AG. ECON. REPORT NO. 72 NOVEMBER 1970

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OUTDOOR RECREATION ACTIVITIES of NORTH DAKOTA RESIDENTS

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ACKNOWLEDGMENTS

A grant of funds from the North Dakota State Outdoor Recreation Agency gave support to this study. Special appreciation is expressed to Mr. Curt Seibel, recreation planner, and Mr. Dan Hoffman, project officer, for their cooperation and interest during the initiation and progress of the study. Appreciation is also extended to Mr. Elliott J. Haugen, programmer, North Dakota State University Computer Center, for his valued assistance in the processing of the mass of data treated. The authors have benefited from a review of the manuscript by their colleagues in the Department of Agricultural Economics. They appreciate the art work in the figures and the help of Miss Jill Jensen, part-time student statistical worker.

ABOUT THE LAYOUT

The layout of this report places many tables and figures, often photo-reduced, on the backsides of some pages. The reason is to obtain a compact report where the tables and figures accompany the discussions of related topics. The authors hope that this format will encourage the reader to examine the wealth of data presented in the tables, which are often highlighted in the figures.

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SUMMARY

This study of outdoor recreation in North Dakota is primarily concerned with the present and projected proportions of North Dakota residents participating in various recreation activities, the rate or number of days of participation, influence of socioeconomic factors on participation, and the states or regions in North Dakota where residents do most of their recreating. The study also includes a brief summary of ownership and use of recreation accessories--boats, outboard motors, and snowmobiles--and information on fees charged by landowners for hunting.

The data used in the study were obtained from a questionnaire mailed to heads of 9,600 North Dakota households. A total of 4,112 usable replies were received from the households representing 13,381 persons.

About one-third of the respondents lived in towns of less than 2,500 persons and nearly one-fourth in cities of 15,000 or above. More than two-fifths of the persons included in the survey were from households with moderate annual incomes, $5,000-$9,999. One-fourth of the persons living on farms were from households with incomes under $3,000.

Over three-fifths of the persons were in the age group, 6-44 years; these are the persons more likely to engage in outdoor recreation activities. One-third of the persons had finished high school with the proportion varying only slightly among places of residence.

Sixty-three percent of persons participated in picnicking, the highest proportion registered for any activity. Over 25% had participated in one or more of the following activities: summer fishing,

boating, swimming, camping, walking and hiking; bicycling, and snowmobiling. The projected percent increase in participation for these activities ranged from about 3% for picnicking, to 28% for camping. Time spent in participation by participants in the above activities amounted to 566,188 days or almost 75% of the total of 769,988 days spent on all outdoor recreation activities included in this study. Bicycling alone accounted for one-fourth of the total. It is estimated that in the near future, total days spent on all activities will increase by about 18%.

Although a larger percentage of persons picnicked than participated in any other activity, time spent per participant averaged only six days. In contrast only 11% played golf, but the participants averaged 18 days in this activity.

Participation data are also presented by region and residence showing the effect of income and age on the proportion of persons participating. For all activities the proportion was lowest among those persons from households with annual incomes of less than $3,000 at each age level. In general, the effect of income was positive as income advanced from the low through moderate income levels, but with little significant change among the upper income levels. The positive effect is particularly evident for those activities which require at least a moderate financial outlay.

The effect of age on the participation at each income level depends on the type of activity. For summer fishing the proportion was highest at the two age levels, 6-17 years and 25-44 years, averaging 57% and 51%, respectively; water skiing, 18-24 years, averaging 26%; bicycling, 6-17 years, averaging 71%; and golf, 18-24 years and 25-44 years, averaging 17% and 15%, respectively. In general, participation declined moderately

for persons in the 45-64 age group and drastically for persons 65 years and older.

The destination of hunting, fishing, camping, and snow-skiing trips taken to places outside of North Dakota depended in part on the region in which the household resided. In general, Minnesota and Canada were the main destinations; however, Montana and Wyoming were the destinations of some households.

Members of households who hunted, fished, camped, or snow skiied in North Dakota did most of their activities within the region where they lived, and most of the participation in these activities in the respective region was by the residents of the region.

The households who camped spent an average of 8.5 nights annually in this activity.

Twenty percent of the reporting households owned at least one boat other than a sailboat or canoe; 24% at least one outboard motor; and 15% reported owning a snowmobile. More than three-fourths of these households said the predominant use of snowmobiles was recreation.

Very few farmers charge hunters a fee for hunting on their land; however, a small additional number said they expected to charge a fee in the future.

OUTDOOR RECREATION ACTIVITIES OF NORTH DAKOTA RESIDENTS

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Many factors have contributed to the growing interest and participation in outdoor recreation activities during the decade of the 1960's. The important factors included larger populations, shorter work weeks resulting in more leisure time, increased personal incomes, improved transportation, innovations in recreation equipment, changing attitudes, advertising, and publicity given to outdoor recreation.

The North Dakota Legislature recognized the growing importance of outdoor recreation by authorizing the organization of the North Dakota Outdoor Recreation Agency. The latter has been instrumental in initiating studies of selected aspects of outdoor recreation in North Dakota with emphasis on the amount of participation in various activities, recreation needs not only of residents but nonresidents or tourists from other states, and the supply of facilities essential to meeting these needs.

Objectives of the Study

The present study is the fourth on recreation in North Dakota conducted by personnel of the Department of Agricultural Economics, North Dakota State University, in cooperation with the North Dakota State Outdoor Recreation Agency.[1] The primary objectives of this study are:

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[1]Cox, Rex W., Stanley E. Foss and Gerald L. Horner, Outdoor Recreation in North Dakota. Fargo: North Dakota Agricultural Experiment Station Bulletin No. 475, April, 1968.

Horner, Gerald L. and Rex W. Cox, "Inventory of North Dakota Recreation Facilities," North Dakota State University, Department of Agricultural Economics Statistical Series, Issue No. 1, August, 1967.

Cox, Rex W., Jerome E. Johnson and Lowell K. Cook, Survey of Resident and Nonresident Tourists. Fargo: North Dakota Agricultural Experiment Station Bulletin No. 482, December, 1969.

Cox, Rex W., Jerome E. Johnson and Lowell K. Cook, "Survey of Resident and Nonresident Tourists, A Statistical Supplement." North Dakota State University, Department of Agricultural Economics Statistical Report No. 4, December, 1969.

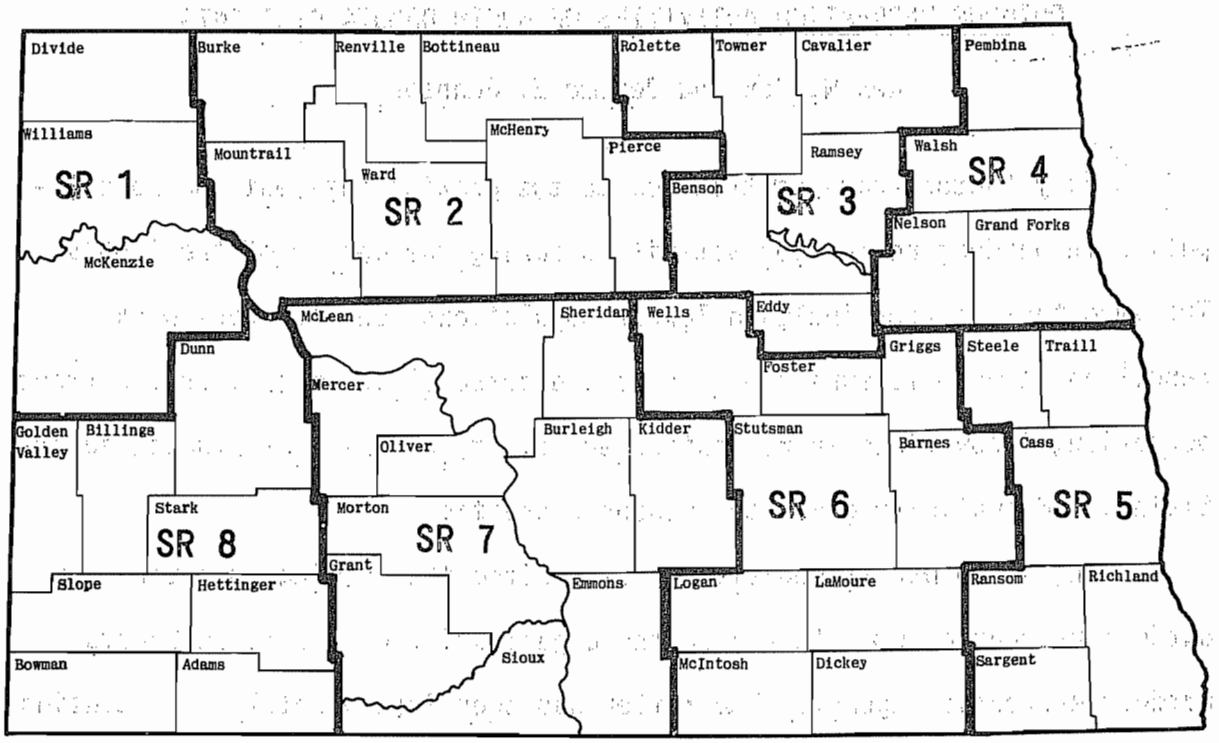

FIGURE 1 NORTH DAKOTA STATE REGIONS.

To determine the present patterns of participation in specified outdoor recreation activities by North Dakota residents.

To establish the effects of various socioeconomic characteristics on the proportion of persons participating and rate of participation.

To project future demands for recreation by North Dakota residents.

Procedure

To answer the questions implied in the above objectives, a mail questionnaire was sent to 9,600 heads of households in North Dakota during the early summer of 1969. (See questionnaire in Appendix A.) Names of persons included in the mail survey were selected from the personal property lists in each county. Every twentieth name was selected which provided for a 5% sample of North Dakota households. About 150 questionnaires were returned because of wrong address, party unknown, or party deceased.

A total of 4,300 replies were received or a 46% return. Of this number, 4,112 questionnaires were usable, and these households included 13,381 persons.

The first part of this report presents the major socioeconomic characteristics of the sample population which were classified by region and residence. The eight regions of the state are shown in Figure 1. Four residence categories were used in the study: farm; towns of less than 2,500 persons (<2,500); cities of 2,500-14,999 population; and cities of 15,000 or more population. Some tables which immediately follow present data for the state as a whole, with the corresponding data for regions given in Appendix C.

TABLE 1 DISTRIBUTION OF HOUSEHOLDS AND PERSONS BY REGION AND RESIDENCE.

	RESIDENCE									
	FARM		LESS THAN 2,500		2,500-14,999		15,000 AND ABOVE		ALL PLACES	
REGIONS	NO.	PCT.	NO.	PCT.	NO.	PCT.	NO.	PCT.	NO.	PCT.
REGION 1										
HOUSEHOLDS	106	36.5	65	22.3	120	41.2			291	100.0
PERSONS	329	32.3	216	21.2	475	46.5			1,020	100.0
REGION 2										
HOUSEHOLDS	246	36.6	179	26.6	33	4.6	215	31.9	673	100.0
PERSONS	849	40.0	581	27.3	102	4.8	592	27.9	2,124	100.0
REGION 3										
HOUSEHOLDS	146	43.2	160	47.0	33	9.8			338	100.0
PERSONS	517	46.7	488	44.0	107	9.7			1,108	100.0
REGION 4										
HOUSEHOLDS	143	27.1	149	28.3	37	7.0	198	37.6	527	100.0
PERSONS	437	26.1	431	25.7	133	8.0	674	40.2	1,675	100.0
REGION 5										
HOUSEHOLDS	225	28.3	207	26.1	66	8.3	296	37.3	794	100.0
PERSONS	756	31.2	557	22.9	187	7.7	928	38.2	2,428	100.0
REGION 6										
HOUSEHOLDS	194	38.6	194	38.6	68	13.5	47	9.3	503	100.0
PERSONS	716	42.4	583	34.5	222	13.1	169	10.0	1,696	100.0
REGION 7										
HOUSEHOLDS	223	31.0	223	30.9	74	10.3	200	27.8	720	100.0
PERSONS	802	33.1	697	28.7	270	11.2	653	27.0	2,428	100.0
REGION 8										
HOUSEHOLDS	126	47.4	123	46.2	17	6.4			266	100.0
PERSONS	465	50.8	390	42.7	59	6.5			914	100.0
STATE										
HOUSEHOLDS	1,409	34.3	1,295	31.5	452	11.0	956	23.2	4,112	100.0
PERSONS	4,871	36.4	3,939	29.4	1,555	11.7	3,016	22.5	13,381	100.0

The second section of this report deals with present and projected proportions of persons participating and the rate of participation in specific outdoor recreation activities.

The report concludes with an analysis of the influence of age, education, and household income on present and projected participation in outdoor recreation activities.

Characteristics of the Sample Population

Place of Residence--The classification of the sample population of households and persons by region and residence is presented in Table 1. The number of households ranged from 291 in Region 1 to 794 in Region 5. The proportion of households residing on farms ranged from about 27 or 28% in Regions 4 and 5 to 47.4% in Region 8, averaging 34.3% for the state.

About a third of the households resided in towns of less than 2,500 persons and nearly one-fourth lived in cities of 15,000 or more.

The distribution of persons in each region corresponded closely with the distribution of households. For example, households and persons on farms accounted for 27.1 and 26.1% of the total number of households and persons in Region 4. The corresponding figures for households and persons residing in cities 15,000 and above in this region were 37.6 and 40.2%, respectively.

Size of Households--The most common size of household consisted of three to five persons with the proportions ranging from 48.3% for households residing on farms to 50.3% for households in cities of 2,500-14,999 persons (Table 2). Less than 10% of the persons included in the survey were from households of eight or more persons.

TABLE 2 DISTRIBUTION OF PERSONS BY RESIDENCE AND SIZE OF HOUSEHOLD.

Size of Family	Residence				
	Farm	-2,500	2,500-14,999	15,000 and Above	All Persons
	Percent of Persons				
1	1.7	4.0	2.5	3.3	2.8
2	13.7	18.9	14.0	13.2	15.2
3	12.3	12.9	11.6	15.5	13.1
4	18.0	17.3	16.8	19.9	18.1
5	18.0	17.9	21.9	21.4	19.2
6	14.2	12.5	15.5	14.0	13.8
7	10.1	9.0	6.9	7.5	8.8
8	5.0	3.8	6.2	3.3	4.4
9	7.0	3.7	4.6	1.9	4.6
All Persons	100.0	100.0	100.0	100.0	100.0

Household Income--About 44% of the persons were of households with moderate incomes, $5,000-$9,999 (Table 3). The lowest proportion (35.2%) in this income group was persons from farm families and the highest proportion

TABLE 3 DISTRIBUTION OF PERSONS BY RESIDENCE AND HOUSEHOLD INCOME.

Size of Income	Residence				
	Farm	-2,500	2,500-14,999	15,000 and Above	All Persons
	Percent of Persons				
Less than $3,000	25.2	18.3	13.1	9.5	18.2
$3,000-$4,999	25.3	18.9	12.2	11.6	18.8
$5,000-$6,999	21.5	21.3	24.0	20.6	21.4
$7,000-$9,999	13.7	26.2	29.1	27.1	22.2
$10,000-$14,999	9.2	10.8	14.7	20.9	13.0
$15,000 and Above	5.1	4.5	6.9	10.3	6.4
All Persons	100.0	100.0	100.0	100.0	100.0

(53.1%) represented persons from households residing in cities of 2,500-14,999. Over 25% of the persons were from households on farms with incomes of less than $3,000 compared with 9.5% for households located in the large cities, 15,000 and above.

TABLE 6 PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING AND DAYS' PARTICIPATION IN SPECIFIED OUTDOOR RECREATION ACTIVITIES, NORTH DAKOTA.

RECREATION ACTIVITY	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION						
				PRESENT		PROJECTED			PER PARTICIPANT	
	PRESENT PCT.	PROJECTED PCT.	INCREASE PCT.	NO.	PCT. OF TOTAL	NO.	PCT. OF TOTAL	INCREASE PCT.	PRESENT NO.	PROJECTED NO.
HUNTING	23.7	28.6	20.8	33,208	4.3	41,281	4.5	24.3	10.5	10.8
FISHING										
SUMMER	45.0	51.9	15.2	57,833	7.5	68,852	7.6	19.0	9.6	9.9
WINTER	8.2	11.3	39.0	7,269	.9	10,196	1.1	40.3	6.7	6.7
BOATING	32.3	37.1	14.9	36,951	4.8	43,670	4.8	18.2	8.5	8.8
WATER-SKIING	10.0	14.3	42.7	10,911	1.4	15,816	1.7	44.9	8.1	8.3
SWIMMING										
IN POOLS	32.2	37.1	15.2	79,215	10.3	92,855	10.2	17.2	18.4	18.7
IN OTHER AREAS	28.2	30.7	8.9	33,054	4.4	36,786	4.0	11.3	8.7	8.9
CAMPING	28.9	37.2	28.4	34,288	4.5	45,136	5.0	31.6	8.8	9.1
PICNICKING	63.3	65.6	3.7	52,018	6.9	55,391	6.2	6.5	6.1	6.3
WALKING, HIKING,										
NATURE STUDY	27.8	30.4	9.3	77,358	10.0	86,668	9.5	12.0	20.8	21.3
BICYCLING	28.5	32.6	14.2	155,451	20.2	180,924	19.9	16.4	40.8	41.5
ICE-SKATING	19.2	22.3	15.9	29,604	3.8	35,013	3.9	18.3	11.5	11.7
SNOW SKIING	6.7	8.7	30.0	7,304	.9	9,631	1.1	31.9	8.2	8.3
SNOWMOBILING	24.2	27.7	14.2	52,784	6.8	61,937	6.8	17.3	16.3	16.7
GOLF	11.0	14.2	28.6	28,170	3.7	37,081	4.1	31.6	19.1	19.6
TENNIS	5.8	7.4	28.6	7,896	1.0	10,710	1.2	35.6	10.3	10.8
BASEBALL, SOFTBALL	19.7	22.3	13.3	46,192	6.0	53,438	5.9	15.7	17.6	17.9
HORSEBACK RIDING	3.1	3.3	5.6	12,664	1.6	13,586	1.5	7.3	30.4	30.8
FOOTBALL	.9	1.0	10.4	3,392	.4	3,777	.4	11.4	29.5	29.7
BADMINTON	.9	1.0	3.2	2,305	.3	2,326	.3	.9	18.6	18.2
ARCHERY	.2	.3	21.4	658	.1	703	.1	6.8	23.5	20.7
HORSESHOES	.8	.8	2.9	1,439	.2	1,505	.2	4.6	13.8	14.1
TOTAL				769,964	100.0	907,282	100.0	17.8		

Age of Persons--More than 62% of the persons included in the survey were in the age groups 6-44 years, the ages most likely to engage in outdoor recreation activities, particularly those requiring greater physical or strenuous activity (Table 4). The proportion did not vary greatly among places of residence. Large differences were observed among persons 65 years or older.

TABLE 4 DISTRIBUTION OF PERSONS BY RESIDENCE AND AGE.

Age Years	Residence				All Persons
	Farm	-2,500	2,500-14,999	15,000 and Above	
	Percent of Persons				
Less than 6	7.0	7.0	8.2	8.7	7.5
6-17	31.7	29.3	32.6	30.4	30.8
18-24	9.6	8.7	9.0	9.6	9.3
25-44	20.9	20.0	23.4	26.7	22.3
45-64	25.6	24.6	19.7	18.7	23.0
65 and Over	5.2	10.4	7.1	5.9	7.1
All Persons	100.0	100.0	100.0	100.0	100.0

Education Level--Over one-third of the persons had finished the equivalent of high school with the proportions varying only slightly among places of residence (Table 5). Persons with 8 years or less education included some adults as well as children in grades 1-8. The proportion of persons in this group ranged from 26.7% for those living in the larger cities to 37.8% for those living on farms. About 22% of the persons included in the survey had at least some college training.

TABLE 5 DISTRIBUTION OF PERSONS BY RESIDENCE AND EDUCATION LEVEL.

Education Level	Residence				All Persons
	Farm	-2,500	2,500-14,999	15,000 and Above	
	Percent of Persons				
Preschool	9.4	8.3	10.3	10.8	9.6
8 Years or Less	37.8	33.1	32.7	26.7	33.3
9-12 Years	36.6	37.0	31.6	32.6	35.2
13-15 Years	13.1	14.3	14.8	16.6	14.4
16 Years or More	3.1	7.3	10.6	13.3	7.5
All Persons	100.0	100.0	100.0	100.0	100.0

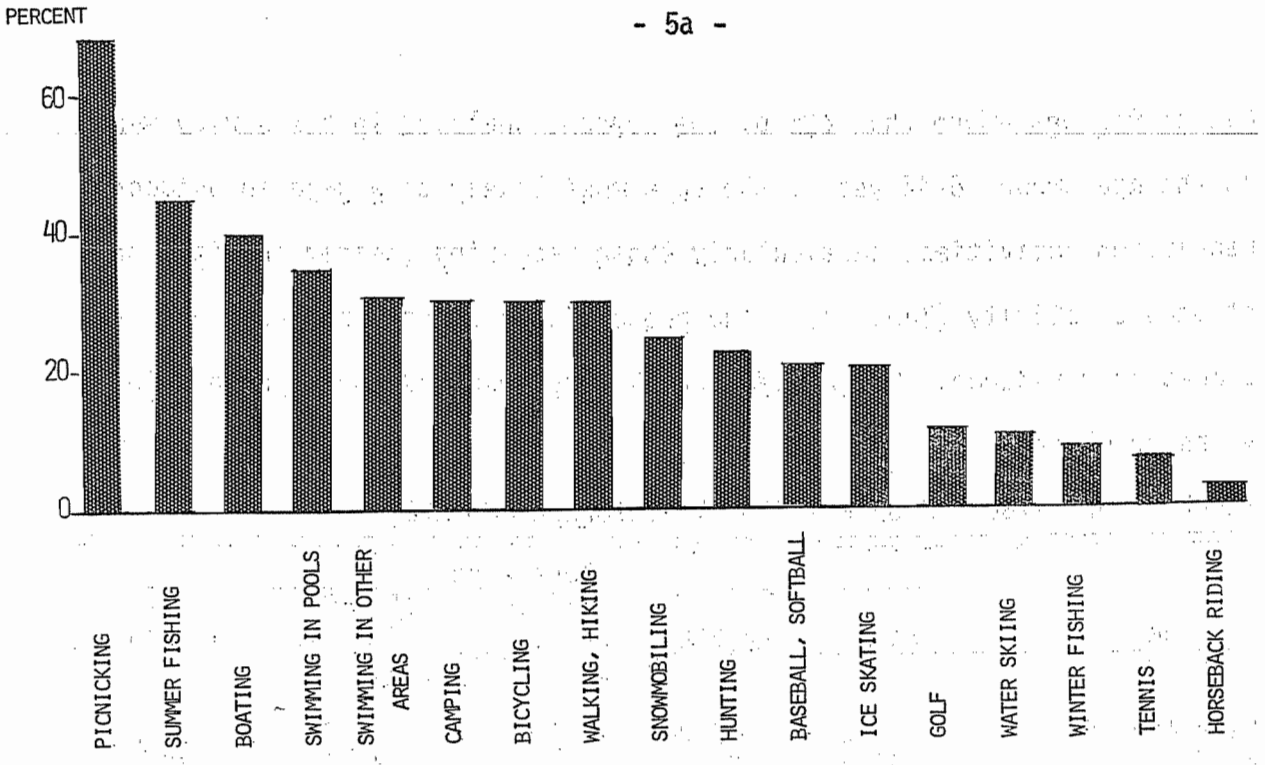

FIGURE 2 PROPORTION OF PERSONS WHO HAVE PARTICIPATED IN OUTDOOR RECREATION ACTIVITIES, NORTH DAKOTA.

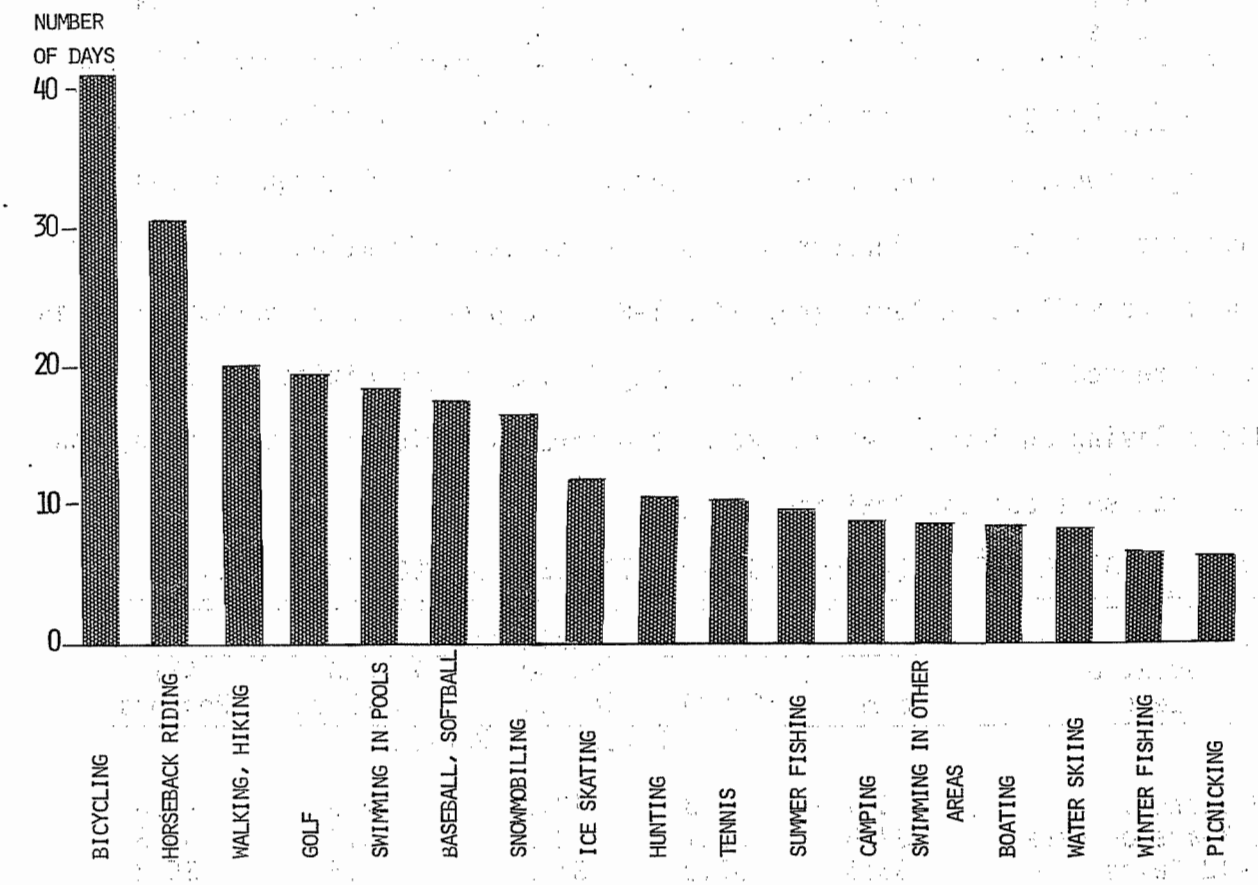

FIGURE 3 DAYS PARTICIPATION PER PARTICIPANT IN OUTDOOR RECREATION ACTIVITIES, NORTH DAKOTA.

Participation in Recreation Activities

Table 6 and Figures 2 and 3 present an overall view of the patterns of participation in outdoor recreation activities in which North Dakota residents have participated or expect to participate. To illustrate the meaning of the data included in the table, let us use summer fishing as our example.

Forty-five percent of the respondents to the questionnaire participated in this activity and an additional 7% indicated they expected to summer fish as an added outdoor recreational activity. Assuming that those persons who now fish will continue to do so, the projected proportion of persons who will engage in this activity amounts to about 52%, an increase of 15% in the total number of participants.

Fishermen reporting in this survey spent a total of 57,833 days in summer fishing. The projected total number is 68,852 days or a 19% increase. In both cases the days spent in summer fishing accounted for about 7.5% of the total number of days spent on all outdoor recreation activities.

The number of days per participant averaged 9.6. The average number of days for the entire sample (participants and nonparticipants) may be determined by multiplying the average number of days per participant by the proportion of persons participating (45.0% X 9.6 = 4.3 days). The total number of days North Dakota residents spend fishing may be determined by multiplying this figure (4.3 days) by the number of North Dakota residents 6 years of age or older.

In comparing present and projected proportions of persons participating, activities in which larger percent increases were indicated for

TABLE 7 PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING IN OUTDOOR RECREATION ACTIVITIES BY REGION, NORTH DAKOTA.

