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AN EVALUATION OF WATER SURFACE USE OF LAKES IN CENTRAL MINNESOTA

A Methodology and Data Report

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METHODOLOGY AND DATA REPORT
Water Surface Use in Central Minnesota

I. INTRODUCTION

One of the important functions of the Minnesota Department of Natural Resources (DNR) is water surface management of Minnesota lakes. To carry out this responsibility, the DNR collects data on the recreational use levels and patterns that lakes are experiencing. Since resources are not available to permit studying each of the state's numerous lakes individually, the DNR has initiated a program of studying a representative sample of lakes within regions of the state.

In 1984, the DNR began the program with a pilot project within the seven county metropolitan area. The results of this study are presented in a report entitled, "An Evaluation of Water Surface Use of Lakes in the Seven County Metropolitan Area," dated December 1984, by Biocentric, Inc.

In May of 1985, the Minnesota Department of Natural Resources again contracted with Biocentric, Inc. to design and implement a similar program on lakes in the central Minnesota counties of Mille Lacs, Aitkin, Crow Wing and Cass. The study area is shown in Figure 1, which also shows the location of the 1984 study.

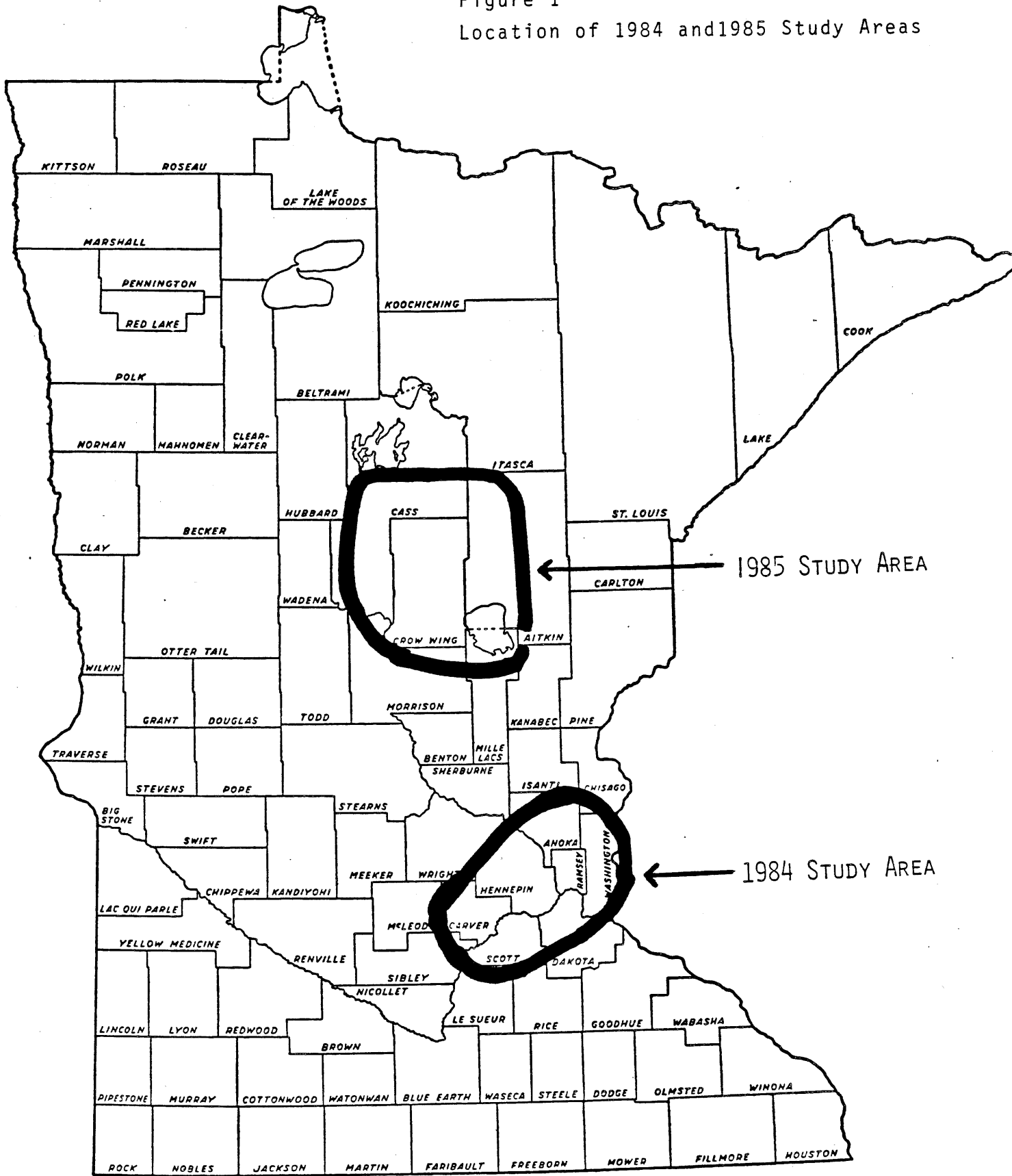
A. OBJECTIVES

The objective of the project was to develop comprehensive data on water surface use for the lakes in the selected area by both private shoreline access and public access users.

To meet this objective, a four-pronged effort was conducted from the opening of fishing season on May 18, 1985 until the end of September. The four separate but coordinated efforts were:

1. A series of interviews was conducted at access points. The surveys were conducted at various times of the season, at various days of the week and at various hours of the day. The purpose of the interviews was to determine the type of boats that were used, the time period that the boaters were on the lake, the relative frequency of boating activity by individuals, distance traveled to go to the lake, attitudes toward the density of lake surface usage by other boats, adequacy of launching facilities and various safety parameters.

Figure 1
Location of 1984 and 1985 Study Areas



2. A survey of guests at resorts around the lakeshore. The survey contained questions of a similar nature relating to attitudes toward lake usage, safety problems as well as the frequency and duration of their own use of the lake.

3. A survey of residents around the lakeshore. The survey contained questions of a similar nature relating to attitudes toward lake usage, safety problems as well as the frequency and duration of their own use of the lake.

4. An aerial survey of lake and access usage. This portion of the study was accomplished by flying over each of the 49 lakes included in the study ten times during the summer boating season. The total number of boats using the lake at a given time was determined. The geographical distribution of boats on the lake was identified by dividing the lake up into various sampling areas. Each boat on the lake was classified by the type of boating activity as well as its location on the lake. Accesses, marinas, resorts and campgrounds were observed to determine where boats were launched and in what proportion.

B. GOALS

The study goals were as follows:

1. Measure boater attitudes concerning safety-related issues such as:
 - a. Perception of lake crowding as related to boating safety,
 - b. Occurrence of specific safety problems,
 - c. Participation in boating safety courses,
 - d. Alcohol use by boat operators and
 - e. Awareness of boating use restrictions and perceptions of needed restrictions.
2. Describe boat/boater characteristics such as:
 - a. Boat type, engine size,
 - b. Activity, boating time, fuel consumption and
 - c. Distance traveled by land, for and money spent on, boating activities.
3. Evaluate access characteristics including:
 - a. Overall adequacy of launching and landing as perceived by boaters,
 - b. Problems encountered and improvements needed and
 - c. Identification of specific access features liked.

4. Measure the number of boaters using accesses at different times in the season, times in a week, time of day from different lake categories.
5. Ascertain the attitudes and use statistics of persons who reside on the lake in proportion to their use contribution.
6. Ascertain the volume of boating use of the study area lakes, classified by source of access to the lake.

II. SURVEY METHODOLOGY AND RESULTS

The project goals were addressed through a series of four survey efforts conducted at 49 representative lakes throughout the study area. The first five goals were addressed by interviewing boaters at accesses and interviewing homeowners, cabin owners and guests of resorts on the selected lakes. The sixth objective was addressed by a visual survey of boating use conducted during aerial overflights and observations of activity at accesses. Methods used in these three survey efforts are as follows:

A. LAKE SELECTION AND CHARACTERISTICS

There are approximately 225 non-game lakes of 150 acres or more in size in the study area. A listing of these lakes and characteristics describing them is provided in Appendix A. Figure 2 presents a map showing the distribution of lakes in the study area. Figure 3 presents a map showing the location of lakes selected for this study. Table 1 presents the list of lakes and their characteristics that were selected for this study. As presented in Appendix A and Table 1, it can be seen that the lakes are grouped into categories (A-Z) based on lake size, fishery characteristics, water quality and shoreland development. The sample of lakes chosen for this study was taken to represent categories A, B and C of the population as a whole. In addition, the sample lakes were chosen to represent both lakes with and without public access.

In the study area there are four large lakes or lake groupings (chain of lakes) that are of special interest to the DNR. These are as follows:

- | | | | |
|----|-----------------|----------|-----------------|
| 1. | Mille Lacs | 1 lake | - 132,516 acres |
| 2. | Pelican | 1 lake | - 8,468 acres |
| 3. | Gull chain | 7 lakes | - 10,635 acres |
| 4. | Whitefish chain | 13 lakes | - 18,731 acres |

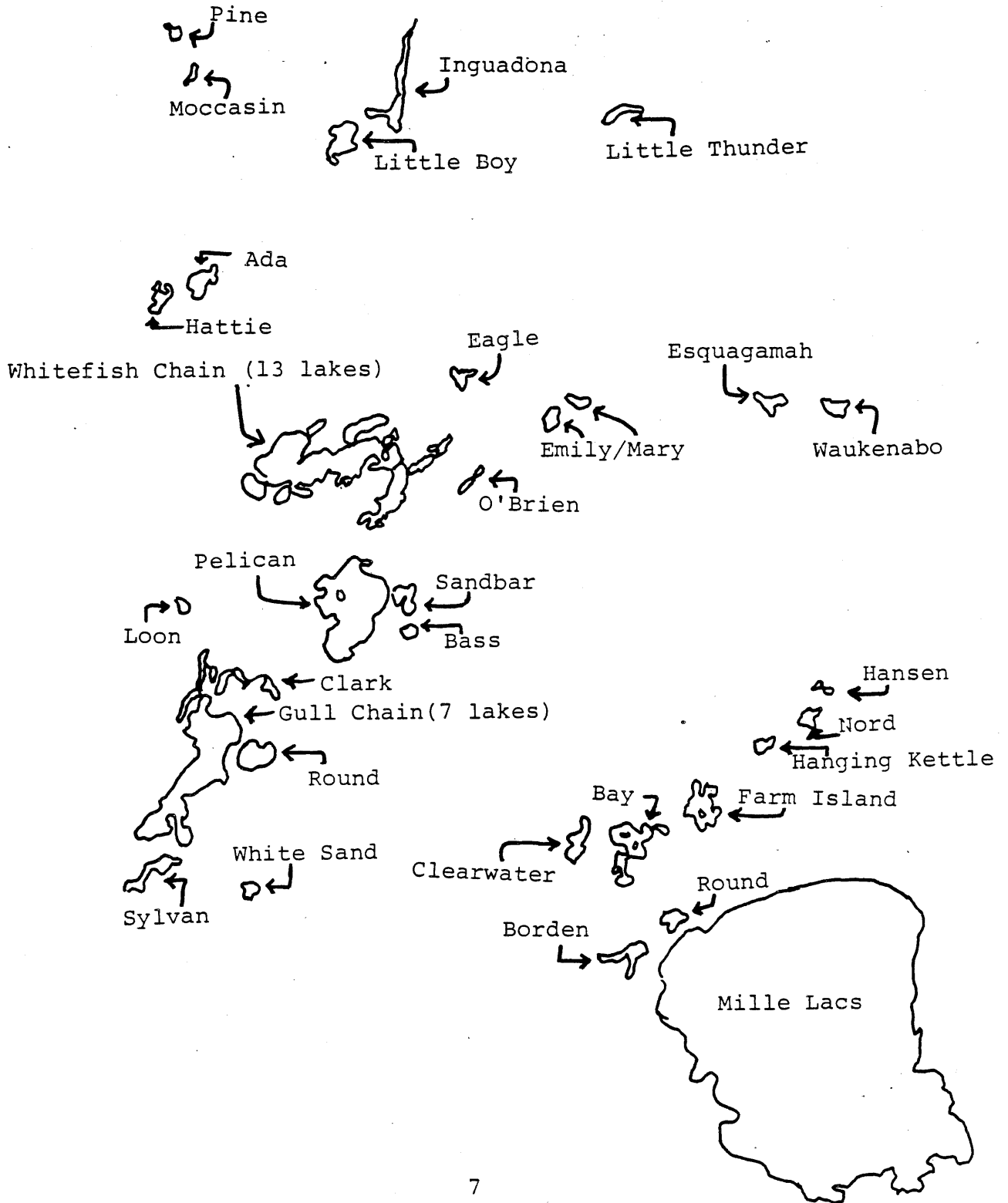
Because of their size and prior knowledge of the extent of boating activity, the DNR identified these lakes of highest priority and all were included in the study. Remaining lakes in the study were chosen to represent lakes in categories A, B and C.

Figure 2

Distribution of Lakes in the 1985 Study Area



Figure 3
 Distribution of Lakes Selected for Study in 1985



6/20/85

TABLE 1
 Characteristics of Lakes Selected for Study

Lake Number	County	Rating	Area (Acres)	Shore (Miles)	Public Accesses	Parking Places	Housing Units (1982)	Resort Units ('76-'78)	Resort Units (1985)	Camp- sites ('76-'78)	Marina Rentals ('76-'78)	Development Classification	Lake Type
TOP PRIORITY LAKES													
480002	Mille Lacs	A111	132,516	76.2	12		2146	434	N/A	1714	489	General Development	9
110305	Gull	A111	9,541	38.0	3	22	490	612	723	111	254	General Development	9
	*Love	Crow Wing											
110222	*Margaret	Cass	230	5.3	0	0	18	19	3	0	16	Natural Environment	8
180399	*Nisswa	Crow Wing	213	2.6	0	0	60	32	3	0	23	Not Available	8
	*Ray												
180398	*Roy	Crow Wing	306	5.2	0	0	118	8	12	50	8	Not Available	8
110218	*Upper Gull	Cass	345	7.5	0	0	18	63	32	8	43	General Development	8
180310	Whitefish, Lower	Crow Wing	7,969	28.4	0	0	N/A	158	147	5	154	General Development	9
180001	*Whitefish, Upper	Crow Wing	760	7.4	0	0	55	14	38	0	6	General Development	8
180366	*Arrowhead	Crow Wing	285	3.8	0	0	29	0	0	0	0	Recreational	9
180355	*Bertha	Crow Wing	353	3.8	0	0	142	21	12	0	26	General Development	9
180315	*Big Trout	Crow Wing	1486	8.6	0	0	269	44	12	0	62	General Development	9
180356	*Clamshell	Crow Wing	238	4.4	1	10	110	25	25	4	16	General Development	9
180312	*Cross	Crow Wing	1884	18.3	3	45	527	62	28	149	57	General Development	9
180271	*Daggett	Crow Wing	284	5.2	0	0	201	22	0	0	5	Not Available	9
180269	*Island	Crow Wing	193	4.2	0	0	98	0	0	0	7	Not Available	8
180266	*Little Pine	Crow Wing	384	7.5	0	0	84	6	4	98	16	Not Available	9
180378	*Lower Hay	Crow Wing	720	4.0	1	25	103	8	9	0	3	General Development	9
180354	*Pig	Crow Wing	213	5.6	0	0	65	19	13	4	15	General Development	7
180311	*Rush/Hen	Crow Wing	782	N/A	0	0	231	16	27	2	17	General Development	9
180308	Pelican	Crow Wing	8,468	22.7	3	25	869	290	327	77	83	General Development	9
PRIORITY A LAKES - Category 2													
Public Access Lakes													
110250	Ada	Cass	1044	7.3	1	10	N/A	25	22	0	10	Recreation	9
180034	Bay	Crow Wing	2435	18.8	1	0	592	113	97	48	56	Recreation	8
10159	Farm Island	Aitkin	2025	12.6	1	0	298	64	35	41	33	Recreation	9
180373	Round	Crow Wing	1706	6.4	1	5	232	68	18	0	46	General Development	9
180251	Sandbar	Crow Wing	974	3.1	1	8	245	28	5	8	12	Recreation	8
110304	Sylvan	Cass	882	9.6	1	10	118	17	38	0	14	General Development	8
No Public Access Lakes													
180020	Borden	Crow Wing	1038	11.0	0	0	122	13	0	20	22	General Development	8
180038	Clearwater	Crow Wing	917	8.5	0	0	65	6	5	47	29	Recreation	8
110120	Inquadona	Cass	935	10.5	0	0	103	2	2	2	0	General Development	9
10204	Round	Aitkin	736	5.0	0	0	116	10	0	0	4	Recreation	8

