0	13.6	9.7	13.8	6.4	17.5	b	11.1	12.5	9.4	20.7	11.1	9.6	10.4
Bar Hopping	b	6.8	4.2	6.9	6.4	10.0	14.3	11.1	6.3	6.3	6.9	19.4	3.8	4.7
Fishing	12.0	6.8	15.3	6.9	44.7	12.5	6.0	4.4	3.1	15.6	10.3	16.7	6.4	8.6
Visiting Friends	52.0	42.2	29.2	37.9	48.9	47.5	61.9	53.3	43.8	37.5	44.8	47.2	35.1	37.6
Meeting New Friends	32.0	37.3	36.1	51.7	44.7	40.0	38.1	37.8	46.9	43.8	48.3	36.1	33.8	36.3
None	b	b	8.3	5.2	4.3	7.5	4.8	4.4	1.6	6.3	a	2.8	7.0	6.1

<sup>a</sup>Adds to more than 100 percent due to multiple responses.<sup>b</sup>Less than one percent.

TABLE 46

## CAMPING DURING THE WINTER

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
Yes	21.7	27.1	28.6	23.2	13.6	5.9	4.8	16.3	21.9	20.0	31.0	11.8	14.5	17.1
No	78.3	72.9	71.4	76.8	86.4	95.0	95.2	83.7	78.1	80.0	69.0	88.2	85.5	82.9

TABLE 47

## DISTANCE SKIED EACH WEEK

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
Yes	4.2	13.6	14.3	10.7	2.2	5.0	10.0	11.4	7.8	3.4	6.9	a	4.6	6.0
No	95.8	86.4	85.7	89.3	97.8	95.0	90.0	88.6	92.2	96.6	93.1	100	95.4	94.0
If yes, how far?														
5 or less (miles)	99	34.5	40.0	20.0	a	50.0	a	40.0	40.0	a	a	a	14.3	25.3
6-10	a	25.0	a	20.0	100	a	a	20.0	20.0	100	a	a	28.6	20.8
11-15	a	25.0	a	a	a	50.0	a	a	20.0	a	50.0	a	14.3	11.6
16-20	a	a	a	a	a	a	50.0	a	20.0	a	50.0	a	14.3	10.0
20+	a	12.5	60.0	60.0	a	a	50.0	40.0	a	a	a	a	28.6	32.3

<sup>a</sup>Less than one percent.

TABLE 48

## NUMBER OF CROSS-COUNTRY OUTINGS PER YEAR IN MINNESOTA

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
5 or less	50.0	18.2	22.1	36.6	25.8	52.7	39.0	33.4	36.0	46.5	33.3	39.5	34.5	33.8
6-10	12.5	32.7	42.7	26.9	30.3	29.0	50.1	26.2	29.7	46.4	37.0	39.4	31.8	32.9
11-15	29.3	18.2	7.3	15.4	14.0	10.5	5.6	16.7	14.1	3.6	11.1	12.1	20.9	16.4
16-20	a	23.6	10.3	7.7	14.0	2.6	a	7.2	7.9	a	18.5	6.1	7.4	8.0
20+	8.3	7.2	17.8	15.4	16.4	5.2	5.6	16.7	12.6	3.6	a	3.0	7.6	7.2
Median	5.5	10.4	9.0	9.8	9.9	5.3	5.9	9.5	7.7	5.8	8.3	7.0	9.7	9.5
Mean	8.5	13.5	13.3	13.5	12.8	7.8	7.5	12.0	10.7	6.5	9.7	8.8	9.6	10.3

<sup>a</sup>Less than one percent.

TABLE 49

## NUMBER OF OUTINGS ON GROOMED, MARKED TRAILS

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
0 outings	47.8	25.4	27.3	29.6	33.3	48.7	45.0	47.5	15.9	37.9	26.9	31.3	14.5	20.2
1-3	30.4	17.0	22.8	31.5	28.5	28.3	35.0	27.5	34.9	34.4	30.7	31.3	33.1	31.5
4-6	21.6	22.1	19.7	13.0	23.8	15.4	10.0	10.0	23.7	20.7	23.0	15.7	24.9	22.7
7-10	a	13.6	18.2	9.3	4.8	7.7	10.0	7.5	17.5	3.4	15.4	12.6	13.1	13.0
10+	a	22.1	12.0	16.9	9.6	a	a	7.5	8.0	3.4	3.8	9.4	14.5	12.8
Median	.8	4.6	3.5	2.3	2.0	0.6	1.0	0.7	3.4	1.4	2.2	2.3	3.8	3.4
Mean	1.7	6.7	7.1	6.0	3.7	2.0	2.1	3.5	5.0	2.6	3.4	4.6	5.6	5.4

<sup>a</sup>Less than one percent.

TABLE 50

DESIRE TO RETURN TO A TRAIL IF CROSS-COUNTRY SKIERS ENCOUNTERED OTHER TYPES OF RECREATORS

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
<u>CROSS COUNTRY SKIERS</u>														
Definitely Not	a	1.8	1.4	a	a	a	a	a	1.7	a	a	a	2.6	1.9
Would not	a	a	a	a	a	a	a	2.3	a	3.4	a	a	a	a
Neutral	4.2	5.3	7.2	9.3	2.2	2.7	4.8	4.7	a	3.4	7.4	6.1	3.9	4.5
Would	8.3	8.8	13.0	5.6	6.7	8.1	9.5	16.3	13.3	10.3	14.8	15.2	7.8	9.2
Definitely Would	87.5	84.2	78.3	85.2	91.1	89.2	85.7	76.7	85.0	82.3	77.8	78.8	85.1	83.9
<u>SNOWSHOERS</u>														
Definitely Not	4.3	5.3	12.1	3.7	2.2	2.7	5.3	a	5.0	a	a	3.1	7.3	6.6
Would not	8.7	7.0	6.1	5.6	6.5	2.7	5.3	a	5.0	3.4	3.7	a	6.0	5.4
Neutral	8.7	22.8	21.2	18.5	19.6	16.2	10.5	14.3	16.7	20.7	18.5	21.9	17.9	18.3
Would	21.7	21.1	16.7	18.5	8.7	24.3	15.8	23.8	20.0	27.6	14.8	21.9	17.9	18.2
Definitely Would	56.5	43.9	43.9	53.7	63.0	54.1	63.2	61.9	53.3	48.3	63.0	53.1	51.0	51.4
<u>FOUR-WHEEL DRIVES</u>														
Definitely Not	68.2	77.6	77.9	79.6	88.6	62.2	81.0	70.7	80.3	82.8	77.8	91.2	85.0	83.2
Would not	22.7	17.2	13.2	13.0	2.3	24.3	14.3	12.2	11.5	6.9	7.4	5.9	9.2	10.0
Neutral	4.5	5.2	5.9	7.4	4.5	10.8	4.8	4.9	3.3	6.9	11.1	2.9	3.3	4.1
Would	a	a	1.5	a	2.3	2.7	a	2.4	1.6	a	a	a	a	a
Definitely Would	4.5	a	1.5	a	2.3	a	a	9.8	3.3	3.4	3.7	a	2.0	2.0