RECREATION ACTIVITY	REGION 1		2		3		4		5		6		7		8		STATE	
	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED
	PERCENT OF PERSONS PARTICIPATING																	
HUNTING	23.1	27.6	28.4	31.9	26.1	31.9	19.6	23.8	20.5	25.8	23.5	29.1	25.3	31.1	22.1	26.6	23.7	28.6
FISHING																		
SUMMER	49.7	53.3	46.4	53.2	49.6	57.4	42.2	48.5	38.2	45.6	43.3	50.5	52.1	59.4	38.6	45.2	45.0	51.9
WINTER	9.0	10.2	9.7	12.7	11.5	15.2	3.9	6.3	5.5	8.9	10.5	14.2	9.8	13.9	5.5	8.2	8.2	11.3
BOATING	27.8	31.4	37.1	40.6	39.0	44.7	32.5	37.5	34.2	39.7	30.7	35.0	30.8	35.6	19.8	27.0	32.3	37.1
WATER-SKIING	8.3	11.3	10.4	14.2	11.1	18.5	10.2	13.7	13.1	18.0	8.3	12.2	8.7	12.7	7.5	11.8	10.0	14.3
SWIMMING																		
IN POOLS	36.8	40.2	28.7	33.1	30.2	36.3	34.6	39.2	33.3	38.3	32.1	37.0	33.7	39.3	26.6	30.7	32.3	37.1
IN OTHER AREAS	26.5	27.3	26.2	27.7	32.4	35.9	28.3	31.6	32.4	34.7	26.9	29.2	28.4	31.4	20.7	24.4	28.2	30.7
CAMPING	36.1	41.5	31.7	38.1	31.2	39.8	26.6	34.1	21.2	30.9	23.3	31.4	35.7	45.9	29.1	36.9	28.9	37.2
PICNICKING	64.4	66.5	63.0	65.2	63.9	66.0	58.3	60.4	59.1	61.0	67.5	70.1	68.2	71.1	61.2	64.4	63.3	65.6
WALKING, HIKING, NATURE STUDY	31.7	33.2	24.2	26.0	26.5	29.1	30.1	33.4	28.1	31.2	29.8	31.9	27.7	31.3	24.4	25.6	27.8	30.4
BICYCLING	32.8	35.4	23.8	26.7	30.0	33.7	31.1	35.8	28.9	34.1	31.0	35.9	27.2	31.0	25.7	29.5	28.5	32.6
ICE-SKATING	27.6	29.1	19.3	21.4	16.0	19.8	20.4	24.0	16.9	20.4	19.5	22.5	19.8	22.9	15.7	19.4	19.2	22.3
SNOW SKIING	7.5	8.2	6.3	10.0	9.6	12.4	6.5	8.9	7.4	10.2	5.4	7.1	4.9	6.2	5.0	6.4	6.7	8.7
SNOWMOBILING	25.0	27.9	30.4	33.7	31.4	35.6	27.2	30.8	24.7	35.7	18.8	21.7	17.6	20.4	21.0	24.7	24.2	27.7
GOLF	11.2	13.2	12.1	14.3	11.3	13.9	14.2	17.9	13.7	18.4	9.4	13.6	7.8	10.5	6.7	8.1	11.0	14.2
TENNIS	9.0	9.4	5.1	6.5	3.1	4.3	8.0	10.2	6.3	8.2	5.9	8.8	5.7	7.1	1.2	2.2	5.8	7.4
BASEBALL-SOFTBALL	18.1	20.3	18.6	21.0	19.2	21.8	16.7	19.7	18.4	21.3	25.4	28.7	20.2	22.3	21.1	23.3	19.7	22.3
HORSEBACK RIDING	1.8	1.9	3.7	3.7	.8	.9	1.6	1.6	2.3	2.5	2.5	2.7	5.7	6.3	5.5	5.5	3.1	3.3
FOOTBALL	.7	1.0	1.5	1.8	.7	.7	1.2	1.2	.5	.6	.7	.7	.7	.7	.8	.8	.9	1.0
BADMINTON	.9	.9	.4	.4	1.1	1.1	1.9	1.9	.9	.9	.2	.2	1.5	1.6	.2	.2	.9	1.0
ARCHERY	.2	.2	.2	.2		.2	.1	.1	.3	.3			.3	.5	.7	.7	.2	.3
HORSESHOES	1.1	1.1	.4	.5	.8	.8	.7	.7	.1	.1	.7	.8	1.1	1.2			.8	.8

the future include winter fishing, water skiing, camping and snow skiing. Water skiing and snow skiing were also included among activities with large percent increases in days spent.

For some activities, the proportion of persons participating may be relatively high, but days per person relatively low, e.g., picnicking. In contrast the proportion of persons bicycling was much lower, but days per participant the highest of any activity.

Participation Patterns by Region and Residence

Tables 7 and 8 show participation patterns for regions and places of residence, respectively. Detailed data on patterns of places of residence within regions are presented in Appendix D.

Region--Interpretation of Table 7 may be illustrated by referring to selected recreation activities. For example, the proportion of persons who summer fished was lowest in Region 5 (38.2%) and Region 8 (38.6%). The proportion exceeded 50% in Region 7 and approached this figure in Regions 1 and 3. In individual regions the projected increase in proportion participating ranged from about 3% to almost 8%.

Participation in boating exceeded 27% in all regions except Region 8 in which 20% of the persons reported participation in this activity. Fifty-eight percent or more reported participation in picnicking in all regions. The proportions were highest in Region 6 (67.5%) and in Region 7 (68.2%). The proportions representing golfing were higher in the regions where the more populous cities are located.

In comparing the projected with the present proportions, large gains were observed in summer fishing and camping. For example, the gain in camping exceeded 10 percentage points in Region 7.

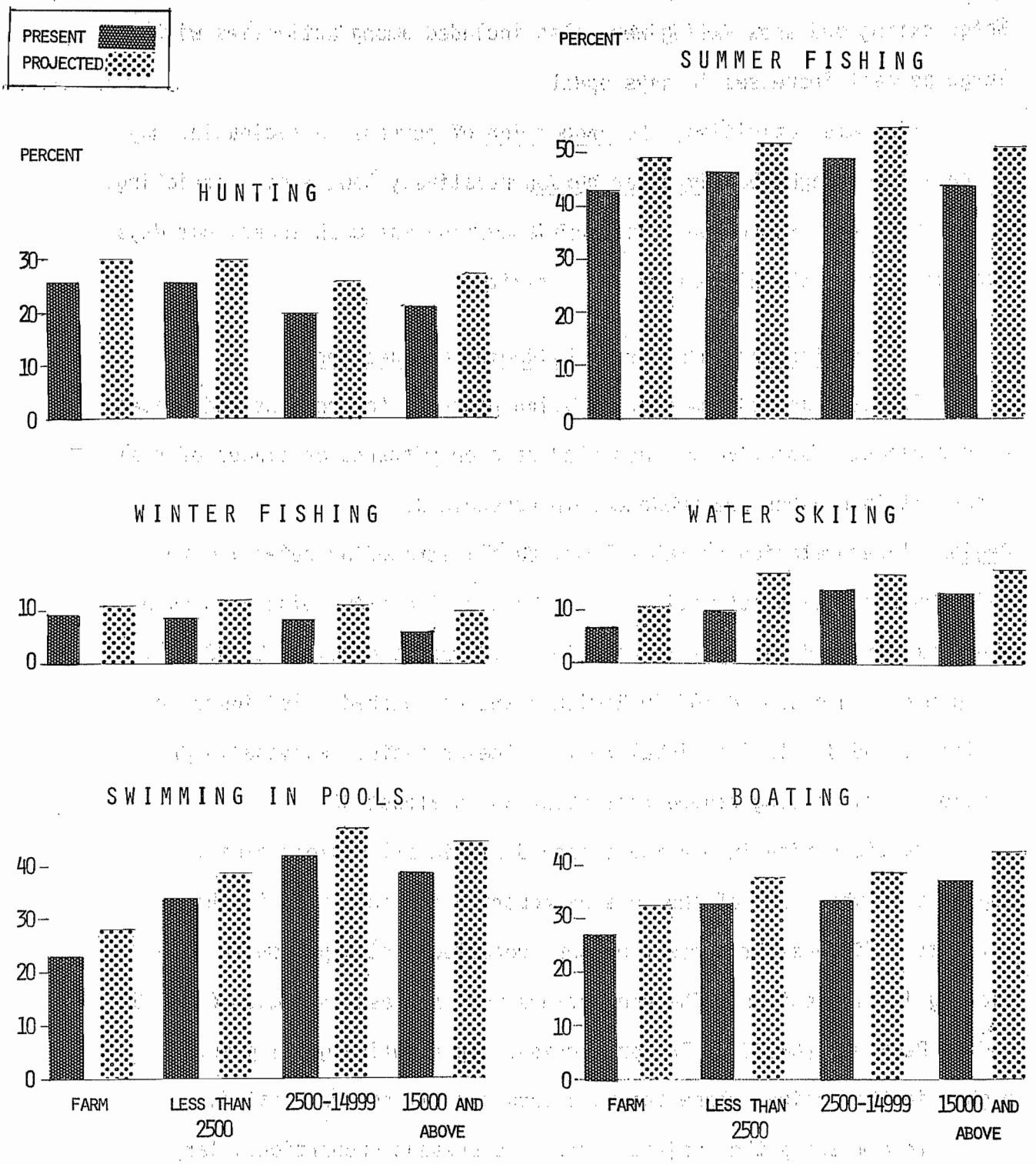

FIGURE 4 PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING IN OUTDOOR RECREATION ACTIVITIES BY RESIDENCE, NORTH DAKOTA. (FIGURE 4 IS CONTINUED ON PAGE 8A)

The study probably underestimated the projected proportion of persons who expected to start snowmobiling. Enthusiasm for this outdoor activity took a tremendous spurt during the past winter, while this survey was conducted the previous summer.

Residence--A larger proportion of persons living on farms or in smaller communities hunted than residents of cities (Table 8 and Figure 4). With the exception of winter fishing, picnicking, snow skiing, snowmobiling, baseball-softball, and horseback riding, significantly fewer farm residents engaged in the major activities than persons residing elsewhere. The difference between the present and projected proportions also corresponds closely to that shown in comparison of regions. For example, the gain in percentage points was greatest in summer fishing and camping.

TABLE 8 PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING IN OUTDOOR RECREATION ACTIVITIES BY PLACE OF RESIDENCE, NORTH DAKOTA.

RECREATION ACTIVITY	PLACE OF RESIDENCE									
	FARM		-2500		2500-14,999		15,000+		ALL PLACES	
	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED
	PERCENT OF PERSONS PARTICIPATING									
HUNTING	24.9	29.9	25.7	30.1	19.7	25.9	21.2	25.8	23.7	28.6
FISHING										
SUMMER	42.8	49.3	46.9	53.1	48.8	56.3	44.1	52.1	45.0	51.9
WINTER	8.6	11.3	8.3	12.0	8.2	11.0	7.2	10.6	8.2	11.3
BOATING	27.8	32.7	33.0	38.1	33.9	38.6	37.9	42.4	32.3	37.1
WATER-SKIING	7.0	10.8	10.1	14.7	11.7	17.2	13.8	17.8	10.0	14.3
SWIMMING										
IN POOLS	23.4	28.2	34.2	38.7	42.4	46.8	38.6	44.4	32.2	37.1
IN OTHER AREAS	25.5	27.4	26.8	27.3	31.6	39.0	32.7	36.4	28.2	30.7
CAMPING	23.8	32.1	29.4	37.5	35.3	43.7	33.5	41.5	28.9	37.2
PICNICKING	65.0	67.0	64.0	65.9	61.5	65.5	60.5	63.1	63.3	65.6
WALKING, HIKING, NATURE STUDY	23.8	25.9	26.5	29.1	31.4	32.8	33.4	37.8	27.8	30.4
BICYCLING	23.3	26.5	30.5	34.6	34.1	38.6	31.4	36.5	28.5	32.6
ICE-SKATING	13.0	15.3	19.5	22.7	25.6	28.5	25.6	29.7	19.2	22.3
SNOW SKIING	6.8	8.1	6.7	9.1	6.5	8.4	6.6	9.2	6.7	8.7
SNOWMOBILING	28.5	32.0	23.4	26.9	22.4	26.2	19.2	22.4	24.2	27.7
GOLF	4.7	5.9	14.2	18.3	13.9	18.4	15.6	20.0	11.0	14.2
TENNIS	2.1	3.2	5.9	7.7	9.3	11.4	9.7	11.8	5.8	7.4
BASEBALL, SOFTBALL	21.6	24.1	20.5	23.2	19.9	22.2	15.4	18.1	19.7	22.3
HORSEBACK RIDING	5.1	5.4	1.8	1.8	3.5	3.5	1.5	1.8	3.1	3.3
FOOTBALL	.7	.8	1.4	1.5	.6	.6	.5	.5	.9	1.0
BADMINTON	.7	.7	1.0	.9	1.4	1.4	1.1	1.1	.9	1.0
ARCHERY	.2	.2	.2	.2	.4	.6	.2	.2	.2	.3
HORSESHOES	1.0	1.0	.5	.5	1.1	1.1	.7	.7	.8	.8

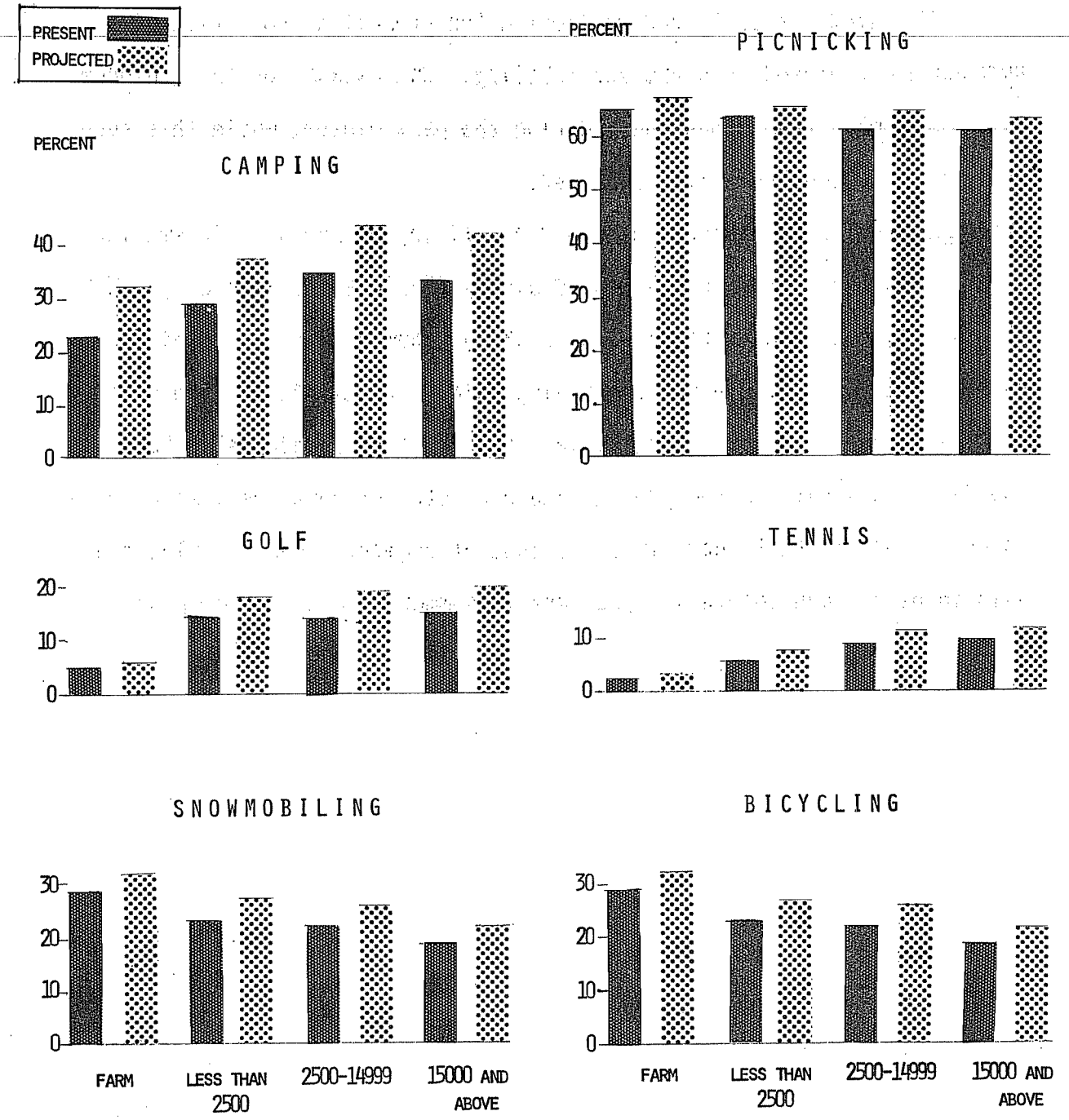

FIGURE 4 PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING IN OUTDOOR RECREATION ACTIVITIES BY RESIDENCE, NORTH DAKOTA.

Reasons for Nonparticipation--Households sent questionnaires were asked to list and then rank in importance things which kept members from participating in various outdoor recreation activities even though they desired to do so. Table 9 provides information on nonparticipation. Some households gave only one reason, others, two or more.

There were 2,178 households who specified their first or most important reason for nonparticipation. Almost one-half said the main reason members did not participate was "lack of time." This expression is not precise. The amount of time that members of households have free

TABLE 9 REASONS FOR NONPARTICIPATION-PROPORTIONS OF HOUSEHOLDS WHO SPECIFIED THE REASONS OF FIRST, SECOND, AND THIRD IMPORTANCE WHICH KEPT THEIR MEMBERS FROM PARTICIPATING IN VARIOUS OUTDOOR RECREATION ACTIVITIES.

Factors Limiting Participation	Reason		
	First	Second	Third
	Percent of Households		
Lack of Time	48.9	21.2	12.4
Finances	10.8	22.5	21.8
Old Age	6.7	2.2	.8
Distance to Facilities	5.9	10.8	9.9
Health	5.7	6.3	5.8
Lack of Facilities	5.5	9.1	16.2
Weather, Insects, Etc.	4.8	10.9	13.5
More Interest in Other Things	2.8	4.3	4.4
Home Ties	2.3	3.5	3.3
Indifference	2.2	3.3	3.6
Lack of Wild Game	2.2	1.4	4.2
Miscellaneous	2.2	4.5	4.0
Total*	100.0	100.0	100.0

*Total number of households equals 2,178, 1,162, and 362, respectively.

is usually limited and its use requires a choice among competing alternatives. So, the expression "lack of time" often means that some activity other than outdoor recreation seems more important.

FIGURE 5 PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARITICIPATING IN OUTDOOR RECREATION ACTIVITIES BY INCOME, NORTH DAKOTA. (FIGURE 5 IS CONTINUED ON PAGE 10A)

About one-tenth of the households reported lack of money or finances as the most important factor limiting participation. Other reasons considered "first choices" were "distance to facilities," "lack of facilities," "old age," and "health conditions."

Of the 1,162 households who listed a second choice or reason of second importance, 21.2% and 22.5% named "lack of time" and "finances," respectively. About 20% listed either "distance to facilities" or "lack of facilities," and 11% indicated "weather and insects."

"Lack of time" and "finances" were reasons mentioned third most important by 12.4 and 21.8% of the 362 households who listed at least three reasons. The other reasons given corresponded closely to those listed as the second most prohibiting factors.

"Lack of time" and "finances" were prominent as either the first, second, or third most important reasons for nonparticipation. Their ranking among regions varied greatly. For example in Region 8, 24.0% of the households said "finances" ranked first compared with the state average of 48.9%. In the same region about 15% gave "old age" as the main reason, compared with the state average of 6.7% and an average of 5.1% for Region 2. About 12% of the households in Region 1 gave the interesting reason of "weather and insects" as their foremost reason. The corresponding figure for Region 6 was 2.8%.

Socioeconomic Factors Related to Proportions by Persons Participating

Data presented above indicate variations among areas and among places of residence for proportions of persons participating in outdoor recreation activities. Among socioeconomic factors that cause variations

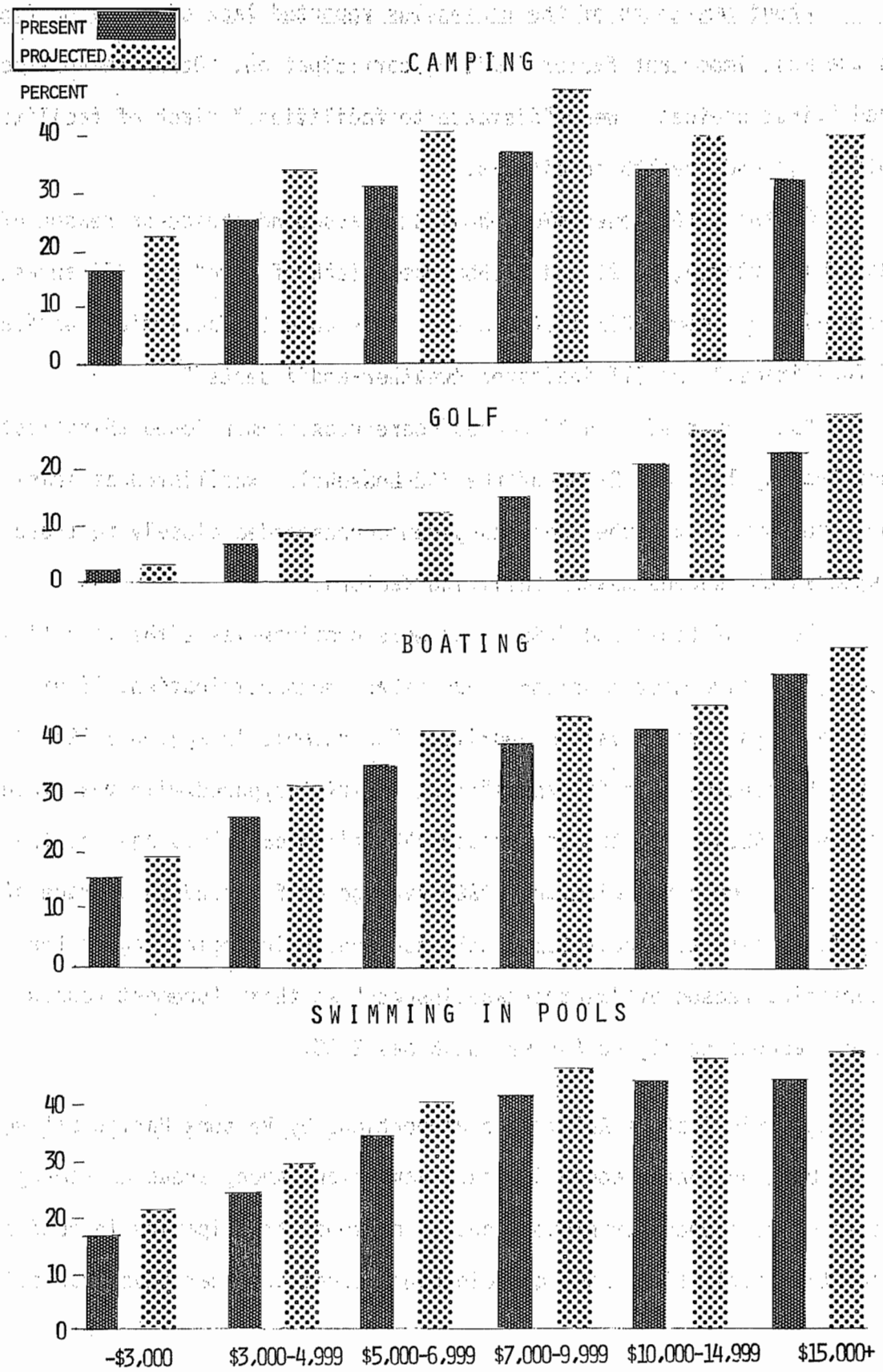

FIGURE 5 PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING IN OUTDOOR RECREATION ACTIVITIES BY INCOME, NORTH DAKOTA. (ADDITIONAL INFORMATION ON FIGURE 5 IS PRESENTED IN APPENDIX B)

are income, age, and education.[2] This section reports on how these factors influence the proportion of North Dakotans participating in different outdoor recreation activities. While these factors are discussed separately, it is recognized that they also act jointly. Their joint effects on proportions of persons participating among regions and places of residence will be considered in a later section of this report.

Income--The influence of income is illustrated by data in Table 10 and Figure 5. For example, about 17% of the persons in the lowest income class in the sample, less than $3,000, hunted compared with about 30% in the upper income classes.

For all activities except winter fishing, the proportions of persons participating in the lower income class were significantly less than for persons included in other income classes, although the highest proportion is not always recorded for persons in the income class $15,000 and above. To illustrate, for summer fishing, camping and picnicking, the highest proportions were reported for persons in households with moderate incomes.

Comparing participation of persons in the low income group and the highest income groups, the largest differences were observed in boating, water skiing, snow skiing, golf, and tennis. These activities do require more expenditures for participation; consequently, financial considerations may limit participation by persons included in households with relatively low incomes.

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[2]Education level is a socioeconomic factor, but it is correlated with income level and age level.

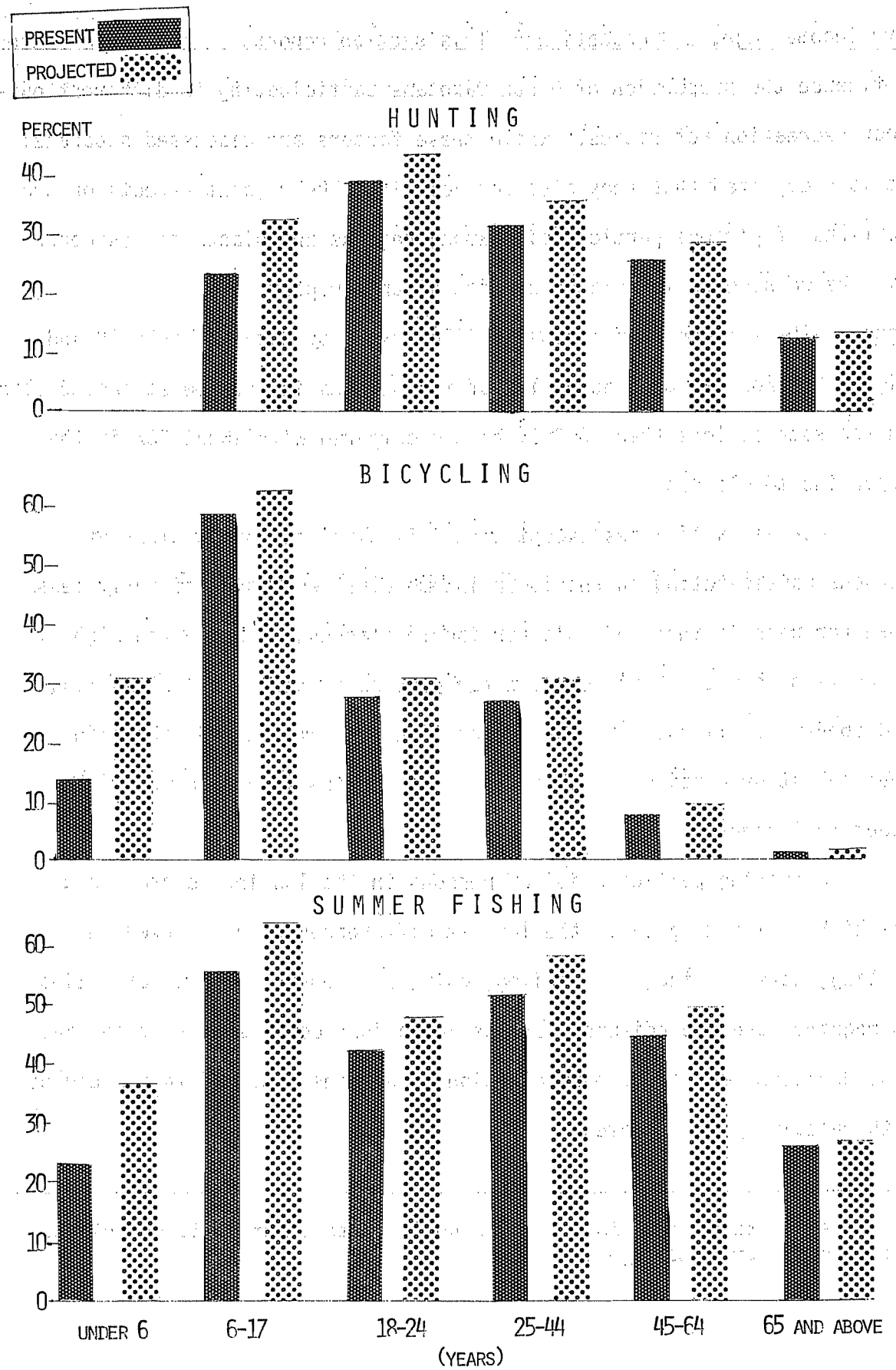


FIGURE 6 PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING IN OUTDOOR RECREATION ACTIVITIES BY AGE, NORTH DAKOTA. (FIGURE 6 IS CONTINUED ON PAGE 12A)

Age--A somewhat larger proportion (38%) of persons 18-24 years of age participated in hunting than persons in other age groups. However, participation in summer fishing was highest in ages 6-17 years (56%) and 25-44 years (51%). The proportion of persons who winter fished was highest for the two age groups, 25-44 years and 45-64 years, but participation was only one-fifth of those who summer fished (see Table 11 and Figure 6).