TABLE 1 (cont.)
 Characteristics of Lakes Selected for Study

6/20/85

Lake Number	County	Rating	Area (Acres)	Shore (Miles)	Public Accesses	Parking Places	Housing Units (1982)	Resort Units (1976-'78)	Resort Units (1985)	Camp- sites (1976-'78)	Marina Rentals (1976-'78)	Development Classification	Lake Type
PRIORITY B LAKES - Category 3													
Public Access Lakes													
180374	Clark	Crow Wing	B412	309	5.0	1	5	116	33	27	10	31 General Development	8
180203	Emily/Mary	Crow Wing	B313	675	4.8	1	2	81	10	20	11	17 General Development	8
110167	Little Boy	Cass	B213	1396	9.0	1	3	92	19	14	2	19 Recreation	9
10117	Nord	Aitkin	B412	414	5.1	1	0	60	0	0	0	0 Recreation	8
10136	Maukenabo	Aitkin	B313	819	4.6	1	0	77	13	0	0	19 Recreation	9
No Public Access Lakes													
10147	Esquagamah	Aitkin	B313	808	6.1	0	0	82	9	0	0	2 Recreation	9
110232	Hattie	Cass	B133	592	6.6	0	0	37	19	16	8	26 Recreation	8
110296	Moccasin	Cass	B412	259	4.7	*	0	13	0	0	0	0 Recreation	8
180227	O'Brien	Crow Wing	B411	203	4.8	0	0	142	0	0	0	0 General Development	8
PRIORITY C LAKES - Category 4													
Public Access Lakes													
180296	Eagle	Crow Wing	C	356						0			
10132	Hansen	Aitkin	C413	200	3.3	1	7	8	0	0	0	0 Natural Environment	5
110009	Little Thunder	Cass	C414	264	6.3	1	0	38	3	0	0	4 Recreation	8
110226	Loon	Cass	C414	220	2.6	1	5	30	1	0	100	5 Recreation	8
180379	White Sand	Crow Wing	C413	441	3.3	1	7	161	4	6	0	4 Not Available	9
No Public Access Lakes													
10170	Hanging Kettle	Aitkin	C413	320	3.7	0	0	61	12	0	0	17 Recreation	8
180256	Bass	Crow Wing	C413	386	2.6	0	0	51	12	0	4	22 Recreation	9
110292	Pine	Cass	C413	256	2.6	0	0	3	7	7	0	0 Recreation	9

B. INTERVIEWING METHODOLOGY

One of the primary efforts of this study was to interview boaters concerning their perceptions of the safety aspects of their boating experience, the adequacy of the access facilities which they used and the types of boating activities pursued. The procedures used in accomplishing the goals of this part of the project are as follows:

1. Sample Size. The original sampling design was based on experience in the 1984 seven county metropolitan area lakes study. As a result, a total of 454 hours were scheduled for access interviews and 190 hours were scheduled for homeowner interviews. This interview schedule was expected to yield approximately 800 access interviews and 400 homeowner interviews. This ratio was expected to approximate the relative proportion of boats from these sources. As the season progressed, it became apparent the total number of boats using the lakes under study was much fewer than originally anticipated, and the relative proportion of boaters using public accesses was less than half of expectations.

More than 500 hours were devoted to access interviews and resulted in 239 completed questionnaires. More than 400 hours were devoted to homeowner (permanent and seasonal), and resort interviews and resulted in 539 resident and 143 resort guest interviews.

2. Locational Selection - Access Interviews. Interviews were conducted at various accesses around the 38 lakes having such accesses. A list of accesses and their codes is given in Table 2. Public accesses are those identified as such in the Public Water Access map series, published by the Minnesota Department of Natural Resources.

3. Temporal (Day of Week, Time of Day) Distribution of Access Interviews. During June - October, the lakes within each category were visited for 6 hour periods which covered weekdays, weekends and various times of the day. At least one visit was made to each lake on the following occasions within this period:

TABLE 2
Lake Access Sites Where Interviews Occurred

<u>Lake Category/ Lake Name</u>	<u>Lake Code</u>	<u>Access Code</u>	<u>Access Name</u>
Category 1:			
Mille Lacs	11	1113-D	DNR - Cove Bay Access
		1122-PM	Eddy's
		1132-D	Shah-Bosh-Kung DNR Access
		1143-PMT	Boat Harbor Marine
		1152-D	Mn/DOT Access
		1161-D	Wealthwood Access - DNR
		1172-PRMT	Malmo Bay Supper Club
		1181-D	Malmo Memorial Park - City of Malmo
		11102-N	Township Public Access
		11104-D	Ceder Creek Public Access - DNR
		11113-D	Mille Lacs Lake Access - Isle - DNR
		11115-D	Father Hennepin Public Launch - State of Minnesota
		White Fish Chain	13
1312-D	DNR Public Access		
1384-N	Ideal Township Access		
13182-D	Corps of Engineers Recreation Area		
Gull Lake Chain	12	1231-D	Corps of Engineers at Gull River Dam
		1241-D	Ron's Squaw Point
		12101-D	DNR Access at Gull Lake Narrows
Pelican Lake	14	1411-D	Jones Bay County Access
		1412-D	South Pelican County Access
		1441-D	DNR Public Access at Halverson Bay
		1451-D	City of Breezy Point Launch
Category 2			
Lake Ada	21	2131-D	DNR Public Access
Bay lake	22	2251-D	DNR Public Access
Farm Island Lake	23	2311-D	DNR Public Access
		2331-PR	Bill's Resort and Campground
Round Lake	24	2421-D	DNR Public Access
Sandbar Lake	25	2511-D	DNR Public Access
Sylvan Lake	26	2622-D	DNR Public Access
Category 3:			
Little Boy Lake	33	3311-D	DNR Public Access
Clark Lake	31	3111-D	DNR Public Access
Emily Lake	32	3211-D	Mn/DOT Public Access
Nord Lake	34	3411-D	DNR Public Access
Waukenabo Lake	35	3511-D	DNR Public Access

June Weekday
June Weekend
July Weekday
July Weekend
August Weekday
August Weekend
September/October Weekend

Within each category of lakes, the time span between 8:30 AM and 8:30 PM was covered. Records were kept of the exact periods of time during which interviews were conducted at each of the public accesses and the time of each interview.

A summary of the number and proportion of interviews from various sources is presented in Tables 3a, 3b and 3c. For comparison purposes, the number and proportion of boats observed in these various categories is presented in Tables 4 and 5. These tables present boat count total for summarizations both with and without the data from fishing opener included. Both sets of data are presented because of the high proportion of total boating usage occurring on the opening weekend of fishing season. Interviews at access points were initiated June 1, resident interviews on July 1 and resort interviews on July 20.

4. Questionnaire Design. The questionnaire used in the 1985 survey follows a similar format to that used during 1984 in the seven county metropolitan area lakes study. Copies of the Access, Resort and Resident questionnaires are presented in Appendix B, C and D.

Where possible, identically worded questions were asked of access boaters, resort guests and lakeshore resident boaters. The major difference between the interviews was that access users were asked to refer to their current boating experience whereas resort guests and lakeshore residents were asked to refer to their most recent boating experience.

5. Interviewing Techniques - Access Interviews. Interviewers were given time schedules for each access and were directed to interview boaters landing at that access during a specific time period. Thus, the attitudes and opinions expressed and experiences described could be directly related to boating that day on that lake and access.

TABLE 3

Summary of Completed Interviews by Lake Categories
and Origin of Boat

Table 3a
Completed Interviews by Lake Categories and Origin of Boat

Origin of Boat	Lake Category			Total
	1	2	3	
Public Access	117	76	46	239
Resort and Private Access	77	44	22	143
Residents	222	169	148	539
TOTAL	416	289	216	921

Table 3b
Percentage of Completed Interviews by Origin of Boat
Within Lake Categories

Origin of Boat	Lake Category			Total
	1	2	3	
Public Access	28%	26%	21%	26%
Resort and Private Access	19%	15%	10%	16%
Residents	53%	59%	69%	58%
TOTAL	100%	100%	100%	100%

Table 3c
Percentage of Completed Interviews by Lake Categories
Within Origin of Boat Groupings

Origin of Boat	Lake Category			Total
	1	2	3	
Public Access	49%	32%	19%	100%
Resort and Private Access	54%	31%	15%	100%
Residents	41%	31%	27%	100%
TOTAL	45%	31%	23%	100%

TABLE 4

Summary of Lake Usage by Lake Categories
and Origin of Boat (Excluding Fishing Opener)

Table 4a
Boat Count by Lake Categories and Origin of Boat

Origin of Boat	Lake Category			Total
	1	2	3	
Public Access	2003	202	102	2307
Resort and Private Access	2049	252	90	2391
Residents	3087	950	240	4271
TOTAL	7139	1404	432	8975

Table 4b
Percentage of Boats Counted by Origin of Boat Within
Lake Categories

Origin of Boat	Lake Category			Total
	1	2	3	
Public Access	28%	14%	24%	26%
Resort and Private Access	29%	18%	21%	27%
Residents	43%	68%	55%	47%
TOTAL	100%	100%	100%	100%

Table 4c
Percentage of Boats Counted by Lake Category
Within Origin of Boat Groupings

Origin of Boat	Lake Category			Total
	1	2	3	
Public Access	87%	9%	4%	100%
Resort and Private Access	86%	10%	4%	100%
Residents	72%	22%	6%	100%
TOTAL	80%	15%	5%	100%

TABLE 5
Summary of Lake Usage by Lake Categories
and Origin of Boat (Including Fishing Opener)

Table 5a
Boat Count by Lake Categories and Origin of Boat

Origin of Boat	Lake Category			Total
	1	2	3	
Public Access	4983	286	168	5437
Resort and Private Access	3394	350	127	3871
Residents	4845	1251	353	6449
TOTAL	13222	1887	648	15757

Table 5b
Percentage of Boats Counted by Origin of Boat Within
Lake Categories

Origin of Boat	Lake Category			Total
	1	2	3	
Public Access	38%	15%	26%	35%
Resort and Private Access	25%	19%	20%	24%
Residents	37%	66%	54%	41%
TOTAL	100%	100%	100%	100%

Table 5c
Percentage of Boats Counted by Lake Category
Within Origin of Boat Groupings

Origin of Boat	Lake Category			Total
	1	2	3	
Public Access	92%	5%	3%	100%
Resort and Private Access	88%	9%	3%	100%
Residents	75%	20%	5%	100%
TOTAL	84%	12%	4%	100%

Questions were asked of the boat operator if possible; under conditions of extreme activity, a spouse or adult companion would from time to time supply information concerning the day's activities, launching time, etc. No sampling scheme at the access site was necessary since each boater landing was normally interviewed. Interviews were normally conducted while the boaters were tying down their boat after landing, thus avoiding interference during the critical time period of actual landing.

Respondents were, in general, very cooperative and able to understand and respond to all questions. Those questions concerning alcohol use and income level (Questions 34-36) related to somewhat more sensitive subjects than did other questions and for this reason were asked last to avoid precipitating an early termination of the interview. Response categories for Questions 34-36 were printed on 3x5 cards and shown to the respondents. The interviewer asked only for a precoded letter to number response for these questions in order to circumvent any inherent reluctance to voice an income or opinion concerning alcohol use, particularly in front of boating companions. The technique proved effective in this study, as it has in the past, with approximately 77% of the respondents answering Question 34, the income question (13% refused to answer and 10% claimed ignorance of household income), and 97% providing a response to Question 36 concerning their perception of appropriate beverages for boat operators. Interviewers and project directors who participated in interviewing from time to time felt that responses to the alcohol use question were candidly given for the most part; this perception is strengthened by a close relationship between fact (presence of alcoholic beverages on board) and opinion (are alcoholic beverages appropriate for boat operators) and the result that nevertheless nearly 13% of those with no alcoholic beverages on board felt that at least some alcoholic use by boat operators is appropriate.

Interviewers were instructed not to reveal the identity of the sponsoring organization. By such a procedure, the responses were less influenced by either a positive or a negative opinion of the DNR, or by the concern that a particular type of response might cause either a desired or undesired

action by the Department. Respondents who asked were offered a Biocentric card with the name, address and telephone number of one of the project directors and told that their questions would be answered by that individual. No calls were received from the access respondents.

6. Interviewing Techniques - Resort Interviews. Interviews at resorts were more difficult to obtain for two reasons. First, care was required to insure that the interviewing process did not interrupt normal operations at the resort. Owners were somewhat apprehensive that their clients would be disturbed by the interviewing process or that normal business would be disrupted. Resort operators frequently asked that interviewers report to them each time they conducted interviews and also that certain times of peak activity be avoided.

7. Locational Selection - Resident Interviews. Interviews of lakeshore residents were conducted in their homes by interviewers going door to door.

Since the exact location of a residence along the lakeshore has little relationship to responses to the type of questions being asked in the survey, no attempt was made to define exact quotas for various lakeshore regions on each lake. However, to avoid any bias which might result by inadvertently restricting interviews to certain residence categories, methods were instituted to insure that interviewers visited areas all around the lakeshore where residences existed.

8. Temporal Distribution - Resident Interviews. Lakeshore residence interviews were conducted in July, August and September. Interviews were conducted in the late afternoon on weekdays and throughout the day on weekends.

Respondents were required to be at least eighteen years of age, to own or regularly operate a boat that is moored or docked on the lake (but not at a marina) and to have been boating on the lake at least once during the current boating season.

Lakeshore residents meeting the above requirements usually have had numerous boating experiences on that particular lake, experiences which represent a variety of conditions. These cumulative boating experiences influence their lake usage patterns and their attitudes. Thus, it is not considered

to be a serious deficiency that lakeshore residents could not be interviewed immediately following their boating activity, nor is it of consequence that interviews were concentrated in the late afternoon hours during the week and on weekends. Still, it should be noted that lakeshore residents were asked to recall events from their last boating occasion while access users were interviewed immediately following their boating experience.

Interviewing in July, August and September gave results related to experiences throughout the boating season. Interviews conducted early in July occasionally encountered residents who had recently put their boats into the water and had not experienced a typical boating occasion. Interviews were not completed with those residents. Interviews conducted in late September frequently encountered residents whose most recent boat usage was to remove the boat from the water. These residents were asked to respond in reference to their most recent typical boating occasion.

9. Interviewing Techniques - Resident Interviews. Conditions for interviewing lakeshore resident boaters were discussed above. Respondent qualification required that the person normally have regular experience with boating on that lake, and have had at least one such experience during the current boating season. These restrictions eliminated those who would have had to rely on the experiences of others or of former years as a basis for their information. Surprisingly, even in July, this requirement eliminated a number of persons from being qualified to participate in the survey since several boat owners had not gotten their boat into the water until after they had been contacted.

In contrast to the 1984 metropolitan lakes survey, residents contacted during 1985 were more cooperative and had less suspicion concerning the uses of the survey results. The identity of the sponsoring organization was not revealed to minimize the influence on responses due to bias toward or against the DNR. If questions were asked, the residents were given a business card of the Biocentric project manager. Biocentric received NO follow-up calls from survey participants.

C. AERIAL OVERFLIGHT METHODOLOGY

A series of aerial overflights of sampled lakes was used within the framework of the study to establish:

- . the total number of boats on a sample lake and where appropriate the number of boats on lake subsections;
- . the activity (moving with wake or stationary) of each type of boat and the amount of water skiing activity for each sample lake and/or lake subsection; and
- . the proportion of the total use of sampled lakes attributable to public and private accesses, resorts and lakeshore residents.

The procedures used in this portion of the study are discussed in the sections that follow.

1. Sampling Pattern. Aerial counts were conducted throughout the primary boating season which begins on the weekend when fishing season opens (May 18, 1985) and ends on Labor Day weekend.

Boating activity varies throughout this season. For the purposes of this study, the season was divided into a peak period (fishing opener) and a summer recreation period (June - August). Previous studies have indicated that boating occasions vary with the day of the week. Boating use tends to be highest on Sunday and lowest on Tuesday, Wednesday and Thursday. Saturday use, although being somewhat lower than Sunday, is nevertheless the most similar to Sunday use as would be expected. Monday and Friday use levels, while more similar to Tuesday, Wednesday and Thursday use levels than to weekend levels, were shown in previous DNR studies to be 30-45% higher than mid-week days. Days for aerial overflights were selected to capture the differences between peak and nonpeak portions of the season as well as the variation between weekday and weekend use within each seasonal segment. The summer holiday weekends (Memorial Day, July 4th and Labor Day) were specifically excluded because the primary emphasis of the study was to obtain data on the typical boating patterns throughout the summer.