Table 50 (continued)

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
<u>SNOWMOBILERS</u>														
Definitely Not	68.2	62.1	46.4	68.5	61.4	62.2	76.2	44.2	67.7	62.1	55.6	64.7	79.1	71.9
Would not	18.2	15.5	15.9	20.4	13.6	18.9	23.8	30.2	11.3	13.8	18.5	23.5	9.2	12.3
Neutral	4.5	17.2	18.8	9.3	13.6	10.8	a	9.3	11.3	17.2	14.4	11.8	6.5	9.0
Would	a	5.2	5.8	a	a	5.4	a	4.7	3.2	3.4	11.1	a	2.6	2.9
Definitely Would	9.1	a	13.0	1.9	11.4	2.7	a	11.6	6.5	3.4	a	a	2.6	3.9
<u>DOG SLEDDERS</u>														
Definitely Not	14.3	27.6	33.8	29.6	17.8	22.2	33.3	25.0	30.0	24.1	7.4	35.3	27.3	27.7
Would not	14.3	22.4	9.2	16.7	15.6	13.9	19.0	10.0	25.0	6.9	18.5	11.8	16.0	15.5
Neutral	28.6	24.1	27.7	29.6	35.6	25.0	23.8	20.0	21.7	41.4	33.3	32.4	31.3	30.4
Would	9.5	15.5	16.9	7.4	6.7	22.2	14.3	15.0	10.0	13.8	25.9	2.9	11.3	11.7
Definitely Would	33.3	10.3	12.3	16.7	24.4	16.7	9.5	30.0	13.3	13.8	14.8	17.6	14.0	14.8

TABLE 51

TRAILS SHOULD ALLOW ALL TYPES OF USES

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Agree Strongly	8.3	6.9	5.9	1.8	2.3	a	a	6.8	a	3.2	a	5.9	4.0	3.8
Agree	12.5	6.9	7.4	1.8	14.0	7.7	a	2.3	3.2	9.7	3.6	8.8	4.0	5.0
Neutral	a	10.3	16.2	12.7	4.7	20.5	5.0	25.0	12.7	9.7	17.9	14.7	4.7	8.0
Disagree	25.0	29.3	23.5	20.0	23.3	30.8	30.0	25.0	25.4	25.8	14.3	17.6	20.0	21.0
Disagree Strongly	54.2	53.4	47.1	63.6	55.8	41.0	65.0	40.9	58.7	51.6	64.3	52.9	67.3	62.2

<sup>a</sup> Less than one percent.

TABLE 52

PARALLEL BUT SEPARATE PATHS SHOULD BE PROVIDED FOR DIFFERENT USES

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
(Percent)														
Agree Strongly	8.7	14.0	19.1	18.2	23.8	7.7	10.0	22.7	17.5	16.7	7.4	17.6	14.0	15.0
Agree	39.1	50.9	41.2	36.4	33.3	41.0	20.0	22.7	36.5	23.3	25.9	17.6	25.3	28.4
Neutral	34.8	15.8	20.6	20.0	19.0	35.9	15.0	27.3	17.5	36.7	29.6	14.7	17.3	18.8
Disagree	8.7	12.3	10.3	12.7	16.7	12.8	25.0	11.4	11.1	16.7	14.8	32.4	22.7	20.0
Disagree Strongly	8.7	7.0	8.8	12.7	7.1	2.6	30.0	15.9	17.5	6.7	22.2	17.6	20.7	17.8

TABLE 53

REGION 1			COMPLAINTS			REGION 2		
	PERCENT OF ALL RESPONDENTS	PERCENT OF RESPONDENTS WITH COMPLAINTS					PERCENT OF ALL RESPONDENTS	PERCENT OF RESPONDENTS WITH COMPLAINTS
No complaints	52.0		No complaints			49.2		
<u>Snowmobiles</u>			<u>Snowmobiles</u>					
Should not be allowed near trails	13.7	28.6	Should not be allowed near trails	16.0	31.6			
Should not be allowed on trails	6.9	14.3	Should not be allowed on trails	4.0	7.9			
TOTAL	(20.6)	(42.9)	TOTAL	(20.0)	(39.5)			
<u>Trails</u>			<u>Trails</u>					
Not enough	6.9	14.3	Not enough	5.3	10.5			
Overcrowded	3.4	21.4	Overcrowded	1.3	7.9			
Inadequate	10.3	7.1	Inadequate	4.0	2.6			
TOTAL	(20.6)	(43.8)	Grooming inadequate	2.7	5.3			
			Not well marked	2.7	5.3			
			TOTAL	(16.0)	(31.6)			
<u>Trail Design</u>			<u>Trail Design</u>					
Located too far from home	3.4	7.1	Located too far from home	4.1	7.9			
TOTAL	( 3.4)	( 7.1)	Designed for long ski	1.3	2.6			
			Need rest areas along trails	1.3	2.6			
			TOTAL	( 8.0)	(15.7)			
OTHER	3.4	7.1	OTHER	6.7	13.2			

TABLE 53 (continued)

REGION 3			REGION 4		
No complaints	40.9		No complaints	42.1	
<u>Snowmobiles</u>					
Should not be allowed near trails	15.1	25.5	Should not be allowed near trails	15.5	26.8
Should not be allowed on trails	8.8	14.9	Should not be allowed on trails	11.3	19.5
TOTAL	(23.9)	(40.4)	Should not be allowed on or near trails	2.8	4.9
			TOTAL	(29.6)	(51.2)
<u>Trails</u>					
Not enough	8.8	18.7	Not enough	2.8	4.9
Overcrowded	3.7	6.3	Overcrowded	5.6	9.8
Inadequate	3.7	6.3	Inadequate	4.4	7.3
Grooming inadequate	3.7	6.3	Grooming inadequate	2.8	4.9
Not well marked	2.5	4.3	Dogs on trails	1.4	2.4
Dogs on trails	1.3	2.1	Information about trails inadequate	1.4	2.4
TOTAL	(23.7)	(44.0)	TOTAL	(18.4)	(31.7)
<u>Trail Design</u>					
Located too far from home	1.3	2.1	Located too far from home	1.4	2.4
Need rest areas along trails	1.3	2.1	Don't allow hunting near trails	1.4	2.4
Need level trails	1.3	2.1	TOTAL	( 2.8)	( 4.8)
TOTAL	( 3.9)	( 6.3)			
OTHER	8.8	14.9	OTHER	7.1	12.2