The proportion of persons in the 18-24 age bracket who water ski was twice that of the 6-17 and 25-44 age groups (the next highest proportions). For camping the proportion was highest in the 6-17 and 25-44 age groups, indicating in part that camping is a family affair.

People enjoy picnicking since the percentage of persons engaging in picnicking was higher in each age bracket than for any other outdoor activity and averaged 65%.

TABLE 10 PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING IN OUTDOOR RECREATION ACTIVITIES BY INCOME GROUPS, NORTH DAKOTA.

	INCOME GROUP (DOLLARS)													
	LESS THAN 3,000		3,000-4,999		5,000-6,999		7,000-9,999		10,000-14,999		15,000 AND ABOVE		ALL INCOME GROUPS	
RECREATION ACTIVITY	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED	PRES-ENT	PRO-JECTED
	PERCENT OF PERSONS PARTICIPATING													
HUNTING	16.9	20.2	23.7	28.3	23.7	29.0	26.6	31.9	28.4	33.8	29.1	36.9	24.1	29.0
FISHING														
SUMMER	34.6	40.6	43.2	48.7	49.2	56.0	50.6	59.6	46.9	54.6	48.0	53.9	45.3	52.3
WINTER	6.5	8.3	6.8	10.1	9.0	12.3	10.2	13.7	9.8	13.6	5.3	8.9	8.3	11.4
BOATING	15.7	19.5	26.5	31.9	35.6	41.1	38.9	43.9	42.2	46.3	52.1	57.2	32.9	37.7
WATER-SKIING	4.3	6.2	7.2	10.7	8.6	13.4	12.2	18.0	17.8	22.4	19.8	25.5	10.2	14.5
SWIMMING														
IN POOLS	16.5	21.0	24.1	29.3	34.5	40.2	41.0	46.5	44.0	48.0	44.3	48.8	32.6	37.6
IN OTHER AREAS	15.8	17.7	22.9	26.0	30.8	34.5	33.1	35.8	39.6	41.4	36.2	37.1	28.6	31.2
CAMPING	16.2	22.4	25.5	34.5	31.4	41.4	37.3	48.0	34.2	39.8	31.8	39.7	29.2	37.8
PICNICKING	48.1	51.5	62.8	64.9	67.2	70.2	71.9	74.4	71.7	72.3	62.1	63.5	64.2	66.6
WALKING, HIKING, NATURE STUDY	18.7	20.9	26.0	28.3	29.0	31.9	32.0	35.6	34.9	35.8	30.3	34.0	28.1	30.7
BICYCLING	18.6	21.3	25.5	29.1	29.6	35.3	34.6	39.1	34.9	39.2	33.7	36.2	28.9	33.0
ICE-SKATING	9.2	11.5	15.4	17.6	21.3	24.7	24.3	28.8	26.2	29.0	25.1	28.1	19.5	22.6
SNOW SKIING	3.4	4.3	5.6	6.9	6.1	8.1	7.8	10.9	9.8	12.1	11.4	13.9	6.7	8.7
SNOWMOBILING	14.6	16.8	22.9	26.2	27.7	31.2	24.2	28.7	31.2	35.4	32.7	36.1	24.4	27.9
GOLF	2.8	3.5	6.6	8.4	9.5	12.3	15.1	19.4	20.6	26.4	22.9	29.8	11.2	14.5
TENNIS	2.5	3.3	4.7	5.8	5.4	6.5	6.9	10.1	9.3	11.3	9.1	11.0	5.8	7.5
BASEBALL, SOFTBALL	13.1	15.0	20.3	23.2	20.9	24.3	22.5	25.2	23.2	24.8	18.5	21.4	19.9	22.5
HORSEBACK RIDING	2.3	2.4	3.0	3.5	3.6	3.6	3.0	3.0	2.8	2.8	7.3	7.8	3.2	3.4
FOOTBALL	.7	.7	.7	.9	.5	.7	1.2	1.3	1.1	1.1	1.1	1.3	.9	1.0
BADMINTON	.1	.1	1.7	1.7	.7	.7	1.3	1.3	1.3	1.3	.1	.2	.9	.9
ARCHERY	.2	.2	.1	.3	.1	.1	.5	.5	.2	.2			.2	.3
HORSESHOES	.4	.5	1.5	1.5	.4	.4	1.1	1.1	.7	.7	.1	.1	.8	.8

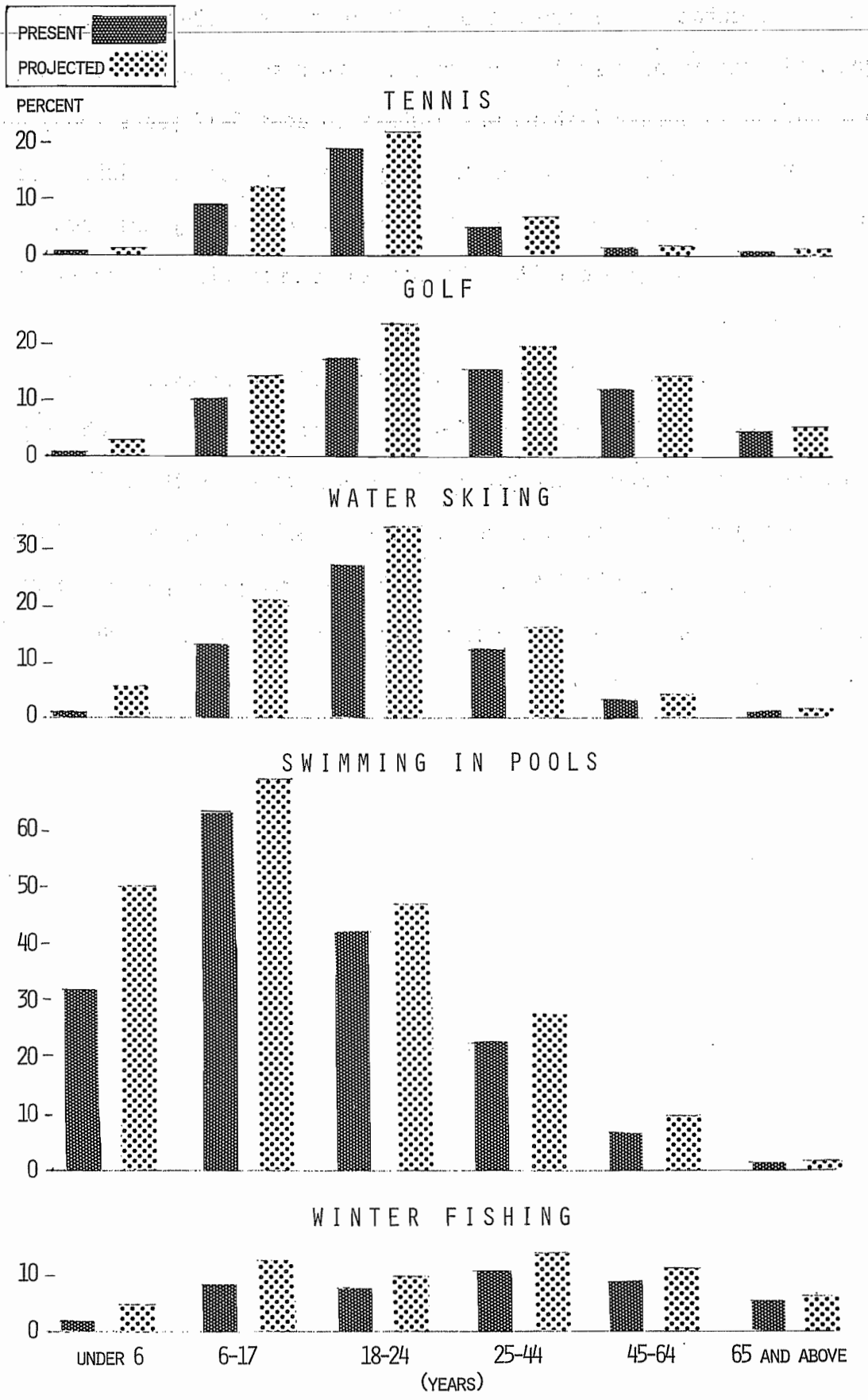


FIGURE 6 PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING IN OUTDOOR RECREATION ACTIVITIES BY AGE, NORTH DAKOTA. (ADDITIONAL INFORMATION ON FIGURE 6 IS PRESENTED IN APPENDIX B)

Snow skiing is one of the more strenuous types of outdoor activities. About 13% of the persons included in the age bracket 6-24 years participated in this activity, which was twice that of the 25-44 year olds skiing.

Participation in various outdoor recreation activities by persons 65 years and older was less than that for other groups with one exception. A significant proportion (more than 25%) participated in summer fishing and picnicking.

Changes between present and projected proportions, expressed as percentage points, were greatest for summer fishing and camping. For example, the proportion for camping increased from an average of 29.8% to 38.4%, a change of percentage points, or 29 percent. In contrast the proportion for water skiing increased from 10.2% to 14.6%, a change of 4.4 points, but this represented a 43.1% increase.

TABLE 11 PRESENT AND PROJECTED PROPORTION OF PERSONS PARTICIPATING IN OUTDOOR RECREATION ACTIVITIES BY AGE GROUPS, NORTH DAKOTA.

RECREATION ACTIVITY	AGE GROUP (YEARS)											
	UNDER 6		6 - 17		18 - 24		25 - 44		45 - 64		65 AND OVER		ALL AGE GROUPS	
	PRESENT	PROJECTED	PRESENT	PROJECTED	PRESENT	PROJECTED	PRESENT	PROJECTED	PRESENT	PROJECTED	PRESENT	PROJECTED	PRESENT	PROJECTED
	PERCENT OF PERSONS PARTICIPATING													
HUNTING			22.9	31.7	38.4	43.2	31.1	34.7	24.9	27.9	12.5	12.8	26.1	31.1
FISHING														
SUMMER	22.9	37.0	55.7	63.7	42.1	47.7	50.8	58.4	44.1	48.9	25.7	27.3	46.0	53.0
WINTER	2.2	5.2	8.3	12.5	7.9	10.3	10.7	14.4	9.3	11.9	5.7	6.1	8.4	11.6
BOATING	25.0	33.3	39.0	44.9	40.4	45.7	39.0	43.8	27.4	30.8	12.2	13.4	33.5	38.4
WATER-SKIING	1.1	5.9	13.4	21.4	26.6	33.8	12.1	15.3	3.5	4.1	.3	.4	10.2	14.6
SWIMMING														
IN POOLS	32.2	50.4	63.2	69.1	42.6	47.2	23.5	27.8	8.4	10.0	1.7	2.2	33.1	38.1
OTHER AREAS	28.9	37.0	47.2	50.1	43.3	46.5	27.3	29.8	10.6	11.8	2.2	2.3	29.4	32.0
CAMPING	24.1	42.7	39.7	49.2	29.6	38.0	34.0	44.5	21.1	25.7	8.6	10.0	29.8	38.4
PICNICKING	68.8	76.1	74.4	76.5	65.8	67.9	73.0	75.3	56.1	58.1	28.5	29.4	65.4	67.8
WALKING, HIKING, NATURE STUDY	23.7	30.3	33.6	36.1	30.2	32.1	30.5	33.7	25.4	27.3	15.2	16.6	28.6	31.3
BICYCLING	13.9	31.1	57.6	61.7	28.2	31.4	27.3	31.3	8.4	10.2	1.1	1.4	29.5	33.6
ICE SKATING	7.9	19.5	44.3	48.4	24.8	27.3	11.5	14.0	2.9	3.4	.3	.3	19.8	22.8
SNOW SKIING	2.1	6.8	12.7	15.1	12.2	16.2	5.9	7.8	1.9	2.4	.3	.5	6.9	9.0
SNOWMOBILING	15.4	22.9	34.2	37.9	32.7	37.2	30.0	34.1	13.3	15.1	4.3	4.8	24.8	28.2
GOLF	1.0	2.9	10.1	14.2	17.4	22.7	15.4	18.9	11.7	14.0	4.2	4.3	11.2	14.4
TENNIS	.2	1.3	8.7	11.7	18.9	22.0	5.4	7.0	1.2	1.4	.2	.3	5.9	7.6
BASEBALL, SOFTBALL	4.2	11.6	38.6	43.2	28.2	29.9	17.0	18.4	5.9	6.5	2.0	2.2	20.1	22.7
HORSEBACK RIDING	2.3	2.8	4.6	4.7	5.0	5.3	3.5	3.7	1.4	1.5	.6	.6	3.2	3.4
FOOTBALL	.2	.2	1.9	2.2	2.1	2.1	.2	.2	.1	.1	.1	.1	.9	1.0
BADMINTON	.3	.3	1.2	1.2	2.0	2.0	1.2	1.2	.4	.4	.2	.2	1.0	1.0
ARCHERY			.2	.3	.7	.7	.2	.2	.2	.2			.2	.3
HORSESHOES			.7	.8	.8	.8	1.3	1.3	.8	.8	.4	.5	.8	.8

TABLE 12 DISTRIBUTION OF HUNTING TRIPS BY DESTINATION.

DESTINATION	REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF TRIPS
	PERCENT OF TRIPS									
NORTH DAKOTA	90.3	90.4	94.4	82.4	90.2	95.0	95.7	93.8	91.4	4,619
MONTANA	6.8	.9	1.2	.7	.8	.8	.5	1.0	1.0	52
WYOMING	2.9	.3		.4	.1	.4	.5		.3	15
MINNESOTA		1.3	.7	9.7	4.1	2.3	.5	.5	2.9	147
OTHER STATES		1.2	.7	1.4	3.2	.4	1.6	3.1	1.6	79
CANADA		5.9	3.0	5.4	1.6	1.1	1.2	1.6	2.8	144
TOTAL*	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	5,056
NUMBER OF HOUSEHOLDS	56	121	83	141	168	98	187	40	894	

*REGIONAL TOTALS EQUAL TO 100 PERCENT FOR EACH REGION: REGION 1, 205; 2, 779; 3, 405; 4, 735; 5, 972; 6, 707; 7, 1062; 8, 191.

Trips Taken to Various States by Households

Tables 12 to 16 report the destinations of hunting, fishing, camping, and snow skiing trips taken by households residing in each of the eight regions.

Hunting Trips--The largest number of hunting trips was 1,062, taken by 187 reporting households in Region 7. All but about 4% were taken in the home state, North Dakota. In contrast, 82% of the 735 hunting trips taken by the 141 reporting households in Region 4 were in North Dakota, a few in Montana and Wyoming, almost 10% in Minnesota, and about 5% in Canada.

For the states as a whole, the total number of trips reported by 894 households was 5,056. Over 90% were in North Dakota, almost 3% in Canada, and most of the remainder distributed among the states bordering North Dakota.

TABLE 13 DISTRIBUTION OF SUMMER FISHING TRIPS BY DESTINATION.

DESTINATION	REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF TRIPS
	PERCENT OF TRIPS									
NORTH DAKOTA	78.8	82.6	50.2	34.7	16.0	74.8	87.1	88.2	59.2	5,579
MONTANA	6.2	1.2	.4	.7	.1	.6	1.3	2.5	1.0	98
WYOMING	.3	.5		.5		.2	.2		.2	19
MINNESOTA	2.8	1.8	9.4	51.0	76.8	11.1	3.4	1.5	27.3	2,582
OTHER STATES	.5	.5	1.1	1.4	3.8	9.3	4.6	6.0	3.6	342
CANADA	11.4	13.4	38.9	11.7	3.3	4.0	3.4	1.8	8.7	823
TOTAL*	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	9,443
NUMBER OF HOUSEHOLDS	80	168	140	191	280	131	242	59	1,299	

*REGIONAL TOTALS EQUAL TO 100 PERCENT FOR EACH REGION: REGION 1, 387; 2, 1172; 3, 722; 4, 1209; 5, 2168; 6, 989; 7, 2396; 8, 400.

TABLE 14 DISTRIBUTION OF WINTER FISHING TRIPS BY DESTINATION.

DESTINATION	REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF TRIPS
	PERCENT OF TRIPS									
NORTH DAKOTA	97.7	27.2	57.5	67.9	12.4	92.3	94.5	72.4	42.4	1,467
MONTANA		5.9			.4		2.2	17.3	4.3	150
WYOMING		3.9			.4			3.5	2.6	90
MINNESOTA		11.5	3.3	14.7	83.1	4.3	.4		14.2	491
OTHER STATES		34.6			3.7	3.4	2.9	3.4	23.5	814
CANADA	2.3	16.9	39.2	17.4				3.4	13.0	451
TOTAL*	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	3,463
NUMBER OF HOUSEHOLDS	6	51	26	21	43	34	59	10	250	

*REGIONAL TOTALS EQUAL TO 100 PERCENT FOR EACH REGION: REGION 1, 44; 2, 2266; 3, 120; 4, 109; 5, 241; 6, 207; 7, 447; 8, 29.

TABLE 15 DISTRIBUTION OF CAMPING TRIPS BY DESTINATION.

DESTINATION	REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF TRIPS
	PERCENT OF TRIPS									
NORTH DAKOTA	72.0	44.6	56.3	34.6	27.2	56.8	81.4	77.0	53.2	2,153
MONTANA	7.5	4.3	2.0	3.0	4.2	3.2	4.1	5.6	4.1	164
WYOMING	1.0	1.7	.8	1.7	3.2	4.6	2.5	2.2	2.2	89
MINNESOTA	1.0	6.2	14.2	46.5	48.1	20.7	2.2	3.4	17.6	711
OTHER STATES	5.5	26.6	4.0	5.2	11.9	10.5	7.3	10.1	13.2	535
CANADA	13.0	16.6	22.7	9.0	5.4	4.2	2.5	1.7	9.7	393
TOTAL*	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	4,045
NUMBER OF HOUSEHOLDS	60	124	77	109	131	81	153	44	779	

*REGIONAL TOTALS EQUAL TO 100 PERCENT FOR EACH REGION: REGION 1, 200; 2, 1168; 3, 247; 4, 591; 5, 503; 6, 285; 7, 872; 8, 179.

Summer Fishing Trips--A small proportion of summer fishing trips was confined to North Dakota (Table 13). This is well illustrated by the examination of the trips taken by residents of Region 5. The 280 reporting households took 2,168 summer fishing trips, or an average of 7.7 per household. Over three-fourths of the trips were to Minnesota, only 16% were in North Dakota, and around 3% in Canada.

In Region 4, 1,209 trips were taken by 191 households. The destinations of one-third of these were North Dakota; one-half, Minnesota; and almost 12%, Canada.

The 400 fishing trips taken by 59 households in Region 8 were fairly well confined to North Dakota. A fairly small proportion of households reported that the destinations of their fishing trips were adjoining states and Canada.

Winter Fishing Trips--A limited number of households participated in this recreation activity. In Region 5, 43 households reported 241 trips. Of these trips 83% were in Minnesota and only 12% in North Dakota. The reporting households in Regions 1, 6, and 7 said over 90% of their winter fishing trips were in North Dakota (Table 14).

Camping Trips--The proportion of camping trips confined to North Dakota ranged from 27% in Region 5 to 81% in Region 7 (Table 15). The destinations of almost one-half of the 131 reporting households in Region 5 were Minnesota. It is likely that many of these trips were associated with fishing trips to Minnesota. As indicated in another section of this report, a lot of camping is done on week-end or trips of a few days' outing.

TABLE 16 DISTRIBUTION OF SNOW SKIING TRIPS BY DESTINATION.

DESTINATION	REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF TRIPS
	PERCENT OF TRIPS									
NORTH DAKOTA	58.9	5.6	90.4	62.8	20.0	62.5	56.9	66.7	21.7	289
MONTANA	26.5	7.1		7.6	1.5		13.7		6.1	81
WYOMING	2.9	1.4		1.0	.3				1.0	13
MINNESOTA	2.9	10.3	1.6	20.9	71.5	25.0	7.8		25.5	340
OTHER STATES	8.8	60.7	3.2	1.0	5.8	12.5	21.6	33.3	36.5	487
CANADA		14.9	4.8	6.7	.9				9.2	123
TOTAL*	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1,333
NUMBER OF HOUSEHOLDS	5	51	14	23	43	9	11	2	158	

*REGIONAL TOTALS EQUAL TO 100 PERCENT FOR EACH REGION: REGION 1, 34; 2, 737; 3, 62; 4, 105; 5, 325; 6, 16; 7, 51; 8, 3.

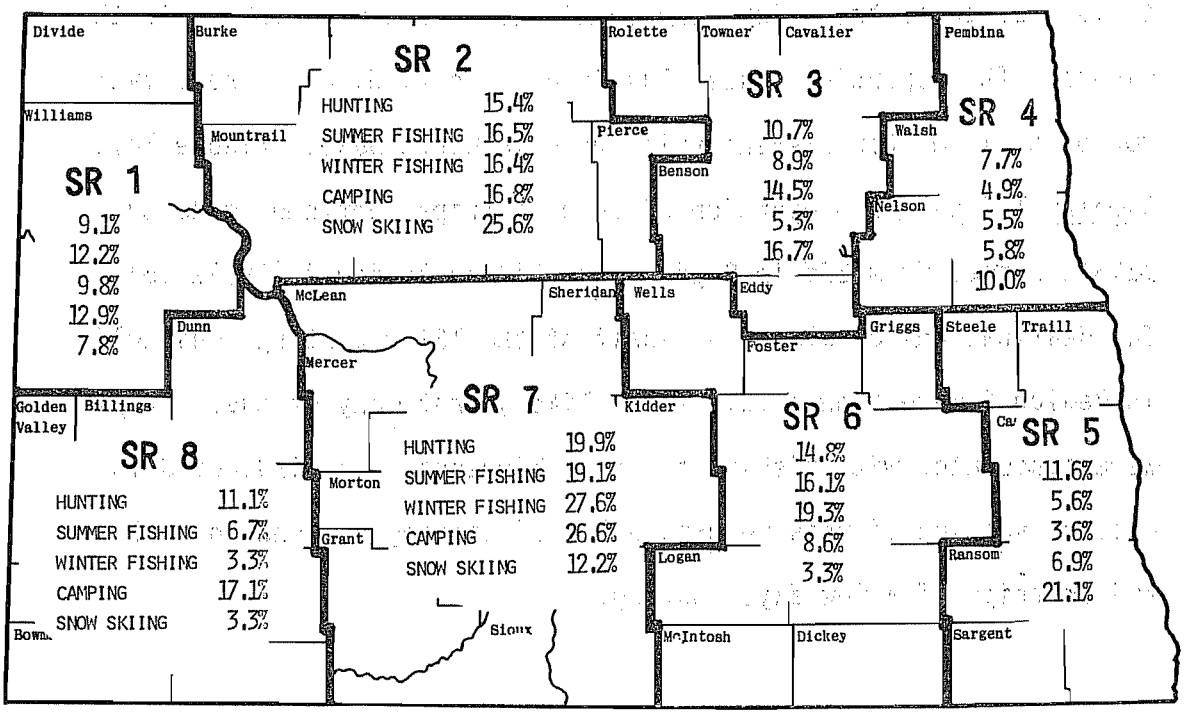


FIGURE 7 PROPORTIONATE DISTRIBUTION OF REPORTING HOUSEHOLDS AMONG REGIONS WHERE THEY DID MOST OF THEIR NORTH DAKOTA OUTDOOR RECREATION ACTIVITIES.

The number of households in the sample reporting camping destinations was 779 and they reported 4,045 camping trips. The proportional distributions of the destinations varied from 2.2% for Wyoming to 53% for North Dakota.

Snow-Skiing Trips--Only 158 households in the sample reported the destinations of their skiing trips. They made 1,333 trips, the destination of one-fifth was North Dakota; one-fourth, Minnesota; more than one-third, other states; and one-tenth, Canada (Table 16).

In Region 2 almost 15% of the skiing trips were to Canada, and only 6% were within the home state.

In Regions 1 and 7 the destinations of 26% and almost 14% of the respective trips were Montana.

Regions in Which Members of Households Did Most of Their Hunting, Fishing, Camping, and Snow Skiing in North Dakota

The data in Figure 7 show where North Dakota households did most of their hunting, fishing, camping, and snow skiing. For example, 15.4% did their hunting in Region 2. The corresponding figure for their other activities within this region were: summer fishing, 16.5%; winter fishing, 16.4%; camping, 16.8%; and snow skiing, 25.6%.

The tables which follow (1) identify the region in North Dakota in which members of households did most of their hunting, fishing, camping and snow skiing; (2) distances traveled to various regions; (3) origin of members who did most of these activities in specified regions in North Dakota.

TABLE 17 HUNTING: REGIONS IN WHICH MEMBERS OF HOUSEHOLDS DID MOST OF THEIR NORTH DAKOTA HUNTING.

REGION IN WHICH MOST HUNTING WAS DONE	RESIDENCE OF HOUSEHOLDS: REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF HOUSEHOLDS
	PERCENT OF HOUSEHOLDS									
1	92.7	5.0		.7	.5	.7	.4	1.5	9.1	103
2	3.1	72.4	7.4	20.0	1.1	.7	1.2		15.4	175
3		1.7	85.0	20.3	3.7	.7	1.2		10.7	121
4		15.6	3.2	40.2	1.6		.4		7.7	88
5			1.1	4.5	64.2	.7	.9		11.6	131
6		.6	1.1	5.2	15.0	87.7	4.1		14.8	168
7		2.5		2.2	5.3	2.9	83.1	4.5	19.9	226
8	4.2	2.2	2.1	6.0	8.6	6.6	8.7	94.0	11.1	127
STATE	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
NUMBER OF HOUSEHOLDS	96	181	94	134	187	138	242	67		1,139

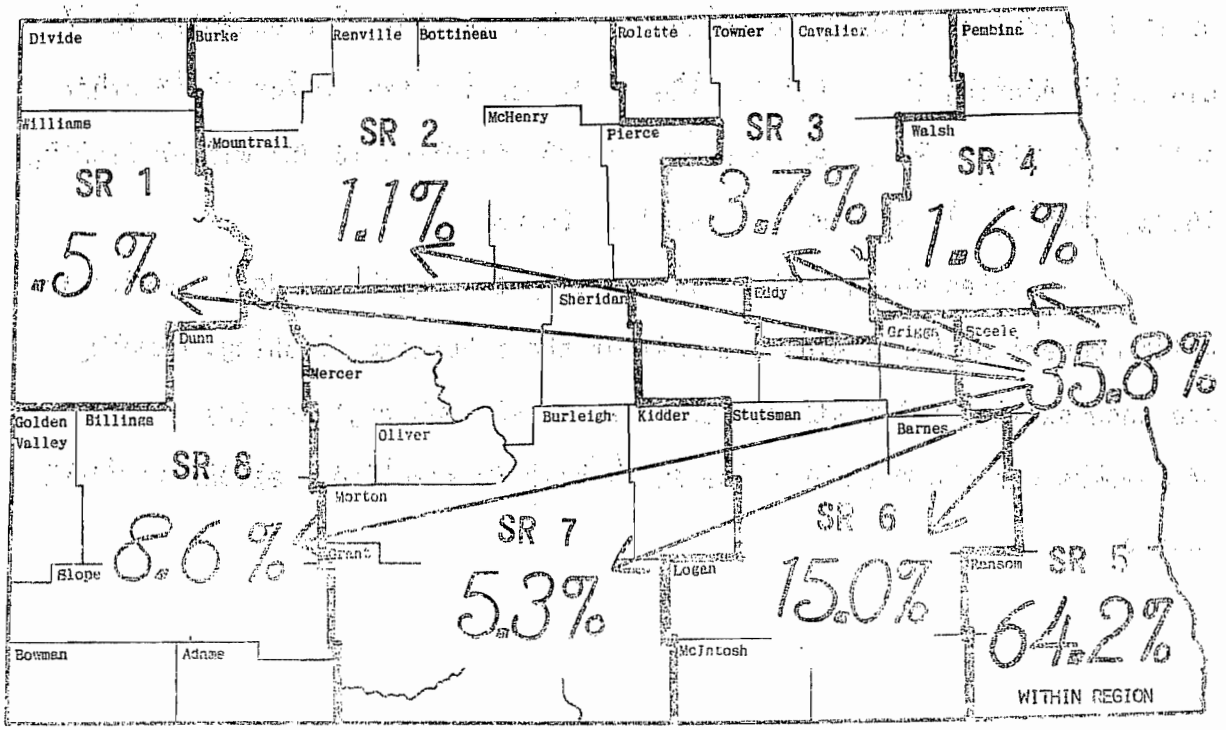


FIGURE 8 REGIONS IN WHICH MEMBERS OF HOUSEHOLDS RESIDING IN REGION 5 DID MOST OF THEIR HUNTING IN NORTH DAKOTA. FOR EXAMPLE, 64.2 PERCENT OF THE REPORTING HOUSEHOLDS RESIDING IN REGION 5 HUNTED IN THIS REGION AND 35.8 PERCENT HUNTED IN OTHER REGIONS.

Hunting--In general, most households did most of their North Dakota hunting in their home region. For example, 93% of the reporting households in Region 1 did most of their hunting in this region, 3% in Region 2, and the remainder in Region 8. The distance traveled by the households hunting in the latter region averaged 120 miles (Table 18).

Around 9% of the households of Region 5 usually hunted in Region 8 and 15% in Region 6 (Table 17 and Figure 8). The distance traveled by residents going from Region 5 to Region 8 averaged 352 miles (Table 18).