Table 6 displays the dates and days initially selected for sampling as well as the actual dates and days of aerial overflights. As can be seen, some substitutions from the plan were necessary due to weather conditions on selected dates. The overall sampling plan, however, was not compromised because substitute days fell within the same seasonal period and were equivalent days within the week.

2. Lake Selection. Before the overflights began, large or complex lakes were divided into sections. Each section was counted separately during every flight. A list of all sampled lakes and the number of sections is given in Table 7. Lake maps showing multiple counting areas, maps are included in Appendix F.

3. Sampling Order. Throughout the season, the order in which lakes were counted on individual aerial overflights was varied to avoid the introduction of systematic bias. The sampling pattern for each flight date is presented in Table 8 which also lists the overall flight observation times. Although it was not possible to observe the peak boating time on each lake, the design of the study made it possible to subsequently estimate peak usage from evaluation of information obtained from the three types of interviews. The amount of time required for an overflight observation ranged from 4.3 to 6.8 hours. The duration of flights was somewhat dependent on the amount of boating activity. Records have been kept of the exact time a count was taken by date, lake, section and access location.

4. Boat Classification. Boats were classified by the type of boating activity as follows:

- . Boats with wakes
- . Water skiers
- . Beached boats (including boats at transient docks)
- . Sail boats (including wind surfers)
- . Canoes (including kayaks)
- . Boats without wakes (primarily fishing activity)

This classification method differs from the 1984 procedure where boats were classified by type of boat. DNR personnel concluded that the type of boating activity was more closely correlated with the amount of water surface used and thus to potential lake management concerns.

TABLE 6
Aerial Overflight Temporal Sampling Schedule

<u>Period</u>	<u>Dates Selection</u>		<u>Actual Flight Dates</u>	
	<u>Date</u>	<u>Day</u>	<u>Date</u>	<u>Day</u>
Fishing opener	May 18	Saturday	May 18	Saturday
	June 1	Saturday	June 1	Saturday
	June 19	Wednesday	June 19	Wednesday
	June 29	Saturday	June 29	Saturday
	July 13	Saturday	July 13	Saturday
	July 17	Wednesday	July 23	Tuesday
	July 27	Saturday	July 28	Sunday
	Aug. 14	Saturday	Aug. 11	Sunday
	Aug. 14	Wednesday	Aug. 15	Thursday
	Aug. 24	Saturday	Aug. 25	Sunday

TABLE 7
Sectional Divisions of Lakes for Aerial Counts

	Lake	Code	Number of Sections
Category 1	Mille Lacs	11	18
	Gull	12	14
	Lower Gull	12	7
	Love	12.05	1
	Margaret	12.09	2
	Upper Gull	12.11	1
	Ray	12.12	1
	Roy	12.13	1
	Nisswa	12.14	1
	Whitefish	13	22
	Lower Hay	13.01	1
	Upper Whitefish	13.02	2
	Arrowhead	13.04	1
	Lower Whitefish	13	5
	Bertha	13.07	1
	Clamshell	13.08	1
	Pig	13.10	1
	Big Trout	13.13	1
	Island/Loon	13.14	2
	Hen/Rush	13.16	2
	Cross	13.18	3
	Daggett	13.21	1
	Little Pine	13.22	1
Category 2	Pelican	14	5
	Ada	21	3
	Bay	22	9
	Farm Island	23	4
	Round	24	2
	Sandbar	25	1
	Sylvan	26	2
	Borden	27	3
	Clearwater	28	2
	Inguadona	29	3
	Round	210	1
	Category 3	Clark	31
Emily/Mary		32	2
Little Boy		33	3
Nord		34	2
Waukenabo		35	1
Esquagamah		36	1
Hattie		37	5
Moccasin		38	1
O'Brien		39	2
Category 4	Eagle	41	3
	Hansen	42	2
	Little Thunder	43	1
	Loon	44	1
	White Sand	45	1
	Hanging Kettle	46	1
	Bass	47	1
	Pine	48	1

TABLE 8
Sampling Pattern for Aerial Counts

DATE										
5/18	6/1	6/19	6/29	7/13	7/23	7/28	8/11	8/15	8/25	
TIME										
9:50	9:32	1:07	9:56	1:45	10:33	1:02	10:21	10:22	12:07	
-4:40	-2:57	-6:16	-3:03	-7:20	-3:48	-6:40	-4:27	-4:26	-4:26	

Sampling
Drive

LAKE CODE NUMBER

1	11	11	45	11	11	11	11	11	11	11
2	27	27	26	210	210	27	27	210	210	27
3	210	210	12	27	27	210	210	23	23	210
4	23	28	24	28	28	23	23	46	46	23
5	22	22	44	22	22	22	22	34	34	22
6	28	23	31	23	23	28	28	42	42	28
7	45	46	14	46	46	45	45	35	35	45
8	26	34	25	34	34	26	26	36	36	26
9	12	42	47	42	42	12	12	43	43	12
10	44	35	13	35	35	24	24	29	29	24
11	31	36	39	36	36	31	31	33	33	31
12	24	43	32	32	43	44	44	48	48	44
13	14	29	41	41	29	14	14	38	38	14
14	25	33	21	39	33	25	25	37	37	47
15	47	48	37	47	48	47	47	21	21	25
16	13	38	38	25	38	13	13	13	13	39
17	39	37	48	31	37	39	39	41	41	32
18	32	21	33	24	21	32	32	32	32	41
19	41	41	29	45	13	41	41	39	39	13
20	21	32	43	26	41	21	21	14	14	21
21	37	39	36	12	32	37	37	25	25	37
22	38	25	35	44	39	38	38	47	47	38
23	48	24	28	14	25	48	48	44	44	48
24	33	31	22	13	47	33	33	31	31	33
25	29	14	23	43	14	29	29	24	12	29
26	43	47	46	29	44	43	43	12	24	43
27	36	13	34	33	31	36	36	26	26	36
28	35	12	42	21	45	35	35	45	45	35
29	42	44	210	37	26	42	42	28	28	42
30	34	26	27	38	12	34	34	22	22	34
31	46	45	11	48	24	46	46	27	27	46

5. Access Points. Prior to the initial flight, the location of public and privately owned access points available to the public and the location of associated parking areas were identified for each sampled lake. Lakes with multiple access points were visited on the ground to establish where public and private launches are located. A telephone survey was conducted of resorts and marinas to determine the number of resort owned boats and the number of rented slips at marinas. These data provided the basis for determining the number of boats that originated from resorts and marinas.

Marinas that were associated with condominiums, private housing developments or the large seasonal campground (Wilderness Park) on Little Pine lake on the Whitefish Chain, were not considered in the marina category. These marinas are for the exclusive use of a subset of lakeshore residents; therefore, the boating activity from these marinas is properly classified as lakeshore resident usage. Marinas that are totally transient such as the marinas at restaurants (Bar Harbor and Channel Inn on Gull and Ye Olde Wharf on Whitefish) are not classified as access points. Boats at these marinas were included in the lake counts as beached boats since they represent a boat which has departed from one of the other access points on the lake.

6. Total Boat Counts. When all sampled lakes were counted during an overflight, two professional personnel and a pilot were on board the airplane. One professional was responsible for observing a lake area to determine numbers and activity of boats while the other professional recorded the time and counts on recording forms and ensured that no lake areas or access points were missed. This procedure allowed each person to concentrate fully on the assigned task. An additional advantage of this type of aerial counting and recording is that it entails minimal interpretation of the data after the flight. Total counts, area counts and the number of boats by type can be developed directly from the recording forms. A sample of the recording form is included in Appendix G.

Transient boats (boats at transient docks of restaurants or marinas), boats on shore at beaches and boats waiting in areas adjacent to access points for landing were included in both area and total lake counts. A count of these boats was essential for an accurate measurement of the proportion of total use derived from the various access types. Although transient boats did not contribute to lake congestion during the counting period, excluding them from the count would have the effect of overstating the proportion of use from public and private accesses while understating the degree to which those who do not require specific accesses (primarily lakeshore residents) used the lake. The process of establishing these relative use proportions will be discussed more fully below.

Boat counts for each of the nine overflights are summarized by lake and type of boating activity in Appendix H. Lakes are listed with their associated category in the table. Each category is totaled. Appendix I presents the boat counts, organized by area of lake, date of observation and type of boating activity observed.

Aerial counts are summarized in Tables 9, 10 and 11. Table 9 presents a summary of boat counts by lake and date of observation. Table 10 presents a summary of the distribution of lake usage by area of lake. Table 11 presents a summary of lake usage by type of boating activity. Appendix J gives an estimate of the average number of boats in various lake areas on a typical weekend and weekend day.

7. Usage by Access Type. To establish the proportion of boating activity from the four major sources (public access, private access, resort and lakeshore residents), the total number of boats on the lake were counted and classified, while simultaneous counts were made of the number of empty trailers parked at each access and resort, and the number of boats remaining at resort and marina docks.

(1) Public and Private Accesses:

The amount of total lake use attributable to public accesses was derived directly from boat trailer counts at or surrounding these accesses. During the overflight of the access

TABLE 9

Summary of Total Boat Counts
for 49 Lakes on 10 Dates (1985)

	5/18/85	6/01/85	6/19/85	6/29/85	7/13/85	7/23/85	7/28/85	8/11/85	8/15/85	8/25/85
	Weekend	Weekend	Weekday	Weekend	Weekend	Weekday	Weekend	Weekend	Weekday	Weekend
Mille Lacs	4,881	745	199	567	387	59	266	301	88	311
Gull Chain	638	152	148	267	239	65	339	220	166	206
Gull	504	101	106	203	164	40	229	135	119	144
Love	18	11	6	5	3	2	8	2	4	3
Margaret	27	8	4	6	17	3	15	19	8	5
Nisswa	13	3	3	3	4	3	10	5	6	10
Ray	13	9	9	3	6	2	7	8	6	2
Roy	11	3	5	7	6	3	11	9	6	6
Upper Gull	52	17	15	40	39	12	59	42	17	36
Whitefish Chain	430	92	150	274	297	141	214	314	222	256
Whitefish, Lower	96	11	37	45	33	16	42	52	46	46
Whitefish, Upper	55	7	13	30	17	5	26	21	22	22
Arrowhead	18	0	4	9	1	2	0	3	3	1
Bertha	10	2	4	3	6	3	5	13	13	3
Big Trout	23	4	7	13	42	15	17	53	9	13
Clamshell	14	9	6	7	7	6	5	15	10	8
Cross	91	25	40	89	78	62	72	61	51	61
Daggett	27	7	7	17	25	8	9	19	11	13
Island	22	8	6	3	8	2	3	7	21	10
Little Pine	26	5	5	15	16	3	14	7	7	3
Lower Hay	11	3	4	3	12	2	5	9	6	9
Pig	8	2	6	3	3	3	7	4	5	7
Rush/Hen	29	9	11	37	49	14	20	50	18	60
Pelican	134	26	34	63	52	20	62	71	70	56
Ada	13	9	10	8	15	5	7	13	10	11
Bay	91	39	20	39	57	28	60	58	32	56
Farm Island	220	54	22	27	45	10	37	47	16	34
Round (Crow Wing)	38	4	8	15	36	7	22	16	21	13
Sandbar	16	11	10	12	20	5	16	13	7	11
Sylvan	25	8	11	18	18	6	17	18	14	16
Borden	31	15	6	10	16	3	4	8	4	10
Clearwater	16	8	6	11	9	2	4	6	3	6
Inquadona	31	9	6	21	8	4	2	6	12	16
Round (Atkin)	2	5	2	5	7	1	8	4	6	9
Clark	5	0	3	2	4	2	4	4	8	2
Emily/Mary	62	7	9	14	14	2	1	6	6	11
Little Boy	63	5	11	29	15	3	6	25	17	9
Nord	8	11	3	2	4	0	1	6	2	2
Waukenabo	40	15	4	3	1	2	2	4	0	2
Esquagamah	21	8	2	9	4	3	4	6	5	4
Hattie	9	4	8	9	11	3	6	11	5	1
Moccasin	6	1	3	1	9	1	3	2	2	0
O'Brien	2	2	2	4	5	2	4	1	2	1
Eagle	9	5	5	13	5	1	1	8	7	5
Hansen	3	5	0	1	3	0	0	3	1	1
Little Thunder	4	1	0	1	2	0	2	6	2	1
Loon	2	2	3	5	1	1	1	2	5	1
White Sand	13	3	5	4	0	2	5	5	5	5
Hanging Kettle	11	5	2	9	8	1	2	3	1	2
Bass	8	3	4	6	7	0	0	2	0	2
Pine	4	0	2	5	2	1	4	0	2	1
TOTAL	7,904	1,498	996	1,995	1,837	586	1,668	1,723	1,129	1,523

TABLE 10

Summary Distribution of Boats by Lake Area and Date

		5/18/85	6/01/85	6/19/85	6/29/85	7/13/85	7/23/85	7/28/85	8/11/85	8/15/85	8/25/85
		Weekend	Weekend	Weekday	Weekend	Weekend	Weekday	Weekend	Weekend	Weekday	Weekend
CATEGORY I LAKES											
Mille Lacs											
	AREA										
	1	3.6%	9.5%	13.6%	8.8%	7.0%	18.6%	9.0%	9.6%	4.3%	9.6%
	2	9.0%	10.6%	14.6%	7.9%	7.2%	11.9%	5.3%	5.3%	3.3%	6.8%
	3	2.9%	9.5%	2.0%	1.9%	1.6%	8.5%	4.5%	2.0%	0.7%	0.3%
	4	6.5%	5.9%	2.0%	6.3%	5.9%	5.1%	5.3%	2.7%	3.4%	3.2%
	5	11.8%	15.0%	6.0%	4.2%	5.4%	3.4%	9.8%	2.3%	10.2%	11.6%
	6	7.8%	5.8%	3.0%	6.7%	1.8%	0.0%	7.1%	1.7%	3.4%	6.8%
	7	11.8%	11.4%	10.1%	4.9%	2.1%	1.7%	3.8%	12.6%	5.7%	12.5%
	8	11.6%	6.8%	5.5%	2.5%	1.0%	5.1%	1.5%	7.0%	3.4%	9.6%
	9	7.4%	5.0%	2.0%	3.4%	5.4%	0.0%	8.6%	14.0%	4.5%	5.1%
	10	5.5%	3.1%	6.5%	8.1%	10.9%	6.8%	9.0%	6.3%	6.8%	10.9%
	11	8.6%	14.4%	16.1%	16.0%	34.4%	20.3%	12.0%	18.9%	14.8%	15.1%
	12	7.8%	1.7%	11.6%	2.5%	4.4%	6.8%	7.1%	14.0%	10.2%	2.6%
	13	0.2%	0.5%	1.5%	1.4%	1.3%	3.4%	1.5%	0.3%	4.5%	1.0%
	14	.0%	0.0%	0.0%	3.9%	0.3%	0.0%	0.8%	0.3%	2.3%	0.0%
	15	2.1%	0.1%	3.5%	4.1%	4.4%	5.1%	5.6%	2.3%	0.0%	3.2%
	16	0.8%	0.0%	1.5%	5.8%	5.9%	0.0%	4.9%	0.7%	0.0%	1.0%
	17	0.9%	0.5%	0.5%	8.1%	0.8%	0.0%	1.5%	0.0%	2.3%	0.0%
	18	1.5%	0.0%	0.0%	3.4%	0.3%	3.4%	2.6%	0.0%	0.0%	0.6%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Gull Chain											
	Lower Gull										
	1	0.9%	12.5%	10.1%	4.9%	11.3%	10.8%	10.3%	8.6%	12.7%	1.9%
	2	6.7%	7.2%	6.8%	8.2%	10.9%	7.7%	2.9%	5.0%	7.8%	7.8%
	3	8.6%	7.9%	12.2%	7.9%	11.7%	15.4%	21.5%	8.6%	11.4%	10.7%
	4	18.3%	15.1%	24.3%	13.9%	14.2%	7.7%	17.1%	19.1%	14.5%	19.9%
	Love	2.8%	7.2%	4.1%	1.9%	1.3%	3.1%	2.4%	0.9%	2.4%	1.5%
	6	22.4%	4.6%	6.8%	28.5%	9.6%	4.6%	4.7%	6.8%	15.7%	10.7%
	7	19.1%	10.5%	3.4%	7.9%	5.0%	6.2%	4.4%	5.5%	4.8%	11.7%
	8	2.8%	8.6%	8.1%	4.9%	5.9%	9.2%	6.5%	7.7%	4.8%	7.3%
	Margaret	4.2%	5.3%	2.7%	2.2%	7.1%	4.6%	4.4%	8.6%	4.8%	2.4%
	10	3.6%	9.2%	7.4%	9.0%	12.1%	13.8%	13.0%	14.5%	6.6%	12.1%
	11	4.5%	2.0%	2.7%	6.0%	4.2%	4.6%	4.4%	4.5%	3.6%	5.3%
	12	2.0%	5.9%	6.1%	1.1%	2.5%	3.1%	2.1%	3.6%	3.6%	1.0%
	13	1.7%	2.0%	3.4%	2.6%	2.5%	4.6%	3.2%	4.1%	3.6%	2.9%
	14	2.0%	2.0%	2.0%	1.1%	1.7%	4.6%	2.9%	2.3%	3.6%	4.9%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE 10 (cont.)