TABLE 53 (continued)

REGION 5			REGION 6E		
No complaints	40.4		No complaints	50.0	
<u>Snowmobiles</u>			<u>Snowmobiles</u>		
Should not be allowed near trails	14.9	25.0	Should not be allowed near trails	7.1	14.3
Should not be allowed on trails	13.0	21.9	Should not be allowed on trails	9.5	19.1
TOTAL	(27.9)	(46.9)	TOTAL	(16.6)	(33.4)
<u>Trails</u>			<u>Trails</u>		
Not enough	11.2	18.8	Not enough	7.1	14.3
Inadequate	1.9	3.1	Overcrowded	2.4	4.8
Grooming inadequate	3.7	6.3	Dogs on trails	2.4	4.8
Not well marked	1.9	3.1	TOTAL	(11.9)	(23.9)
TOTAL	(18.7)	(31.3)			
<u>Trail Design</u>			<u>Trail Design</u>		
Located too far from home	3.7	6.3	Located too far from home	2.4	4.8
TOTAL	( 3.7)	( 6.3)	Need rest areas along trails	4.8	9.5
			TOTAL	( 7.2)	(14.3)
Snow cover inadequate	1.9	3.1	Do not develop	2.4	4.8
OTHER	9.3	15.6	Snow cover inadequate	4.8	9.5
			OTHER	7.1	14.3

TABLE 53 (continued)

REGION 6W			REGION 7E		
No complaints	42.9		No complaints	48.9	
<u>Snowmobiles</u>			<u>Snowmobiles</u>		
Should not be allowed near trails	10.7	18.7	Should not be allowed near trails	11.4	22.2
Should not be allowed on trails	17.8	31.3	Should not be allowed on trails	13.2	25.9
TOTAL	(28.5)	(50.0)	TOTAL	(24.6)	(48.1)
<u>Trails</u>			<u>Trails</u>		
Not enough	10.7	18.8	Overcrowded	1.9	3.7
Overcrowded	3.6	6.3	Inadequate	1.9	3.7
Inadequate	3.6	6.3	Grooming inadequate	1.9	3.7
Grooming inadequate	3.6	6.3	Not well marked	1.9	3.7
Not well marked	7.4	12.5	Information about trails inadequate	1.9	3.7
TOTAL	(28.9)	(50.1)	TOTAL	( 9.5)	(18.5)
<u>Trail Design</u>			<u>Trail Design</u>		
Dislike point to point trails	1.9	3.7	Dislike point to point trails	1.9	3.7
Need open areas	1.9	3.7	Need open areas	1.9	3.7
TOTAL	( 3.8)	( 7.4)	TOTAL	( 3.8)	( 7.4)
Do not develop	1.9	3.7			
Snow cover inadequate	5.7	11.1			
OTHER	5.7	11.1			

TABLE 53 (continued)

REGION 7W			REGION 8		
No complaints	45.3		No complaints	41.9	
<u>Snowmobiles</u>			<u>Snowmobiles</u>		
Should not be allowed near trails	6.8	12.5	Should not be allowed near trails	7.9	13.6
Should not be allowed on trails	6.8	12.5	Should not be allowed on trails	7.9	13.6
TOTAL	(13.6)	(25.0)	Should not be allowed on/near trails	3.2	4.6
			TOTAL	(19.0)	(31.8)
<u>Trails</u>			<u>Trails</u>		
Not enough	10.2	18.8	Not enough	7.9	13.6
Overcrowded	5.7	10.4	Overcrowded	5.3	9.1
Inadequate	2.3	4.2	Inadequate	5.3	9.1
Grooming inadequate	4.6	8.3	Grooming inadequate	3.2	4.6
Not well marked	1.4	2.1			
TOTAL	(24.2)	(43.8)	TOTAL	(21.7)	(36.4)
<u>Trail Design</u>			<u>Trail Design</u>		
Need rest areas along trails	2.3	4.2	Located too far from home	5.3	9.1
Combination of hills and level	1.4	2.1	Need rest areas along trails	2.6	4.6
Need open areas	1.4	2.1	Combination of hills and level	2.6	4.6
Prefer network trails	1.4	2.1	Need variety of scenery	2.6	4.6
TOTAL	( 6.5)	(10.5)	TOTAL	(13.1)	(22.9)
Snow cover inadequate	5.7	10.4	Snow cover inadequate	2.6	2.6
OTHER	5.7	10.4	OTHER	2.6	4.6

TABLE 53 (continued)

REGION 9			REGION 10		
No complaints	30.3		No complaints	45.2	
<u>Snowmobiles</u>			<u>Snowmobiles</u>		
Should not be allowed near trails	9.1	13.4	Should not be allowed near trails	9.5	17.4
Should not be allowed on trails	12.1	17.4	Should not be allowed on trails	14.3	26.1
TOTAL	(21.2)	(30.8)	TOTAL	(23.8)	(43.5)
<u>Trails</u>			<u>Trails</u>		
Not enough	12.1	17.4	Not enough	9.5	17.4
Inadequate	18.2	26.1	Inadequate	4.8	8.7
Grooming inadequate	3.0	4.4			
Not well marked	3.0	4.4			
Information about trails inadequate	3.0	4.4			
TOTAL	(39.3)	(56.7)	TOTAL	(14.3)	(26.1)
<u>Trail Design</u>			<u>Trail Design</u>		
Trails should go through woods	3.0	4.4	Located too far from home	4.8	8.7
			Need rest areas along trails	4.8	8.7
TOTAL	( 3.0)	( 4.4)	TOTAL	( 9.6)	(17.4)
Snow cover inadequate	3.0	4.4	Do not develop	2.4	4.4
OTHER	3.0	4.4	OTHER	4.8	8.7

TABLE 53 (continued)