Ninety-four percent of the residents of Region 8 did most of their North Dakota hunting in the home area. The remainder hunted in the adjoining Regions 1 and 7.

TABLE 18 HUNTING: AVERAGE DISTANCES TO REGIONS WHERE MEMBERS OF HOUSEHOLDS DID MOST OF THEIR NORTH DAKOTA HUNTING.

REGION IN WHICH MOST HUNTING WAS DONE	RESIDENCE OF HOUSEHOLDS: REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF HOUSEHOLDS
	AVERAGE DISTANCE TRAVELED (MILES)									
1	37	146		350	350	250	240	35	57	103
2	102	34	54	61	129	240	180		46	175
3		62	41	128	136	30	191		73	121
4		61	97	54	74		320		59	88
5			250	128	65	20	28		68	131
6		40	93	127	105	41	226		63	168
7		49		143	199	82	48	85	57	226
8	120	220	375	319	352	225	136	44	62	127
STATE	43	49	53	99	107	54	68	37	68	
NUMBER OF HOUSEHOLDS	96	181	94	134	187	138	242	67		1,139

TABLE 19 HUNTING: ORIGIN OF MEMBERS OF HOUSEHOLDS WHO DID MOST OF THEIR NORTH DAKOTA HUNTING IN SPECIFIED REGIONS.

REGION IN WHICH MOST HUNTING IS DONE	ORIGIN OF HOUSEHOLDS: REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF HOUSEHOLDS
	PERCENT OF HOUSEHOLDS									
1	86.5	8.7	.1	.9	.9	.9	.9	.9	100.0	103
2	1.6	74.7	3.9	15.9	1.1	.6	1.6	.6	100.0	175
3		2.6	66.3	22.2	5.8	.3	2.5		100.0	121
4		31.8	3.4	61.4	2.3		1.1		100.0	88
5			.8	4.6	92.3	.8	1.5		100.0	131
6		.6	.6	4.2	16.7	72.0	5.9		100.0	168
7		2.2		1.3	4.4	2.2	88.9		100.0	226
8	3.1	3.8	1.6	6.3	12.6	7.1	16.5	49.0	100.0	127
STATE	8.4	15.9	8.3	11.8	16.4	12.1	21.3	5.8	100.0	
NUMBER OF HOUSEHOLDS	96	181	94	134	187	138	242	67		1,139

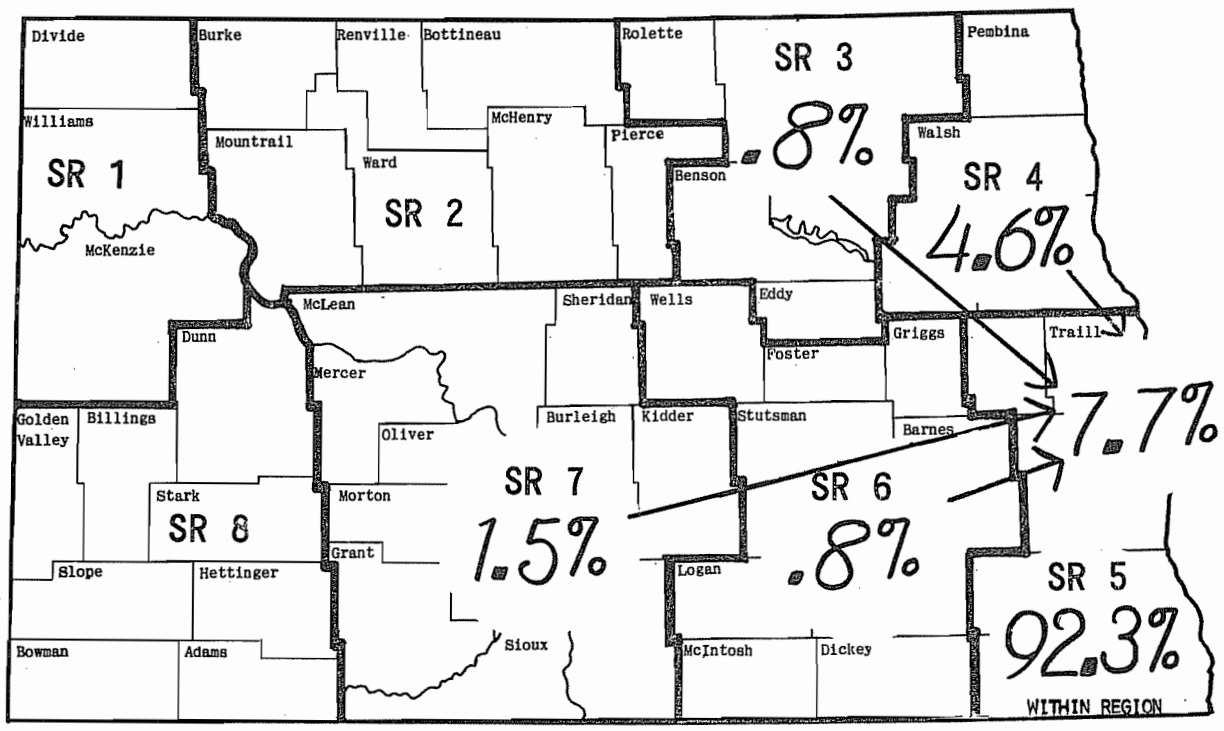


FIGURE 9 ORIGIN OF MEMBERS OF HOUSEHOLDS WHO HUNTED IN REGION 5.
FOR EXAMPLE, 92.3 PERCENT OF THE REPORTING HOUSEHOLDS HUNTING IN REGION 5, RESIDED IN THIS REGION AND 4.6 PERCENT, IN REGION 4.

Table 19 gives the origin of the members of households who hunted in the other regions. For example, 72% of the households who hunted in Region 6 resided within this region, 16.7% in Region 5, and 5.9% in Region 7. Of the 127 hunters in Region 8, about one-half resided in the region. All other regions except Regions 1 and 2 and 3 accounted for at least 6% of the hunters in Region 8. Figure 9 shows the origin of hunters in Region 5.

Summer Fishing--With the exception of Regions 4 and 5, two-thirds or more of the households did their fishing in their home region (Table 20). In Region 4 where 40% did most of their fishing in this region, about 30% and 14% of the households reported their main fishing areas were Regions 2 and 6, respectively. Region 6 apparently is also a popular fishing area for households residing in Region 5. Figure 10 shows the locations where residents of Region 5 do most of their summer fishing.

TABLE 20 SUMMER FISHING: REGIONS IN WHICH MEMBERS OF HOUSEHOLDS DID MOST OF THEIR NORTH DAKOTA SUMMER FISHING.

REGION IN WHICH MOST SUMMER FISHING WAS DONE	RESIDENCE OF HOUSEHOLDS: REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF HOUSEHOLDS
	PERCENT OF HOUSEHOLDS									
1	98.2	1.7			1.0			2.4	12.2	145
2	1.8	65.7	9.1	29.4	1.0	.6	2.1	1.2	16.5	197
3		5.7	83.5	2.5					8.9	106
4		10.0	2.9	39.8			.4		4.9	58
5				9.0	56.6				5.6	67
6			1.8	14.2	30.1	91.7	1.4	1.2	16.1	192
7		16.0	.9	5.1	11.3	7.1	94.7	11.8	29.1	346
8		.9	1.8			.6	1.4	83.4	6.7	80
STATE	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
NUMBER OF HOUSEHOLDS	142	230	109	78	106	155	286	85		1,191

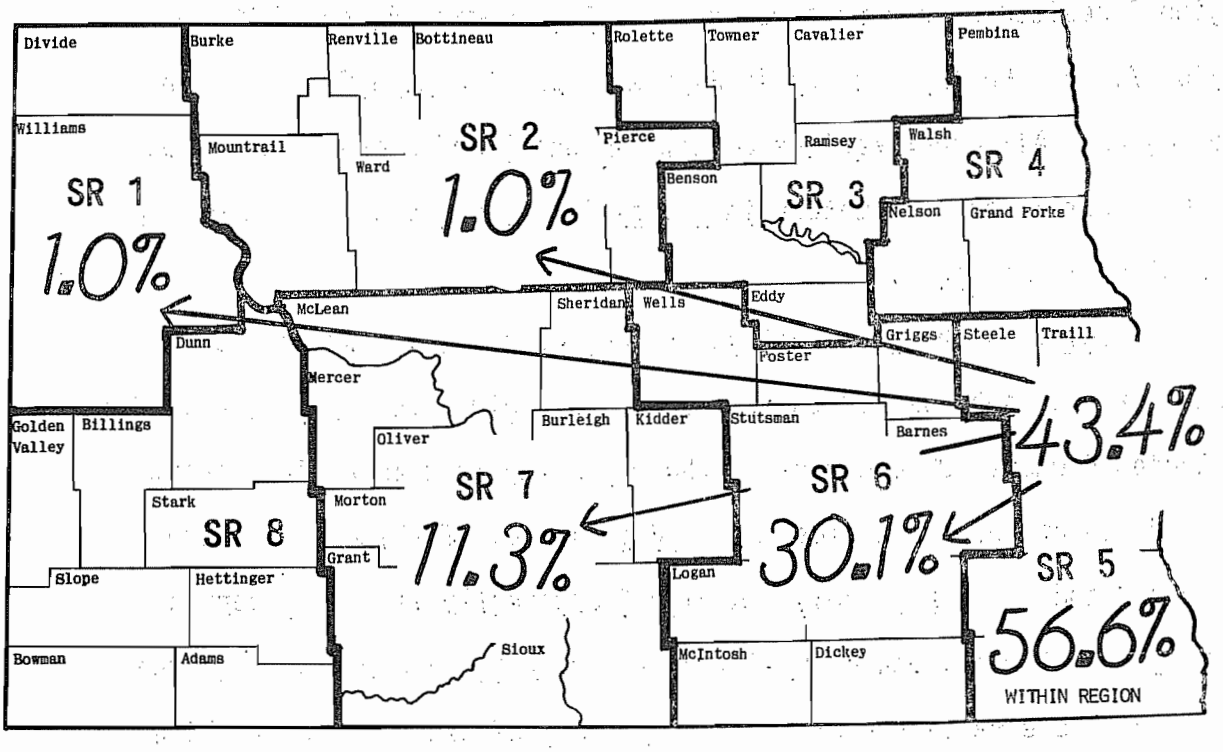


FIGURE 10 REGIONS IN WHICH MEMBERS OF HOUSEHOLDS RESIDING IN REGION 5 DID MOST OF THEIR SUMMER FISHING IN NORTH DAKOTA. FOR EXAMPLE, 56.6 PERCENT OF THE REPORTING HOUSEHOLDS RESIDING IN REGION 5, SUMMER FISHED IN THIS REGION AND 43.4 PERCENT WENT TO OTHER REGIONS.

TABLE 21 SUMMER FISHING: AVERAGE DISTANCES TO REGIONS WHERE MEMBERS OF HOUSEHOLDS DID MOST OF THEIR NORTH DAKOTA SUMMER FISHING.

REGION IN WHICH MOST SUMMER FISHING WAS DONE	RESIDENCE OF HOUSEHOLDS: REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF HOUSEHOLDS
	AVERAGE DISTANCE TRAVELED (MILES)									
1	40	68			350			53	43	145
2	61	44	73	21	250	105	112	200	48	197
3		50	34	23					36	106
4		50	63	50			115		52	58
5				51	30				31	67
6			35	91	54	35	149	60	44	192
7		63	140	231	208	106	49	91	62	346
8		45	163			160	100	43	49	80
STATE	40	48	35	58	63	43	87	50	49	
NUMBER OF HOUSEHOLDS	142	230	109	78	106	155	286	85		1,191

Fishermen living in Region 5 and traveling to Regions 7, 2, and 1 averaged 208, 250, and 350 miles, respectively (Table 21). It is likely that the destination of these fishermen was Lake Sakakawea. In general, the average distances traveled to favorite fishing spots varied from 40 miles for residents of Region 1 to 87 for those living in Region 7.

Almost 90% of the households who do most of their fishing in Region 5 of North Dakota originated in or were residents of this region (Table 22 and Figure 11). The corresponding proportions in Regions 1, 3, and 8 exceeded 85%. In contrast, slightly more than one-half of the reporting households in Region 4 originated in this region. Almost 40% came from Region 2.

TABLE 22 SUMMER FISHING: ORIGIN OF MEMBERS OF HOUSEHOLDS WHO DID MOST OF THEIR NORTH DAKOTA SUMMER FISHING IN SPECIFIED REGIONS.

REGION IN WHICH MOST SUMMER FISHING WAS DONE	ORIGIN OF HOUSEHOLDS: REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF HOUSEHOLDS
	PERCENT OF HOUSEHOLDS									
1	95.1	2.8			.7			1.4	100.0	145
2	2.0	76.7	5.1	11.7	.5	.5	3.0	.5	100.0	197
3		12.3	85.9	1.9					100.0	106
4		39.7	5.2	53.4			1.7		100.0	58
5				10.4	89.6				100.0	67
6			1.0	5.7	16.7	74.1	2.0	.5	100.0	192
7		10.6	.3	1.1	3.5	3.2	71.4	2.9	100.0	346
8		2.5	2.5			1.2	5.0	88.8	100.0	80
STATE	21.8	19.4	9.2	6.5	8.9	13.1	24.0	7.1	100.0	
NUMBER OF HOUSEHOLDS	142	230	109	78	106	155	286	85		1,191

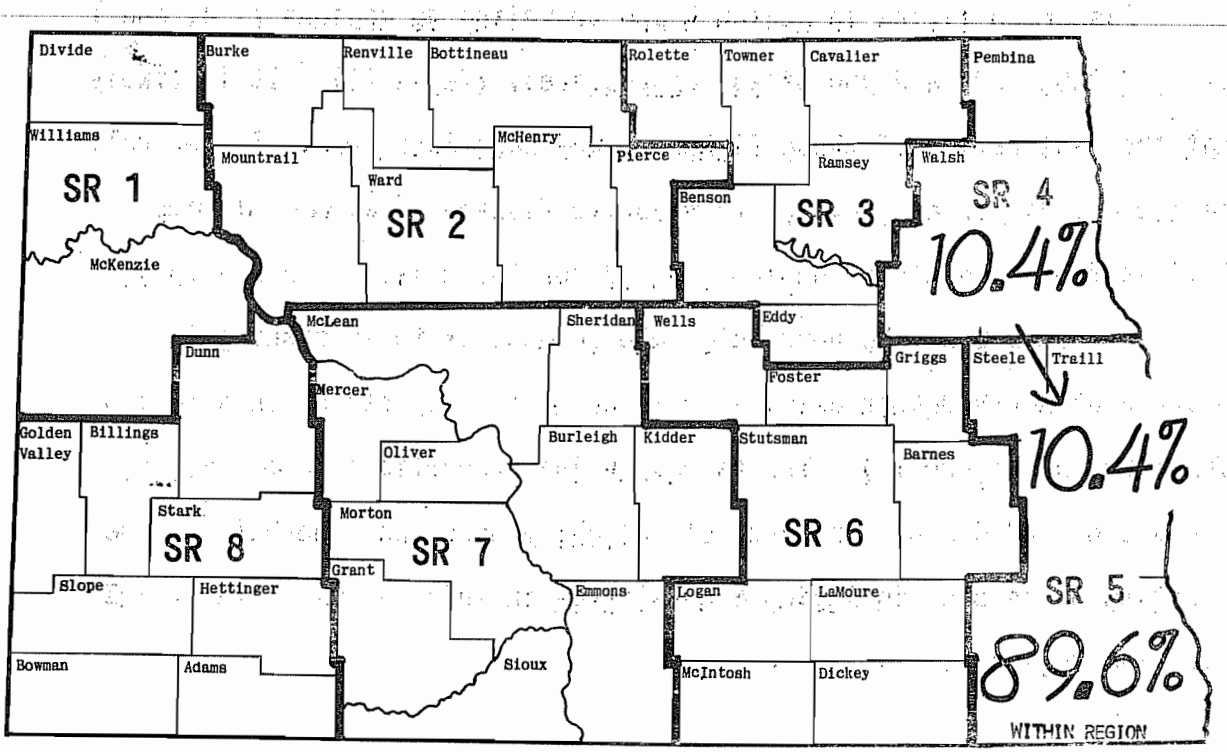


FIGURE 11 ORIGIN OF MEMBERS OF HOUSEHOLDS WHO SUMMER FISHED IN REGION 5. FOR EXAMPLE, 89.6 PERCENT OF THE REPORTING HOUSEHOLDS FISHING IN REGION 5, RESIDED IN THIS REGION AND THE REMAINDER OR 10.4 PERCENT IN REGION 4.

TABLE 23 WINTER FISHING: REGIONS IN WHICH MEMBERS OF HOUSEHOLDS DID MOST OF THEIR NORTH DAKOTA WINTER FISHING.

REGION IN WHICH MOST WINTER FISHING WAS DONE	RESIDENCE OF HOUSEHOLDS: REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF HOUSEHOLDS
	PERCENT OF HOUSEHOLDS									
1	96.2	1.5						11.1	9.8	27
2	3.8	63.7		14.3		2.2			16.4	45
3		4.5	94.6	28.5					14.5	40
4		16.7	2.7	28.6		2.2			5.5	15
5				14.3	53.3		1.4		3.6	10
6			2.7	14.3	46.7	95.6			19.3	52
7		13.6					97.2		27.6	76
8							1.4	88.9	3.3	9
STATE	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
NUMBER OF HOUSEHOLDS	26	66	37	7	15	45	69	9		274

Winter Fishing--Compared with summer fishing, a much smaller number in the sample participate in winter fishing. There were 274 households who specified the regions where they did most of this fishing in North Dakota. Members of households in Region 5 did most of their winter fishing within this region (53%) and Region 6 (47%) (Table 23). In contrast, 97% of the households in Region 7 did most of their fishing in the home region. Residents of Region 4 specified five regions in which most of the fishing was done.

The 15 households in Region 5 who divided their winter fishing between Regions 5 and 6 averaged 41 miles to reach their fishing destinations. The distance traveled by all 274 reporting households in reaching the places where most of the winter fishing was done averaged 40 miles (Table 24).

TABLE 24 WINTER FISHING: AVERAGE DISTANCES TO REGIONS WHERE MEMBERS OF HOUSEHOLDS DID MOST OF THEIR NORTH DAKOTA WINTER FISHING.

REGION IN WHICH MOST WINTER FISHING WAS DONE	RESIDENCE OF HOUSEHOLDS: REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF HOUSEHOLDS
	AVERAGE DISTANCE TRAVELED (MILES)									
1	46	30						105	48	27
2	40	43		15		15			42	45
3		47	23	31					25	39
4		44	180	38		38			51	15
5				10	34		365		65	10
6			160	117	49	30			37	53
7		52					41		43	76
8								34	34	9
STATE	46	44	29	52	41	30	46	41	40	
NUMBER OF HOUSEHOLDS	26	66	37	7	15	45	69	9		274

TABLE 25 WINTER FISHING: ORIGIN OF MEMBERS OF HOUSEHOLDS WHO DID MOST OF THEIR NORTH DAKOTA WINTER FISHING IN SPECIFIED REGIONS.

REGION IN WHICH MOST WINTER FISHING WAS DONE	ORIGIN OF HOUSEHOLDS: REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF HOUSEHOLDS
	PERCENT OF HOUSEHOLDS									
1	92.6	3.7						3.7	100.0	27
2	2.2	93.3		2.2		2.2			100.0	45
3		7.5	87.5	5.0					100.0	40
4		73.3	6.7	13.3		6.7			100.0	15
5				10.0	80.0		10.0		100.0	10
6			1.9	1.9	13.5	82.7			100.0	52
7		11.8					88.2		100.0	76
8							11.1	88.9	100.0	9
STATE	9.5	24.1	13.5	2.5	5.5	16.4	25.2	3.3	100.0	
NUMBER OF HOUSEHOLDS	26	66	37	7	15	45	69	9		274

TABLE 26 CAMPING: REGIONS IN WHICH MEMBERS OF HOUSEHOLDS DID MOST OF THEIR NORTH DAKOTA CAMPING

REGION IN WHICH MOST CAMPING WAS DONE	RESIDENCE OF HOUSEHOLDS: REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF HOUSEHOLDS
	PERCENT OF HOUSEHOLDS									
1	85.8	6.7					1.8	5.4	12.9	58
2	7.1	57.4	20.0	25.8	2.0	4.8	2.7		16.8	76
3		2.2	60.0	3.2					5.3	24
4		9.0	5.7	45.2	2.0		.9		5.8	26
5				6.5	52.0	4.8	.9		6.9	31
6			5.7	3.2	12.0	71.4			8.6	39
7		20.2	5.7	6.4	8.0	7.1	75.7	18.9	26.6	120
8	7.1	4.5	2.9	9.7	24.0	11.9	18.0	75.7	17.1	77
STATE	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
NUMBER OF HOUSEHOLDS	56	89	35	31	50	42	111	37		451

Eighty percent of the households who said Region 5 was where they did most of their fishing came from this region, 10% from Region 4, and 10% from Region 7 (Table 25). The households who specified either Region 7 or Region 8 as their most favored spot came mainly from their own region or one of the adjoining regions.

Camping--Households of Region 4 mentioned all but one of the eight regions where most of their North Dakota camping was done. Over one-half of those in Region 5 indicated this region and Region 8 where they did most of their camping. A certain proportion of the replying households in every region indicated Region 8 as one of their favorite campsites (Table 26).

Camping in Regions 2, 7, and 8 involved greater traveling distances on the average than camping in other regions. For example, households in Regions 4 and 5 traveled over 300 miles to reach their campsites in Region 8 (Table 27). The 451 households who provided information regarding the regions where they camped most averaged 79 miles in reaching their destinations.

Householders who specified Regions 2 and 7 where most of their camping occurred originated in all regions except Numbers 8 and 1, respectively. Those who indicated Region 8 as their favored campsite came from every region, 15.5% came from Region 5, 26.0% from Region 7, and 36.4% from Region 8 (Table 28).

Snow Skiing--Data on destinations of snow skiers were received from only 90 households. Snow-skiing popularity as a sport or recreation activity is growing, but the proportion of persons participating is

TABLE 27 CAMPING: AVERAGE DISTANCES TO REGIONS WHERE MEMBERS OF HOUSEHOLDS DID MOST OF THEIR NORTH DAKOTA CAMPING.

REGION IN WHICH MOST CAMPING WAS DONE	RESIDENCE OF HOUSEHOLDS: REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF HOUSEHOLDS
	AVERAGE DISTANCE TRAVELED (MILES)									
1	47	108					105	53	56	58
2	183	65	111	27	350	175	108		80	76
3		30	35	55					36	24
4		53	65	29	40		80		42	26
5				100	45	39	150		51	31
6			75	25	69	47			51	39
7		72	125	375	194	98	56	66	71	120
8	184	200	300	317	316	209	144	64	160	77
STATE	67	74	67	84	131	75	75	64	79	
NUMBER OF HOUSEHOLDS	56	89	35	31	50	42	111	37		451

TABLE 28 CAMPING: ORIGIN OF MEMBERS OF HOUSEHOLDS WHO DID MOST OF THEIR NORTH DAKOTA CAMPING IN SPECIFIED REGIONS.

REGION IN WHICH MOST CAMPING WAS DONE	ORIGIN OF HOUSEHOLDS: REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF HOUSEHOLDS
	PERCENT OF HOUSEHOLDS									
1	82.8	10.4					3.4	3.4	100.0	58
2	5.3	67.2	.2	10.5	1.3	2.6	3.9		100.0	76
3		8.3	87.5	4.2					100.0	24
4		30.8	7.7	53.9	3.8		3.8		100.0	26
5				6.4	84.0	6.4	3.2		100.0	31
6			5.1	2.6	15.4	76.9			100.0	39
7		15.0	1.7	1.7	3.3	2.5	70.0	5.8	100.0	120
8	5.2	5.2	1.3	3.9	15.6	6.5	26.0	36.4	100.0	77
STATE	12.4	19.7	7.8	6.9	11.1	9.3	24.6	8.2	100.0	
NUMBER OF HOUSEHOLDS	56	89	35	31	50	42	111	37		451

much less than in some other states. The data in Table 29 indicate that most of their North Dakota skiing was done in the home region or adjoining areas. For example, almost 79% of the households in Region 5 reported they did most of their skiing in this region and about 14% in the two adjoining regions, 4 and 6. Many skiers whose home is North Dakota travel to other states on their trips; consequently, data on such travels are not recorded here.

Distance traveled by skiers to sites where they do most of their skiing was quite moderate. For example, the 14 households in Region 5 averaged only 13 miles (Table 30).

TABLE 29 SNOW SKIING: REGIONS IN WHICH MEMBERS OF HOUSEHOLDS DID MOST OF THEIR NORTH DAKOTA SNOW SKIING.

REGION IN WHICH MOST SNOW SKIING WAS DONE	RESIDENCE OF HOUSEHOLDS: REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF HOUSEHOLDS
	PERCENT OF HOUSEHOLDS									
1	87.5								7.8	7
2	12.5	87.5		43.7	7.1				25.6	23
3			100.0	6.3					16.7	15
4		6.3		37.5	7.1	11.1			10.0	9
5				12.5	78.7	66.7			21.1	19
6		6.2			7.1	11.1			3.3	3
7						11.1	100.0		12.2	11
8								100.0	3.3	3
STATE	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
NUMBER OF HOUSEHOLDS	8	16	14	16	14	9	10	3		90

TABLE 30 SNOW SKIING: AVERAGE DISTANCES TO REGIONS WHERE MEMBERS OF HOUSEHOLDS DID MOST OF THEIR NORTH DAKOTA SNOW SKIING.

REGION IN WHICH MOST SNOW SKIING WAS DONE	RESIDENCE OF HOUSEHOLDS: REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF HOUSEHOLDS
	AVERAGE DISTANCE TRAVELED (MILES)									
1	50								50	7
2	150	16		19	10				35	23
3			13	20					18	15
4		18		18	50	200			42	9
5				85	13	50			32	19
6		110			8	20			46	3
7						100	15		23	11
8								11	11	3
STATE	63	22	20	27	13	68	15	11	28	
NUMBER OF HOUSEHOLDS	8	16	14	16	14	9	10	3		90

TABLE 31 SNOW SKIING: ORIGIN OF MEMBERS OF HOUSEHOLDS WHO DID MOST OF THEIR NORTH DAKOTA SNOW SKIING IN SPECIFIED REGIONS.

REGION IN WHICH MOST SNOW SKIING WAS DONE	ORIGIN OF HOUSEHOLDS: REGION 1	2	3	4	5	6	7	8	STATE	NUMBER OF HOUSEHOLDS
	PERCENT OF HOUSEHOLDS									
1	100.0								100.0	7
2	4.3	61.0		30.4	4.3				100.0	23
3			93.3	6.7					100.0	15
4		11.1		66.7	11.1	11.1			100.0	9
5				10.5	57.9	31.6			100.0	19
6		33.3			33.3	33.4			100.0	3
7						9.1	90.9		100.0	11
8								100.0	100.0	3
STATE	8.9	17.8	15.6	17.7	15.6	10.0	11.1	3.3	100.0	
NUMBER OF HOUSEHOLDS	8	16	14	16	14	9	10	3		90

The origin of members of households who skied in various regions in North Dakota is shown in Table 31. Fifty-eight percent of the households in Region 5 said they did most of their skiing in this region and the remainder originated in the two adjoining Regions, 4 and 6. Of the 23 households who did most of their skiing in Region 2, 61% came from this region, about 9% from Regions 1 and 5, and 30% from Region 4.

Camping by Households

North Dakota households who camped in 1968 numbered 1,078 or 29% of households in the sample. The proportion ranged from 21% in Region 5 to about 40% in Region 1 (Table 32).

The average number of nights households camped varied from around seven in Regions 1 and 8 to ten in Region 4 (Table 32).

TABLE 32 CAMPING: PERCENT OF HOUSEHOLDS WHO CAMPED AND AVERAGE NUMBER OF NIGHTS SPENT ON CAMPING TRIPS IN NORTH DAKOTA.

Region	Total Number of Households	Percent of Households Who Camped	Average Number of Nights Camped Per Household
1	275	39.9	7.2
2	551	31.6	8.9
3	309	29.1	7.9
4	455	27.0	10.0
5	746	20.9	8.3
6	436	25.5	8.7
7	669	35.6	8.6
8	228	30.3	6.8
State	3,669	29.4	8.5

Table 33 CAMPING: OCCASIONS WHEN HOUSEHOLDS CAMPED IN NORTH DAKOTA.

Region	Occasion: Vacation Trips	Few Days' Outings	Weekend or Overnight Trips	All Occasions	Number of Households
	Percent of Households				
1	.9	4.5	94.6	100.0	112
2	2.3	.6	97.1	100.0	175
3	2.2	2.2	95.6	100.0	90
4	1.5	6.2	92.3	100.0	130
5	1.8	1.8	96.4	100.0	167
6		1.0	99.0	100.0	105
7	.4	2.6	97.0	100.0	232
8		4.2	95.8	100.0	72
State	1.2	2.7	96.1	100.0	1,082

Table 34 CAMPING: LOCATIONS WHERE HOUSEHOLDS CAMPED IN NORTH DAKOTA.