		5/18/85	6/01/85	6/19/85	6/29/85	7/13/85	7/23/85	7/28/85	8/11/85	8/15/85	8/25/85
		Weekend	Weekend	Weekday	Weekend	Weekend	Weekday	Weekend	Weekend	Weekday	Weekend
CATEGORY I LAKES											
Whitefish Chain	AREA										
Lower Hay	1	2.6%	3.3%	2.7%	1.1%	4.0%	1.4%	2.3%	2.9%	2.7%	3.5%
Upper Whitefish	2	4.9%	6.5%	6.0%	8.0%	3.4%	2.8%	6.1%	4.8%	3.6%	7.0%
Upper Whitefish	3	7.9%	1.1%	2.7%	2.9%	2.4%	0.7%	6.1%	1.9%	6.3%	1.6%
Arrowhead	4	4.2%	0.0%	2.7%	3.3%	0.3%	1.4%	0.0%	1.0%	1.4%	0.4%
Lower Whitefish	5	6.0%	1.1%	2.0%	2.9%	1.3%	0.7%	4.2%	1.9%	4.5%	1.6%
Lower Whitefish	6	5.1%	3.3%	7.3%	1.8%	3.7%	2.1%	1.4%	2.9%	3.6%	4.7%
Bertha	7	2.3%	2.2%	2.7%	1.1%	2.0%	2.1%	2.3%	4.1%	5.9%	1.2%
Clamshell	8	3.3%	9.8%	4.0%	2.6%	2.4%	4.3%	2.3%	4.8%	4.5%	3.1%
Lower Whitefish	9	1.2%	1.1%	2.7%	1.1%	1.0%	2.1%	1.4%	1.9%	1.8%	1.2%
Pig	10	1.9%	2.2%	4.0%	1.1%	1.0%	2.1%	3.3%	1.3%	2.3%	2.7%
Lower Whitefish	11	2.6%	4.3%	6.7%	2.9%	3.0%	5.7%	4.7%	6.7%	7.7%	6.6%
Lower Whitefish	12	7.4%	2.2%	6.0%	7.7%	2.0%	0.7%	2.8%	3.2%	3.2%	3.9%
Big Trout	13	5.3%	4.3%	4.7%	4.7%	14.1%	10.6%	7.9%	16.9%	4.1%	5.1%
Island	14	3.7%	5.4%	4.0%	1.1%	2.0%	1.4%	1.4%	1.9%	9.5%	3.5%
Loon	15	1.4%	3.3%	0.0%	0.0%	0.7%	0.0%	0.0%	0.3%	0.0%	0.4%
Hen	16	0.5%	5.4%	0.0%	2.6%	0.7%	0.7%	0.9%	1.6%	0.5%	0.8%
Rush	17	6.3%	4.3%	7.3%	10.9%	15.8%	9.2%	8.4%	14.3%	7.7%	22.7%
Cross	18	15.1%	18.5%	18.0%	19.3%	10.4%	36.9%	19.6%	9.6%	13.5%	10.5%
Cross	19	4.0%	4.3%	5.3%	9.1%	9.8%	3.5%	11.7%	7.6%	7.7%	9.8%
Cross	20	2.1%	4.3%	3.3%	4.0%	6.1%	3.5%	2.3%	2.2%	1.8%	3.5%
Daggett	21	6.3%	7.6%	4.7%	6.2%	8.4%	5.7%	4.2%	6.1%	5.0%	5.1%
Little Pine	22	6.0%	5.4%	3.3%	5.5%	5.4%	2.1%	6.5%	2.2%	3.2%	1.2%
TOTAL		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Pelican											
	1	17.2%	38.5%	32.4%	27.0%	28.8%	15.0%	27.4%	26.8%	24.3%	32.1%
	2	18.7%	11.5%	11.8%	12.7%	23.1%	10.0%	41.9%	15.5%	11.4%	30.4%
	3	28.4%	3.8%	11.8%	20.6%	9.6%	20.0%	4.8%	23.9%	15.7%	28.6%
	4	24.6%	34.6%	14.7%	11.1%	26.9%	20.0%	25.8%	9.9%	25.7%	3.6%
	5	11.2%	11.5%	29.4%	28.6%	11.5%	35.0%	0.0%	23.9%	22.9%	5.4%
TOTAL		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE 10 (cont.)

		5/18/85	6/01/85	6/19/85	6/29/85	7/13/85	7/23/85	7/28/85	8/11/85	8/15/85	8/25/85
		Weekend	Weekend	Weekday	Weekend	Weekend	Weekday	Weekend	Weekend	Weekday	Weekend
CATEGORY II LAKES											
Ada	AREA										
	1	15.4%	11.1%	30.0%	25.0%	20.0%	0.0%	0.0%	53.8%	30.0%	18.2%
	2	53.8%	77.8%	50.0%	62.5%	53.3%	80.0%	100.0%	23.1%	70.0%	54.5%
	3	30.8%	11.1%	20.0%	12.5%	26.7%	20.0%	0.0%	23.1%	0.0%	27.3%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Bay											
	1	8.8%	17.9%	10.0%	17.9%	10.5%	28.6%	16.7%	12.1%	15.6%	7.1%
	2	7.7%	7.7%	0.0%	7.7%	1.8%	3.6%	6.7%	5.2%	0.0%	8.9%
	3	3.3%	12.8%	20.0%	15.4%	12.3%	17.9%	13.3%	8.6%	18.8%	19.6%
	4	27.5%	12.8%	15.0%	15.4%	10.5%	10.7%	18.3%	24.1%	31.3%	23.2%
	5	23.1%	0.0%	10.0%	2.6%	19.3%	3.6%	10.0%	20.7%	3.1%	8.9%
	6	7.7%	17.9%	10.0%	17.9%	8.8%	14.3%	11.7%	8.6%	6.3%	12.5%
	7	7.7%	7.7%	10.0%	10.3%	8.8%	0.0%	1.7%	8.6%	9.4%	5.4%
	8	11.0%	17.9%	5.0%	10.3%	19.3%	21.4%	18.3%	10.3%	15.6%	12.5%
	9	3.3%	5.1%	20.0%	2.6%	8.8%	0.0%	3.3%	1.7%	0.0%	1.8%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Farm Island											
	1	6.8%	20.4%	13.6%	29.6%	24.4%	60.0%	27.0%	12.8%	25.0%	20.6%
	2	13.2%	38.9%	45.5%	25.9%	26.7%	20.0%	27.0%	23.4%	31.3%	14.7%
	3	36.4%	18.5%	18.2%	18.5%	20.0%	10.0%	21.6%	25.5%	31.3%	32.4%
	4	43.6%	22.2%	22.7%	25.9%	28.9%	10.0%	24.3%	38.3%	12.5%	32.4%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Round (Crow Wing)											
	1	52.6%	25.0%	25.0%	60.0%	36.1%	42.9%	31.8%	37.5%	38.1%	38.5%
	2	47.4%	75.0%	75.0%	40.0%	63.9%	57.1%	68.2%	62.5%	61.9%	61.5%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Sandbar											
	1	25.0%	54.5%	60.0%	75.0%	45.0%	60.0%	25.0%	30.8%	28.6%	36.4%
	2	43.8%	18.2%	10.0%	16.7%	15.0%	20.0%	75.0%	23.1%	28.6%	27.3%
	3	31.3%	27.3%	30.0%	8.3%	40.0%	20.0%	0.0%	46.2%	42.9%	36.4%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Sylvan											
	1	64.0%	75.0%	36.4%	27.8%	44.4%	33.3%	52.9%	44.4%	28.6%	68.8%
	2	36.0%	25.0%	63.6%	72.2%	55.6%	66.7%	47.1%	55.6%	71.4%	31.3%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Borden											
	1	51.6%	20.0%	0.0%	50.0%	31.3%	100.0%	25.0%	50.0%	25.0%	60.0%
	2	12.9%	20.0%	50.0%	10.0%	43.8%	0.0%	25.0%	12.5%	25.0%	20.0%
	3	35.5%	60.0%	50.0%	40.0%	25.0%	0.0%	50.0%	37.5%	50.0%	20.0%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Clearwater											
	1	37.5%	50.0%	83.3%	36.4%	11.1%	0.0%	50.0%	50.0%	33.3%	66.7%
	2	62.5%	50.0%	16.7%	63.6%	88.9%	100.0%	50.0%	50.0%	66.7%	33.3%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Inguadona											
	1	41.9%	44.4%	83.3%	61.9%	62.5%	50.0%	100.0%	33.3%	58.3%	18.8%
	2	45.2%	44.4%	16.7%	33.3%	25.0%	50.0%	0.0%	50.0%	41.7%	68.8%
	3	12.9%	11.1%	0.0%	4.8%	12.5%	0.0%	0.0%	16.7%	0.0%	12.5%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE 10 (cont.)

		5/18/85	6/01/85	6/19/85	6/29/85	7/13/85	7/23/85	7/28/85	8/11/85	8/15/85	8/25/85
		Weekend	Weekend	Weekday	Weekend	Weekend	Weekday	Weekend	Weekend	Weekday	Weekend
CATEGORY III LAKES											
Clark	AREA										
	1	60.0%	0.0%	66.7%	50.0%	25.0%	50.0%	25.0%	0.0%	87.5%	100.0%
	2	40.0%	0.0%	33.3%	50.0%	75.0%	50.0%	75.0%	100.0%	12.5%	0.0%
	TOTAL	100.0%	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Emily/Mary											
	1	69.4%	85.7%	77.8%	64.3%	42.9%	100.0%	0.0%	33.3%	33.3%	45.5%
	2	30.6%	14.3%	22.2%	35.7%	57.1%	0.0%	100.0%	66.7%	66.7%	54.5%
	Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Little Boy											
	1	47.6%	40.0%	18.2%	6.9%	0.0%	66.7%	33.3%	12.0%	11.8%	11.1%
	2	27.0%	20.0%	27.3%	37.9%	53.3%	0.0%	16.7%	48.0%	41.2%	22.2%
	3	25.4%	40.0%	54.5%	55.2%	46.7%	33.3%	50.0%	40.0%	47.1%	66.7%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Nord											
	1	87.5%	81.8%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	100.0%
	2	12.5%	18.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	100.0%
Hattie											
	1	11.1%	50.0%	37.5%	11.1%	18.2%	66.7%	0.0%	45.5%	0.0%	0.0%
	2	66.7%	25.0%	25.0%	44.4%	36.4%	0.0%	66.7%	45.5%	40.0%	100.0%
	3	0.0%	0.0%	12.5%	11.1%	45.5%	0.0%	33.3%	0.0%	20.0%	0.0%
	4	22.2%	0.0%	25.0%	11.1%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%
	5	0.0%	25.0%	0.0%	22.2%	0.0%	33.3%	0.0%	9.1%	20.0%	0.0%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
O'Brien											
	1	0.0%	0.0%	50.0%	50.0%	60.0%	100.0%	75.0%	100.0%	0.0%	100.0%
	2	100.0%	100.0%	50.0%	50.0%	40.0%	0.0%	25.0%	0.0%	100.0%	0.0%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
CATEGORY IV											
Eagle											
	1	44.4%	60.0%	40.0%	84.6%	40.0%	100.0%	100.0%	62.5%	57.1%	60.0%
	2	44.4%	40.0%	40.0%	7.7%	20.0%	0.0%	0.0%	25.0%	42.9%	20.0%
	3	11.1%	0.0%	20.0%	7.7%	40.0%	0.0%	0.0%	12.5%	0.0%	20.0%
	TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Hansen											
	1	0.0%	40.0%	0.0%	100.0%	66.7%	0.0%	0.0%	33.3%	100.0%	100.0%
	2	100.0%	60.0%	0.0%	0.0%	33.3%	0.0%	0.0%	66.7%	0.0%	0.0%
	TOTAL	100.0%	100.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	100.0%

TABLE 11

Distribution of Counted Boats by Lake Category
Date and Type of Boating Activity

	Boats With Wakes		Boats Without Wakes				Total With Wakes	Total Without Wakes	Lake Area Total
	Other	With Skiers	Beached Boats	Sailed	Canoe	Other			
CATEGORY I									
May 18, 1985 - Saturday	7%	0%	1%	0%	0%	91%	7%	93%	100%
June 01, 1985 - Saturday	12%	0%	2%	0%	0%	86%	12%	88%	100%
June 19, 1985 - Wednesday	19%	1%	4%	2%	0%	75%	20%	80%	100%
June 29, 1985 - Saturday	21%	1%	7%	1%	1%	70%	22%	78%	100%
July 13, 1985 - Saturday	27%	3%	14%	3%	2%	51%	30%	70%	100%
July 23, 1985 - Tuesday	29%	3%	18%	6%	1%	44%	32%	68%	100%
July 28, 1985 - Sunday	33%	5%	14%	8%	1%	38%	38%	62%	100%
August 11, 1985 - Sunday	30%	4%	9%	8%	2%	47%	34%	66%	100%
August 15, 1985 - Thursday	30%	8%	9%	4%	3%	47%	37%	63%	100%
August 25, 1985 - Sunday	36%	3%	6%	3%	1%	51%	39%	61%	100%
CATEGORY I-MILLE LACS									
May 18, 1985 - Saturday	5%	0%	0%	0%	0%	95%	5%	95%	100%
June 01, 1985 - Saturday	9%	0%	0%	0%	0%	91%	9%	91%	100%
June 19, 1985 - Wednesday	12%	0%	0%	0%	0%	88%	12%	88%	100%
June 29, 1985 - Saturday	13%	0%	1%	1%	0%	87%	13%	87%	100%
July 13, 1985 - Saturday	16%	1%	10%	2%	0%	83%	17%	83%	100%
July 23, 1985 - Tuesday	14%	3%	0%	0%	0%	83%	17%	83%	100%
July 28, 1985 - Sunday	26%	3%	2%	7%	2%	71%	29%	71%	100%
August 11, 1985 - Sunday	15%	0%	1%	1%	1%	85%	15%	85%	100%
August 15, 1985 - Thursday	17%	0%	2%	2%	0%	83%	17%	83%	100%
August 25, 1985 - Sunday	15%	0%	0%	2%	0%	85%	15%	85%	100%
CATEGORY I WITHOUT MILLE LACS									
May 18, 1985 - Saturday	15%	0%	4%	0%	1%	81%	15%	85%	100%
June 01, 1985 - Saturday	19%	0%	7%	0%	1%	73%	19%	81%	100%
June 19, 1985 - Wednesday	23%	1%	6%	2%	0%	67%	24%	76%	100%
June 29, 1985 - Saturday	28%	2%	12%	2%	1%	54%	30%	70%	100%
July 13, 1985 - Saturday	34%	4%	16%	4%	4%	38%	38%	62%	100%
July 23, 1985 - Tuesday	33%	3%	23%	7%	1%	34%	36%	64%	100%
July 28, 1985 - Sunday	36%	6%	20%	9%	1%	28%	42%	58%	100%
August 11, 1985 - Sunday	38%	6%	13%	12%	2%	30%	44%	56%	100%
August 15, 1985 - Thursday	32%	9%	11%	5%	3%	40%	41%	59%	100%
August 25, 1985 - Sunday	48%	5%	9%	5%	1%	31%	54%	46%	100%

TABLE 11 (cont.)