REGION 11			STATE TOTALS		
No complaints	51.5		No complaints	51.0	
<u>Snowmobiles</u>			<u>Snowmobiles</u>		
Should not be allowed near trails	6.0	12.4	Should not be allowed near trails	8.5	17.8
Should not be allowed on trails	7.2	14.8	Should not be allowed on trails	8.5	17.8
Should not be allowed on/near trails	1.2	2.5	Should not be allowed on/near trails	.9	1.9
TOTAL	(14.4)	(29.7)	TOTAL	(17.9)	(37.5)
Should be allowed near trails	1.2	2.5	Should be allowed near trails	.8	1.6
<u>Trails</u>			<u>Trails</u>		
Overcrowded	9.0	18.5	Not enough trails	9.0	18.4
Not enough	7.2	14.8	Overcrowded	6.8	14.2
Inadequate	2.4	4.9	Inadequate	3.3	6.9
Grooming inadequate	1.2	2.5	Grooming inadequate	1.3	3.6
Not well marked	1.2	2.5	Not well marked	1.3	2.6
			Dogs on trails	.2	.4
			Information about trails inadequate	.2	.4
TOTAL	(21.0)	(43.2)	TOTAL	(22.6)	(46.5)
<u>Trail Design</u>			<u>Trail Design</u>		
Located too far from home	1.8	3.7	Located too far from home	1.8	3.6
Prefer hilly areas	1.2	2.5	Prefer hilly areas	.8	1.6
Combination of hills and level	.6	1.2	Need rest areas along trails	.7	1.3
Need variety of scenery	.6	1.2	Combination of hilly and level	.5	1.0
Trails should follow streets	.6	1.2	Need variety of scenery	.4	.8
Preserve wilderness character	.6	1.2	Trails should follow streams	.4	.8
			Preserve wilderness character	.4	.8
TOTAL	( 5.4)	(11.0)	TOTAL	( 5.0)	( 9.9)
Snow cover inadequate	1.8	3.7	Snow cover inadequate	1.8	3.6
OTHER	4.8	9.9	OTHER	.8	1.6

TABLE 54

REGION 1			REGION 2		
	Percent of Total	Percent of Comments		Percent of Total	Percent of Comments
None	68		No comment	67.8	
<u>Trails</u>			<u>Snowmobiles</u>		
Trails Adequate	5.8	18.2	Should not be allowed near trails	2.5	7.4
Develop trails	2.9	9.0	Should not be allowed on trails	2.5	7.4
Don't develop trails	2.9	9.0	Should not be allowed on/near trails	1.2	3.7
TOTAL	(11.6)	(36.2)	TOTAL	( 6.2)	(11.1)
<u>Trail Design</u>			<u>Trails</u>		
Prefer off trail skiing	2.9	9.0	Not enough	2.5	7.4
Need rest areas	2.9	9.0	Existing inadequate	1.2	3.7
Go through woods	2.9	9.0	Not well marked	1.2	3.7
TOTAL	( 8.7)	(27.0)	TOTAL	( 4.9)	(14.8)
OTHER	11.6	36.4	<u>Trail Design</u>		
			Located too far from home	2.5	7.4
			Combine hills and level	1.2	3.7
			Need variety of scenery	1.2	3.7
			Preserve wilderness character	1.2	3.7
			Ski to observe nature	1.2	3.7
			Prefer network trails	1.2	3.7
			Land around trails should be for multiple use	1.2	3.7
			Prefer off-trail	1.2	3.7
			Trails adequate	2.5	7.4
			TOTAL	13.4	40.7
			Volunteer to work	1.2	3.7
			OTHER	7.1	22.2

TABLE 54 (continued)

REGION 3			REGION 4		
No comment	59.7		No comment	58.6	
<u>Snowmobiles</u>			<u>Snowmobiles</u>		
Should not be allowed near trails	2.1	5.1	Should not be allowed near trails	6.9	16.7
Should not be allowed on/near trails	2.1	5.1	Should not be allowed on trails	4.6	11.1
			Should not be allowed on/near trails	1.2	2.8
TOTAL ( 4.2)	(10.1)		TOTAL (11.5)	(15.6)	
<u>Trails</u>			<u>Trails</u>		
Overcrowded	1.0	2.6	Not enough	4.6	11.1
Not well groomed	1.0	2.6	Existing inadequate	1.2	2.8
Information about trails inadequate	2.1	5.6	Not well groomed	1.2	2.8
TOTAL ( 4.1)	(10.8)		TOTAL ( 7.0)	(16.7)	
<u>Trail Design</u>			<u>Trail Design</u>		
Preserve wilderness character	3.1	7.7	Located too far from home	2.3	5.6
Trails for over one day's ski	1.0	2.6	Preserve wilderness character	2.3	5.6
Prefer loop trails	1.0	2.6	Ski for exercise	1.2	2.8
Prefer network trails	1.0	2.6	Ski for nature observation	1.2	2.8
Ski for wildlife observation	1.0	2.6			
Approve of dual use	1.0	2.6			
Volunteer to work	1.0	2.6			
TOTAL ( 9.1)	(23.3)		TOTAL ( 7.0)	(16.8)	
Do not develop	4.1	10.3	Trails adequate	1.2	2.8
Snow cover inadequate	1.0	2.6	Snow cover inadequate	2.3	5.6
OTHER	17.6	43.6	OTHER	10.3	25.0

TABLE 54 (continued)

REGION 5			REGION 6 E		
No comment	57.5		No comment	85.0	
<u>Snowmobiles</u>			<u>Snowmobiles</u>		
Should not be allowed near trails	6.6	15.4	Should not be allowed near trails	1.2	7.7
Should not be allowed on trails	3.3	7.7			
Should not be allowed on/near trails	1.6	3.9			
TOTAL (11.5)	(27.0)		TOTAL ( 1.2)	( 7.7)	
<u>Trails</u>			<u>Trails</u>		
Not enough	3.3	7.7	Not enough	1.2	7.7
Grooming inadequate	1.6	3.9	Existing inadequate	1.2	7.7
Information about trails inadequate	4.9	11.5	Dogs should not be allowed	1.2	7.7
TOTAL (11.4)	(27.0)		TOTAL ( 3.6)	(23.1)	
<u>Trail Design</u>			<u>Trail Design</u>		
Located too far from home	1.6	3.9	Located too far from home	1.2	7.7
Need rest areas	4.9	11.5	Need rest areas	1.2	7.7
Need variety of scenery	1.6	3.9	Approve of dual use	1.2	7.7
Ski for exercise	1.6	3.9	Prefer trails along lakes	1.2	7.7
Volunteer to work	1.6	3.9	Prefer trails through woods	1.2	7.7
TOTAL ( 9.7)	(23.2)		TOTAL ( 7.2)	(46.2)	
OTHER	9.8	23.1	Do not develop	1.2	7.7
			OTHER	2.3	15.4

TABLE 54 (continued)