Location	Region: 1	2	3	4	5	6	7	8	State
	Number of Households								
Ashtabula Reservoir			1		5	3	1		10
Beaver Lake State Park						5	1		6
Custer National Forest	1	2		1		1	1		6
De Mores Historic Site		3		1			2		6
Fred Smith Park							1		1
Forestry Park							1	1	2
Fort Lincoln		1				3	2		6
Fort Stevenson			2				1		3
Garrison State Park	2	11		1	1	2	17	4	38
Icelandic State Park			1	1		1			3
International Peace Gardens	4	5	3	2	7	2	2		25
Lake Hiawatha			1		1		2		4
Lake Metigoshe	6	26	7	2	1		3	1	46
Lehr Dam							1		1
Oahe Public Use Area							1		1
Sibley Campground			2	1					3
Streeter Memorial State Park	3	1	1	1	10	2	9	8	35
T. Roosevelt Nat. Mem. Park	27	16	8	17	10	11	40	8	137
Totten Trail Park		1					2		3
Turtle River State Park			1	13	3		1		18
Whitestone Hill						3			3
Total	43	66	28	39	38	33	88	22	357

Almost all of the camping was done on overnight or weekend trips. These occasions accounted for 92% or more of all the occasions mentioned in each region. Only a few households said they camped when on a vacation or a few days' outing (Table 33).

Table 34 provides information regarding the parks and other locations where households in the sample camped. Out of a total of 357 replies, 137 households camped at Theodore Roosevelt National Park. All eight regions were represented. Some households may have camped at several locations.

Other parks or locations used as campsites which were mentioned include Lake Metigoshe, households in Region 2 accounted for more than half of the 46 camp-outs at this lake; 38 households camped at Garrison State Park or at nearby points on Lake Sakakawea; 35 households at Streeter Memorial State Park; and 25 at the International Peace Gardens.

Ownership of Boats, Outboard Motors, and Snowmobiles

Boats--Twenty percent of the 3,399 reporting households in the sample owned one boat other than a canoe or sailboat. This percentage ranged from 15% in Region 8 to 26% in Region 3 and 30% in Region 2 (Table 35). Only 1% of the households in the sample owned two or more boats. Total boats owned numbered 749, with the largest number, 160, recorded in Region 2.

Outboard Motors--About 24% of reporting households owned one outboard motor, and 1.7% owned two or more (Table 36). Over one-third of the households in Regions 2 and 3 reported the ownership of one or more motors compared with 15% in Region 8. Households in Region 5 owned 216 motors or about 23% of the total ownership of 945 motors.

Table 35 BOATS OWNED BY HOUSEHOLDS.*

Region	Number of Boats Owned: None	One	Two or More	Households Owning Boats	Reporting Households		Total Boats Owned
	Percent of Households					Number	
1	79.3	20.7		20.7	100.0	265	55
2	67.7	30.5	1.7	32.2	100.0	462	160
3	71.8	26.4	1.8	28.2	100.0	287	88
4	83.5	16.0	.5	16.5	100.0	430	73
5	81.4	17.1	1.5	18.5	100.0	684	143
6	81.9	17.6	.5	18.1	10010	397	74
7	80.9	18.1	1.0	19.1	100.0	623	125
8	83.3	14.7		14.7	100.0	211	31
State	79.0	20.0	1.0	21.0	100.0	3,359	749

*Includes boats other than canoes and sailboats. One household reported owning a sailboat, and 14 households a canoe.

Table 36 OUTBOARD MOTORS OWNED BY HOUSEHOLDS.

Region	Number of Motors Owned: None	One	Two	Three	Four or More	Households Owning Motors	Reporting Households		Total Motors Owned
	Percent of Households							Number	
1	77.9	22.1				22.1	100.0	267	59
2	64.0	32.8	2.4	.6	.2	36.6	100.0	469	189
3	64.8	32.8	1.4	.7	.3	35.2	100.0	293	110
4	75.3	24.3	.4			24.7	100.0	441	111
5	73.7	22.9	3.0	.1	.3	24.3	100.0	700	216
6	79.4	19.9	.5	.2		20.6	100.0	407	88
7	79.2	19.7	1.1			20.8	100.0	635	139
8	84.6	15.4				15.4	100.0	214	33
State	74.5	23.8	1.4	.2	.1	25.5	100.0	3,426	945

Outboard motors of 3-5.9 and 15-39.9 horsepower each accounted for 25% of all outboard motors reported owned by households. Some households which reported ownership of motors failed to report the amount of horsepower (Table 37).

With the exception of Regions 1 and 4, at least 14% of the motors owned were of 40-59.9 horsepower. A motor of a minimum of 40 horsepower is generally recommended if it is to be used in water skiing.

Snowmobiles--Ten percent of households reported ownership of snowmobiles (Table 38). If the survey had been taken during the 1969-1970 winter, the proportion would be much higher because of the large increase in sales. More and more households both on farms and in urban communities are acquiring one or more snowmobiles. Their use has become a popular form of recreation. Snowmobiles are used not only for recreation, but also for feeding livestock, transportation, rescue work and other uses. Nearly 80% of the households in the sample who reported on the use of snowmobiles said the predominant use was recreation, the proportions varying from 57% to 85% among the regions (Table 39). Feeding livestock was given as the main use by 15% of the households, transportation by almost 5%, and rescue work by 2% (Table 39).

Figure 12 enables a direct comparison to be made of the proportions of households in the various regions owning boats, outboard motors, and snowmobiles. For example, the proportions in Region 5 are 18.5, 24.3, and 7.3, respectively, which differ markedly from those in other regions.

TABLE 37 HORSEPOWER OF OUTBOARD MOTORS OWNED BY HOUSEHOLDS.

REGION	HORSEPOWER								ALL MOTORS	
	LESS THAN 3	3-5.9	6-9.9	10-14.9	15-39.9	40-59.9	60-79.9	80 AND OVER	NO.	PCT.
	PERCENT OF MOTORS									
1	1.8	17.9	19.6	12.5	14.3	10.7	8.9	14.3	56	100.0
2	1.2	24.4	17.7	6.7	23.7	15.9	5.5	4.9	164	100.0
3	2.0	27.6	11.0	8.0	32.0	15.0	3.0	2.0	100	100.0
4	3.8	26.4	16.0	9.4	23.6	6.6	8.5	5.7	106	100.0
5	2.3	33.9	11.9	6.2	22.6	14.1	7.3	1.7	177	100.0
6	2.6	24.6	20.8	5.2	23.4	14.3	5.2	3.9	77	100.0
7	3.2	20.2	16.1	8.1	26.6	14.5	7.3	4.0	124	100.0
8		13.8	27.6	3.5	17.2	17.2	13.8	6.9	29	100.0
STATE	2.3	25.5	16.0	7.4	24.0	13.6	6.7	4.5	833	100.0

Table 39 USE MADE OF SNOWMOBILES BY HOUSEHOLDS.

Region	Predominant Use				All Uses	Number of Households
	Recre-ation	Feed Livestock	Transpor-tation	Rescue Work		
	Percent of Households					
1	80.9	9.5	4.7	4.7	100.0	21
2	77.8	19.0	1.6	1.6	100.0	63
3	74.3	15.4	7.7	2.6	100.0	39
4	85.5	23.1	1.4		100.0	69
5	84.0	8.0	8.0		100.0	50
6	78.1	21.9			100.0	32
7	75.7	10.8	8.1	5.4	100.0	37
8	57.1	25.0	10.7	7.1	100.0	28
State	78.2	15.0	4.7	2.1	100.0	339

TABLE 38 SNOWMOBILES OWNED BY HOUSEHOLDS IN SAMPLE.

Region	Households Reporting	Households Owning Snowmibiles
	No.	Pct.
1	263	8.0
2	452	13.9
3	283	13.8
4	429	16.1
5	686	7.3
6	395	8.1
7	624	5.9
8	209	13.4
State	3,341	10.1

Payment of Fees for Hunting

There were 1,959 households in the sample who reported on their hunting activities. Only 20 or 1% of these said they paid the landowner a fee for hunting on his land (Table 40).

The question was asked, "If you are a farmer or rancher, do you charge a fee for hunting?" Only seven out of 1,500 respondents said they charge a fee. Of this number, four charge for hunting deer, and only one for hunting geese and ducks. None of the respondents said they charge for hunting small game.

The question also was asked, "If you do not charge a fee at present, do you expect to do so in the future?" Fifty, or 3.6% of the 1,382 reporting farmers or ranchers, replied in the affirmative; 25 said they expected to charge a fee for hunting deer; 21 for hunting ducks or geese; and 21 for hunting small game.

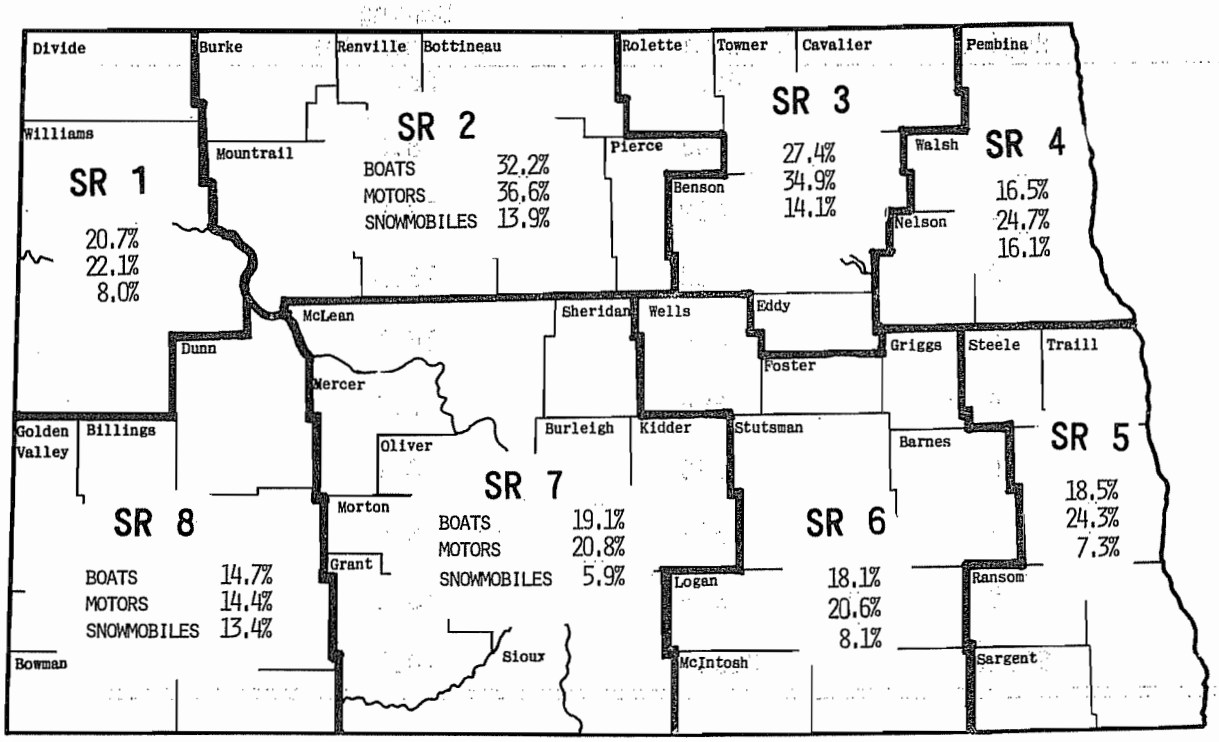
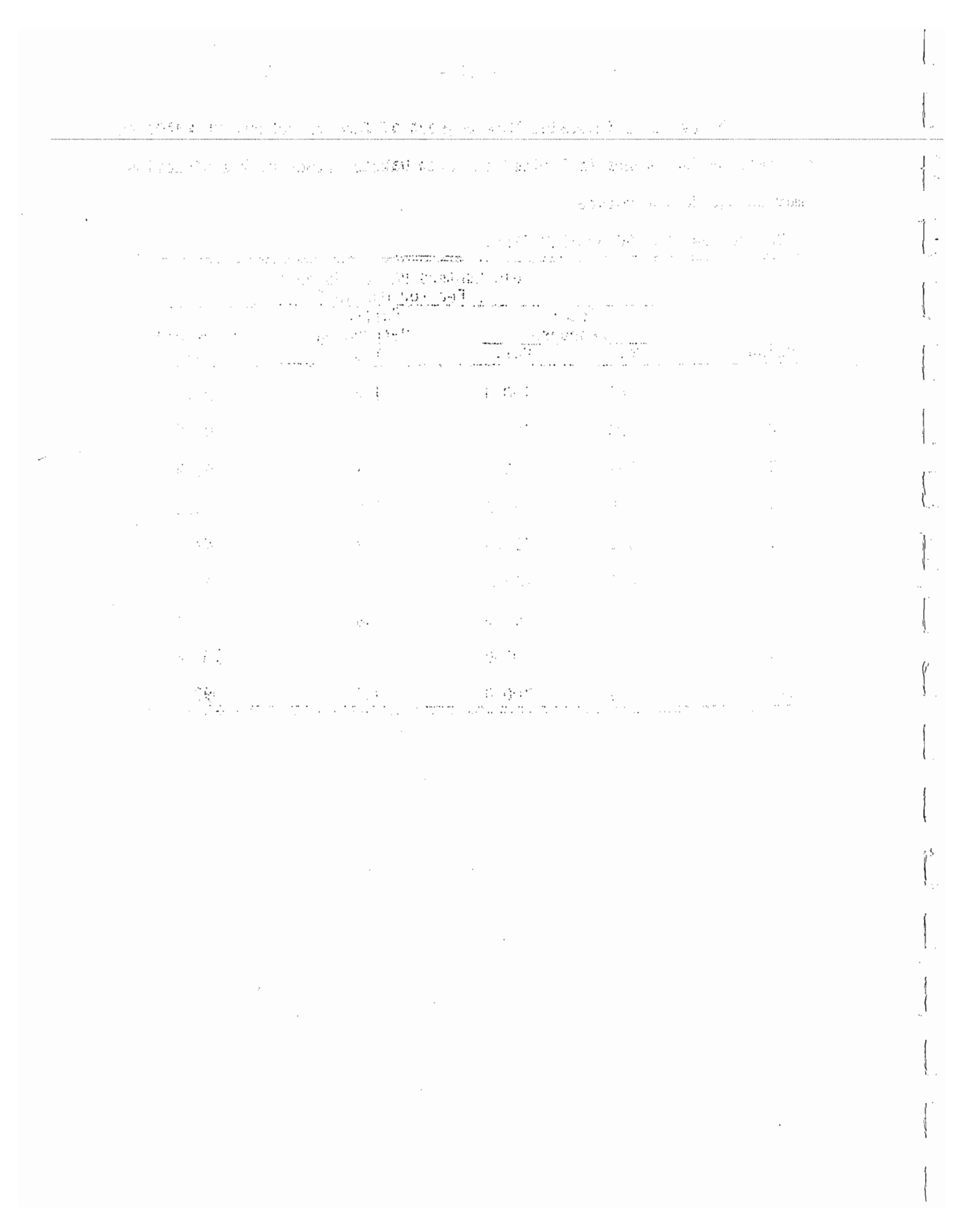


FIGURE 12 PROPORTIONS OF HOUSEHOLDS WHO OWNED OUTBOARD MOTORS AND SNOWMOBILES IN 1968.
THE TOP FIGURE REPRESENTS BOATS, THE SECOND, OUTBOARD MOTORS AND THE LOWER FIGURE, SNOWMOBILES.

The evidence indicates that payment of fees by hunters or charging of fees by landowners is limited in North Dakota; however, the situation may change in the future.

TABLE 40 PAYMENT OF HUNTING FEES.

	Did Hunters Pay Landowners a Fee for Hunting?			
	Total Response		Percent Responding	Percent Responding
Region	No.	Pct.	Yes	No
1	142	100.0	1.4	98.6
2	283	100.0	.7	99.3
3	189	100.0	.1	98.9
4	219	100.0	1.8	98.2
5	340	100.0	1.7	98.3
6	247	100.0	.4	99.6
7	390	100.0	.8	99.2
8	140	100.0		100.0
State	1,959	100.0	1.0	99.0



APPENDIX A

RECREATION SURVEY QUESTIONNAIRE

NORTH DAKOTA OUTDOOR RECREATION SURVEY, 1968

Department of Agricultural Economics
NORTH DAKOTA STATE UNIVERSITY
Fargo, North Dakota 58102

Dear Cooperator:

The North Dakota State Outdoor Recreation Agency has asked your State University to study the demand, need, and wants for recreational facilities by North Dakota residents. We hope to find out the kinds of outdoor recreation activities in which people participate, and those in which they want to participate and for which they need more facilities.

We are mailing this questionnaire to a selected number of housholders in North Dakota. You have been selected as one of the persons to whom the questionnaire is being sent. Because of the high cost of printing and mailing, it will help us if you will promptly fill in and return the questionnaire so that we do not have to send a second or third mailing.

Information that you provide will be held confidential and will be combined and tabulated with other returns before publication. The combined data from all returns will indicate the kinds of outdoor recreation opportunities North Dakota people desire and those facilities that need development.

We will appreciate it if you will answer the questions and return the questionnaire in the special postage-paid return envelope. Thank you.

1. Name your county of residence: .....

2. Where do you presently live? *(Check one blank)*

.....On a farm	.....City of 5,500 - 14,999
.....Town of less than 2,500	.....City of 15,000 and above
.....City of 2,500 - 5,499	

3. How many people reside in your household?.....

4. How many members of your household are employed?.....

5. Occupation of head of household:

.....Retired

.....Active: Occupation: .....

6. Income. What was the total **disposable** income of **all** members of your household in 1968? *Disposable income is that amount of income left after payments of personal income taxes that is available for spending (for food, shelter, clothing, education, recreation, and other family living expenses) or savings. Check one blank:*

.....Less than $3,000	.....$7,000 - $9,999
.....$3,000 - $4,999	.....$10,000 - $14,999
.....$5,000 - $6,999	.....$15,000 and above

Write in the number of different days members of your household took part in each of the following outdoor recreation activities in 1968. Use a separate column for each member and identify each with a letter, A, B, C, etc. The letter A refers to yourself. If there are more than eight members in your household, give the oldest eight members only. *Any part of a day is considered one day, but going fishing both morning and evening of the same date is still only one day — same idea for any other activity.*

	A Yourself	B	C	D	E	F	G	H
Age of member *(enter across)*								
Sex *(indicate by M or F)*								
Years of school completed								
Outdoor Recreation Activities	*Enter Total Number of Days Engaged in Each Activity Below*							
1. Hunting								
2. Fishing								
Summer								
Winter								
3. Boating								
4. Water skiing								
5. Swimming								
In swimming pools								
In other areas								
6. Camping								
7. Picnicking								
8. Walking for pleasure, hiking, nature study								
9. Bicycling for pleasure								
10. Ice skating								
11. Snow Skiing								
12. Snowmobiling								
13. Golf								
14. Tennis								
15. Baseball - Softball								
16a. Other sports: *Specify:*								
16b.								
16c.								

Future participation For each activity listed below, show the household members (by letter code) whom you expect will either **start** or **increase** their participation in that activity in the next two or three years.

As an example: Assume a family where the youngest (coded "D") is 12 years old. Last year he did not fish, but plans to start fishing this year, so we place a letter "D" in the first column. However, if he had fished last year and plans to fish more often in the near future, place the letter "D" in the second column.

Outdoor RECREATION ACTIVITY	Members Who Have Not, But Will START Participation	Members Who Expect To INCREASE THEIR PARTICIPATION
	List Members By Letter Code	
1. Hunting		
2. Fishing		
Summer		
Winter		
3. Boating		
4. Water skiing		
5. Swimming		
In swimming pools		
In other areas		
6. Camping		
7. Picnicking		
8. Walking for pleasure, hiking, nature study		
9. Bicycling for pleasure		
10. Ice skating		
11. Snow Skiing		
12. Snowmobiling		
13. Golf		
14. Tennis		
15. Baseball - Softball		
16a. Other sports: *Specify*:		
16b.		
16c.		

LIST and then RANK IN IMPORTANCE the things which kept members of your household from participating in the activities listed above even though they desired to do so.

(OVER)

We would like to know more about some of the outdoor recreation activities in which members of your household participated. If any member did participate in the activities mentioned below, will you please answer the questions which follow.

1. How many **trips** did members of your household take in 1968 (or the 1968-69 season) to places in:

Type of Trip	North Dakota	Montana	Wyoming	Minnesota	Other States *Specify*	Canadian Provinces	Total Trips
				Number of Trips			
Hunting							
Fishing Summer							
Winter							
Camping							
Snow Skiing							
Other Types *(Specify)*							
Total Trips							

2. In the spaces below name the county or counties in North Dakota where members of your family do most of their hunting, fishing, etc.

Type of Activity	*Name of County*	How Far are These Locations From Your Home
		Miles
Hunting		
Fishing Summer		
Winter		
Camping		
Snow Skiing		

3. a. How many nights did members of your household **camp** last year? .....

   b. When was most of the camping done? .....Vacation trips

   .....Outings of a few days .....Weekend or overnight trips

   c. In what North Dakota state parks did your household camp during the past two years? .....

   .....

4. a. Do you own an outboard motor? Yes..... No..... Size: .....H.P.

   b. Do you own a boat? Yes..... No..... Size:.....Feet

5. Do you own a snowmobile? Yes..... No..... What proportions of its use are for:

   Recreation .....% Other uses *Specify*

   ....%

   ....%

6. Did any members of your household take bicycle trips last year exceeding 50 miles round trip: Yes..... No..... What was the longest trip taken? ..... miles

7. Did you pay the landowner a fee for hunting on his land? Yes..... No.....

8. If you are a farmer or rancher:

   a. Do you charge a fee for hunting? Yes..... No..... How much do you charge for hunting:

   Deer $..... Ducks and Geese $..... Small game $.....

   b. If you do not charge at present, do you expect to charge a fee? Yes..... No..... How much will you charge for hunting: Deer $..... Ducks and Geese $..... Small game $.....

APPENDIX B

CONTINUATIONS OF FIGURES 5 AND 6 IN TEXT

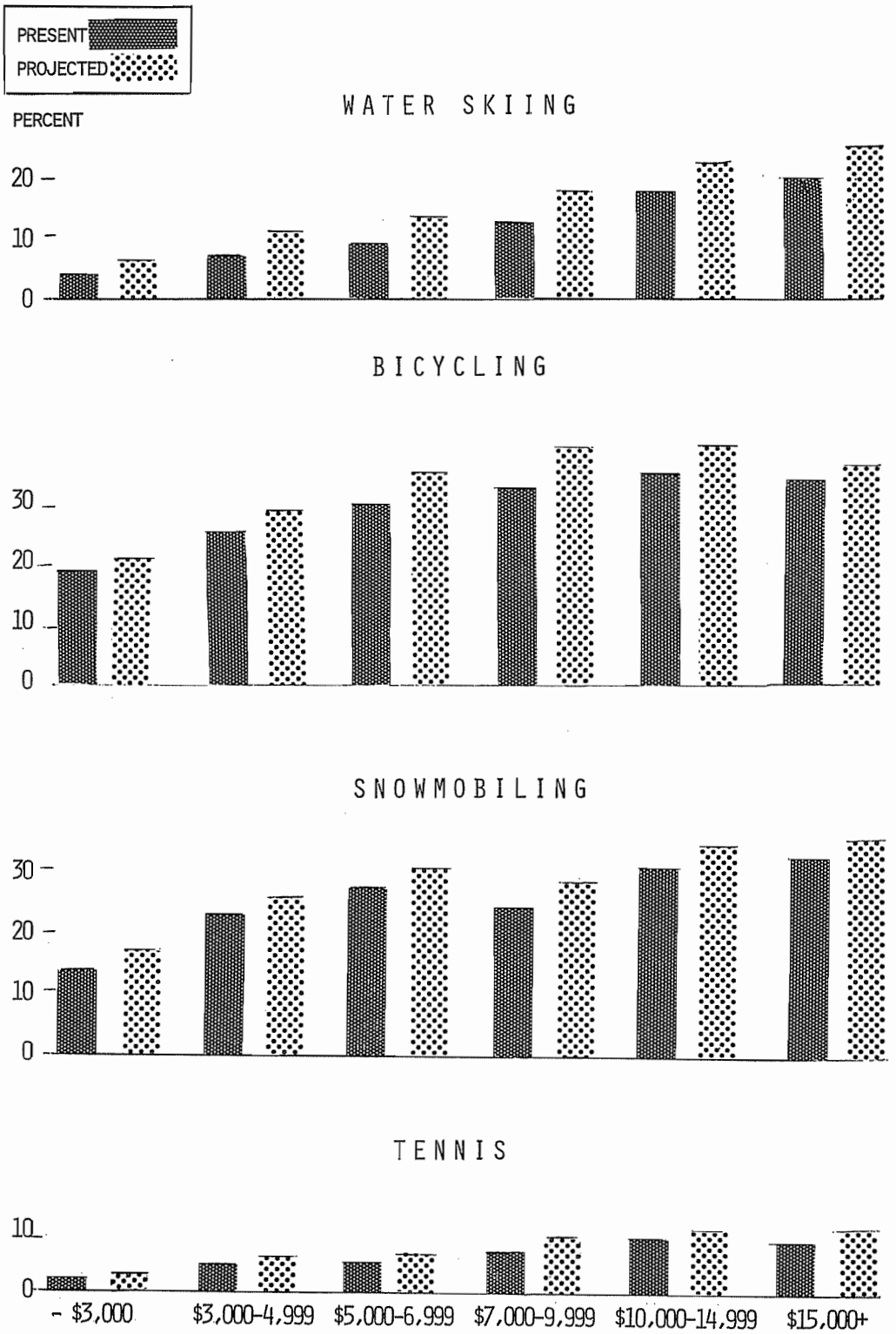


FIGURE B-1 PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING IN RECREATION ACTIVITIES BY INCOME, NORTH DAKOTA. (A CONTINUATION OF FIGURE 5 IN TEXT)

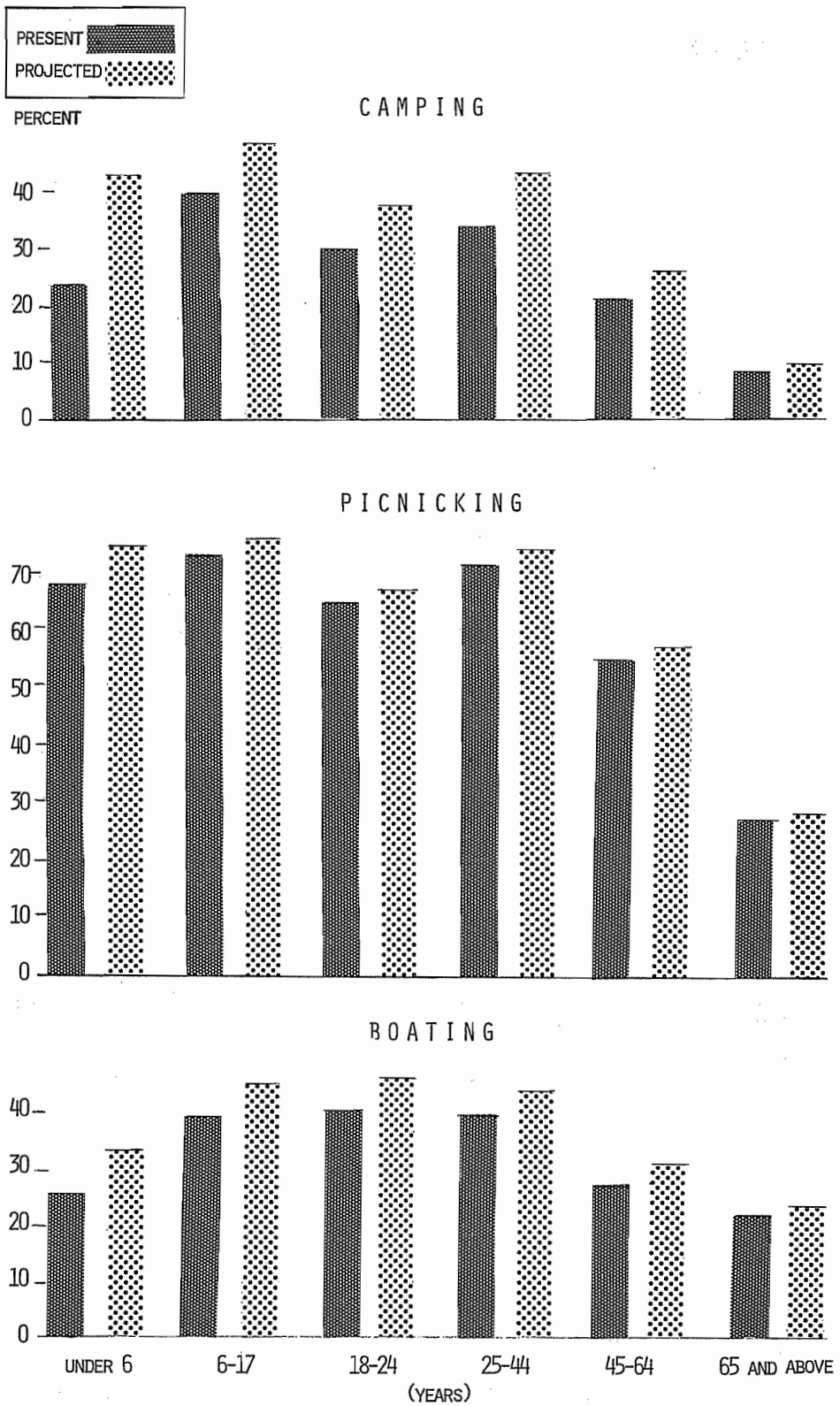


FIGURE B-2 PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING IN RECREATION ACTIVITIES BY AGE, NORTH DAKOTA.
(A CONTINUATION OF FIGURE 6 IN TEXT)