	Boats With Wakes		Boats Without Wakes				Total	Total	Lake
	Other	With Skiers	Beached Boats	Sailed	Canoe	Other	With Wakes	Without Wakes	Area Total
CATEGORY II									
May 18, 1985 - Saturday	9%	0%	0%	0%	1%	89%	9%	91%	100%
June 01, 1985 - Saturday	14%	0%	0%	0%	0%	86%	14%	86%	100%
June 19, 1985 - Wednesday	15%	1%	1%	1%	2%	80%	16%	84%	100%
June 29, 1985 - Saturday	20%	1%	3%	2%	3%	71%	20%	80%	100%
July 13, 1985 - Saturday	24%	6%	2%	4%	3%	61%	30%	70%	100%
July 23, 1985 - Tuesday	20%	1%	4%	3%	3%	69%	21%	79%	100%
July 28, 1985 - Sunday	31%	8%	0%	8%	2%	51%	39%	61%	100%
August 11, 1985 - Sunday	29%	7%	0%	7%	2%	56%	35%	65%	100%
August 15, 1985 - Thursday	20%	7%	0%	2%	4%	67%	27%	73%	100%
August 25, 1985 - Sunday	28%	4%	3%	4%	4%	57%	32%	68%	100%
CATEGORY III									
May 18, 1985 - Saturday	8%	1%	15%	0%	0%	76%	9%	91%	100%
June 01, 1985 - Saturday	4%	0%	0%	0%	2%	94%	4%	96%	100%
June 19, 1985 - Wednesday	7%	0%	7%	9%	0%	78%	7%	93%	100%
June 29, 1985 - Saturday	14%	0%	0%	3%	0%	84%	14%	86%	100%
July 13, 1985 - Saturday	16%	0%	7%	9%	4%	63%	16%	84%	100%
July 23, 1985 - Tuesday	6%	0%	0%	0%	0%	94%	6%	94%	100%
July 28, 1985 - Sunday	39%	6%	0%	0%	0%	55%	45%	55%	100%
August 11, 1985 - Sunday	14%	0%	0%	2%	2%	83%	14%	86%	100%
August 15, 1985 - Thursday	17%	2%	0%	0%	2%	79%	19%	81%	100%
August 25, 1985 - Sunday	16%	3%	0%	0%	0%	81%	19%	81%	100%
CATEGORY IV									
May 18, 1985 - Saturday	4%	0%	0%	0%	4%	93%	4%	96%	100%
June 01, 1985 - Saturday	17%	0%	0%	0%	0%	83%	17%	83%	100%
June 19, 1985 - Wednesday	0%	0%	0%	0%	0%	100%	0%	100%	100%
June 29, 1985 - Saturday	16%	0%	0%	0%	2%	82%	16%	84%	100%
July 13, 1985 - Saturday	7%	0%	0%	7%	0%	86%	7%	93%	100%
July 23, 1985 - Tuesday	17%	0%	0%	17%	0%	67%	17%	83%	100%
July 28, 1985 - Sunday	27%	7%	0%	0%	13%	53%	33%	67%	100%
August 11, 1985 - Sunday	28%	10%	0%	3%	3%	55%	38%	62%	100%
August 15, 1985 - Thursday	13%	0%	0%	0%	9%	78%	13%	87%	100%
August 25, 1985 - Sunday	17%	0%	0%	6%	0%	78%	17%	83%	100%

location, all empty trailers, cars with empty cartop carriers and pickup trucks capable of carrying a boat or canoe were counted. These counts were recorded and identified by lake and access. Most frequently, the trailers and other carriers were located in a lot or designated parking area immediately adjacent to the launch. However, in some cases, particularly on the opening weekend of fishing season on Mille Lacs, parking was more widely dispersed.

Private accesses were treated in an identical manner to public accesses. All empty trailers or boat-carrying vehicles at or near the private launching site were recorded. The determination of the proportion of use from public and private accesses was a straight-forward division of the number of empty boat-carrying vehicles on the lake by the total number of boats observed on that lake.

On the opening weekend of fishing season, particularly on Mille Lacs, large numbers of boaters use informal access points scattered around the lake. Trailers and trucks are then parked randomly along peripheral roads. All of these randomly parked vehicles capable of carrying boats were counted and attributed to a random shoreline access category corresponding with the designated lake area. These counts were included in the nondesignated public access category for analysis.

(2) Resorts and Marinas:

Boats originating from resorts and marinas were determined by several steps. First, the number of resort owned boats was obtained from a telephone survey. The number of rented slips at marinas was also obtained. During the aerial overflights, the number of trailers was also counted. Trailers were added to the number of resort owned boats or rented slips at marinas. This created a total maximum number of boats available at the resort or marina. During the aerial overflight, the number of boats beached or moored at the resort or marina were

counted. By subtracting the number of boats actually counted from the total available boats, we determined the number of boats that originated from the resort or marina.

Since all resorts were not counted during the aerial overflight, it was necessary to extrapolate from data obtained from resorts where counts were made to the entire population. By telephone survey and review of published data, we obtained a count of the number of resort units or cabins at each resort and totaled for the lake category. Using the data from the resorts actually sampled and counted, we were able to calculate the amount of boat usage per cabin or unit at the resort. By multiplying the boat usage per resort unit by the total number of resort units in the lakes of a specific category, we were able to obtain an overall estimate of the number of boats originating from resorts at each aerial overflight counting period.

(3) Lakeshore Residents:

Use of a lake by residents could not be directly observed, rather it was calculated by subtracting the number of boats arising from use of public and private accesses and resorts from the total number of boats counted on the lake. Remaining boats, by definition, had to come from lakeshore resident use. As noted earlier, some of these residents live in housing developments that provide marinas; their use of the lake is counted as lakeshore resident usage rather than marina usage.

Appendix K includes boat counts and activity proportions from each access type. This Appendix is organized by lake category and flight date. Table 12 presents a summary of these data weighted to reflect seasonal usage.

TABLE 12
 Summary of Lake Usage by Access Type Weighted to Reflect
 Seasonal Characteristics on Weekdays and Weekend

Category 1 Lakes

June-Aug.

	<u>Access</u>	<u>Resorts</u>	<u>Residences</u>	<u>Total</u>
<u>Observed</u>				
Weekday	310	448	604	1362
Weekend	1693	1601	2483	5777
<u>Weighted</u>				
Weekday (obs.* 65/3)	6717	9707	13087	29510
Weekend (obs.* 27/6)	7618	7204	11174	25996
TOTAL	14335	16911	24261	55506

Weekday	22.8%	32.9%	44.3%	100%
Weekend	29.3%	27.7%	43.0%	100%
TOTAL	25.8%	30.5%	43.7%	100%

Weekday	46.9%	57.4%	53.9%	53.2%
Weekend	53.1%	42.6%	46.1%	46.8%
TOTAL	100%	100%	100%	100%

Category 2 Lakes

June-Aug.

<u>Observed</u>	<u>Access</u>	<u>Resorts</u>	<u>Residences</u>	<u>Total</u>
Weekday	40	41	216	297
Weekend	162	211	734	1107

Weighted

Weekday (obs.* 65/3)	867	888	4680	6435
Weekend (obs.* 27/6)	729	949	3303	4981
TOTAL	1596	1837	7983	11416

Weekday	13.5%	13.8%	72.7%	100%
Weekend	14.6%	19.1%	66.3%	100%
TOTAL	14.0%	16.1%	69.9%	100%

Weekday	54.3%	48.3%	58.6%	56.4%
Weekend	45.7%	51.7%	41.4%	43.6%
TOTAL	100%	100%	100%	100%

Category 3 Lakes

June-Aug.

<u>Observed</u>	<u>Access</u>	<u>Resorts</u>	<u>Residences</u>	<u>Total</u>
Weekday	27	26	57	110
Weekend	141	101	296	538

Weighted

Weekday (obs.* 65/3)	585	563	1235	2383
Weekend (obs.* 27/6)	635	454	1332	2421
TOTAL	1220	1017	2567	4804

Weekday	24.6%	23.6%	51.8%	100%
Weekend	26.2%	18.8%	55.0%	100%
TOTAL	25.4%	21.2%	53.4%	100%

Weekday	48.0%	55.4%	48.1%	49.6%
Weekend	52.0%	44.6%	51.9%	50.4%
TOTAL	100%	100%	100%	100%

Category 4 Lakes

June-Aug.

	<u>Access</u>	<u>Resorts</u>	<u>Residences</u>	<u>Total</u>
<u>Observed</u>				
Weekday	7	9	34	50
Weekend	33	15	111	159
<u>Weighted</u>				
Weekday (obs.* 65/3)	152	195	737	1084
Weekend (obs.* 27/6)	148	67	500	715
TOTAL	300	262	1237	1799

Weekday	14.0%	18.0%	68.0%	100%
Weekend	20.7%	9.4%	69.9%	100%
TOTAL	16.7%	14.6%	68.7%	100%

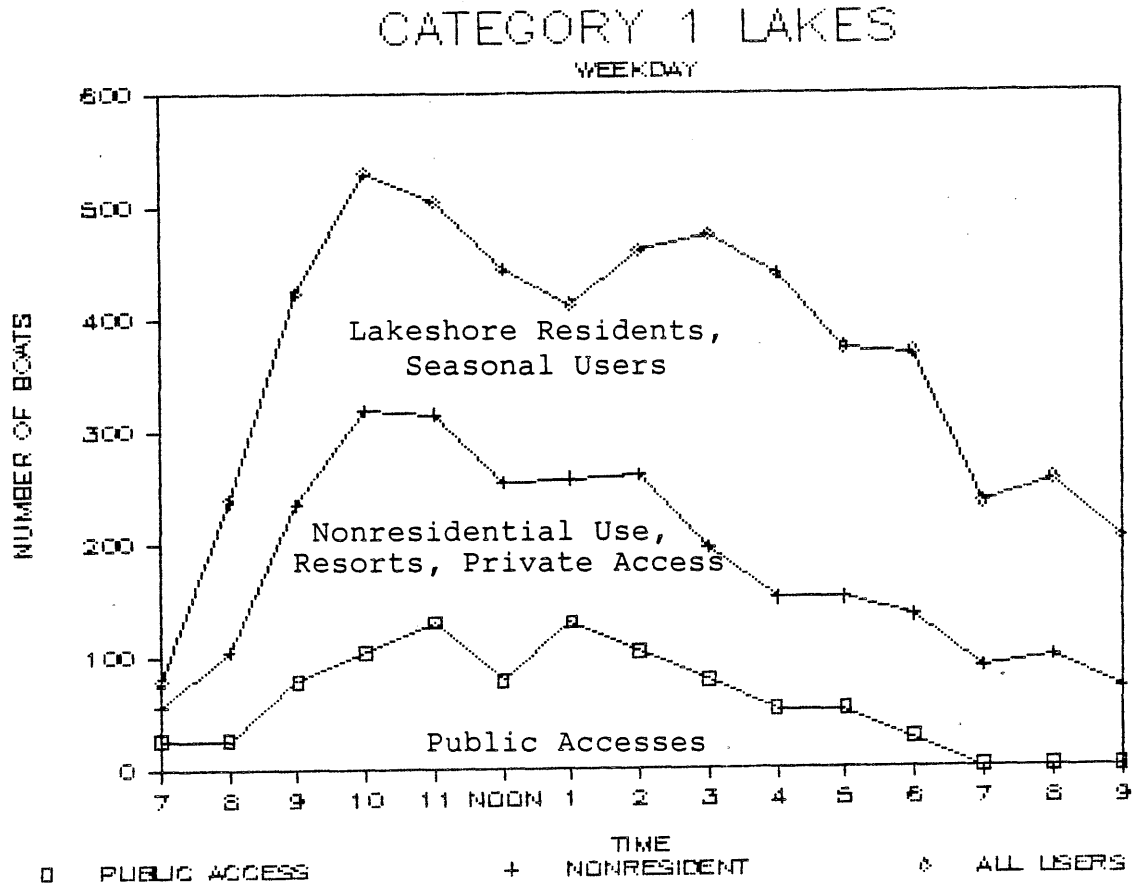
Weekday	50.7%	74.4%	59.6%	60.3%
Weekend	49.3%	25.6%	40.4%	39.7%
TOTAL	100%	100%	100%	100%

8. Total Boating Hours and Boating Occasions. Following weighting of access survey results to provide unbiased representation of time periods during the day, the distribution of public boating from various access types was analyzed over time for weekdays and weekend days during the recreational summer boating season (June, July and August). This distribution was applied to the results of the aerial overflight boat counts to arrive at an estimate of the number of boats on lakes in each of the lake categories at each hour between 6:00 AM and 10:00 PM during the summer season. The results of these estimates are shown in Figures 4-9. Because interviewers seldom remained at the accesses after 8:30 PM, the estimates after that time are lower than actual boating use; a few boaters from public accesses, private accesses and marinas do remain on the lake after 8:30 PM; however, this number is very small compared to overall boating counts. Results of the lakeshore residents interviews were used to distribute their boating use over time and are also given in Figures 4-9. It should be noted that peak boating time varies from category to category, differs somewhat for access users and for lakeshore residents as well as for weekdays and weekends. Because of these differences and because each overflight required five to seven hours, it was not possible to observe peak boating activity on each lake. However, the distribution of boating activity obtained from the survey analyses allowed estimates of both time and amount of peak boating activity to be made.

The number of boating occasions per day (for a typical weekday or weekend day during the prime boating season) has been derived from the total number of boating hours (summation of boating hours shown in Figures 4-9 over time) by dividing these total boat-hours by the average length of time per boating occasion. Table 13 gives the average time per boating occasion as derived from the access and resident interviews.

Special attention is called to Figure 5 in which the pattern of boating by resort guests is shown to terminate after 5 PM on weekends on lakes in Category 1. Upon seeing this result, we reviewed all of the interviews conducted with resort guests in Category 1 lakes. Most of the interviews were conducted at resorts on Tuesday through Saturday, with only a few on Sunday and Monday. Resort guests were found to be frequent boaters and responded by reference to their most recent

FIGURE 4
BOATING PATTERNS ON CATEGORY 1 LAKES
WEEKDAY USE



LAKES INCLUDED: Mille Lacs, Gull Chain, Whitefish Chain, Pelican

DATA SOURCES: Survey of public and private access users; Survey of boating resort guests; Survey of boating lakeshore residents; Aerial overflights. Survey results used to distribute lake usage over time periods not covered by aerial overflights.

RESULTS: Typical weekday; summer of 1985; totals for all Category 1 lakes.

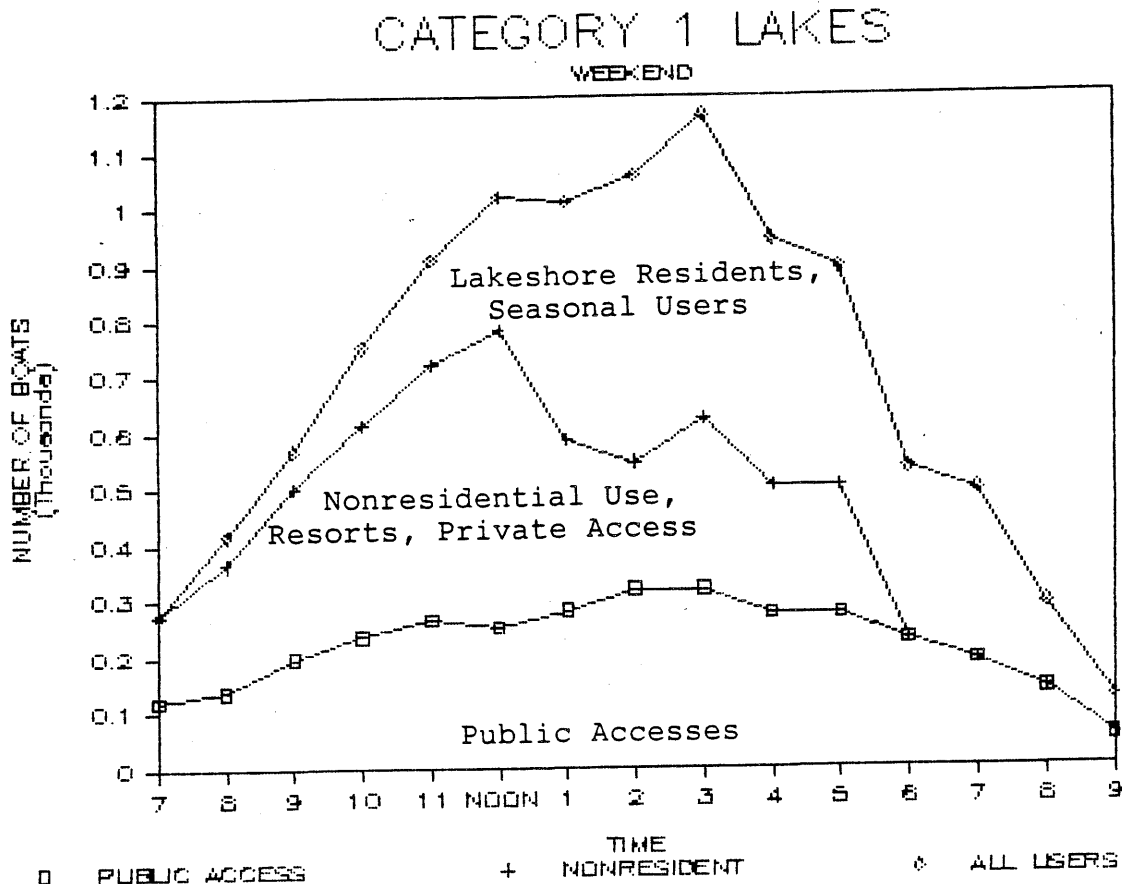
Public Accesses: 878 boat hours, 219 boating occasions

Resort, Private
Accesses: 1,802 boat hours, 467 boating occasions

Resident; Seasonal
Users: 2,762 boat hours, 924 boating occasions

TOTAL 5,442 boat hours, 1,610 boating occasions

FIGURE 5
BOATING PATTERNS ON CATEGORY 1 LAKES
WEEKEND USE



LAKES INCLUDED: Mille Lacs, Gull Chain, Whitefish Chain, Pelican

DATA SOURCES: Survey of public and private access users; Survey of boating resort guests; Survey of boating lakeshore residents; Aerial overflights. Survey results used to distribute lake usage over time periods not covered by aerial overflights.