REGION 6 W			REGION 7 E		
No comment	66.7		No comment	68.9	
<u>Snowmobiles</u>			<u>Snowmobiles</u>		
Should not be allowed near trails	6.1	18.2	Should not be allowed near trails	3.1	10.0
			Should not be allowed on trails	1.6	5.0
TOTAL ( 6.1)	(18.2)		TOTAL ( 4.7)	(15.0)	
<u>Trails</u>			<u>Trails</u>		
Not enough	6.1	18.2	Not enough	4.7	15.0
Existing inadequate	3.0	9.1	Adequate	1.6	5.0
Overcrowded	3.0	9.1			
Adequate	3.0	9.1			
TOTAL (15.1)	(45.5)		TOTAL ( 6.3)	(20.0)	
<u>Trail Design</u>			<u>Trail Design</u>		
Located too far from home	6.1	18.2	Located too far from home	4.7	15.0
Preserve wilderness character	3.0	9.1	Prefer hills	3.1	10.0
			Preserve wilderness	4.7	15.0
			Prefer network trails	1.6	5.0
			Volunteer to work	1.6	5.0
TOTAL ( 9.1)	(27.3)		TOTAL (17.3)	(50.0)	
OTHER	3.0	9.1	Do not develop	1.6	5.0
			OTHER	3.1	10.0

TABLE 54 (continued)

REGION 7 W			REGION 8		
No comment	64.1		No comment	78.1	
<u>Snowmobiles</u>			<u>Snowmobiles</u>		
Should not be allowed near trails	2.0	5.3	Should not be allowed near trails	3.9	18.2
Should not be allowed on trails	3.9	10.5	Should not be allowed on trails	2.0	9.1
Should not be allowed on/near trails	2.0	5.3	Should not be allowed on/near trails	2.0	9.1
TOTAL ( 7.9)	(21.1)		TOTAL ( 9.9)	(45.4)	
<u>Trails</u>			<u>Trails</u>		
Not enough	5.9	21.2	Not enough	3.9	18.2
Existing inadequate	2.0	5.3	Enough	2.0	9.1
Overcrowded	2.0	5.3			
Not well marked	2.0	5.3			
TOTAL (11.9)	(36.8)		TOTAL ( 5.9)	(27.3)	
<u>Trail Design</u>			<u>Trail Design</u>		
Located too far from home	2.0	5.3	Ski for transportation	2.0	9.1
Prefer hills	2.0	5.3	Preserve wilderness character	2.0	9.1
Hills and level	2.0	5.3			
Need variety of scenery	2.0	5.3			
Preserve wilderness character	3.9	10.5			
TOTAL (11.9)	(31.7)		TOTAL ( 4.0)	(18.2)	
OTHER	3.9	10.5	OTHER	3.9	18.2

TABLE 54 (continued)

REGION 9			REGION 10		
No comment	72.4		No comment	58.3	
<u>Snowmobiles</u>			<u>Snowmobiles</u>		
Should not be allowed near trails	2.5	9.1	Should not be allowed near trails	6.2	15.0
<u>Trails</u>			<u>Trails</u>		
Not enough	5.0	18.2	Existing inadequate	2.1	5.0
Existing inadequate	2.5	9.1			
Existing adequate	2.5	9.1			
Overcrowded	2.5	9.1			
Information about trails inadequate	2.5	9.1			
Prefer off trail	2.5	9.1			
TOTAL	(17.5)	(63.7)		(2.1)	(5.0)
<u>Trail Design</u>			<u>Trail Design</u>		
Located too far from home	2.5	9.1	Located too far from home	4.2	10.0
Prefer hills	2.5	9.1	Prefer hills	2.1	5.0
			Variety of scenery	2.1	5.0
			Over one day's ski	2.1	5.0
			Through woods	2.1	5.0
			Network trails	4.2	10.0
TOTAL	(5.0)	(18.2)	TOTAL	(16.8)	(35.0)
OTHER	2.5	9.1	Do not develop	4.2	10.0
			OTHER	12.5	30.0

TABLE 54 (continued)

REGION 11			STATE TOTAL		
No comment	72.6		No comment	69.1	
<u>Snowmobiles</u>			<u>Snowmobiles</u>		
Should not be allowed near trails	3.8	13.9	Should not be allowed near trails	3.6	11.7
Should not be allowed on trails	1.9	7.2	Should not be allowed on trails	1.7	5.4
Should not be allowed on/near trails	.9	3.6	Should not be allowed on/near trails	1.0	3.1
TOTAL	(6.6)	(24.7)	TOTAL	(6.3)	(20.2)
<u>Trails</u>			<u>Trails</u>		
Not enough	2.4	8.9	Not enough	2.3	7.5
Existing inadequate	1.9	7.2	Existing inadequate	1.5	4.9
Adequate	.5	1.8	Overcrowded	.2	.7
Information about inadequate	.9	3.6	Information about inadequate	.9	3.0
			Need grooming	.2	.6
			Adequate	.3	.9
TOTAL	(5.7)	(21.5)	TOTAL	(5.4)	(17.6)
<u>Trail Design</u>			<u>Trail Design</u>		
Located too far from home	1.9	7.2	Located too far from home	1.8	5.9
Hills and level	.5	1.8	Prefer hills	1.1	3.5
Variety of scenery	.5	1.8	Hills and level	.4	1.2
Preserve wilderness character	1.9	7.2	Go through woods	.5	1.7
Go through woods	.5	1.8	Variety of scenery	.6	1.8
Hills	1.4	5.3	Preserve wilderness values	1.9	6.1
Ski for transportation	.5	1.8	Trails for skis of over one day	.2	.7
			Net work trails	1.0	3.3
TOTAL	(7.2)	(26.9)	TOTAL	(7.5)	(24.2)
OTHER	7.1	26.2	Prefer off trail	.2	.6
			Ski for exercise	.2	.6
			Ski to observe nature	.2	.6
			Volunteer to work on trails	.4	1.1
			Do not develop	1.2	3.8
			OTHER	9.7	31.2

TABLE 55

## AGE OF CROSS-COUNTRY SKIERS

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
Less than 20	12.9	17.1	11.4	25.1	17.8	17.5	a	15.9	12.8	37.6	17.1	23.0	10.6	13.1
20-24	12.9	17.2	14.2	19.7	8.8	20.0	9.6	18.2	25.7	3.1	24.0	14.3	12.5	14.0
25-29	30.3	13.8	15.6	16.1	20.0	17.5	38.0	27.2	20.8	18.8	17.2	22.9	25.6	23.3
30-34	4.3	13.7	21.5	10.8	17.7	10.0	4.8	16.0	16.0	a	13.7	17.2	17.1	16.6
35-39	4.3	10.3	7.1	9.0	6.7	2.5	9.6	6.8	9.6	21.8	13.7	5.7	9.9	9.3
40-44	13.0	6.8	2.9	3.6	2.2	10.0	9.6	6.9	3.2	6.3	6.9	2.9	7.4	6.2
45-49	8.6	10.2	10.1	10.8	6.6	5.0	a	a	1.6	3.1	3.4	8.7	3.4	4.6
50-54	8.7	3.4	5.6	3.6	6.6	5.0	19.1	4.6	6.4	6.]	a	a	4.7	4.6
55-59	a	a	7.1	1.8	2.2	2.5	4.8	4.6	3.2	3.1	3.4	2.9	5.9	5.3
60-64	a	3.4	a	a	6.6	5.0	4.8	a	a	a	a	2.9	a	0.4
65+	4.3	3.4	4.3	a	4.4	5.0	a	a	a	a	a	a	3.3	2.8
Median	28.0	30.5	31.5	25.1	30.0	28.0	34.0	28.0	27.5	25.8	27.0	27.3	29.8	29.4
Mean	33.5	32.5	34.5	29.2	34.3	33.0	37.2	29.5	29.6	28.6	28.8	29.4	32.9	31.4

<sup>a</sup>Less than one percent.