APPENDIX C

PRESENT AND PROJECTED PARTICIPATION IN ACTIVITIES BY REGION

TABLE C-1

PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING AND DAYS' PARTICIPATION IN SPECIFIED OUTDOOR RECREATION ACTIVITIES BY REGION, NORTH DAKOTA

RECREATION ACTIVITY AND REGION	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION						
				TOTAL					PER PARTICIPANT	
				PRESENT		PROJECTED				
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
HUNTING										
REGION 1	23.1	27.6	19.1	2,634	7.9	3,225	7.8	22.4	11.2	11.5
2	28.4	31.9	12.1	6,767	20.4	7,845	19.0	15.9	11.2	11.6
3	26.1	31.9	22.1	3,284	9.9	4,182	10.1	27.3	11.4	11.8
4	19.6	23.8	21.3	3,068	9.2	3,822	9.2	24.6	9.3	9.6
5	20.5	25.8	25.7	4,362	13.1	5,647	13.7	29.4	8.7	9.0
6	23.5	29.1	23.9	5,295	15.9	6,755	16.5	27.5	13.3	13.7
7	25.3	31.1	23.2	6,105	18.5	7,727	18.7	26.6	10.0	10.2
8	22.1	26.6	20.3	1,693	5.1	2,078	5.0	22.7	8.4	8.6
STATE	23.7	28.6	20.8	33,208	100.0	41,281	100.0	24.3	10.5	10.8
SUMMER FISHING										
REGION 1	49.7	53.3	8.5	5,264	9.1	5,921	8.6	12.5	10.4	10.8
2	46.4	53.2	14.5	10,463	18.1	12,312	17.9	17.7	10.6	10.9
3	49.0	57.4	15.8	4,289	7.4	5,147	7.5	20.0	7.8	8.1
4	42.2	48.5	14.8	6,281	10.9	7,443	10.8	18.5	8.9	9.2
5	38.2	45.6	19.3	7,666	13.2	9,564	13.9	24.7	8.3	8.6
6	43.3	50.5	16.8	7,096	12.3	8,596	12.5	21.1	9.7	10.1
7	52.1	59.4	13.9	13,767	23.8	16,250	23.6	18.1	10.9	11.3
8	38.6	45.2	17.0	2,987	5.2	3,618	5.2	21.1	8.5	8.8
STATE	45.0	51.9	15.2	57,833	100.0	68,852	100.0	19.0	9.6	9.9

- CONTINUED -

PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING AND DAYS' PARTICIPATION IN SPECIFIED OUTDOOR RECREATION ACTIVITIES BY REGION, NORTH DAKOTA
(CONTINUED)

RECREATION ACTIVITY AND REGION	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION						
				TOTAL					PER PARTICIPANT	
				PRESENT		PROJECTED				
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
WINTER FISHING										
REGION 1	9.6	10.2	14.1	813	11.2	941	9.2	15.7	8.8	9.0
2	9.7	12.7	31.2	1,247	17.1	1,666	16.3	33.6	6.1	6.2
3	11.5	15.2	31.2	647	8.9	850	8.3	31.4	5.1	5.1
4	3.9	6.3	61.5	352	4.8	569	5.6	63.9	5.4	5.5
5	5.5	8.9	63.6	780	10.8	1,381	13.6	77.0	5.8	6.4
6	10.5	14.2	34.8	1,300	17.9	1,778	17.5	36.8	7.3	7.4
7	9.8	13.9	41.6	1,804	24.8	2,521	24.7	39.7	7.6	7.6
8	5.5	8.2	50.0	326	4.5	490	4.8	50.4	6.5	6.5
STATE	8.2	11.3	39.0	7,269	100.0	10,196	100.0	40.3	6.7	6.7
BOATING										
REGION 1	27.8	31.4	12.7	2,337	6.3	2,734	6.3	17.0	8.2	8.5
2	37.1	40.6	9.4	6,980	18.9	7,848	18.0	12.5	8.8	9.1
3	39.0	44.7	14.6	3,872	10.5	4,879	11.2	26.0	9.0	9.5
4	32.5	37.5	15.4	4,872	13.2	5,660	13.0	16.2	8.9	9.0
5	34.2	39.7	16.1	7,713	20.9	9,173	21.0	18.9	9.3	9.5
6	30.7	35.0	13.9	3,450	9.3	3,971	9.1	15.1	6.6	6.7
7	30.8	35.6	15.4	6,439	17.4	7,611	17.3	18.2	8.6	8.6
8	19.8	27.0	36.5	1,288	3.5	1,794	4.1	39.2	7.1	7.3
STATE	32.3	37.1	14.9	36,951	100.0	43,670	100.0	18.2	8.5	8.8

- CONTINUED -

PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING AND DAYS' PARTICIPATION IN SPECIFIED OUTDOOR RECREATION ACTIVITIES BY REGION, NORTH DAKOTA
(CONTINUED)

RECREATION ACTIVITY AND REGION	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION						
				TOTAL					PER PARTICIPANT	
				PRESENT		PROJECTED				
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
WATER SKIING										
REGION 1	8.3	11.3	35.3	375	3.4	526	3.3	40.3	4.4	4.6
2	10.4	14.2	36.8	2,413	22.1	3,340	21.1	38.4	11.0	11.1
3	11.1	18.5	66.7	908	8.3	1,509	9.6	66.2	7.4	7.4
4	10.2	13.7	33.9	1,169	10.8	1,595	10.2	36.4	6.8	7.0
5	13.1	18.0	37.8	2,594	23.8	3,647	23.0	40.6	8.2	8.3
6	8.3	12.2	46.8	1,232	11.3	1,933	12.2	56.9	8.7	9.3
7	8.7	12.7	44.8	1,746	16.0	2,516	15.9	44.0	8.2	8.2
8	7.5	11.8	56.5	474	4.3	749	4.7	58.1	6.9	6.9
STATE	10.0	14.3	42.7	10,911	100.0	15,816	100.0	44.9	8.1	8.3
SWIMMING (POOLS)										
REGION 1	36.8	40.2	9.3	8,386	10.6	9,402	10.1	13.4	22.4	23.2
2	28.7	33.1	16.6	9,300	11.7	10,971	11.8	18.0	15.3	15.7
3	30.2	36.3	20.0	6,348	8.0	7,733	8.3	21.8	18.9	19.2
4	34.6	39.2	13.5	10,979	13.8	12,741	13.7	16.0	19.0	19.4
5	33.3	38.3	15.0	14,771	18.6	17,421	18.8	18.0	18.3	18.7
6	32.1	37.0	15.5	10,844	13.8	12,582	13.5	16.0	20.0	20.1
7	33.7	39.3	16.6	13,711	17.4	16,274	17.6	18.7	16.8	17.1
8	26.6	30.7	15.6	4,876	6.1	5,732	6.2	17.5	20.1	20.4
STATE	32.2	37.1	15.2	79,215	100.0	92,855	100.0	17.2	18.4	18.7

- CONTINUED -

PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING AND DAYS' PARTICIPATION IN SPECIFIED OUTDOOR RECREATION ACTIVITIES BY REGION, NORTH DAKOTA (CONTINUED)

RECREATION ACTIVITY AND REGION	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION						
				TOTAL					PER PARTICIPANT	
				PRESENT		PROJECTED				
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
SWIMMING (OTHER AREAS)										
REGION 1	26.5	27.3	3.3	2,030	6.1	2,156	5.9	6.2	7.5	7.7
2	26.2	27.7	5.8	4,547	13.7	4,940	13.4	8.7	8.2	8.4
3	32.4	35.9	10.9	3,714	11.2	4,221	11.5	13.6	10.3	10.6
4	28.3	31.6	11.6	4,261	12.9	4,865	13.2	14.2	9.0	9.2
5	32.4	34.7	7.0	7,655	23.2	8,364	22.7	9.3	9.7	99.9
6	26.9	29.2	8.8	3,735	11.4	4,137	11.2	10.8	8.2	8.4
7	28.4	31.4	10.6	5,633	17.0	6,313	17.2	12.1	8.2	8.3
8	20.7	24.4	18.0	1,480	4.5	1,788	4.9	20.8	7.8	8.0
STATE	28.2	30.7	8.9	33,054	100.0	36,786	100.0	11.3	8.7	8.9
CAMPING										
REGION 1	36.1	41.5	14.9	3,068	8.9	3,608	8.0	18.6	8.3	8.5
2	31.7	38.1	20.0	6,171	18.0	7,522	16.7	21.9	9.2	9.3
3	31.2	39.8	27.4	2,553	7.4	3,384	7.5	32.6	7.4	7.7
4	26.6	34.1	28.2	4,998	14.6	6,577	14.6	31.6	11.2	11.5
5	21.2	30.9	45.8	4,421	12.9	6,565	14.5	48.5	8.6	8.7
6	23.3	31.4	34.5	3,571	10.5	4,857	10.8	36.0	9.1	9.2
7	35.7	45.9	28.6	7,789	22.7	10,345	22.9	32.3	9.0	9.3
8	29.1	36.9	26.7	1,717	5.0	2,278	5.0	32.7	6.4	6.8
STATE	28.9	37.2	28.4	34,288	100.0	45,136	100.0	31.6	8.8	9.1

- CONTINUED -

PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING AND DAYS' PARTICIPATION IN SPECIFIED OUTDOOR RECREATION ACTIVITIES BY REGION, NORTH DAKOTA (CONTINUED)

RECREATION ACTIVITY AND REGION	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION						
				TOTAL					PER PARTICIPANT	
				PRESENT		PROJECTED				
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
PICNICKING										
REGION 1	64.4	66.5	3.2	4,776	9.2	5,049	9.1	5.7	7.3	7.4
2	63.0	65.2	3.4	8,370	16.1	8,859	16.0	5.9	6.2	6.4
3	63.9	66.0	3.2	4,753	9.1	5,028	9.1	5.8	6.7	6.9
4	58.3	60.4	3.5	6,166	11.9	6,599	11.9	7.0	6.3	6.5
5	59.1	61.0	3.2	7,307	14.0	7,733	14.0	5.8	5.1	5.2
6	67.5	70.1	3.8	7,016	13.5	7,460	13.5	6.3	6.1	6.3
7	68.2	71.1	4.2	10,735	20.6	11,507	20.7	7.2	6.5	6.7
8	61.2	64.4	5.4	2,895	5.6	3,155	5.7	9.0	5.2	5.4
STATE	63.3	65.6	3.7	52,018	100.0	55,391	100.0	6.5	6.1	6.3
WALKING, ETC.										
REGION 1	31.7	33.2	4.9	3,363	4.3	3,627	4.2	7.8	10.4	10.7
2	24.2	26.0	7.6	10,550	13.6	11,581	13.4	9.8	20.5	20.9
3	26.5	29.1	9.5	4,539	5.9	5,041	5.8	11.0	15.4	15.6
4	30.1	33.4	11.1	9,667	12.5	11,104	12.8	14.9	19.2	19.8
5	28.1	31.2	11.0	16,258	21.0	18,513	21.4	13.9	23.8	24.4
6	29.8	31.9	6.7	16,305	21.1	17,790	20.5	9.1	32.4	33.1
7	27.7	31.3	12.6	12,990	16.8	15,041	17.3	15.8	19.3	19.9
8	24.4	25.6	4.9	3,686	4.8	3,971	4.6	7.7	16.5	17.0
STATE	27.8	30.4	9.3	77,358	100.0	86,668	100.0	12.0	20.8	21.3

- CONTINUED -

PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING AND DAYS' PARTICIPATION IN SPECIFIED OUTDOOR RECREATION ACTIVITIES BY REGION, NORTH DAKOTA
(CONTINUED)

RECREATION ACTIVITY AND REGION	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION						
				TOTAL					PER PARTICIPANT	
				PRESENT		PROJECTED				
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
BICYCLING										
REGION 1	32.8	35.4	7.8	13,739	8.8	15,120	8.3	10.0	41.6	41.9
2	23.8	26.7	12.2	21,343	13.7	24,365	13.5	14.2	42.2	42.9
3	30.0	33.7	12.3	12,422	8.0	14,281	7.9	15.0	37.4	38.3
4	31.1	35.8	15.0	24,643	15.8	29,033	16.0	17.8	47.3	48.5
5	28.9	34.1	18.0	27,031	17.5	32,495	18.0	20.2	38.6	39.3
6	31.0	35.9	14.5	20,586	13.3	24,306	13.5	18.0	39.3	40.1
7	27.2	31.0	14.0	27,524	17.7	31,757	17.5	15.4	41.8	42.3
8	25.7	29.5	14.9	8,163	5.2	9,566	5.3	17.2	34.7	35.4
STATE	28.5	32.6	14.2	155,451	100.0	180,924	100.0	16.4	40.8	41.5
ICE SKATING										
REGION 1	27.6	29.1	5.7	2,706	9.1	2,901	8.3	7.2	9.6	9.8
2	19.3	21.4	11.2	3,947	13.3	4,487	12.8	13.7	9.7	9.9
3	16.0	19.8	23.7	1,546	5.2	1,971	5.6	27.5	8.7	9.0
4	20.4	24.0	17.9	6,305	21.3	7,447	21.3	18.1	18.5	18.5
5	16.9	20.4	21.0	5,425	18.4	6,718	19.2	23.9	13.2	13.6
6	19.5	22.5	15.1	3,488	11.8	4,116	11.8	18.0	10.6	10.8
7	19.8	22.9	15.4	5,245	17.7	6,198	17.7	18.2	10.9	11.2
8	15.7	19.4	23.8	942	3.2	1,176	3.3	24.8	6.6	6.6
STATE	19.2	22.3	15.9	29,604	100.0	35,013	100.0	18.3	11.5	11.7

- CONTINUED -

PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING AND DAYS' PARTICIPATION IN SPECIFIED OUTDOOR RECREATION ACTIVITIES BY REGION, NORTH DAKOTA
(CONTINUED)

RECREATION ACTIVITY AND REGION	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION						
				TOTAL					PER PARTICIPANT	
				PRESENT		PROJECTED				
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
SNOW SKIING										
REGION 1	7.5	8.2	10.5	666	9.1	753	7.8	13.2	8.8	9.0
2	7.8	10.0	27.7	1,309	17.9	1,659	17.2	26.7	7.9	7.9
3	9.6	12.4	29.2	892	12.2	1,168	12.2	31.0	8.4	8.5
4	6.5	8.9	36.7	1,023	14.0	1,478	15.4	44.4	9.4	9.9
5	7.4	10.2	39.1	1,232	16.9	1,739	18.0	41.2	6.9	7.0
6	5.4	7.1	31.9	585	8.0	770	8.0	31.6	6.4	6.4
7	4.9	6.2	26.9	643	8.8	836	8.7	30.1	5.4	5.5
8	5.0	6.4	26.1	954	13.1	1,225	12.7	28.4	20.7	18.1
STATE	6.7	8.7	30.0	7,304	100.0	9,631	100.0	31.9	8.2	8.3
SNOWMOBILING										
REGION 1	25.0	27.9	11.8	2,374	4.5	2,746	4.4	15.7	9.3	9.6
2	30.4	33.7	10.8	13,124	24.9	15,090	24.4	15.0	20.3	21.1
3	31.4	35.6	13.5	6,167	11.7	7,355	11.9	19.2	17.7	18.6
4	27.2	30.8	13.1	8,122	15.3	9,499	15.4	16.9	17.8	18.4
5	24.7	28.9	17.0	10,020	19.0	11,676	18.8	16.5	16.7	16.7
6	18.8	21.7	15.4	4,249	8.0	5,034	8.1	18.5	13.4	13.7
7	17.6	20.4	15.7	5,153	9.8	6,156	9.9	19.5	12.1	12.5
8	21.0	24.7	17.7	3,575	6.8	4,380	7.1	22.5	18.6	19.3
STATE	24.2	27.7	14.2	52,784	100.0	61,937	100.0	17.3	16.3	16.7

- CONTINUED -

PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING AND DAYS' PARTICIPATION IN SPECIFIED OUTDOOR RECREATION ACTIVITIES BY REGION, NORTH DAKOTA (CONTINUED)

RECREATION ACTIVITY AND REGION	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION						
				TOTAL					PER PARTICIPANT	
				PRESENT		PROJECTED				
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
GOLF										
REGION 1	11.2	13.2	18.4	1,916	6.8	2,347	6.3	22.5	16.8	17.4
2	12.1	14.3	18.4	5,371	19.1	6,488	17.5	20.8	21.0	21.4
3	11.3	13.9	23.2	2,582	9.2	3,254	8.8	26.0	20.7	21.1
4	14.2	17.9	26.1	5,112	18.1	6,707	18.1	31.2	21.6	22.4
5	13.7	18.4	34.6	5,962	21.2	8,166	22.0	37.0	18.0	18.3
6	9.4	13.6	44.9	2,860	10.1	4,244	11.4	48.4	18.1	18.5
7	7.8	10.5	33.2	3,485	12.4	4,775	12.9	37.0	18.3	18.9
8	6.7	8.1	21.3	882	3.1	1,100	3.0	24.7	14.5	14.9
STATE	11.0	14.2	28.6	28,170	100.0	37,081	100.0	31.6	19.1	19.6
TENNIS										
REGION 1	9.0	9.4	4.3	889	11.2	938	8.7	5.5	9.7	9.8
2	5.1	6.5	25.7	688	8.7	868	8.2	26.1	6.3	6.3
3	3.1	4.3	41.2	480	6.1	874	8.3	82.2	14.1	18.2
4	8.0	10.2	27.6	1,821	23.1	2,317	21.6	27.3	13.6	13.5
5	6.3	8.2	28.6	1,467	18.6	1,948	18.2	32.8	9.5	9.8
6	5.9	8.8	49.5	1,036	13.1	1,570	14.6	32.0	10.5	10.6
7	5.7	7.1	25.5	1,432	18.1	2,029	18.9	41.7	10.5	10.8
8	1.2	2.2	81.8	83	1.1	165	1.5	98.4	7.6	8.2
STATE	5.8	7.4	28.6	7,896	100.0	10,710	100.0	35.6	10.3	10.8

- CONTINUED -

PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING AND DAYS' PARTICIPATION IN SPECIFIED OUTDOOR RECREATION ACTIVITIES BY REGION, NORTH DAKOTA
(CONTINUED)

RECREATION ACTIVITY AND REGION	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION						
				TOTAL					PER PARTICIPANT	
				PRESENT		PROJECTED				
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
BASEBALL-SOFTBALL										
REGION 1	18.1	20.3	11.9	3,233	7.0	3,683	6.9	13.9	17.5	17.8
2	18.6	21.0	12.6	7,113	15.4	8,244	15.4	15.9	18.0	18.5
3	19.2	21.8	13.6	4,376	9.5	5,066	9.5	15.8	20.5	20.9
4	16.7	19.7	17.8	5,429	11.7	6,477	12.1	19.3	19.4	19.6
5	18.4	21.3	15.9	6,863	14.8	8,157	15.3	18.6	15.4	15.7
6	25.4	28.7	12.8	6,979	15.2	8,069	15.1	15.6	16.2	16.6
7	20.2	22.3	10.9	8,644	18.7	9,778	18.3	13.1	17.7	18.1
8	21.1	23.3	10.4	3,555	7.7	3,963	7.4	11.5	18.4	18.6
STATE	19.7	22.3	13.3	46,192	100.0	53,438	100.0	15.7	17.6	17.9
HORSEBACK RIDING										
REGION 1	1.8	1.9	5.6	598	4.7	621	4.6	3.8	33.2	33.2
2	3.7	3.7	0.0	1,995	15.7	2,034	15.0	2.0	25.6	26.1
3	0.8	0.9	11.1	207	1.7	237	1.7	14.4	23.0	23.7
4	1.6	1.7	3.8	351	2.8	362	2.7	3.1	13.5	13.5
5	2.3	2.5	7.1	1,075	8.5	1,220	9.0	13.5	19.2	20.3
6	2.5	2.7	7.1	1,365	10.8	1,523	11.2	11.6	32.5	33.8
7	5.7	6.3	10.1	4,763	37.6	5,225	38.4	9.7	34.5	34.5
8	5.5	5.5	0.0	2,310	18.2	2,363	17.4	2.3	46.2	47.3
STATE	3.1	3.3	5.7	12,664	100.0	13,586	100.0	7.3	30.4	30.8

- CONTINUED -

PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING AND DAYS' PARTICIPATION IN SPECIFIED OUTDOOR RECREATION ACTIVITIES BY REGION, NORTH DAKOTA
(CONTINUED)

RECREATION ACTIVITY AND REGION	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION						
				TOTAL					PER PARTICIPANT	
				PRESENT		PROJECTED				
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
FOOTBALL										
REGION 1	0.7	1.0	42.8	379	11.2	514	13.6	35.6	54.1	54.4
2	1.5	1.8	25.8	695	20.5	881	23.3	26.8	22.4	22.6
3	0.7	0.7	0.0	305	9.0	305	8.1	0.0	38.1	38.1
4	1.2	1.2	0.0	689	20.3	698	18.5	1.3	34.5	34.9
5	0.5	0.6	7.7	364	10.7	393	10.5	8.0	28.0	28.1
6	0.7	0.7	0.0	187	5.5	189	5.0	1.1	15.6	15.7
7	0.7	0.7	0.0	625	18.4	648	17.1	3.7	36.8	38.1
8	0.8	0.8	0.0	148	4.4	149	3.9	0.9	21.1	21.3
STATE	0.9	1.0	10.4	3,392	100.0	3,777	100.0	11.4	29.5	29.7
BADMINTON										
REGION 1	0.9	0.9	0.0	137	5.9	137	5.9	0.0	15.2	15.2
2	0.4	0.4	0.0	238	10.4	238	10.2	0.0	26.4	26.4
3	1.1	1.1	0.0	175	7.7	175	7.5	0.0	14.6	14.6
4	1.9	1.9	0.0	537	23.3	549	23.6	2.3	16.8	17.2
5	0.9	1.0	4.8	264	11.4	270	11.7	2.1	12.6	12.6
6	0.2	0.2	0.0	31	1.3	31	1.3	0.0	10.3	10.3
7	1.5	1.6	8.3	915	39.7	918	39.5	0.3	25.3	25.3
8	0.2	0.2	0.0	8	0.3	8	0.3	0.0	4.0	4.0
STATE	0.9	1.0	4.8	2,305	100.0	2,326	100.0	0.9	18.6	18.6

- CONTINUED -

PRESENT AND PROJECTED PROPORTIONS OF PERSONS PARTICIPATING AND DAYS' PARTICIPATION IN SPECIFIED OUTDOOR RECREATION ACTIVITIES BY REGION, NORTH DAKOTA (CONTINUED)

RECREATION ACTIVITY AND REGION	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION						
				TOTAL					PER PARTICIPANT	
				PRESENT		PROJECTED				
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	NUMBER	PERCENT OF TOTAL	NUMBER	PERCENT OF TOTAL	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
ARCHERY										
REGION 1	0.2	0.2	0.0	55	8.4	55	7.8	0.0	27.5	27.5
2	0.2	0.2	0.0	13	2.0	14	2.0	8.5	3.3	3.5
3	0.0	0.2		0	0.0				0.0	
4	0.1	0.1	0.0	95	14.5	100	14.3	5.2	47.5	50.0
5	0.3	0.3	0.0	224	34.0	236	33.7	5.4	37.3	39.4
6	0.0	0.0	0.0	0	0.0	0	0.0	0.0	0.0	0.0
7	0.3	0.5	50.0	147	22.3	171	24.3	16.2	18.4	18.4
8	0.7	0.7	0.0	124	18.8	126	17.9	2.0	20.7	21.0
STATE	0.2	0.3	21.4	658	100.0	841	100.0	6.8	23.5	24.7
HORSESHOES										
REGION 1	1.1	1.1	0.0	172	11.9	172	11.4	0.0	15.6	15.6
2	0.4	0.5	11.1	99	6.9	100	6.6	0.7	11.0	11.0
3	0.8	0.8	0.0	55	3.8	55	3.7	0.0	6.1	6.1
4	0.7	0.7	0.0	153	10.7	153	10.3	0.0	12.8	12.8
5	0.1	0.1	0.0	301	20.9	315	20.9	4.6	12.5	13.1
6	0.7	0.8	8.3	210	14.6	243	16.1	15.7	17.5	18.7
7	1.1	1.2	3.7	449	31.2	467	31.0	6.7	16.6	17.1
8	0.0	0.0	0.0	0	0.0	0	0.0	0.0	0.0	0.0
STATE	0.8	0.8	2.9	1,439	100.0	1,505	100.0	4.6	13.8	14.1

APPENDIX D

PRESENT AND PROJECTED PARTICIPATION IN ACTIVITIES BY REGION AND RESIDENCE

The following tables provide a breakdown by region and residence of the present and projected proportions of persons participating and days' participation for the following outdoor recreation activities: hunting, summer and winter fishing, boating, water skiing, camping, and golf. These activities are among those in which participation may be particularly influenced by income and age.