RESULTS: Typical weekend; summer of 1985; totals for all Category 1 lakes.

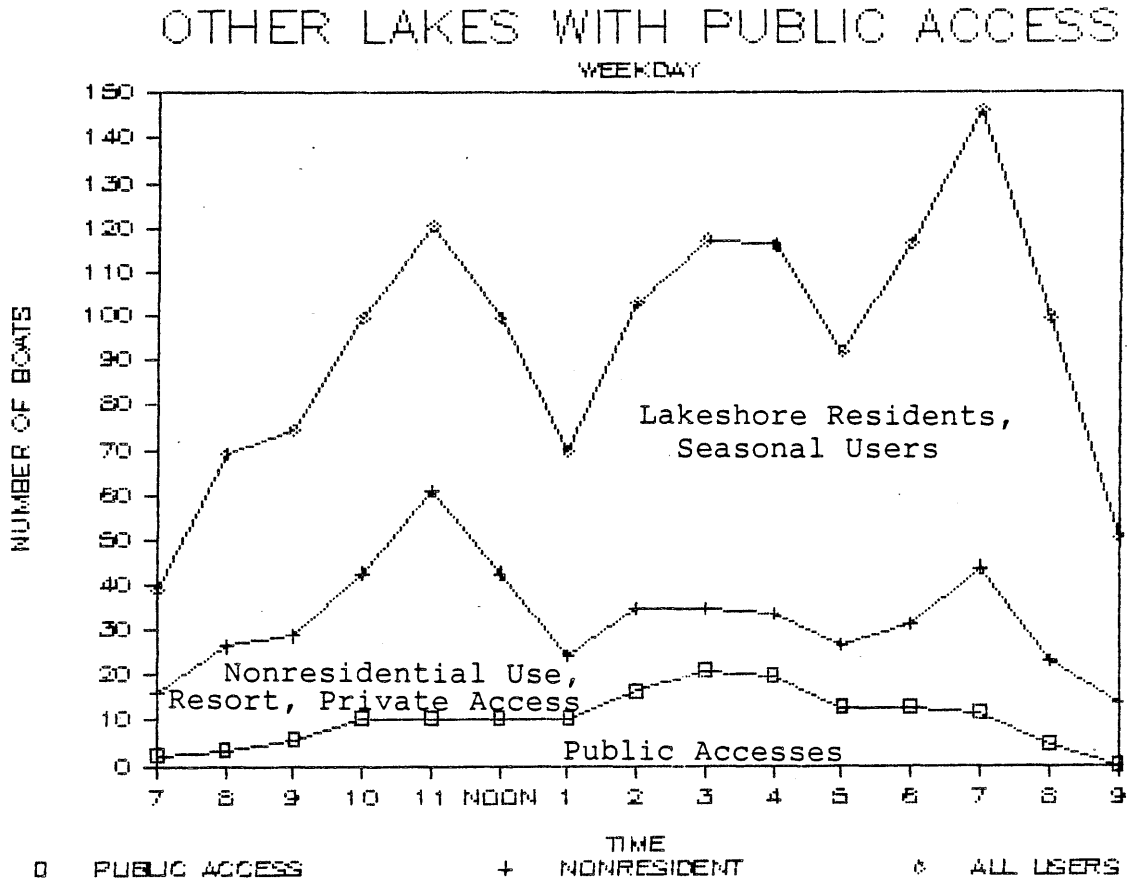
Public Accesses: 3,265 boat hours, 710 boating occasions

Resort, Private Accesses: 3,354 boat hours, 890 boating occasions

Resident; Seasonal Users: 3,826 boat hours, 1,366 boating occasions

TOTAL 10,445 boat hours, 2,966 boating occasions

FIGURE 6
BOATING PATTERNS ON OTHER PUBLIC ACCESS LAKES
WEEKDAY USE



LAKES INCLUDED: Ada, Bay, Farm Island, Round (Crow Wing), Sandbar, Sylvan, Clark, Emily/Mary, Little Boy, Nord, Waukenabo

DATA SOURCES: Survey of public and private access users; Survey of boating resort guests; Survey of boating lakeshore residents; Aerial overflights. Survey results used to distribute lake usage over time periods not covered by aerial overflights.

RESULTS: Typical weekday; summer of 1985; totals for 11 lakes.

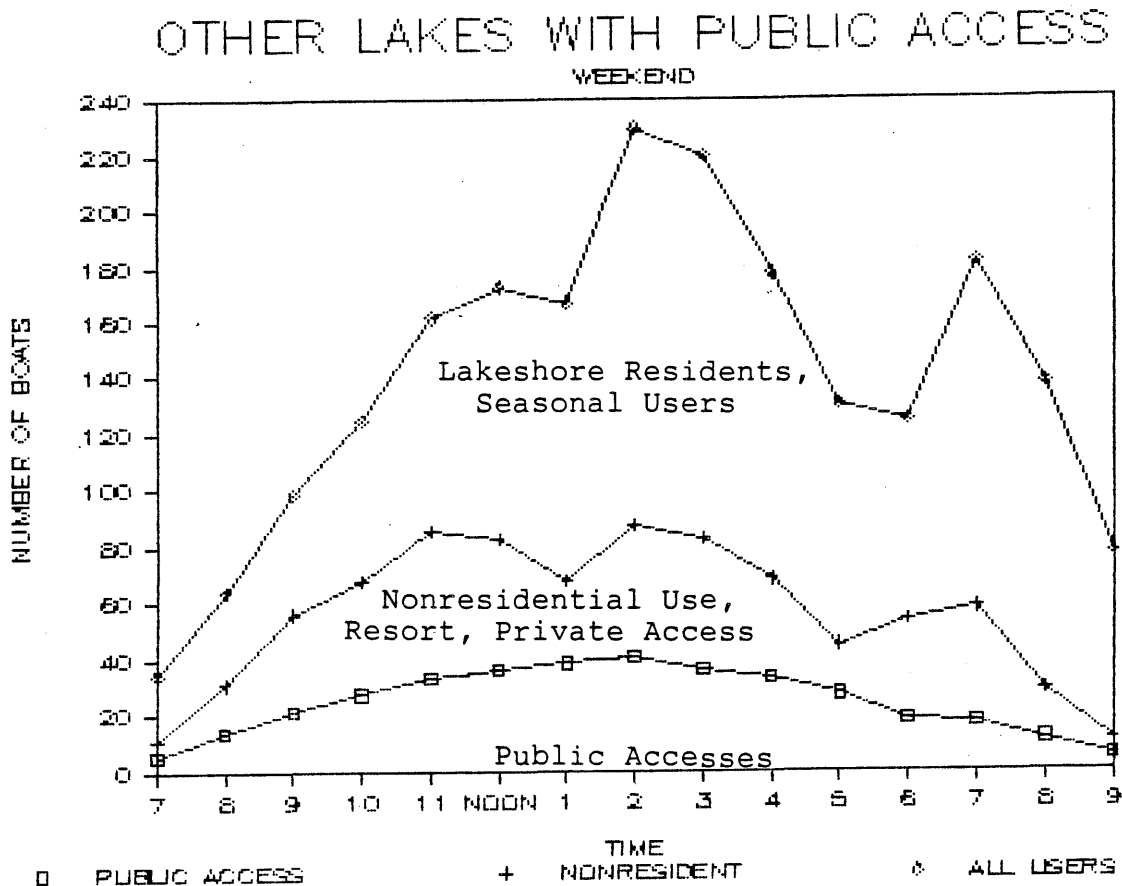
Public Accesses: 153 boat hours, 42 boating occasions

Resort, Private Accesses: 330 boat hours, 168 boating occasions

Resident; Seasonal Users: 930 boat hours, 422 boating occasions

TOTAL 1,413 boat hours, 632 boating occasions

FIGURE 7
BOATING PATTERNS ON OTHER PUBLIC ACCESS LAKES
WEEKEND USE



LAKES INCLUDED: Ada, Bay, Farm Island, Round (Crow Wing), Sandbar, Sylvan, Clark, Emily/Mary, Little Boy, Nord, Waukenabo

DATA SOURCES: Survey of public and private access users; Survey of boating resort guests; Survey of boating lakeshore residents; Aerial overflights. Survey results used to distribute lake usage over time periods not covered by aerial overflights.

RESULTS: Typical weekday; summer of 1985; totals for 11 lakes.

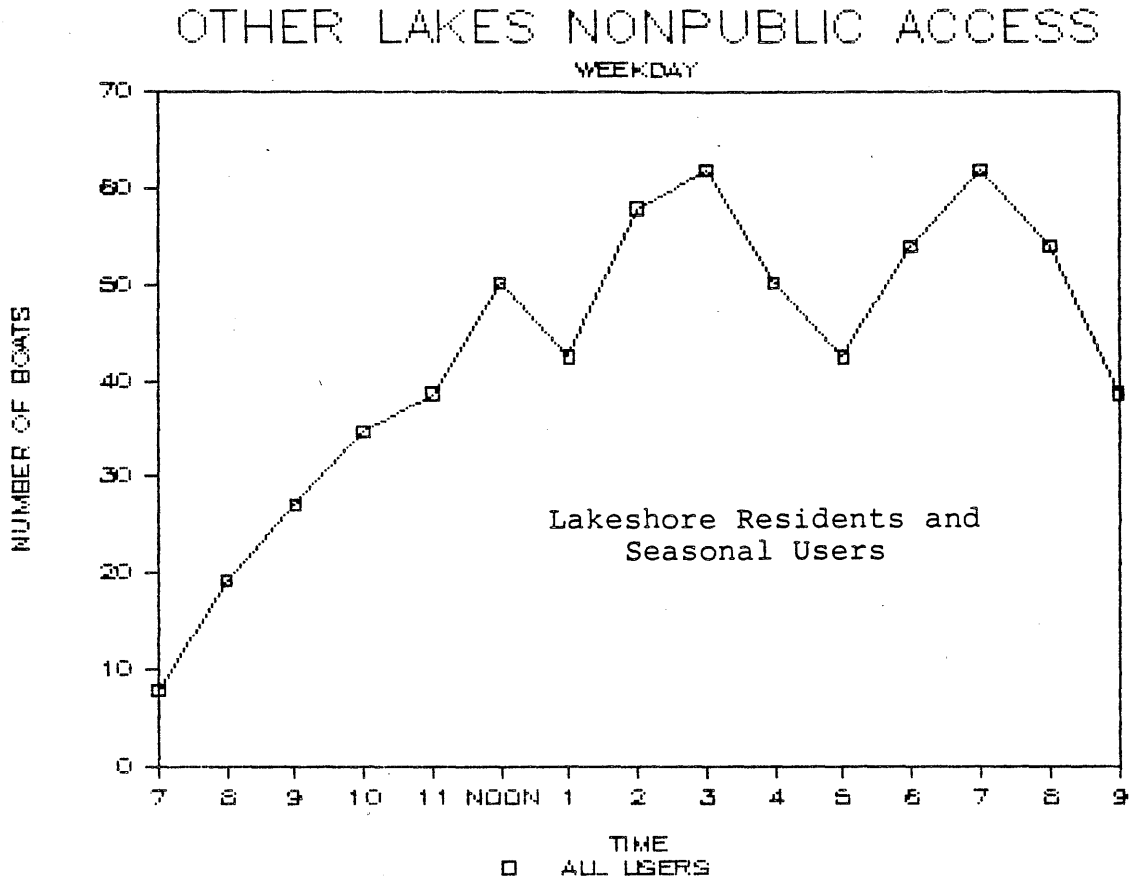
Public Accesses: 365 boat hours, 82 boating occasions

Resort, Private Accesses: 471 boat hours, 173 boating occasions

Resident; Seasonal Users: 1,266 boat hours, 530 boating occasions

TOTAL 2,102 boat hours, 785 boating occasions

FIGURE 8
BOATING PATTERNS ON OTHER NO PUBLIC ACCESS LAKES
WEEKDAY USE



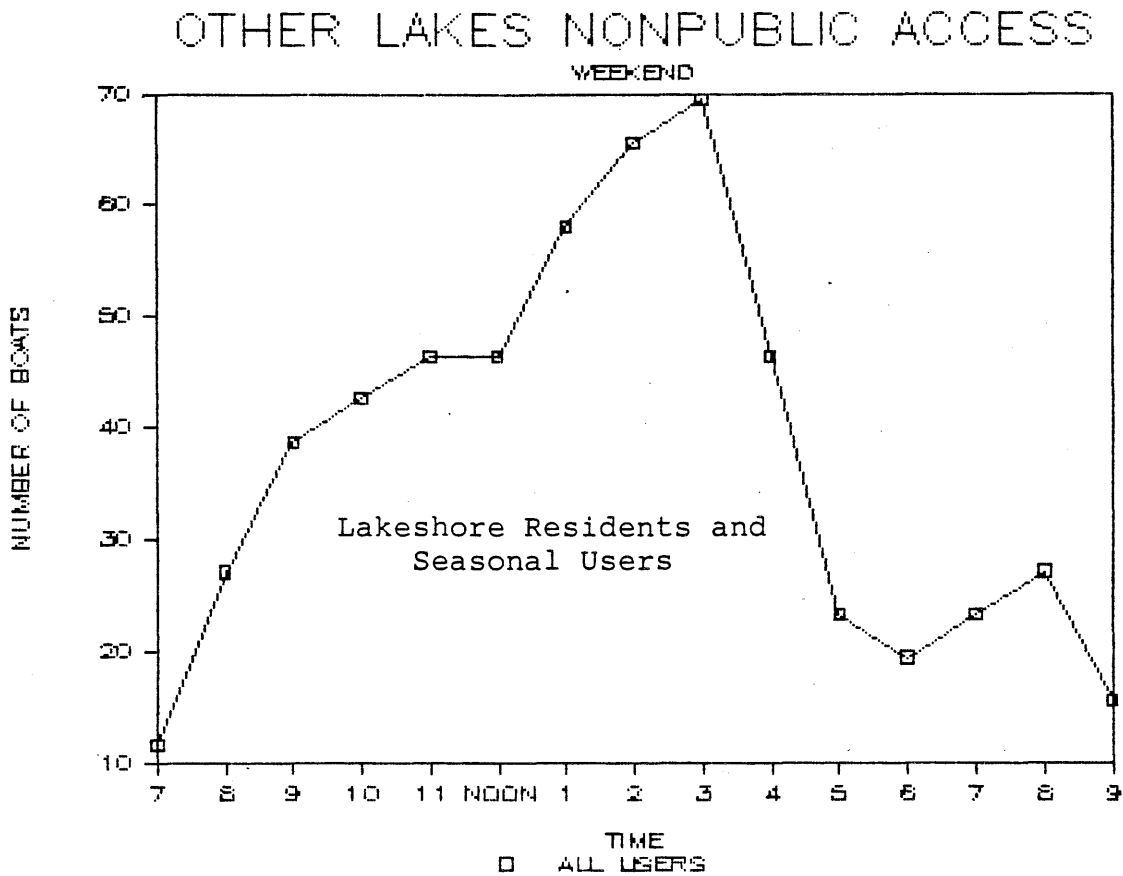
LAKES INCLUDED: Borden, Clearwater, Inguadona, Round (Aitkin), Esquagamah, Hattie, Moccasin, O'Brien

DATA SOURCES: Survey of boating lakeshore residents; Aerial overflights. Survey results used to distribute lake usage over time periods not covered by aerial overflights.

RESULTS: Typical weekday; summer of 1985; totals for 8 lakes.