TABLE 57

## OCCUPATIONS OF CROSS-COUNTRY SKIERS

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
OCCUPATION														
Professional Technical	30.0	31.6	33.3	26.9	14.0	17.9	65.0	47.6	42.6	25.0	30.8	34.3	42.2	38.7
Managers	10.0	7.1	9.1	11.5	13.9	7.8	30.0	4.8	13.0	9.4	11.5	5.7	4.7	6.5
Sales	a	1.8	4.5	1.9	a	5.2	a	4.8	1.6	3.1	7.6	a	8.2	6.2
Clerical	10.0	7.0	10.5	11.4	6.9	2.6	a	4.8	3.2	6.2	15.2	2.9	6.8	7.1
Craftsmen	5.0	1.8	6.0	3.8	11.5	5.2	a	7.2	3.2	6.2	3.8	11.6	4.1	4.8
Operatives-Laborers	10.0	5.4	3.0	5.7	13.9	10.3	5.0	7.2	4.8	a	3.8	2.9	4.7	4.9
Farmers	a	3.6	a	1.9	9.3	7.7	a	2.4	a	3.1	7.7	8.6	a	1.2
Service Workers	a	3.6	3.0	1.9	9.2	2.6	a	2.4	9.6	12.4	a	a	3.4	3.6
Housewives	25.0	17.5	16.7	11.5	9.3	20.5	a	4.8	4.9	6.3	11.5	8.6	11.6	11.7
Students	10.0	21.1	13.6	23.1	11.6	23.1	a	14.3	16.4	28.1	7.7	25.7	14.3	15.4

<sup>a</sup>Less than one percent.

TABLE 56

## LEVEL OF FORMAL EDUCATION OF RESPONDENTS

REGION	1	2	3	4	5	6E	6W	7E	7W	8	9	10	11	STATE TOTAL
	(Percent)													
Years of Completed Formal Schooling														
8 or less	8.3	5.1	1.4	1.8	a	2.5	4.8	6.8	1.6	9.4	a	5.7	1.4	1.6
9-12	20.8	23.7	34.3	26.9	40.4	42.5	a	18.2	25.9	40.7	27.5	34.3	21.1	24.0
13-16	58.3	49.2	45.7	50.0	48.8	37.5	66.7	59.2	40.3	34.4	48.2	45.7	45.4	46.1
16+	12.5	22.1	18.6	21.4	11.1	17.5	28.6	15.9	32.2	15.6	24.1	14.4	32.3	27.9
Median	14.0	14.4	13.9	13.8	13.6	13.2	16.1	14.4	14.4	12.5	13.4	13.4	15.8	15.3
Mean	13.7	14.5	14.0	14.0	13.9	13.9	16.0	14.2	14.8	13.4	14.2	13.8	15.2	14.8

<sup>a</sup>Less than one percent.





APPENDIX A

MINNESOTA CROSS-COUNTRY QUESTIONNAIRE



Recreation Research  
Department of Natural Resources  
St. Paul, Minnesota 55155

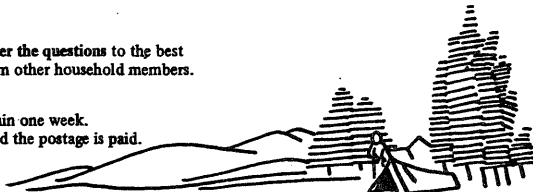
Dear Cross-Country Skier:

The Minnesota Department of Natural Resources and your legislature are sponsoring a large-scale outdoor recreation study. The purpose of the study is to help outdoor recreation planners and legislators better understand the needs and wants of Minnesota residents. You may recall that a member of your household was recently interviewed by phone. During the interview, we noted you are a cross-country skier. This activity is a vital portion of the study. By answering the questions below you can influence the people who make decisions on facilities and opportunities for cross-country skiing in Minnesota.

In completing this questionnaire, it is important that:

1. The person to whom this packet is addressed answer the questions to the best of his or her ability without the help or advice from other household members.
2. All of the questions be answered.
3. The questionnaire be completed and returned within one week.  
Just drop it in any mail box. It is self-addressed and the postage is paid.

Thank you in advance for your opinions.



- 1a. Do you feel you have a need for the development of additional cross-country skiing trail areas? ☐ Yes ☐ No
- 1b. If yes, which one statement best describes the one type of additional trail area that would best meet your needs?  
☐ a trail area designed for short ski outings. ☐ a trail area designed for full day ski outings.  
☐ a trail area designed for skiers spending two or three days at the area.
- 1c. How far from your home could the area you checked above be, and still meet your needs? \_\_\_\_\_ mile(s)
2. Would you be willing to spend one Saturday a year working to construct or maintain a cross-country skiing trail that you use?  
☐ Yes ☐ No ☐ Don't know
3. Should rest shelters be developed along cross-country skiing trails? ☐ Yes ☐ No ☐ Don't know
- 3b. If yes, how many miles should there be between shelters? \_\_\_\_\_ mile(s)
4. How do you feel state sponsored cross-country skiing trails should be paid for?  
☐ general taxes ☐ yearly licenses to use state sponsored trails ☐ special use fee paid at trail head  
☐ a decal purchased and applied to skis used on state trails ☐ cross-country ski equipment taxes ☐ other \_\_\_\_\_
5. How many hours would you say your average cross-country skiing outing lasts? \_\_\_\_\_ hour(s)
6. How many miles do you usually cover in that time period? \_\_\_\_\_ mile(s)
7. In the average year, how many cross-country skiing outings do you take? \_\_\_\_\_ cross-country skiing outing(s)
8. How many of these outings would normally be on a groomed, marked trail? \_\_\_\_\_ cross-country skiing outing(s)
9. How many years have you been cross-country skiing? \_\_\_\_\_ year(s) cross-country skiing
10. When you go cross-country skiing, which type of group do you usually go with? ☐ alone ☐ family ☐ friends

11. If you were using a trail that was also being used by the types of users below, how would each type of user affect your decision to return to that trail at a later date?