TABLE D-1 PRESENT AND PROJECTED PROPORTIONS AND DAYS' PARTICIPATION IN SPECIFIED RECREATION ACTIVITIES BY REGION AND RESIDENCE. NORTH DAKOTA (CONT)

RECREATION ACTIVITY BY REGION AND RESIDENCE	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION				
				TOTAL			PER PARTICIPANT	
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
REGION 5								
FARM	23.4	28.6	24.8	1,420	1,816	27.9	8.0	8.2
LESS THAN 2,500	21.0	29.2	25.6	1,008	1,305	29.5	8.6	8.9
2,500-14,999	21.9	25.7	17.1	3,711	451	21.5	9.0	9.4
15,000 AND ABOVE	17.7	22.7	28.6	1,563	2,075	32.8	9.5	9.8
STATE	20.5	25.8	25.7	4,362	5,647	29.4	8.7	9.0
REGION 6								
FARM	24.2	29.2	20.8	2,432	3,035	24.8	14.1	14.5
LESS THAN 2,500	26.9	32.6	21.0	2,054	2,571	25.2	13.1	13.5
2,500-14,999	24.9	19.9	68.0	359	585	63.0	14.2	14.5
15,000 AND ABOVE	23.5	30.2	21.4	450	564	25.2	10.7	11.1
STATE	23.5	29.1	23.9	5,295	6,755	27.5	13.3	13.7
REGION 7								
FARM	28.3	35.3	24.7	2,115	2,373	12.2	9.3	9.4
LESS THAN 2,500	26.4	30.3	14.7	2,002	2,699	34.8	10.9	12.8
2,500-14,999	18.9	25.6	35.9	410	576	40.4	8.6	8.3
15,000 AND ABOVE	23.0	29.3	27.3	1,578	2,079	31.7	10.5	10.9
STATE	25.3	31.1	23.2	6,105	7,727	26.6	10.0	10.2
REGION 8								
FARM	23.9	28.2	18.0	754	913	21.1	6.6	7.0
LESS THAN 2,500	22.1	28.9	22.1	818	1,033	26.3	9.5	9.8
2,500-14,999	8.4	11.9	14.0	121	132	9.0	24.2	25.0
15,000 AND ABOVE								
STATE	22.1	26.6	20.3	1,693	2,078	22.7	8.4	8.6

- CONTINUED -

TABLE D-1 PRESENT AND PROJECTED PROPORTIONS AND DAYS' PARTICIPATION IN SPECIFIED RECREATION ACTIVITIES BY REGION AND RESIDENCE, NORTH DAKOTA

RECREATION ACTIVITY BY REGION AND RESIDENCE	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION				
				TOTAL			PER PARTICIPANT	
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
HUNTING								
REGION 1								
FARM	23.2	25.2	13.7	749	865	15.6	10.2	10.4
LESS THAN 2,500	29.2	31.9	9.5	790	896	13.5	12.5	13.0
2,500-14,999	21.1	27.2	11.9	1,095	1,463	83.6	10.9	11.3
15,000 AND ABOVE								
STATE	23.1	27.6	19.1	2,634	3,225	22.4	11.2	11.5
REGION 2								
FARM	28.3	32.1	10.4	2,296	2,617	14.0	9.6	9.9
LESS THAN 2,500	32.7	36.7	12.2	2,420	2,794	15.5	12.7	13.1
2,500-14,999	32.3	37.2	15.2	329	3,914	20.0	10.0	10.3
15,000 AND ABOVE	23.8	27.2	14.2	1,722	2,040	18.4	12.2	12.7
STATE	28.4	31.9	12.1	6,767	7,845	15.9	11.2	11.6
REGION 3								
FARM	27.3	33.1	21.3	1,666	2,068	24.1	3.2	12.1
LESS THAN 2,500	25.6	30.0	16.9	1,334	1,606	20.4	2.8	11.1
2,500-14,999	22.4	34.6	54.4	284	508	79.0	11.8	13.7
15,000 AND ABOVE								
STATE	26.1	31.9	22.1	3,284	4,182	27.3	11.4	11.8
REGION 4								
FARM	15.7	22.0	39.1	567	813	43.3	8.2	9.5
LESS THAN 2,500	21.1	24.8	17.6	1,071	1,296	21.0	11.8	12.1
2,500-14,999	20.3	24.8	24.8	311	395	26.7	11.5	11.9
15,000 AND ABOVE	21.1	24.2	14.8	1,119	1,318	17.9	7.9	8.1
STATE	19.6	23.8	21.3	3,068	3,822	24.6	9.3	9.6

- CONTINUED -

TABLE D-1 PRESENT AND PROJECTED PROPORTIONS AND DAYS' PARTICIPATION IN SPECIFIED RECREATION ACTIVITIES BY REGION AND RESIDENCE, NORTH DAKOTA (CONT)

RECREATION ACTIVITY BY REGION AND RESIDENCE	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION				
				TOTAL			PER PARTICIPANT	
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
SUMMER FISHING								
REGION 1								
FARM	45.5	48.6	6.7	1,352	1,497	10.7	9.0	9.4
LESS THAN 2,500	47.2	50.9	7.8	1,120	1,258	12.3	10.1	11.4
2,500-14,999	53.7	58.9	9.8	2,792	3,166	13.4	10.9	11.2
15,000 AND ABOVE								
STATE	49.7	53.3	8.5	5,264	5,921	12.5	10.4	10.8
REGION 2								
FARM	42.3	50.3	18.9	3,372	4,132	22.5	9.4	9.7
LESS THAN 2,500	56.3	60.4	7.3	3,542	3,909	10.4	10.8	11.1
2,500-14,999	48.5	61.6	27.0	469	611	30.1	9.8	10.0
15,000 AND ABOVE	42.6	49.0	15.1	3,080	3,660	18.8	12.2	12.6
STATE	46.4	53.2	14.5	10,463	12,312	17.7	10.6	10.9
REGION 3								
FARM	52.2	59.4	13.7	1,891	2,225	17.7	7.0	7.2
LESS THAN 2,500	46.7	55.6	19.0	1,820	2,242	23.2	8.1	8.3
2,500-14,999	49.5	56.1	13.2	578	681	17.8	10.9	11.4
15,000 AND ABOVE								
STATE	49.0	57.4	15.8	4,289	5,147	20.0	7.8	8.1
REGION 4								
FARM	33.4	41.9	25.3	898	1,167	30.0	6.2	6.4
LESS THAN 2,500	40.4	46.9	16.1	1,554	1,872	20.5	8.9	9.3
2,500-14,999	50.4	57.9	19.9	688	847	23.1	10.3	11.0
15,000 AND ABOVE	47.5	81.9	9.4	3,141	3,556	13.2	9.8	10.2
STATE	42.2	48.5	14.8	6,281	7,443	18.5	8.9	9.2

- CONTINUED -

TABLE D-1 PRESENT AND PROJECTED PROPORTIONS AND DAYS' PARTICIPATION IN SPECIFIED RECREATION ACTIVITIES BY REGION AND RESIDENCE, NORTH DAKOTA (CONT)

RECREATION ACTIVITY BY REGION AND RESIDENCE	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION				
				TOTAL			PER PARTICIPANT	
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
REGION 5								
FARM	39.0	43.9	12.5	1,607	1,884	17.2	5.5	5.7
LESS THAN 2,500	36.5	44.7	22.7	2,255	2,848	26.3	11.1	11.4
2,500-14,999	38.5	44.9	16.7	561	667	18.8	7.8	7.9
15,000 AND ABOVE	38.6	47.6	23.5	3,263	4,165	27.7	9.1	9.4
STATE	38.2	45.6	19.3	7,666	9,564	24.7	8.3	8.6
REGION 6								
FARM	42.2	49.3	16.9	2,180	2,625	20.4	7.2	7.4
LESS THAN 2,500	47.0	51.8	10.2	3,055	3,509	14.9	11.2	11.6
2,500-14,999	39.6	49.5	25.0	1,056	1,353	28.2	12.0	12.3
15,000 AND ABOVE	39.1	52.1	33.3	805	1,109	37.7	12.2	12.6
STATE	43.3	50.5	16.8	7,096	8,596	21.1	9.7	10.1
REGION 7								
FARM	50.0	55.6	11.2	4,043	4,662	15.3	10.1	10.5
LESS THAN 2,500	52.7	58.3	10.6	4,188	4,786	14.3	11.4	11.8
2,500-14,999	59.8	68.9	17.0	2,130	2,571	20.7	13.4	13.9
15,000 AND ABOVE	51.3	61.3	19.4	3,406	4,232	24.2	10.2	10.6
STATE	52.1	59.4	13.9	13,767	16,250	18.1	10.9	11.3
REGION 8								
FARM	34.4	41.7	21.2	1,245	1,556	25.0	7.8	8.0
LESS THAN 2,500	45.1	51.8	14.8	1,615	1,926	19.3	9.2	9.5
2,500-14,999	28.8	28.8	0.0	127	136	7.1	7.5	8.0
15,000 AND ABOVE								
STATE	38.6	45.2	17.0	2,987	3,618	21.1	8.5	8.8

- CONTINUED -

TABLE D-1 PRESENT AND PROJECTED PROPORTIONS AND DAYS' PARTICIPATION IN SPECIFIED RECREATION ACTIVITIES BY REGION AND RESIDENCE, NORTH DAKOTA (CONT)

RECREATION ACTIVITY BY REGION AND RESIDENCE	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION				
				TOTAL			PER PARTICIPANT	
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
WINTER FISHING								
REGION 1								
FARM	7.3	9.1	25.0	147	190	29.6	6.1	6.4
LESS THAN 2,500	8.8	9.3	5.3	208	230	10.5	11.0	11.5
2,500-14,999	10.3	11.6	12.2	458	521	13.7	9.3	9.4
15,000 AND ABOVE								
STATE	9.6	10.2	14.1	813	941	15.7	8.8	9.0
REGION 2								
FARM	9.7	12.5	29.3	450	593	31.8	5.2	5.6
LESS THAN 2,500	7.6	10.0	31.8	315	419	33.0	7.2	7.2
2,500-14,999	15.7	17.6	12.5	99	114	15.7	6.2	6.3
15,000 AND ABOVE	10.6	14.7	38.1	383	540	40.9	6.1	6.2
STATE	9.7	12.7	31.2	1,247	1,666	33.6	6.1	6.2
REGION 3								
FARM	12.6	14.7	16.9	402	479	19.2	6.2	6.3
LESS THAN 2,500	11.2	15.9	42.6	204	297	45.7	3.8	3.9
2,500-14,999	8.4	14.0	66.7	41	74	78.0	4.6	4.9
15,000 AND ABOVE								
STATE	11.5	15.2	31.2	647	850	31.4	5.1	5.1
REGION 4								
FARM	1.6	3.2	100.0	14	29	104.3	2.0	2.0
LESS THAN 2,500	5.3	9.5	78.3	171	307	79.5	7.4	7.5
2,500-14,999	1.5	3.8	150.0	3	8	166.6	1.5	1.6
15,000 AND ABOVE	4.9	6.7	36.4	164	225	37.0	5.0	5.0
STATE	3.9	6.3	61.5	352	569	63.9	5.4	5.5

TABLE D-1 PRESENT AND PROJECTED PROPORTIONS AND DAYS' PARTICIPATION IN SPECIFIED RECREATION ACTIVITIES BY REGION AND RESIDENCE, NORTH DAKOTA (CONT)

RECREATION ACTIVITY BY REGION AND RESIDENCE	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION				
				TOTAL			PER PARTICIPANT	
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
REGION 5								
FARM	6.8	9.1	43.1	331	483	45.9	6.5	6.6
LESS THAN 2,500	5.9	8.4	42.4	147	214	45.4	4.5	4.5
2,500-14,999	4.2	9.8	112.5	78	257	229.4	9.7	15.1
15,000 AND ABOVE	4.5	8.5	88.1	224	427	90.7	5.3	5.4
STATE	5.5	8.9	63.6	780	1,381	77.0	5.8	6.4
REGION 6								
FARM	11.9	15.2	28.2	620	807	30.2	7.3	7.4
LESS THAN 2,500	10.1	14.1	39.0	378	537	42.2	6.4	6.6
2,500-14,999	8.1	10.8	33.3	188	251	33.5	10.4	10.5
15,000 AND ABOVE	9.5	14.8	56.2	114	182	60.0	7.1	7.3
STATE	10.5	14.2	34.8	1,300	1,778	36.8	7.3	7.4
REGION 7								
FARM	10.5	14.3	36.9	628	879	40.0	7.5	7.6
LESS THAN 2,500	9.6	14.5	50.7	607	833	37.2	9.1	9.2
2,500-14,999	8.9	13.3	50.0	95	147	54.7	4.0	4.1
15,000 AND ABOVE	9.7	13.0	34.9	474	662	39.7	7.5	7.8
STATE	9.8	13.9	41.6	1,804	2,521	39.7	7.6	7.8
REGION 8								
FARM	4.5	5.5	23.8	148	184	24.3	7.1	7.1
LESS THAN 2,500	7.2	12.3	71.4	175	303	73.2	6.3	6.3
2,500-14,999	1.7	1.7	0.0	3	3	0.0	3.0	3.0
15,000 AND ABOVE								
STATE	5.5	8.2	50.0	326	490	50.4	6.5	6.5

- CONTINUED -

TABLE D-1 PRESENT AND PROJECTED PROPORTIONS AND DAYS' PARTICIPATION IN SPECIFIED RECREATION ACTIVITIES BY REGION AND RESIDENCE, NORTH DAKOTA (CONT)

RECREATION ACTIVITY BY REGION AND RESIDENCE	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION				
				TOTAL			PER PARTICIPANT	
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
BOATING								
REGION 1								
FARM	27.4	28.6	4.4	668	715	7.1	7.4	7.6
LESS THAN 2,500	13.9	17.6	26.7	208	270	30.0	6.9	7.1
2,500-14,999	34.5	39.6	14.6	1,461	1,749	19.6	8.9	9.3
15,000 AND ABOVE								
STATE	27.8	31.4	12.7	2,337	2,734	17.0	8.2	8.5
REGION 2								
FARM	38.3	42.9	7.1	2,254	2,486	10.3	6.9	7.1
LESS THAN 2,500	41.8	41.0	9.5	2,348	2,629	12.0	9.7	9.9
2,500-14,999	52.5	52.5	0.0	774	809	4.6	14.9	15.6
15,000 AND ABOVE	28.5	0.0	16.6	1,604	1,924	19.9	9.5	9.8
STATE	37.1	40.6	9.4	6,980	7,848	12.5	8.8	9.1
REGION 3								
FARM	35.4	41.4	16.9	1,280	1,537	20.1	7.0	7.2
LESS THAN 2,500	39.0	44.6	14.3	2,112	2,497	18.2	11.2	11.6
2,500-14,999	56.1	60.7	8.3	480	845	75.8	8.0	13.3
15,000 AND ABOVE								
STATE	39.0	44.7	14.6	3,872	4,879	26.0	9.0	9.5
REGION 4								
FARM	22.2	28.6	28.9	309	409	32.3	3.2	3.3
LESS THAN 2,500	26.9	32.0	19.0	709	867	22.2	6.1	6.3
2,500-14,999	43.6	47.4	8.6	812	924	13.8	14.0	14.6
15,000 AND ABOVE	40.6	44.9	10.6	3,043	3,460	13.7	11.1	11.4
STATE	32.5	37.5	15.4	4,872	5,660	16.2	8.9	9.0

- CONTINUED -

TABLE D-1 PRESENT AND PROJECTED PROPORTIONS AND DAYS' PARTICIPATION IN SPECIFIED RECREATION ACTIVITIES BY REGION AND RESIDENCE, NORTH DAKOTA (CONT)

RECREATION ACTIVITY BY REGION AND RESIDENCE	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION				
				TOTAL			PER PARTICIPANT	
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
REGION 5								
FARM	27.9	31.7	13.7	1,187	1,384	16.6	5.6	5.8
LESS THAN 2,500	30.5	38.4	25.9	1,494	1,921	28.6	8.8	9.0
2,500-14,999	35.3	39.6	12.1	469	534	13.8	7.1	7.2
15,000 AND ABOVE	41.3	47.0	13.8	4,563	5,334	16.9	11.9	12.2
STATE	34.2	39.7	16.1	7,713	9,173	18.9	9.3	9.5
REGION 6								
FARM	28.2	34.1	20.8	879	1,087	23.7	4.3	4.4
LESS THAN 2,500	33.1	36.9	11.4	1,689	1,926	14.0	8.7	9.0
2,500-14,999	27.4	29.7	8.1	304	338	11.2	5.0	5.1
15,000 AND ABOVE	37.3	39.0	4.8	578	620	7.0	9.2	9.4
STATE	30.7	35.0	13.9	3,450	3,971	15.1	6.6	6.7
REGION 7								
FARM	19.8	26.6	34.0	1,261	1,726	36.9	7.9	8.1
LESS THAN 2,500	39.2	42.9	9.5	2,707	3,043	12.4	9.9	10.2
2,500-14,999	22.2	27.4	23.3	567	718	26.5	9.5	9.7
15,000 AND ABOVE	39.0	42.3	8.2	1,904	2,124	11.6	7.5	7.7
STATE	30.8	35.6	15.4	6,439	7,611	18.2	8.6	8.7
REGION 8								
FARM	19.1	24.3	27.0	390	503	29.1	4.4	4.4
LESS THAN 2,500	21.8	29.5	35.3	833	1,155	38.7	9.8	10.0
2,500-14,999	11.9	32.2	171.4	65	136	184.6	9.3	9.7
15,000 AND ABOVE								
STATE	19.8	27.0	36.5	1,288	1,794	39.2	7.1	7.3

- CONTINUED -

TABLE D-1 PRESENT AND PROJECTED PROPORTIONS AND DAYS' PARTICIPATION IN SPECIFIED RECREATION ACTIVITIES BY REGION AND RESIDENCE, NORTH DAKOTA (CONT)

RECREATION ACTIVITY BY REGION AND RESIDENCE	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION				
				TOTAL			PER PARTICIPANT	
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
WATER SKIING								
REGION 1								
FARM	7.9	9.4	19.2	99	123	24.6	3.8	4.0
LESS THAN 2,500	4.6	7.4	60.0	22	36	65.0	2.2	2.3
2,500-14,999	11.1	15.4	38.8	254	367	44.3	5.2	5.4
15,000 AND ABOVE								
STATE	8.3	11.3	35.3	375	526	40.3	4.4	4.6
REGION 2								
FARM	8.8	13.2	49.3	676	1,028	52.1	9.0	9.2
LESS THAN 2,500	11.5	15.7	35.8	592	822	38.8	8.8	9.0
2,500-14,999	24.2	31.3	29.1	306	413	35.0	12.7	13.0
15,000 AND ABOVE	9.1	11.3	24.1	839	1,077	28.3	15.5	16.1
STATE	10.4	14.2	36.8	2,413	3,340	38.4	11.0	11.1
REGION 3								
FARM	10.1	15.9	57.7	317	508	60.4	6.1	6.2
LESS THAN 2,500	12.2	19.8	62.7	565	944	67.1	9.5	9.8
2,500-14,999	11.6	25.2	125.0	26	57	118.5	2.2	2.2
15,000 AND ABOVE								
STATE	11.1	18.5	66.7	908	1,509	66.2	7.4	7.4
REGION 4								
FARM	5.5	8.5	54.2	93	147	58.4	3.9	4.0
LESS THAN 2,500	6.5	9.5	46.4	158	238	50.4	5.6	5.8
2,500-14,999	23.3	30.1	29.0	255	346	35.3	8.2	8.6
15,000 AND ABOVE	13.1	16.5	26.1	663	864	30.3	7.5	7.8
STATE	10.2	13.7	33.9	1,169	1,595	36.4	6.8	7.0

- CONTINUED -

TABLE D-1 PRESENT AND PROJECTED PROPORTIONS AND DAYS' PARTICIPATION IN SPECIFIED RECREATION ACTIVITIES BY REGION AND RESIDENCE, NORTH DAKOTA (CONT)

RECREATION ACTIVITY BY REGION AND RESIDENCE	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION				
				TOTAL			PER PARTICIPANT	
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
REGION 5								
FARM	9.5	13.0	36.1	465	652	40.1	6.5	6.6
LESS THAN 2,500	9.9	14.9	50.9	344	534	55.3	6.2	6.4
2,500-14,999	16.0	23.0	43.3	215	318	48.3	7.2	7.4
15,000 AND ABOVE	17.2	22.9	33.1	1,570	2,143	36.5	9.8	10.1
STATE	13.1	18.0	37.8	2,594	3,647	40.6	8.2	8.3
REGION 6								
FARM	5.3	9.4	76.3	210	380	81.0	5.5	5.7
LESS THAN 2,500	11.3	14.6	28.8	563	741	31.7	8.5	8.7
2,500-14,999	5.9	9.9	69.2	120	336	180.0	9.2	15.2
15,000 AND ABOVE	14.2	19.5	37.5	339	476	40.4	14.1	14.4
STATE	8.3	12.2	46.8	1,232	1,933	56.9	8.7	9.3
REGION 7								
FARM	3.5	6.6	89.3	219	418	91.1	7.8	7.9
LESS THAN 2,500	10.2	15.5	52.1	572	877	53.4	8.1	8.1
2,500-14,999	8.1	12.6	54.5	61	108	75.4	2.8	3.1
15,000 AND ABOVE	13.9	17.1	23.1	884	1,113	25.9	9.7	9.9
STATE	8.7	12.7	44.8	1,746	2,516	44.0	8.2	8.2
REGION 8								
FARM	5.6	9.7	73.1	163	287	76.1	6.3	6.4
LESS THAN 2,500	10.8	15.6	45.2	301	452	50.2	7.2	7.4
2,500-14,999	2.2	2.2	0.0	10	10	0.0	10.0	10.0
15,000 AND ABOVE								
STATE	7.5	11.8	56.5	474	749	58.1	6.9	6.9

- CONTINUED -

TABLE D-1 PRESENT AND PROJECTED PROPORTIONS AND DAYS' PARTICIPATION IN SPECIFIED RECREATION ACTIVITIES BY REGION AND RESIDENCE, NORTH DAKOTA (CONT)

RECREATION ACTIVITY BY REGION AND RESIDENCE	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION				
				TOTAL			PER PARTICIPANT	
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
CAMPING								
REGION 1								
FARM	34.9	37.7	7.8	878	972	10.7	7.6	7.8
LESS THAN 2,500	26.8	29.2	8.6	389	437	12.2	6.7	6.9
2,500-14,999	41.3	49.7	21.0	1,801	2,199	21.9	9.2	9.3
15,000 AND ABOVE								
STATE	36.1	41.5	14.9	3,068	3,608	18.6	8.3	8.5
REGION 2								
FARM	29.4	39.3	33.6	1,683	2,307	37.1	6.7	6.9
LESS THAN 2,500	32.0	36.5	14.0	1,731	2,031	17.3	9.3	9.6
2,500-14,999	38.4	46.5	21.0	444	560	26.3	11.7	12.2
15,000 AND ABOVE	33.8	36.7	8.5	2,313	2,624	13.4	11.6	12.1
STATE	31.7	38.1	20.0	6,171	7,522	21.9	9.2	9.3
REGION 3								
FARM	32.3	39.5	22.1	958	1,205	25.8	5.7	5.9
LESS THAN 2,500	31.0	40.7	31.3	1,419	1,933	36.2	9.5	9.8
2,500-14,999	28.1	38.8	37.9	176	246	40.3	6.1	6.2
15,000 AND ABOVE								
STATE	31.2	39.8	27.4	2,553	3,384	32.6	7.4	7.7
REGION 4								
FARM	17.2	24.5	42.7	558	828	48.4	7.4	7.7
LESS THAN 2,500	23.2	31.5	36.0	1,027	1,437	40.0	10.3	10.6
2,500-14,999	28.6	30.8	7.0	462	530	14.7	12.2	12.9
15,000 AND ABOVE	34.6	42.7	23.6	2,951	3,782	28.2	12.7	13.1
STATE	26.6	34.1	28.2	4,998	6,577	31.6	11.2	11.5

TABLE D-1 PRESENT AND PROJECTED PROPORTIONS AND DAYS' PARTICIPATION IN SPECIFIED RECREATION ACTIVITIES BY REGION AND RESIDENCE, NORTH DAKOTA (CONT)

RECREATION ACTIVITY BY REGION AND RESIDENCE	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION				
				TOTAL			PER PARTICIPANT	
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
REGION 5								
FARM	18.5	27.8	50.0	724	1,112	53.6	5.2	5.3
LESS THAN 2,500	19.6	31.6	61.5	1,039	1,721	65.7	9.5	9.8
2,500-14,999	19.2	25.7	33.3	256	325	37.0	7.1	7.9
15,000 AND ABOVE	24.8	34.2	37.8	2,402	3,407	41.8	10.4	10.7
STATE	21.2	30.9	45.8	4,421	6,565	48.5	8.6	8.7
REGION 6								
FARM	16.2	24.6	51.7	744	1,155	55.3	6.4	6.6
LESS THAN 2,500	27.3	36.2	32.7	1,410	1,938	37.4	8.9	9.2
2,500-14,999	34.6	38.7	11.7	843	1,019	15.4	11.4	11.9
15,000 AND ABOVE	24.8	33.7	35.7	534	745	39.5	12.7	13.1
STATE	23.3	31.4	34.5	3,571	4,857	36.0	9.1	9.2
REGION 7								
FARM	23.1	34.3	48.6	1,607	2,434	51.5	8.7	8.9
LESS THAN 2,500	36.3	43.6	20.2	2,330	2,890	24.0	9.2	9.5
2,500-14,999	45.5	58.9	29.8	1,037	1,401	35.2	8.4	8.8
15,000 AND ABOVE	46.5	57.3	23.0	2,815	3,620	28.6	9.5	9.7
STATE	35.7	45.9	28.6	7,789	10,345	32.3	9.0	9.3
REGION 8								
FARM	23.7	29.2	23.6	487	626	28.5	4.4	4.6
LESS THAN 2,500	36.7	45.6	24.5	1,040	1,334	28.3	7.3	7.5
2,500-14,999	22.6	39.6	76.9	190	318	77.9	14.6	14.7
15,000 AND ABOVE								
STATE	29.1	36.9	26.7	1,717	2,278	32.7	6.4	6.8

- CONTINUED -

TABLE D-1 PRESENT AND PROJECTED PROPORTIONS AND DAYS' PARTICIPATION IN SPECIFIED RECREATION ACTIVITIES BY REGION AND RESIDENCE, NORTH DAKOTA (CONT)

RECREATION ACTIVITY BY REGION AND RESIDENCE	PROPORTIONS OF PERSONS PARTICIPATING			DAYS' PARTICIPATION				
				TOTAL			PER PARTICIPANT	
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
GOLF								
REGION 1								
FARM	3.7	4.3	16.7	167	203	21.7	13.9	14.5
LESS THAN 2,500	13.4	15.3	13.8	527	623	18.3	18.2	18.9
2,500-14,999	15.4	18.5	20.5	1,222	1,521	24.5	16.7	17.2
15,000 AND ABOVE								
STATE	11.2	13.2	18.4	1,916	2,347	22.5	16.8	17.4
REGION 2								
FARM	7.3	7.5	3.2	1,268	1,346	6.1	20.5	21.0
LESS THAN 2,500	19.1	23.9	25.2	2,450	3,167	29.3	22.1	22.8
2,500-14,999	13.1	21.3	61.5	113	191	69.2	8.7	9.1
15,000 AND ABOVE	11.8	13.3	12.8	1,540	1,784	15.9	22.0	22.6
STATE	12.1	14.3	18.4	5,371	6,488	20.8	21.0	21.4
REGION 3								
FARM	5.6	7.7	37.9	577	812	40.7	20.0	20.3
LESS THAN 2,500	16.1	18.8	16.7	1,784	2,152	20.6	22.9	23.7
2,500-14,999	17.4	22.3	27.8	221	290	31.1	12.2	12.6
15,000 AND ABOVE								
STATE	11.3	13.9	23.2	2,582	3,254	26.0	20.7	21.1
REGION 4								
FARM	4.1	4.8	16.7	165	203	22.8	9.2	9.6
LESS THAN 2,500	16.2	21.1	30.0	1,746	2,317	32.7	25.0	25.5
2,500-14,999	18.0	27.8	54.1	587	962	63.8	24.4	26.0
15,000 AND ABOVE	18.6	22.3	20.0	2,614	3,225	23.4	20.9	21.5
STATE	14.2	17.9	26.1	5,112	6,707	31.2	21.6	22.4

- CONTINUED -

TABLE D-1 PRESENT AND PROJECTED PROPORTIONS AND DAYS' PARTICIPATION IN SPECIFIED RECREATION ACTIVITIES BY REGION AND RESIDENCE, NORTH DAKOTA (CONT)

RECREATION ACTIVITY BY REGION AND RESIDENCE	PROPORTION OF PERSONS PARTICIPATING			DAYS' PARTICIPATION				
				TOTAL			PER PARTICIPANT	
	PRESENT PERCENT	PROJECTED PERCENT	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER	INCREASE PERCENT	PRESENT NUMBER	PROJECTED NUMBER
REGION 5								
FARM	6.5	9.0	38.8	719	1,018	41.6	14.7	15.0
LESS THAN 2,500	14.4	19.0	32.5	1,930	2,622	35.9	24.1	24.7
2,500-14,999	19.2	22.4	16.7	804	926	15.0	22.3	22.4
15,000 AND ABOVE	18.0	24.9	38.3	2,509	3,600	43.5	15.0	15.6
STATE	13.7	18.4	34.6	5,962	8,166	37.0	18.0	18.3
REGION 6								
FARM	3.6	6.0	65.4	230	385	67.3	8.9	8.9
LESS THAN 2,500	14.2	20.6	44.6	1,611	2,380	47.7	19.4	19.8
2,500-14,999	8.5	12.6	14.7	487	791	62.6	25.6	28.2
15,000 AND ABOVE	17.8	22.5	26.7	532	688	29.3	17.7	18.1
STATE	9.4	13.6	44.9	2,860	4,244	48.4	18.1	18.5
REGION 7								
FARM	1.3	1.5	20.0	187	228	22.0	18.7	19.0
LESS THAN 2,500	10.3	13.3	29.2	1,193	1,577	32.0	16.6	17.0
2,500-14,999	11.7	16.5	41.9	573	841	46.8	18.5	19.1
15,000 AND ABOVE	11.8	15.9	35.1	1,532	2,129	39.0	19.9	20.4
STATE	7.8	10.5	33.2	3,485	4,775	37.0	18.3	18.9
REGION 8								
FARM	4.5	5.0	9.5	352	399	13.3	16.8	17.3
LESS THAN 2,500	9.5	12.1	27.0	488	641	31.4	13.2	13.6
2,500-14,999	6.5	10.3	33.3	42	60	43.3	14.0	15.0
15,000 AND ABOVE								
STATE	6.7	8.1	21.3	882	1,100	24.7	14.5	14.9

APPENDIX E

TESTS OF SIGNIFICANCE

Two socioeconomic characteristics commonly thought to be associated with changes in proportions of persons participating in various outdoor recreation activities are age of persons and annual income of the household of which the person is a member. The tables which follow examine the effect of changes in age on proportions of persons participating at various income levels; the effect of changes in income on the proportions at various age levels; and the statistical significance of differences in proportions. Almost invariably a change in either age or income results in or is accompanied by some change in the percentage of persons participating; however, many of the resulting differences are due to chance variations and, therefore, cannot be considered statistically significant.