All Users: 642 boat hours, 208 boating occasions

FIGURE 9
BOATING PATTERNS ON OTHER NO PUBLIC ACCESS LAKES
WEEKEND USE



LAKES INCLUDED: Borden, Clearwater, Inguadona, Round (Aitkin), Esquagamah, Hattie, Moccasin, O'Brien

DATA SOURCES: Survey of boating lakeshore residents; Aerial overflights. Survey results used to distribute lake usage over time periods not covered by aerial overflights.

RESULTS: Typical weekday; summer of 1985; totals for 8 lakes.

All Users: 560 boat hours, 208 boating occasions

TABLE 13

AVERAGE LENGTH OF BOATING OCCASION DURING
SUMMER BOATING SEASON

	<u>Category 1</u>	<u>Other Lakes</u>	
	<u>With Access</u>	<u>With Access</u>	<u>Without Access</u>
Weekday			
Public Access	4.00	3.62	
Resort, Private Access	3.86	1.96	
Resident, Seasonal	2.99	2.20	3.09
Weekend			
Public Access	4.60	4.46	
Resort, Private Access	3.77	2.72	
Resident, Seasonal	2.80	2.39	2.69

boating experience. Their most recent boating experience was usually earlier in the day of the interview or the previous day. Because of the small number of interviews conducted on Sunday and Monday on Category 1 lakes resorts, we did not get any responses indicating evening boating usage on weekends.

Realizing that this result was probably an anomaly of the sampling design, we conducted a separate analysis of questions 30, 32, 21 and 22.

Question 30. How many days will you stay at this resort?

Question 32. How many times will you or your party use a boat during your stay?

Question 21. Approximately what percentage of your boating activity occurs on weekdays; on Saturday; on Sunday?

Question 22. During what hours do you boat most frequently on weekdays; on Saturday; on Sunday?

This analysis showed that resort guests on Category 1 lakes boated 46.3 percent of the time on weekdays, 28.1 percent of the time on Saturdays and 25.6 percent of the time on Sundays. Of the total boating occasions by resort guests on Category 1 lakes, 6.5 percent occurred after 5 PM on Saturdays and 5.4 percent occurred after 5 PM on Sundays. Of the total weekend boating occasions by resort guests on Category 1 lakes, 22.3 percent included boating after 5 PM.

While this analysis does not permit us to complete the missing data in Figure 5, it indicates that 198 of the 890 boating occasions by resort guests extended beyond the 5 PM period.

9. Access Activity. In addition to conducting interviews during the assigned time period at designated accesses, interviewers were required to record launching, landing and parking activity at each access. These activities were observed under the same locational and temporal conditions described in Section 2 for access interviews. Interviewers recorded these observations on an Access Information Sheet (Appendix L) and were instructed to take such information even during period of poor weather when little or no activity was present. Thus, the results represent a good mix of activity levels over the season under a variety of weather conditions.

a. Parking. Interviewers arriving at the access observed and recorded the number of vehicles with trailers, as well as other vehicles which were parked within the boundaries of the designated parking lot. As boats were launched, they also recorded whether the driver parked the vehicle in the designated lot. At the conclusion of the time period allocated for that access, the interviewer again recorded the number of vehicles with and without trailers in the lot. Time of interviewer arrival and departure at the access was noted on the access sheet, along with observation of whether it was windy, cloudy or raining.

b. Launchings/Landings. During the observation period, interviewers recorded launching and landing activity on their Access Information Sheet. This information provided the basis for calculating launching and landing activity rates for each lake category.

Table 14 summarizes the activity rates at lakes within the three lake categories. Note that rates on the weekend and during the week are quite different, a result that was anticipated and accounted for in the design of the study. Rates also differ by time of day.

These data are presented graphically in Figure 10.

FIGURE 10
 AVERAGE LAUNCHING AND LANDING RATES THROUGHOUT
 THE DAY AT PUBLIC ACCESSES

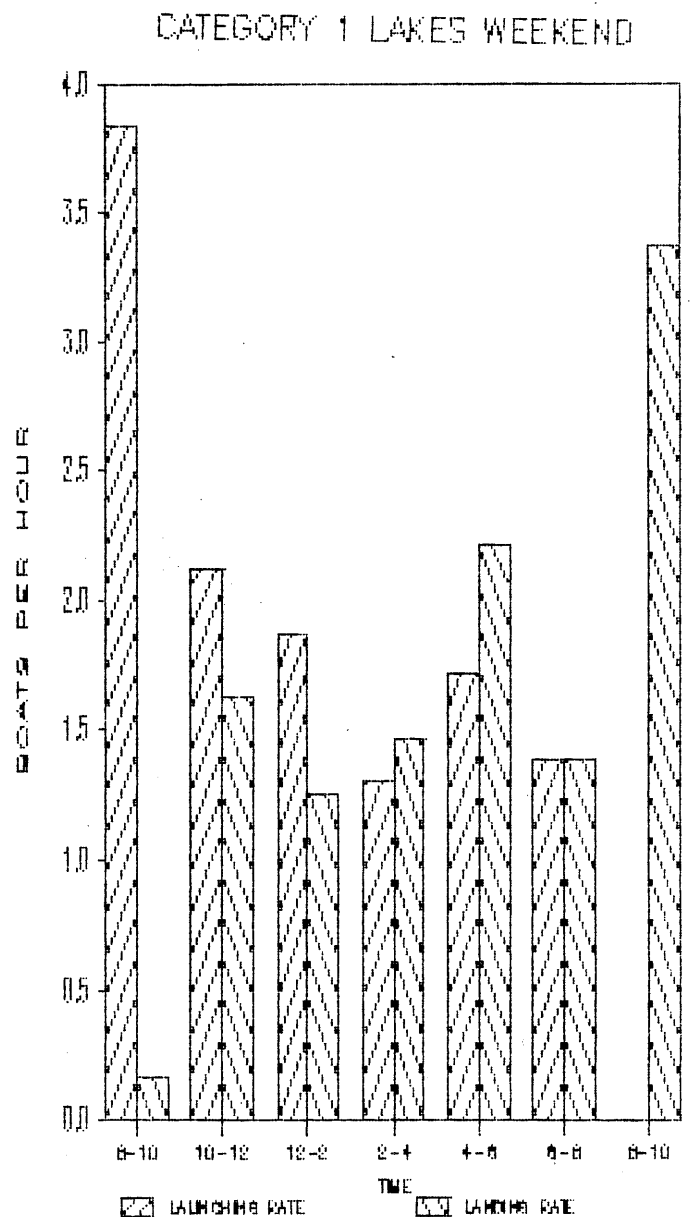
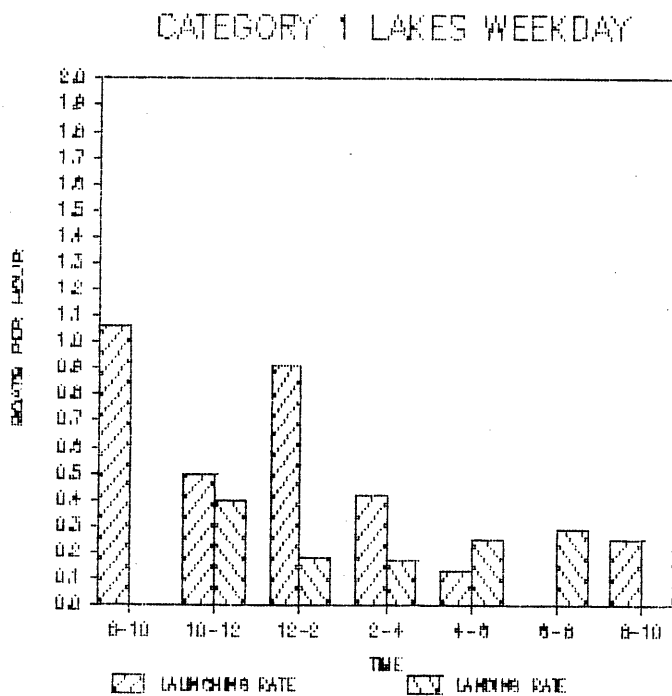
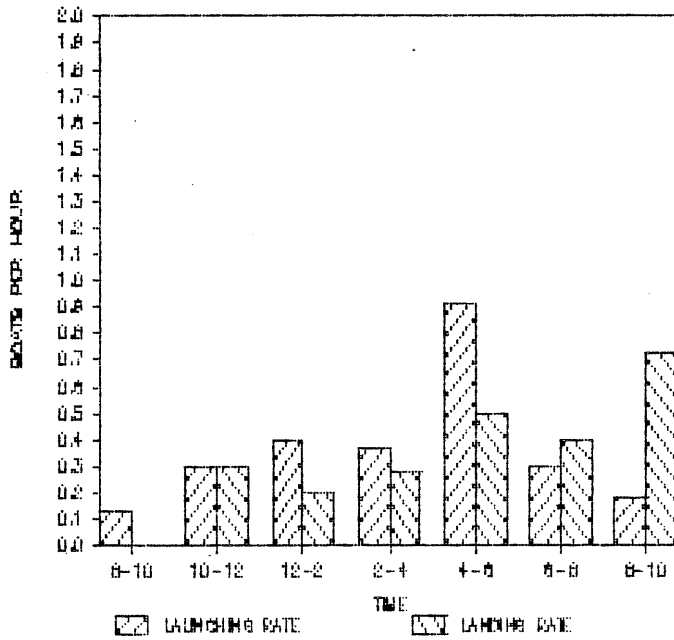
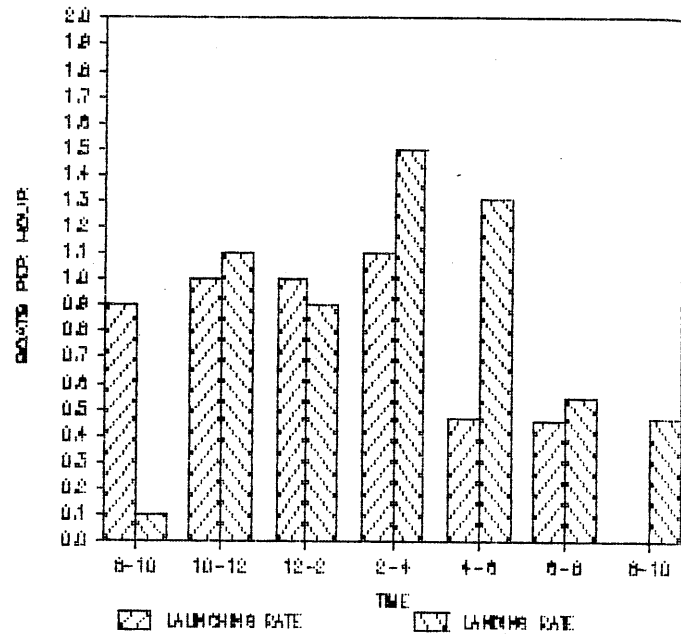


FIGURE 10 (CONTINUED)
 AVERAGE LAUNCHING AND LANDING RATES THROUGHOUT
 THE DAY AT PUBLIC ACCESSES

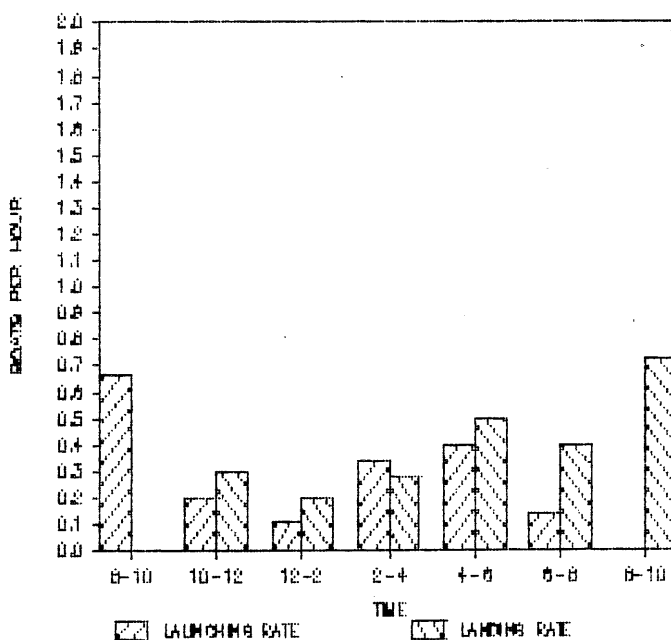
CATEGORY 2 LAKES WEEKDAY



CATEGORY 2 LAKES WEEKEND



CATEGORY 3 LAKES WEEKDAY



CATEGORY 3 LAKES WEEKEND

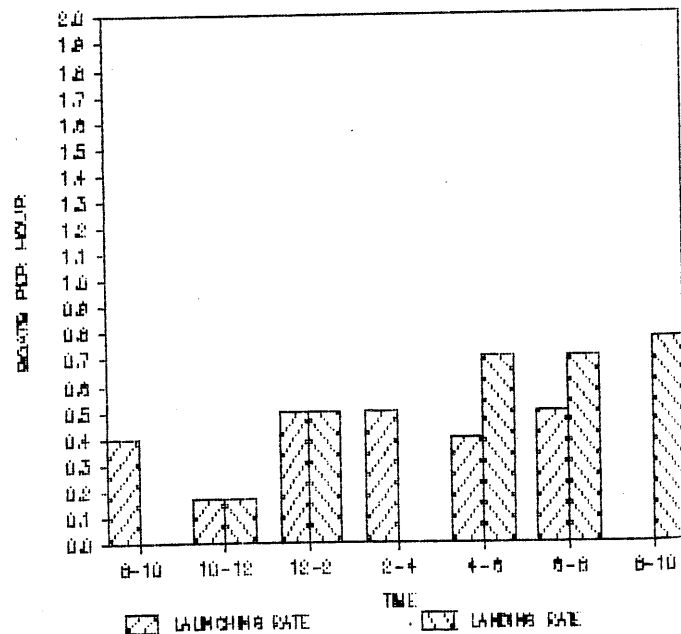


TABLE 14
BOAT LAUNCHING AND LANDING RATES
AT PUBLIC ACCESSSES

CATEGORY 1

TIME	<u>WEEKDAY</u>		<u>WEEKEND</u>	
	LAUNCH/HR	LAND/HR	LAUNCH/HR	LAND/HR
8-10	1.07	0.00	3.83	0.17
10-12	0.50	0.40	2.13	1.63
12- 2	0.91	0.18	1.88	1.25
2- 4	0.42	0.17	1.31	1.46
4- 6	0.13	0.25	1.71	2.21
6- 8	0.00	0.29	1.38	1.38
8-10	0.25	0.00	0.00	3.38

CATEGORY 2

TIME	<u>WEEKDAY</u>		<u>WEEKEND</u>	
	LAUNCH/HR	LAND/HR	LAUNCH/HR	LAND/HR
8-10	0.13	0.00	0.90	0.10
10-12	0.30	0.30	1.00	1.10
12- 2	0.40	0.20	1.00	0.90
2- 4	0.36	0.27	1.10	1.50
4- 6	0.92	0.50	0.46	1.31
6- 8	0.30	0.40	0.45	0.55
8-10	0.18	0.73	0.00	0.46

CATEGORY 3

TIME	<u>WEEKDAY</u>		<u>WEEKEND</u>	
	LAUNCH/HR	LAND/HR	LAUNCH/HR	LAND/HR
8-10	0.67	0.00	0.40	0.00
10-12	0.20	0.60	0.17	0.17
12- 2	0.11	0.33	0.50	0.50
2- 4	0.33	0.44	0.50	0.00
4- 6	0.40	0.90	0.40	0.70
6- 8	0.14	0.57	0.50	0.70
8-10	0.00	0.50	0.00	0.78

10. Parking Lot Turnover Rates. Table 15 presents data and calculations of the number and percentage of boaters launching at public accesses who parked their trailer and/or vehicle in the designated public access. Table 15 also presents the calculations of the number of times a parking space was used on a typical summer day in 1985 (i.e. Parking Lot Turnover Rate).

It must be noted that these data and calculations are for the period June - September. During the opening weekend of fishing season (May 18th), the parking lots are usually filled to capacity with considerable random parking along adjacent roadways.