	1 Definitely Would Not Return	2	3	4	5 Definitely Would Return		1 Definitely Would Not Return	2	3	4	5 Definitely Would Return
cross-country skiers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	off-road vehicle users (4-wheel drives)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
snowshoers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	snowmobilers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						dog sledgers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

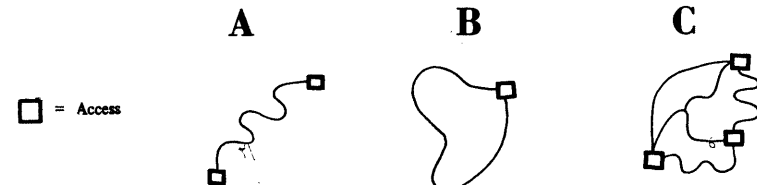
12. How many times do you think you could ski the same trail during one season and not have your enjoyment decrease? (circle the number) 1 2 3 4 5 6 7 8 9 10+
13. As a public agency we must provide for all levels of experience and skill. Please check the one item from each of the four groups below that describes your skiing habits.

- |  |  |
|--|--|
| 13a. <input type="checkbox"/> I seldom ski over 5 miles during a single day.<br><input type="checkbox"/> Under good conditions, I comfortably ski 5-10 miles in a day.<br><input type="checkbox"/> Under good conditions, I comfortably ski 10-15 miles in a day.<br><input type="checkbox"/> Under good conditions, I comfortably ski 15-30 miles in a day. | 13b. <input type="checkbox"/> I don't enjoy breaking trail, usually let others prepare track.<br><input type="checkbox"/> I enjoy making tracks through unbroken snow. |
| 13c. <input type="checkbox"/> I most often choose trails with gentle hills.<br><input type="checkbox"/> I most often choose trails with moderate hills.<br><input type="checkbox"/> I most often choose trails with steep hills.   | 13d. <input type="checkbox"/> I avoid trails with narrow twisting downhill run.<br><input type="checkbox"/> I look for trails with narrow twisting downhill run.       |

14. What is the longest distance that you have skied in a single day? \_\_\_\_\_ mile(s)
15. Have you ever camped out during the winter in Minnesota in a tent or similar shelter (i.e., other than in a trailer or vehicle)? ☐ Yes ☐ No
16. What other activities do you usually enjoy doing while you are on a cross-country skiing outing? (Check all you usually do)  
☐ picnicking ☐ hunting ☐ fishing  
☐ camping ☐ racing ☐ visiting friends  
☐ nature observations ☐ bar hopping ☐ meeting new friends
17. What is the biggest gripe you have about your Minnesota cross-country skiing outings? \_\_\_\_\_
18. Do you have a distance you try to ski each week? ☐ Yes ☐ No  
 If yes, how far is that distance per week? \_\_\_\_\_ mile(s)

We have asked you about your need for additional cross-country skiing areas and your general cross-country skiing experiences. Now we would like you to closely describe your **most needed cross-country skiing trail**.

19. Approximately how many miles long would your most needed cross country skiing trail be? \_\_\_\_\_ mile(s)
20. Circle the letter above the map which looks most like your most needed cross-country skiing area. (Consider the trail length between accesses as that distance you listed in question 19.)



21. Would you like to have your most needed cross-country skiing area patrolled by law enforcement officers?  
☐ Yes ☐ No

CONTINUED ON OTHER SIDE

22. Would you like to have your most needed cross-country skiing area patrolled by a ski patrol offering assistance and first aid? ☐ Yes ☐ No

23. For each statement listed below, check the box to the right which best expresses your feelings about the statement.

My most needed cross-country skiing trail would:						My most needed cross-country skiing trail would:					
1 Strongly Agree	2 Agree	3 Neutral	4 Disagree	5 Strongly Disagree		1 Strongly Agree	2 Agree	3 Neutral	4 Disagree	5 Strongly Disagree	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pass through hilly terrain.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pass through open areas where I can leave the trail awhile.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Take me along a river or stream.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pass through a state forest recreation area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bring me back to my starting point.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Require me to break the trail.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Have tent campsites located along the trail.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Have warming huts and toilets along the trail.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Have small cabins available for overnight stays.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Allow all types of uses (snowmobiling, cross-country skiing, snowshoeing for example) along the same segments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide parallel but separate paths for different uses.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
					Have learning experiences and displays along the trail.						
					Take me along a lake shore.						
					Connect major recreation areas such as county parks, state parks, and state forests.						
					Be a groomed trail.						
					Pass mostly through forests or woods.						
					Offer a good chance to view wildlife.						
					Pass primarily through open fields and meadows.						
					Be marked by frequent signs.						
					Have no signs marking the trail but a self-guiding map available.						
					Be located in a city park.						
					Be in a resort area.						
					Be in a wilderness-like area.						

24. How old are you? \_\_\_\_\_ years

25. How many total years of grade school, high school, and college have you completed? \_\_\_\_\_ year(s)

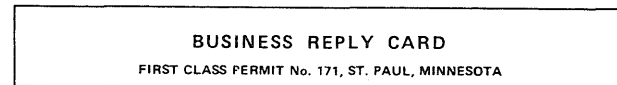
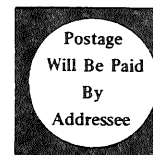
26. What is your occupation? \_\_\_\_\_

27. Do you have any comments? \_\_\_\_\_

Thank you for your assistance.

The Minnesota Department of Natural Resources.

PLEASE DROP IN THE NEAREST MAIL BOX - POSTAGE IS PREPAID



RECREATION RESEARCH  
BOX 11  
DEPARTMENT OF NATURAL RESOURCES  
CENTENNIAL BUILDING  
ST. PAUL, MINNESOTA 55155



APPENDIX B

MINNESOTA DEVELOPMENT REGIONS AND COUNTIES

## Minnesota Development Regions and Counties

## Region 1

Kittson'  
Marshall  
Norman  
Pennington  
Polk  
Red Lake  
Roseau

## Region 2

Beltrami  
Clearwater  
Hubbard  
Lake of the Woods  
Mahnomen

## Region 3

Aitkin  
Carlton  
Cook  
Itasca  
Koochiching  
Lake  
St. Louis

## Region 4

Becker  
Clay  
Douglas  
Grant  
Ottertail  
Pope  
Stevens  
Traverse  
Wilkin

## Region 5

Cass  
Crow Wing  
Morrison  
Todd  
Wadena

## Region 6E

Kandiyohi  
McLeod  
Meeker  
Renville

## Region 6W

Bigstone  
Chippewa  
Lac Qui Parle  
Swift  
Yellow Medicine

## Region 7E

Chisago  
Isanti  
Kanabec  
Mille Lacs  
Pine

## Region 7W

Benton  
Sherburne  
Stearns  
Wright

## Region 8

Cottonwood  
Jackson  
Lincoln  
Lyon  
Murray  
Nobles  
Pipestone  
Redwood  
Rock