The following formula was used in determining the statistical significance of the differences in proportions;

$$t = \frac{\text{Difference between two proportions}}{\text{Standard error of the difference}}$$

A "t"-value equal to or greater than 1.96 indicates that there were only five chances or less in 100 that the difference obtained could have arisen by chance variations; therefore, the difference would be considered statistically significant. The standard error (S.E.) of the difference was computed as:

$$\text{S.E.} = \sqrt{\frac{p_1 q_1}{n_1} + \frac{p_2 q_2}{n_2}}$$

p_1 and p_2 = proportions of persons participating

q_1 and q_2 = proportions of persons not participating

n_1 and n_2 = total number of persons in the respective groups

The following identifications are used for age and income subgroupings in the tables which follow:

TABLE E-1 HUNTING: STATISTICAL SIGNIFICANCE OF THE DIFFERENCES BETWEEN PROPORTIONS OF PERSONS PARTICIPATING

	INCOME CLASS A				INCOME CLASS B				INCOME CLASS C			
AGE CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
2	16				23				24			
3	36	+20	4.3	4.60	39	+16	3.9	4.10	35	+11	3.7	2.70
4	25	-11	4.5	2.44	34	- 5	4.2	1.19	30	- 5	3.8	1.32
5	18	-10	2.8	2.50	24	-10	3.0	3.33	26	- 4	2.7	1.48
6	12	- 6	2.6	2.80	21	- 3	3.2	.94	13	-13	3.8	3.42
3-6						-18	4.3	4.19		-22	4.7	4.66
4-6												

	INCOME CLASS D				INCOME CLASS E				INCOME CLASS F			
AGE CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
2	22				25				30			
3	38	+16	3.4	4.70	44	+19	4.4	4.32	42	+12	6.6	1.82
4	35	- 3	3.8	.78	34	-10	4.7	2.13	33	- 9	6.8	1.39
5	31	- 4	2.8	1.43	30	- 4	3.6	1.12	29	- 4	4.9	.81
6	21	-10	5.3	1.93	19	-16	8.1	1.99	23	- 6	8.9	.67
3-6		-17	5.8	3.68						-19	10.1	1.88
4-6						-20	8.1	2.50				

TABLE E-1 HUNTING: STATISTICAL SIGNIFICANCE OF THE DIFFERENCES BETWEEN PROPORTIONS OF PERSONS PARTICIPATING (CONT)

	AGE CLASS 2				AGE CLASS 3				AGE CLASS 4			
INCOME CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
A	16				36				25			
B	23	+ 7	2.5	3.60	39	+ 3	5.2	.57	34	+ 9	3.3	2.72
C	24	+ 1	2.4	.41	35	- 4	4.8	.83	30	- 4	3.0	1.33
D	22	- 2	2.1	.95	38	+ 3	4.0	.65	35	+ 5	2.7	1.85
E	25	- 3	2.4	1.26	44	+ 6	5.0	1.20	34	- 1	3.2	.31
F	30	+ 5	3.5	1.42	40	- 4	7.0	.42	33	- 1	4.2	.24
A-F		+14	3.5	4.00						+ 8	4.1	1.96

	AGE CLASS 5				AGE CLASS 6			
INCOME CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
A	18				12			
B	24	+ 6	2.5	2.40	21	+ 9	3.3	2.73
C	26	+ 2	2.7	.74	13	- 8	4.2	1.67
D	31	+ 5	2.9	1.72	21	+ 8	5.9	1.35
E	30	- 1	3.3	.31	14	- 7	9.1	.77
F	29	- 1	4.3	.23	13	- 1	11.2	.09
A-F		+11	3.9	2.82				

Class	Income (dollars)	Group	Age (years)
A	Less than 3,000	1	Less than 6
B	3,000-4,999	2	6-17
C	5,000-6,999	3	18-24
D	7,000-9,999	4	25-44
E	10,000-14,999	5	45-64
F	15,000 and above	6	65 and over

Interpretation of the data in the Appendix E tables may be explained by reference to the upper and lower sections of Table E-1. The upper section shows the effect of variations in age when income is held constant at specified levels on the proportion of persons participating in hunting. For example, 16% and 36%, respectively, of the persons in age groups 2 and 3 in households with incomes of less than $3,000 (A), participated in hunting. The difference in the proportion was 20 percentage points. This difference divided by the standard error of the difference, 4.3, yields a "t"-value of 4.60 which indicates that the difference is statistically significant; that is, the increase in participation accompanying increase in age was not due to mere chance.

The lower section of Appendix Table E-1 shows the effect of changes in income on proportions of persons participating when age is held constant at specified levels.

The discussions which follow summarize the overall effect of these two factors, age and income, on the proportion of persons included in the sample of North Dakota persons who participated in hunting, summer fishing, winter fishing, boating, water skiing, camping and golf. These activities were selected for special study because it was hypothesized that participation in them would be influenced by changes in age and income because of either physical or financial requirements or both.

TABLE E-2 SUMMER FISHING: STATISTICAL SIGNIFICANCE OF THE DIFFERENCES BETWEEN PROPORTIONS OF PERSONS PARTICIPATING

AGE CLASS	INCOME CLASS A PERCENT	A DIFFERENCE	A S.E. DIFFERENCE	A T	INCOME CLASS B PERCENT	B DIFFERENCE	B S.E. DIFFERENCE	B T	INCOME CLASS C PERCENT	C DIFFERENCE	C S.E. DIFFERENCE	C T
2	43				52				62			
3	47	+ 4	4.7	.85	43	- 9	4.0	2.25	45	-17	4.0	4.25
4	41	-19	4.9	3.88	47	+ 4	4.3	.93	55	+10	4.0	2.50
5	36	- 5	3.4	1.47	43	- 4	3.7	1.01	49	- 6	2.9	2.07
6	30	- 6	3.6	1.66	31	-12	4.6	2.60	31	-11	5.1	3.60
4-6		-11	3.8	2.89		-16	4.5	3.55		-24	4.9	4.90

AGE CLASS	INCOME CLASS D PERCENT	D DIFFERENCE	D S.E. DIFFERENCE	D T	INCOME CLASS E PERCENT	E DIFFERENCE	E S.E. DIFFERENCE	E T	INCOME CLASS F PERCENT	F DIFFERENCE	F S.E. DIFFERENCE	F T
2	59				55				48			
3	42	-17	3.6	4.72	36	-19	3.1	6.12	38	-10	11.5	.87
4	53	+11	3.7	2.97	52	+16	3.5	4.57	54	+16	7.0	2.38
5	50	- 8	3.8	2.11	45	- 7	3.8	1.84	47	- 7	5.6	1.25
6	31	-19	6.4	2.97	14	-31	8.2	3.78	38	- 9	4.9	1.83
4-6		-22	7.0	4.43		-38	8.1	4.69		-16	3.1	5.21

TABLE E-2 SUMMER FISHING: STATISTICAL SIGNIFICANCE OF THE DIFFERENCES BETWEEN PROPORTIONS OF PERSONS PARTICIPATING (CONT)

INCOME CLASS	AGE CLASS 2 PERCENT	2 DIFFERENCE	2 S.E. DIFFERENCE	2 T	AGE CLASS 3 PERCENT	3 DIFFERENCE	3 S.E. DIFFERENCE	3 T	AGE CLASS 4 PERCENT	4 DIFFERENCE	4 S.E. DIFFERENCE	4 T
A	43				47				41			
B	52	+ 9	3.1	2.90	43	+ 4	5.4	.74	47	+ 6	3.7	1.62
C	62	+ 4	7.6	.53	45	+ 2	5.0	.40	55	+ 8	3.0	2.67
D	59	- 3	2.5	1.20	42	- 3	4.7	.63	58	+ 6	2.8	2.14
E	55	- 4	2.8	1.43	36	- 6	3.9	1.54	52	- 6	2.3	2.61
F	48	- 7	3.2	2.19	38	+ 2	6.1	.24	54	+ 2	4.8	.41

INCOME CLASS	AGE CLASS 5 PERCENT	5 DIFFERENCE	5 S.E. DIFFERENCE	5 T	AGE CLASS 6 PERCENT	6 DIFFERENCE	6 S.E. DIFFERENCE	6 T
A	36				30			
B	43	+ 7	3.5	2.00	31	+ 1	4.2	.23
C	49	+ 6	3.5	1.72	31	0	5.9	—
D	50	+ 1	4.0	.25	31	0	7.2	—
E	45	- 5	4.3	1.16	14	-17	9.9	.17
F	47	+ 2	4.7	.42	38	+24	8.3	2.89

Hunting

Age: For all income classes except F the change in age groups from 2 to 3 resulted in a significant change in proportion of persons participating in hunting (see Table E-1). The highest proportion of persons participating was by age group 3 (18-24 years). The decline accompanying advance in age was statistically significant although differences between consecutive age groups were not always significant. For example, the decline in the proportions from age groups 3 to 4 and 5 to 6 in income class B was not significant, but the overall decline from 2 to 6 was statistically significant. In the case of income class F, chances were about 10 out of 100 that the differences in proportions between age groups 2 and 3 and 3 and 6 were due to chance variations.

Income: With the exception of age group 3, the advance from income class A to B was accompanied by a significant increase in proportion of persons who hunted. Except age groups 3 and 6, the increases from income class B to F also were statistically significant. It appears that the positive effects of income are particularly evident at the lower levels of income. In the case of age group 6, the only positive effect of income was the change from A to B.

Summer Fishing

Age: The proportion of persons who summer fished reached its highest point in age class 2 at all income levels except A, and the difference between age groups 2 and 3 was not significant at this income level (see Table E-2). Although the differences between successive age groups were not always significant, the drop in proportion of persons participating from age group 4 to age group 6 was definitely significant at all income levels.

TABLE E-3 WINTER FISHING: STATISTICAL SIGNIFICANCE OF THE DIFFERENCES BETWEEN PROPORTIONS OF PERSONS PARTICIPATING

	INCOME CLASS A				B				C			
AGE CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
2	5.5				7.6				10.5			
3	7.4	+1.9	2.4	.79	9.5	+1.9	2.3	.83	7.4	-3.1	2.0	1.55
4	8.0	+ .6	2.6	.23	12.3	+2.8	2.4	1.16	10.8	+3.4	2.1	1.62
5	7.1	- .9	2.1	.43	10.6	-1.7	1.9	.89	13.6	+2.8	2.0	1.40
6	8.1	+1.0	2.0	.50	8.7	-2.2	3.1	.71	18.6	+5.0	3.7	1.35
2-4						+4.7	2.3	2.04				
3-6										+11.2	3.8	3.00
4-6												

	INCOME CLASS D				E				F			
AGE CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
2	12.3				5.0				5.5			
3	7.6	+4.7	4.7	1.00	2.8	-2.2	2.5	.88	7.4	+1.9	2.1	.90
4	12.8	+5.2	2.8	1.86	7.8	+5.0	2.3	2.17	8.0	+ .6	2.2	.18
5	5.9	-6.9	2.2	3.13	6.0	-1.8	2.8	.64	7.1	- .9	1.6	.56
6	4.8	-1.1	4.9	.39	3.9	-2.1	4.3	.48	8.1	+1.0	2.5	.40
2-4												
3-6												
4-6		-8.0	5.1	1.60								

TABLE E-3 WINTER FISHING: STATISTICAL SIGNIFICANCE OF THE DIFFERENCES BETWEEN PROPORTIONS OF PERSONS PARTICIPATING (CONT)

	AGE CLASS 2				3				4			
INCOME CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
A	5.5				7.4				8.0			
B	7.6	+2.1	2.6	.80	7.9	+ .5	3.0	.17	12.3	+4.3	2.2	1.96
C	10.5	+2.9	2.6	1.11	7.4	- .4	2.7	.14	10.8	-1.5	1.8	.83
D	12.3	+1.8	4.4	.41	7.6	+ .2	2.7	.74	12.8	+2.0	2.2	.91
E	5.0	-7.3	4.5	1.62	2.8	-4.8	2.1	2.29	7.8	-5.0	2.8	1.79
F	5.5	+ .5	1.8	.27	7.4	+4.6	2.5	1.84	8.0	- .2	2.5	.80
A-C												
A-D		+6.8	4.3	1.58						+4.8	2.5	1.92
D-F		-4.8	1.4	3.42						-4.8	1.5	3.20
C-F												

	AGE CLASS 5				6			
INCOME CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
A	7.0				8.1			
B	10.6	+3.6	2.5	1.44	8.7	+ .6	3.2	.18
C	13.6	+3.0	2.1	1.42	18.6	+9.9	4.6	1.96
D	5.9	-7.7	2.1	3.67	4.8	-13.8	6.5	2.12
E	6.0	+ .1	2.3	.04	3.9	- .9	6.1	.15
F	7.1	+1.1	2.1	.52	8.1	+4.2	4.5	.93
A-C		+6.6	1.9	3.50		+10.5	3.8	2.76
A-D								
D-F								
C-F		-6.5	1.8	3.61		-10.5	4.1	2.56

Income: In most cases the proportion of persons who fished was highest in income groups C or D; however, the difference between either of these two and the adjoining group was not consistently significant at various age levels. Income apparently had a more precise effect on the proportion in age group 2; the proportion rose significantly from income class A to income class C and then dropped significantly from the latter class to income class F. The same pattern prevailed among the participants in age group 4, and to a lesser extent in age group 5, particularly the rise in the proportion from income group A to C or D. In general, the precise effect of income on the proportion of persons who summer fished is difficult to identify from the available data.

Winter Fishing

Age: With few exceptions the differences in participation between various age groups at different income levels were not statistically significant (see Table E-3). The exceptions included the differences between age groups 2 and 3, income class B; age groups 3 and 6, income class C; and age groups 4 and 6, income class D. In the latter two situations, the proportion of persons participating in winter fishing declined.

Income: The above remarks regarding age and participation may well be applied to income and participation. That is, with few exceptions the differences between the various income classes at the different age levels were not statistically significant. The exception includes the increases in participants from income classes A to C, in age groups 5 and 6. Other differences statistically significant were the declines in participation from income classes D to F, age groups 2 and 4; and income classes C to F, age groups 5 and 6.

TABLE E-4 BOATING: STATISTICAL SIGNIFICANCE OF THE DIFFERENCES BETWEEN PROPORTIONS OF PERSONS PARTICIPATING

AGE CLASS	INCOME CLASS A PERCENT	A DIFFERENCE	A S.E. DIFFERENCE	A T	B PERCENT	B DIFFERENCE	B S.E. DIFFERENCE	B T	C PERCENT	C DIFFERENCE	C S.E. DIFFERENCE	C T
2	21				33				40			
3	28	+ 7	4.04	1.73	38	+ 5	3.94	1.26	45	+ 5	3.64	1.39
4	22	- 6	4.34	1.36	31	- 7	4.12	1.70	39	- 6	3.74	1.66
5	15	- 7	2.34	2.37	23	- 8	2.91	2.75	30	- 9	2.89	3.11
6	10	- 5	2.45	2.04	17	- 6	3.53	1.70	13	-17	3.91	4.35
3-6		-18	4.17	4.32		-21	4.59	4.57		-32	4.53	7.06

AGE CLASS	INCOME CLASS D PERCENT	D DIFFERENCE	D S.E. DIFFERENCE	D T	E PERCENT	E DIFFERENCE	E S.E. DIFFERENCE	E T	F PERCENT	F DIFFERENCE	F S.E. DIFFERENCE	F T
2	42				48				65			
3	40	- 2	3.45	.58	50	+ 2	5.06	.40	58	- 7	6.64	1.05
4	43	+ 3	4.09	.73	50	0	4.77	—	63	+ 5	7.00	.71
5	37	- 6	3.42	1.75	35	-15	3.70	4.05	45	-18	5.22	3.45
6	24	-13	5.54	2.35	19	-16	9.50	1.68	31	-14	9.76	1.43
3-6		-16	5.99	2.67		-31	4.97	6.23		-27	10.72	2.21

TABLE E-4 BOATING: STATISTICAL SIGNIFICANCE OF THE DIFFERENCES BETWEEN PROPORTIONS OF PERSONS PARTICIPATING (CONT)

INCOME CLASS	AGE CLASS 2 PERCENT	2 DIFFERENCE	2 S.E. DIFFERENCE	2 T	3 PERCENT	3 DIFFERENCE	3 S.E. DIFFERENCE	3 T	4 PERCENT	4 DIFFERENCE	4 S.E. DIFFERENCE	4 T
A	21				28				22			
B	33	+12	2.71	4.42	38	+10	5.07	1.97	31	+ 9	3.19	2.82
C	40	+ 7	2.61	1.91	45	+ 7	4.67	1.50	39	+ 8	3.10	2.59
D	42	+ 2	2.48	.80	40	- 5	4.47	1.11	43	+ 6	3.30	1.20
E	48	+ 6	3.61	1.66	50	+10	5.96	1.67	50	+ 7	3.74	1.87
F	65	+17	4.54	3.74	58	+ 8	6.29	1.27	63	+13	4.72	2.76
B-F		+32	3.78	8.46		+20	6.74	2.97		+32	4.64	6.82

INCOME CLASS	AGE CLASS 5 PERCENT	5 DIFFERENCE	5 S.E. DIFFERENCE	5 T	6 PERCENT	6 DIFFERENCE	6 S.E. DIFFERENCE	6 T
A	15				10			
B	23	+ 8	2.40	2.02	17	+ 7	3.50	2.00
C	30	+ 7	2.75	2.55	13	- 4	4.60	.89
D	37	+ 7	3.03	2.31	24	+11	6.06	1.81
E	35	- 2	3.43	.58	19	- 5	9.90	.51
F	45	+10	13.25	.73	31	+12	12.45	.96
B-F		+23	3.91	5.88		+14	4.20	3.33

Boating

Age: The proportion of persons who participated in boating was highest in age groups 3 and 4. For all income groups the proportion declined reaching a minimum in the oldest age group (Number 6). The decline from age group 3 to age group 6 was statistically significant at all income levels (see Table E-4).

Income: Household income had a positive effect on proportion of persons participating in boating at all age levels. The proportion of persons in income group F was two or three times that of persons in the lowest income class at all age levels. The increase from income class B to F was statistically significant at all age levels.

Water Skiing

Age: The influence of age on the proportion of persons participating in water skiing was about the same at all income levels (see Table E-5). For example, the increase from age group 2 to age group 3 was statistically significant at all income levels; as also was the decline from age group 3 to age group 5 or 6.

Income: The proportion of persons in age group 6 at all income levels was either zero or so small as to prohibit drawing any conclusions on the effect of income on participation. For the remaining age levels, 2, 3, and 4, the influence of income was positive. This is illustrated by comparing income group F with B. At the various age levels the increase in the proportion from B to F was statistically significant.

Camping

Age: The proportion of persons camping in the age group, 6-17 years, was significantly higher than in the lowest age group at all income

TABLE E-5 WATER SKIING: STATISTICAL SIGNIFICANCE OF THE DIFFERENCES BETWEEN PROPORTIONS OF PERSONS PARTICIPATING

	INCOME CLASS											
	A				B				C			
AGE CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
2	6				11				8			
3	13	+ 7	3.04	2.30	24	+13	3.29	3.95	29	+21	3.36	6.25
4	9	- 4	3.14	1.27	6	-18	3.22	5.59	10	-19	3.43	5.54
5	1	- 8	1.58	5.06	2	- 4	1.32	3.03	3	- 7	1.45	4.82
6	1	0			0	- 2	.59	3.33	0	+ 3	.78	3.84

	INCOME CLASS											
	D				E				F			
AGE CLASS	PERCENT	DIFFERENCE	DIFFERENCE	T	PERCENT	DIFFERENCE	DIFFERENCE	T	PERCENT	DIFFERENCE	DIFFERENCE	T
2	14				3				30			
3	28	+14	3.14	4.46	36	+33	4.21	5.46	44	+14	6.65	2.10
4	14	-14	3.21	4.36	19	-17	4.36	3.90	26	-24	6.75	3.56
5	5	- 9	1.72	5.23	7	-12	3.53	3.40	7	-13	3.84	3.36
6	0	- 5	.98	5.10	5	- 2	5.07	.39	0	- 7	1.98	3.03

TABLE E-5 WATER SKIING: STATISTICAL SIGNIFICANCE OF THE DIFFERENCES BETWEEN PROPORTIONS OF PERSONS PARTICIPATING (CONT)

	AGE CLASS											
	2				3				4			
INCOME CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
A	6				13				9			
B	11	+ 5	1.81	2.76	24	+11	4.08	2.45	6	- 3	1.92	1.56
C	8	- 3	1.68	1.78	29	+ 5	4.39	1.14	10	+ 4	1.70	2.35
D	14	+ 6	1.48	4.05	28	- 1	4.31	.23	14	+ 4	1.84	2.17
E	3	-11	2.17	5.06	36	+ 8	1.51	4.63	19	+ 5	2.52	1.98
F	30	+27	3.57	7.56	44	+ 8	7.02	1.13	26	+ 7	1.23	5.69
B-F		+19	3.36	5.65		+20	4.37	4.57		+20	3.51	5.70

	AGE CLASS							
	5				6			
INCOME CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
A	1				1			
B	2	+ 1	.74	1.35	0	- 1	.61	
C	3	+ 1	.98	1.01	0	0		
D	5	+ 2	1.25	1.60	0	0		
E	7	+ 2	1.73	1.73	5	+ 5	4.87	
F	7	0			0	- 5		
B-F		+ 5	2.07	2.42				

levels (see Table E-6). This increase in the proportion is logical. Following the peak participation by the 6-17 age group, the proportion declined. Although the difference in the proportion between consecutive age groups was not always statistically significant, the overall decline in proportion of persons participating was significant.

Income: With the exception of age groups 1 and 6, the proportions were significantly higher in income class B compared with class A. In practically all instances, additional increases in household income had no significant effect on the proportion of persons participating.

Golf

Age: For the three lower income classes the highest proportion of persons participating in golf was registered by persons in age group 2 (see Table E-7). In general, the proportion declined with each successive age group. For income class E the proportion was highest in age group 4 (44-64 years). People in this age group and income class are established in their profession and at the high point of their earning ability. These facts enable a significant proportion to participate in this activity. The sampling error of the differences in proportions in income class F was so great that differences between most age groups were not statistically significant; however, it is apparent that advancing age is negatively related to proportions of persons participating.

Income: The positive effect of income on the proportion of persons participating in this activity is more evident than for any of the other outdoor recreation activities considered here. The only

TABLE E-6 CAMPING: STATISTICAL SIGNIFICANCE OF THE DIFFERENCES BETWEEN PROPORTIONS OF PERSONS PARTICIPATING

	INCOME CLASS											
	A				B				C			
AGE CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
1	16				19				25			
2	24	+ 8	3.44	2.32	37	+18	3.82	4.71	44	+19	3.66	5.18
3	22	- 2	3.92	.51	33	- 4	3.88	1.03	32	-12	3.76	3.19
4	20	- 2	4.02	.76	29	- 4	4.01	1.00	35	+ 3	3.83	.78
5	12	- 8	2.59	3.09	20	- 9	2.83	3.19	25	-10	2.78	3.56
6	12	0			8	-12	2.79	4.30	11	-14	3.67	3.81
2-5		-12	3.96	3.03		-17	3.97	4.28		-19	4.51	4.21
3-6												

	INCOME CLASS											
	D				E				F			
AGE CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
1	27				27				31			
2	49	+22	3.49	6.30	47	+20	5.15	3.88	40	+ 9	2.59	3.47
3	30	-19	3.42	5.56	30	-17	4.28	3.97	28	-12	3.71	3.23
4	41	+11	3.56	3.09	42	+12	4.48	4.46	33	+ 5	4.17	1.20
5	27	-14	2.83	4.95	21	-21	3.44	6.16	24	- 9	5.04	1.80
6	9	-18	4.00	4.50	10	-11	7.08	1.55	12	-12	7.28	1.65
2-5												
3-6						+20	7.19	2.78		+16	6.71	2.38

TABLE E-6 CAMPING: STATISTICAL SIGNIFICANCE OF THE DIFFERENCES BETWEEN PROPORTIONS OF PERSONS PARTICIPATING (CONT)

	AGE CLASS											
	1				2				3			
INCOME CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
A	16				24				22			
B	19	+ 3	4.67	.64	37	+13	2.81	4.63	33	+11	4.76	4.62
C	25	+ 6	4.52	1.33	44	+ 7	2.73	2.56	32	- 1	4.68	.21
D	27	+ 2	4.49	.44	49	+ 5	2.51	1.99	30	- 2	4.43	.45
E	27	0	5.55	--	47	- 2	2.82	.70	30	0	4.69	--
F	31	+ 4	5.22	.77	40	- 7	3.97	1.76	28	- 2	4.01	.49
A-C		+ 9	6.67	1.34								
A-F		+15	8.22	1.82								
B-D						-12	2.69	4.46				
D-F						- 9	3.74	2.40				

	AGE CLASS											
	4				5				6			
INCOME CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
A	20				12				12			
B	29	+ 9	3.11	1.92	20	+ 8	2.22	2.25	8	- 4	2.99	1.33
C	35	+ 6	2.98	2.01	25	+ 5	2.62	1.91	11	+ 3	3.79	.79
D	41	+ 6	2.76	2.17	27	+ 2	2.82	.70	9	- 2	4.62	.43
E	42	+ 2	3.26	.61	21	- 6	3.03	1.98	10	+ 1	7.54	.13
F	33	- 7	4.60	1.52	24	+ 3	4.01	.75	12	+ 2	9.33	.20
A-C												
A-F												
B-D												
D-F												

exception is in age group 3; however, even in this group the change in proportion from income group A to D was statistically significant. The overall influence of income can readily be observed by comparing income classes A and F. For all age groups except 6, the increases in the proportions were statistically significant.

TABLE E-7 GOLF: STATISTICAL SIGNIFICANCE OF THE DIFFERENCES BETWEEN PROPORTIONS OF PERSONS PARTICIPATING

	INCOME CLASS											
	A				B				C			
AGE CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
2	1.6				5.2				8.2			
3	8.8	+ 7.2	2.41	2.99	15.8	+10.6	2.73	3.88	17.0	+ 8.8	2.84	3.10
4	5.1	- 3.7	2.62	1.42	6.3	- 9.5	2.96	3.21	11.4	- 5.6	2.96	1.89
5	2.3	- 2.8	1.35	2.07	6.4	+ .1	1.59	.06	10.2	- 1.2	1.89	.63
6	2.3	0			4.7	- 1.7	2.02	.84	7.7	- 2.5	2.91	.86
3-6		- 6.5	2.52	2.58		-11.1	3.10	3.58		-10.0	2.72	3.66
2-4												
4-6												

	INCOME CLASS											
	D				E				F			
AGE CLASS	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
2	13.3				18.4				23.6			
3	20.6	+ 7.3	2.85	2.56	20.8	+ 2.4	3.64	.65	25.0	+ 1.4	5.86	.24
4	20.5	- .1	3.06	.03	28.3	+ 7.5	4.02	1.86	30.7	+ 4.7	6.35	.74
5	18.5	- 2.0	2.39	.08	22.7	- 5.6	3.35	1.67	28.7	- 2.0	5.10	.39
6	10.0	- 8.5	4.04	2.10	9.5	-13.2	6.96	1.90	11.5	-17.2	7.20	2.39
3-6		-10.6	4.85	2.18								
2-4						- 9.9	2.96	3.34		+ 7.1	4.71	1.51
4-6						-18.8	6.98	2.69		-19.2	7.39	2.60

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TABLE E-7 GOLF: STATISTICAL SIGNIFICANCE OF THE DIFFERENCES BETWEEN PROPORTIONS OF PERSONS PARTICIPATING (CONT)

INCOME CLASS	AGE CLASS 2 PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	AGE CLASS 3 PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	AGE CLASS 4 PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
A	1.6				8.8				5.1			
B	5.2	- 1.4	1.10	1.27	15.8	+ 7.0	3.48	2.09	6.3	+ 1.2	1.68	.71
C	8.2	+ 3.0	1.37	2.19	17.0	+ 1.2	3.70	.32	11.4	+ 5.1	1.77	2.88
D	13.3	+ 5.1	1.55	3.29	20.6	+ 3.6	3.71	.97	20.5	+ 9.1	2.07	4.39
E	18.4	+ .1	2.09	.04	20.8	+ .2	4.15	.05	28.3	+ 7.8	2.89	2.70
F	23.6	+ 5.2	3.34	1.55	25.0	+ 4.2	6.06	.69	30.7	+ 2.4	4.45	.54
B-D		+ 8.1	3.16	2.56								
D-F		+10.3	3.10	3.32						+10.2	4.01	2.54
B-F						+ 9.2	5.74	1.31				
A-F												
A-D		+11.7	1.33	8.86		+11.8	3.50	3.32		+15.4	5.25	2.93
D-F		+10.3	3.10	3.29		+ 4.4	5.75	.76		+10.2	6.34	1.61
A-F		+22.0	2.92	7.53		+16.2	5.64	2.87		+25.6	3.91	6.54

- CONTINUED -

TABLE E-7 GOLF: STATISTICAL SIGNIFICANCE OF THE DIFFERENCES BETWEEN PROPORTIONS OF PERSONS PARTICIPATING (CONT)

INCOME CLASS	AGE CLASS 5 PERCENT	DIFFERENCE	S.E. DIFFERENCE	T	AGE CLASS 6 PERCENT	DIFFERENCE	S.E. DIFFERENCE	T
A	2.3				2.3			
B	6.4	+ 4.1	1.23	2.52	4.7	+ 2.4	1.97	1.22
C	10.2	+ 3.8	1.73	2.17	7.7	+ 3.0	3.14	.95
D	18.5	+ 8.3	2.23	3.72	10.6	+ 2.9	4.45	.66
E	22.7	+ 4.2	2.92	1.44	9.5	- 1.1	7.48	.15
F	28.7	+ 6.0	4.19	1.43	11.5	+ 2.0	9.14	.22
B-D								
D-F		+10.2	4.09	2.49				
B-F								
A-F						+ 9.2	6.48	1.42
A-D		+16.2	5.05	3.21		+ 8.3	3.72	2.23
D-F		+10.2	3.87	2.63		- .9	7.30	.12
A-F		+26.4	3.53	7.47		+ 9.2	6.44	1.42