## Region 9

Blue Earth  
Brown  
Faribault  
Le Seur  
Martin  
Nicollet  
Sibley  
Waseca  
Watsonwan

## Region 10

Dodge  
Fillmore  
Freeborn  
Goodhue  
Houston  
Olmsted  
Rice  
Steele  
Wabasha  
Winona  
Mower

## Region 11

Anoka  
Carver  
Dakota  
Hennepin  
Ramsey  
Scott  
Washington

APPENDIX C

Weighting Procedure



A weighting procedure was used to produce state total data. For each region, the frequency of response to each question was multiplied by a proportion produced by dividing the known population of persons over 16 years of age in the region in question by the number of questionnaires returned from that region, or

$$\left(\frac{p}{q}\right)_1 + \left(\frac{p}{q}\right)_2 + \dots + \left(\frac{p}{q}\right)_N$$

where:

p = regional population over 16 years of age

q = number of questionnaires returned

The weighted frequencies were then added to produce statewide responses and percentages were calculated.

APPENDIX D

Confidence Levels

### Confidence Levels

Confidence levels have been calculated for selected questions for the entire statewide sample, the Metropolitan Region and Region 7E. Region 7E was selected because the median number of returns was from that area (Table 2). Calculations were made for one of each type of question appearing on the questionnaire. These question types were: Should new trails be developed?, a binary yes/no; What type of additional trail would best fit your needs?, short ski outings, full day ski outings, extended ski outings, or short and full day ski outings; Average miles skied per outing?, an open response (0-20 range) My most needed trail would require me to break trail, a lickert scale--strongly agreed, agree, neutral, disagree, strongly disagree; Age, open ended (0-99 range); and distance willing to travel to ski, open ended (0-999 range).

Calculations were made utilizing a method described by Mendenhall for determining the bound on the error of estimation for a random sample calculated at the .75 level. The formula used for the bound on the error estimation of a proportion =

$$1.15 \sqrt{\frac{\hat{p} \hat{q}}{N-1} \left( \frac{N-n}{N} \right)}$$

where:

$\hat{p}$  = the percent of a particular response expressed as a decimal

$\hat{q} = 1 - \hat{p}$

N = the size of the population being described

n = the number of responses

The method used for a lickert scale response differs. There, the bound about the mean response was calculated using the following formula:

$$(Z_{.75}) \cdot S_d = \text{estimated bound about the mean}$$

where:

$$Z_{.75} = 1.15$$

$$S_d = \text{Standard Deviation}$$

Where estimation refer to statewide totals, the method described by Mandenhall for determining the bound on a stratified random sample was used. The bound on the error of estimation of a proportion =

$$1.15 \sqrt{\frac{1}{N^2} \sum_{i=1}^L N_i^2 \cdot \frac{N_i - n_i}{N_i} \frac{\hat{p}_i \hat{q}_i}{n_i - 1}}$$

Where:

L = the number of STRATA COMBINED

The bound on this error of estimation of a mean =

$$1.15 \sqrt{\frac{1}{N^2} \sum_{i=1}^L N_i^2 \cdot \frac{N_i - n_i}{N_i} \frac{S_i^2}{n_i}}$$

Data tapes are available through the Minnesota Department of Natural Resources. These tapes contain all information necessary for the calculation of confidence intervals for specific questions and/or regions not appearing here.

## CONFIDENCE INTERVALS FOR SELECTED QUESTIONS AND REGIONS

QUESTION	REGION		
	7E	11	STATE TOTAL
Develop new trails (Table 3) Binary (yes/no)	$(\hat{p}=.778)^{\pm} .072$	$(\hat{p}=.836)^{\pm} .035$	$(\hat{p}=.823)^{\pm} .016$
Desired new trail (Table 4) Short-Full Day-Extended Stay-Short and Full Day	$(\hat{p}=.486)^{\pm} .098$	$(\hat{p}=.485)^{\pm} .048$	$(\hat{p}=.475)^{\pm} .022$
Average miles skied per outing (Table 5) (7E, 1 mile or less) Open-ended (range 0-20 miles)	$(\hat{p}=.170)^{\pm} .068$	$(\hat{p}=.137)^{\pm} .028$	$(\hat{p}=.145)^{\pm} .011$
Break trail (Table 32) Lickert scale (1-5)	$(\bar{x}=3.05)^{\pm} 1.08$	$(\bar{x}=3.23)^{\pm} 1.07$	$(\bar{x}=3.20)^{\pm} 1.06$
✓ Age (Table 55) Region 7E Skiers less than 20 years old Open-ended (range 0-99 years)	$(\hat{p}=.159)^{\pm} .064$	$(\hat{p}=.106)^{\pm} .029$	$(\hat{p}=.131)^{\pm} .015$
Distance willing to travel (Table 9) Open-ended (range 0-999 miles)	$(\hat{p}=.424)^{\pm} .099$	$(\hat{p}=.307)^{\pm} .047$	$(\hat{p}=.333)^{\pm} .023$



APPENDIX E

TRAIL CHOICES - STATE TOTALS

Cross-Country  
Skiers Percent  
Positive Response

Resource Characteristics

Offer a chance to view wildlife	95.6
Located in wilderness-like area	86.3
Pass along a river	86.1
Pass mostly through woods	84.2
Pass along a lake shore	73.8
Pass through hilly terrain	67.7
Pass primarily through open fields	16.7

Design and Management

Return to starting point	90.2
Pass through open areas where the trail can be left	69.2
Develop rest shelters	60.9
Be marked by frequent signs	60.3
Have warming huts and toilets	58.5
Provide safety patrol	57.1
Connect recreation areas	56.3
Contain groomed trail	55.2
Offer learning experiences and displays	41.9
Located in a resort area	29.8
Have tent campsites along trail	27.9
Have cabins for overnight stays	27.7
No signs, but self-guiding map	27.0
Require trail breaking	19.8
Located in a city	17.4
Choose trails with gentle hills	39.8
Choose trails with moderate hills	52.3
Choose trails with steep hills	8.0
Avoid trails with narrow twisting runs	68.5
Look for trails with narrow twisting runs	31.5

Conflicts

Provide separate paths for different uses	43.4
Allow all types of uses	8.8