TABLE 15

PARKING TURNOVER RATES DURING
SUMMER BOATING SEASON

Category 1	<u>Weekday</u>	<u>Weekend</u>
Percent Parking in Lot	88.9%	90.6%
Total Users	219	710
Number Parking in Lot	195	643
Available Parking Spaces	409	409
Turnover Rates		
Lot Turnover	.48	1.57
Total Turnover	.54	1.74
Other Lakes	<u>Weekday</u>	<u>Weekend</u>
Percent Parking in Lot	91.4%	73.6%
Total Users	42	82
Number Parking in Lot	38	60
Available Parking Spaces	127	127
Turnover Rates		
Lot Turnover	.30	.48
Total Turnover	.33	.64

APPENDIX A

INVENTORY OF LAKES 150 ACRES OR LARGER IN SIZE
LOCATED IN THE 1985 STUDY AREA



APPENDIX A
Inventory of Lakes 150 Acres or Larger in Size
Located in the 1985 Study Area

<u>Lake Number</u>	<u>Lake Name</u>	<u>Acres</u>	<u>Miles of Shoreline</u>	<u>Shoreline Zoning Class</u>
Water Access Priority A.				
010093	Clear	590	4.4	Recreation
010096	Dam	633	5.9	Recreation
010137	Round	645	3.6	Recreation
010142	Hill	898	10.2	Gen. Dev.
010157	Pine	646	5.8	Recreation
010159	Farm Island	2025	12.6	Recreation
010178	Spirit	523	5.1	Recreation
010204	Round	736	5.0	Recreation
110043	Roosevelt	1561	18.1	Gen. Dev.
110059	Washburn	1768	17.2	Gen. Dev.
110062	Thunder	1316	14.9	Gen. Dev.
110120	Inguadona	935	10.5	Gen. Dev.
110142	Long	926	11.3	Gen. Dev.
110171	Wabede	1272	11.5	Recreation
110200	Mule	501	6.2	Recreation
110201	Woman	5360	26.3	Gen. Dev.
110250	Ada	1044	7.3	Recreation
110274	Black Water	761	8.0	Recreation
110277	Big Deep	532	0.0	Recreation
110283	Baby	736	9.7	Recreation
110304	Sylvan	882	9.6	Gen. Dev.
110305	Gull	9541	38.0	Gen. Dev.
110308	Big Portage	956	7.0	Gen. Dev.
110311	Webb	619	0.0	Recreation
110371	Stony	523	6.0	Recreation
110383	Pleasant	907	6.2	Gen. Dev.
110412	Birch	1262	14.0	Gen. Dev.
110413	Ten Mile	4640	30.0	Gen. Dev.
180018	Camp	537	8.5	Gen. Dev.
180020	Borden	1038	11.0	Gen. Dev.
180028	Smith	486	5.7	Recreation
180034	Bay	2435	18.8	Recreation
180038	Clearwater	917	8.5	Recreation
180090	Serpent	1154	8.6	Gen. Dev.
180093	Rabbit	840	6.1	Gen. Dev.
180096	Upper Long	793	6.3	Gen. Dev.
180104	Nokay	782	6.1	Recreation
180212	Ruth	623	4.9	Not Avail.
180225	Adney	322	2.8	Gen. Dev.
180242	Upper Mission	895	5.1	Gen. Dev.
180243	Lower Mission	739	5.8	Recreation
180251	Sandbar	974	3.1	Recreation
180297	West Fox	510	4.3	Gen. Dev.

180305	Edward	2844	9.4	Gen. Dev.
180308	Pelican	8468	22.7	Gen. Dev.
180310	Whitefish	7969	28.4	Gen. Dev.
180311	Rush	782	12.7	Gen. Dev.
180312	Cross	1882	18.3	Gen. Dev.
180315	Big Trout	1486	8.6	Gen. Dev.
180352	Ossawinnamakee	739	13.1	Gen. Dev.
180372	Long	6178	19.3	Gen. Dev.
180373	Round	1706	6.4	Gen. Dev.
180375	Hubert	1344	6.0	Gen. Dev.
180378	Lower Hay	720	4.0	Gen. Dev.
180412	Upper Hay	640	3.7	Gen. Dev.
480002	Mille Lacs	132516	76.2	Gen. Dev.

Water Access Priority B

010089	Long	433	5.1	Recreation
010091	Rabbit	210	4.2	Recreation
010099	Gun	735	7.1	Recreation
010102	Wilkins	366	3.7	Recreation
010104	French	155	2.7	Nat. Envir.
010117	Nord	414	5.1	Recreation
010125	Lone	437	5.6	Recreation
010126	Waukenabo	819	4.6	Recreation
010146	Ripple	676	8.2	Recreation
010147	Esquagamah	808	6.1	Recreation
010161	Hammal	393	4.2	Recreation
010209	Cedar	788	26.2	Recreation
110053	Lawrence	224	4.4	Recreation
110069	Bass	224	3.9	Recreation
110073	Big Rice	2656	14.0	Nat. Envir.
110102	Island	390	5.4	Recreation
110104	Laura	1424	6.5	Nat. Envir.
110105	Upper Trelipe	426	3.9	Recreation
110129	Lower Trelipe	592	5.5	Recreation
110167	Little Boy	1396	9.0	Recreation
110170	Hunter	181	2.5	Recreation
110174	Girl	384	8.1	Recreation
110177	Three Island	168	6.2	Nat. Envir.
110199	Hay	406	4.9	Recreation
110218	Upper Gull	345	7.5	Gen. Dev.
110222	Margaret	230	5.3	Nat. Envir.
110232	Hattie	592	6.6	Recreation
110234	Ponto	380	4.3	Recreation
110242	Hand	316	5.2	Recreation
110258	Long	229	4.4	Recreation
110261	Mc Keown	171	3.9	Recreation
110262	Kid	167	2.7	Recreation
110263	Child	295	5.1	Recreation
110273	Widow	197	3.0	Recreation
110282	Mann	484	5.3	Recreation
110296	Moccasin	259	4.7	Recreation
110320	Pillager	213	2.4	Recreation

110324	Rock	249	3.0	Recreation
110350	Bowen	185	2.1	Recreation
110351	Five Point	265	3.0	Recreation
110355	Ox Yoke	199	2.7	Recreation
110358	Horseshoe	245	3.4	Recreation
110361	Sanburn	224	2.3	Recreation
110366	Brookway	182	1.6	Recreation
110367	Lind	462	4.9	Recreation
110387	Little Webb	249	2.5	Recreation
110411	Pine Mountain	1657	8.6	Gen. Dev.
110472	Howard	384	6.7	Recreation
110476	Portage	282	2.5	Recreation
110502	Williams	188	3.4	Recreation
180014	Bull Dog	151	2.0	Recreation
180033	Scott	178	1.9	Recreation
180041	Crooked	462	9.2	Recreation
180048	Partridge	185	3.1	Recreation
180050	Portage	292	2.5	Recreation
180060	Agate	203	2.7	Recreation
180070	Hamlet	313	4.2	Recreation
180076	Long	196	3.0	Recreation
180088	Platto	1768	10.3	Gen. Dev.
180105	Pointon	193	1.7	Recreation
180136	Long	1389	9.3	Gen. Dev.
180139	Little Rabbit	153	4.1	Nat. Envir.
180140	Balck Bear	235	2.7	Recreation
180155	Crow Wing	373	3.9	Gen. Dev.
180165	Ross	504	5.8	Recreation
180169	Stark	228	3.7	Gen. Dev.
180184	Rogers	249	2.4	Recreation
180203	Emily	675	4.8	Gen. Dev.
180211	Blue	185	2.4	NA
180226	Goodrich	398	3.9	Gen. Dev.
180227	O Brien	203	4.8	Gen. Dev.
180231	Butterfield	225	3.2	Recreation
180239	Silver	213	2.1	Recreation
180266	Little Pine	384	7.5	NA
180269	Island	193	4.2	NA
180284	Velvet	167	1.9	NA
180288	OX	258	3.8	Gen. Dev.
180293	Kego	299	3.6	Recreation
180294	Mitchell	460	4.3	Gen. Dev.
180298	East Fox	234	5.0	Gen. Dev.
180306	Bass	455	3.0	Recreation
180314	Duck	160	3.8	Recreation
180320	Gilbert	391	7.9	Gen. Dev.
180338	Gladstone	457	3.5	Gen. Dev.
180340	Little Hubert	192	2.4	Recreation
180342	Lougee	217	2.0	Recreation
180351	Little Pelican	402	3.9	Gen. Dev.
180355	Bertha	353	3.8	Gen. Dev.
180356	Clamshell	238	4.4	Gen. Dev.
180359	Star	153	3.2	Recreation
180361	Kimball	186	3.0	Gen. Dev.

180364	Clear	242	3.4	Recreation
180371	Perch	284	4.2	NA
180374	Clark	309	5.0	Gen. Dev.
180376	Upper Cullen	459	4.3	Recreation
180377	Middle Cullen	405	5.4	Gen. Dev.
180387	Whipple	345	6.9	Recreation
1800396	Edna	156	4.9	NA
180398	Roy	306	5.2	NA
180403	Lower Cullen	469	3.7	Gen. Dev.
180407	East Twin	164	2.5	Gen. Dev.

Water Access Priority C

010087	Sugar	466	3.8	Recreation
010092	Swamp	276	2.8	Nat. Envir.
010115	Wladimiraf	440	4.1	Recreation
010120	Section 12	167	2.2	Recreation
010123	Elm Island	656	6.1	Recreation
010129	Sissabagamah	386	4.0	Recreation
010132	Hansen	200	3.3	Nat. Envir.
010170	Hanging Kettle	320	3.7	Recreation
010174	Thornton	186	4.2	Recreation
010179	Hickory	183	2.3	Recreation
010212	Moulton	282	3.8	Recreation
010213	Edna	272	2.8	Nat. Envir.
110009	Little Thunder	264	6.3	Recreation
110162	Rice	342	2.2	Recreation
110226	Loon	220	2.6	Recreation
110292	Pine	256	2.6	Recreation
110307	Norway	498	4.1	Recreation
110374	Larson	179	3.8	NA
180001	Whitefish	760	7.4	Recreation
180009	Erskine	186	2.0	Recreation
180016	Rock	210	3.1	Recreation
180029	Holt	156	2.3	Recreation
180072	Shirt	220	4.0	Recreation
180099	Eagle	249	3.1	Recreation
180110	Grave	177	2.2	Gen. Dev.
180117	Blackhoof	195	2.1	Recreation
180126	Mahnomen	468	4.0	Gen. Dev.
180145	Rice	434	36.1	Gen. Dev.
180161	Sebie	180	2.1	Recreation
180170	Upper Dean	263	3.1	Recreation
180183	Island	256	4.7	Gen. Dev.
180185	Mary	491	3.9	Gen. Dev.
180186	Perry	160	2.4	Recreation
180256	Bass	386	2.6	Recreation
180261	Pine	391	6.0	Gen. Dev.
180271	Daggett	284	5.2	NA
180287	Greer	384	5.0	NA
180354	Pig	213	2.4	Gen. Dev.
180366	Arrowhead	285	3.8	Recreation
180367	Stewart	254	2.6	NA

180379	White Sand	441	3.3	NA
180399	Nisswa	213	2.6	NA
180494	Sibley	412	8.2	Gen.Dev.
180415	Jail	190	2.0	Recreation
180416	Lizzie	384	4.0	Recreation

Water Access Priority D

110216	Agate	151	1.9	Recreation
110474	Bass	264	0.0	Nat. Envir.
180067	Reno	181	2.6	NA
180401	Hole-in-the-Day	217	3.0	NA

Water Access Priority E

010105	Fleming	326	3.0	Recreation
010188	Blind	323	5.9	Nat. Envir.
110101	George	720	6.1	Recreation
110168	Mc Carthey	194	2.4	Nat. Envir.
180112	Walf	218	2.7	Nat. Envir.
180123	Crocker	256	4.2	Nat. Envir.
180164	Nelson	323	4.0	Nat. Envir.
180180	Long	320	1.5	Nat. Envir.
180195	Dolney	264	2.5	Recreation
180224	Fool	250	2.7	Nat. Envir.
180386	Red Sand	569	4.1	Recreation

Water Access Priority Z

010207	Townline	174	2.6	Recreation
010208	Sunset	235	7.3	Recreation
110449	North Haynes	164	1.5	Nat. Envir.
180008	Twenty Two	169	2.5	Nat. Envir.
180044	Hanks	171	3.6	Recreation
180097	Swamp	267	0.0	Nat. Envir.
180142	Russell	153	3.4	Nat. Envir.
180160	Mud	153	2.8	Nat. Envir.
180231	Mud	185	2.5	Nat. Envir.

APPENDIX B
ACCESS QUESTIONNAIRE

DATE _____

INTERVIEW # _____

INTERVIEWER _____

LAKE _____

ACCESS _____

OF BOAT OCCUPANTS _____ Adults _____ Teenagers _____ Children

OCCUPANTS WEARING LIFE JACKETS _____ Adults _____ Teenagers _____ Children

HELLO. MY NAME IS _____. I'M CONDUCTING A SURVEY WITH BOATERS ON THIS LAKE. COULD YOU TAKE A FEW MINUTES TO ANSWER SOME QUESTIONS?

1. Where did you launch your boat? (DO NOT READ RESPONSES)

- 1 Here at this access
- 2 Another public access
- 3 Private access
- 4 Resort/Campground where staying
- 5 Friend's home/cabin
- 6 Other (SPECIFY _____)

2. How much did you pay to launch? _____ (Dollars)

3. Where did you park? (DO NOT READ RESPONSES)

1 In lot at access (GO TO QUESTION 4)

- | | | |
|--|---|----------------|
| <input type="checkbox"/> 2 Another lot | <input type="checkbox"/> 5 At my home | GO TO QUESTION |
| <input type="checkbox"/> 3 Street | <input type="checkbox"/> 6 At resort/campground where staying | 3A |
| <input type="checkbox"/> 4 Friend's home/cabin | <input type="checkbox"/> 7 Other (SPECIFY _____) | |

3A. How far away was that? _____ miles (use 1/4, 1/2, 3/4, 1; 2 etc.)

4. Was it today that you launched?

1 Yes What time did you launch? _____ AM PM (CIRCLE ONE)

That means you were on the lake about _____ hours. Is that correct?
GO TO QUESTION 5

- 2 No What day was it?
- 1 Yesterday
- 2 2-7 days ago
- 3 8-14 days ago
- 4 Earlier than 14 days ago

5. What was your group's primary activity on the lake today? (CIRCLE ONE)

- 1 Fishing
 - 2 Water Skiing
 - 3 Sailing
 - 4 Canoeing
 - 5 Boat Ride
 - 6 Transportation To/From (SPECIFY _____)
- GO TO QUESTION 6

7 Taking boat off lake (GO TO QUESTION 5A, 5B, 5C, 5D)

5A. Other than taking the boat off the lake, when was the last time you used a boat on this lake? _____ (DATE)

5B. What time did you leave from shore that day? _____ AM PM (CIRCLE ONE)

5C. What time did you return to shore that day? _____ AM PM (CIRCLE ONE)

5C. What was your primary activity that day?

- 1 Fishing
- 2 Water Skiing
- 3 Sailing
- 4 Canoeing
- 5 Boat Ride
- 6 Transportation To/From (SPECIFY _____)

FOR THE REST OF THE QUESTIONS, PLEASE ANSWER IN TERMS OF YOUR BOATING ACTIVITY ON THAT DAY

6. What length is your boat? _____ feet
7. What size motor do you have? _____ horsepower (__000__ no motor, __999__ don't know)
8. Approximately how many gallons of gas did you use while boating? _____ gallons (__000__ no motor, __999__ don't know)
9. Do you have a home, cabin or other residence on this lake?

__1__ Yes (IF YES, TERMINATE INTERVIEW)

__2__ No (IF NO, GO TO QUESTION 9A AND 9B)

9A. How far away do you live from here? _____ miles

9B. How many miles did you drive to use this access today? _____ miles

NOW WE HAVE SOME QUESTIONS ABOUT BOATING SAFETY.

10. Have you yourself ever taken a course in boating safety?
- __1__ Yes __2__ No __3__ Don't Know/Not Sure __4__ Other (Specify _____)

11. Has anybody else on your boat taken a boating safety course?
- __1__ Yes __2__ No __9__ Don't Know/Not Sure __0__ Alone On Boat

12. From a safety standpoint, how did you feel about the number of boats on the lake? Was the lake....?
- (READ CATEGORIES AND CIRCLE ONE)
- __1__ About Right __2__ Crowded or __3__ Far Too Crowded to be Safe? (__4__ Few Boats Here
 __9__ Don't Know/No Response)

13. Would you come back to this lake if you if you knew there were going to be about the same number of boats?
- __1__ Yes __2__ No __9__ Don't Know

14. While you were boating, did you see any incidents that you considered to be safety problems?

__1__ Yes (GO TO QUESTION 14A)

14A. (IF YES) Tell me what you saw. (DO NOT READ LIST, CIRCLE ALL THAT ARE MENTIONED)

- | | |
|---|---|
| __1__ Near Miss or Collision | __1__ Use of Alcohol |
| __1__ High Wakes | __1__ Boats not Yielding Right-of-Way |
| __1__ Overloaded boats | __1__ Other Carelessness (Describe _____) |
| __1__ Boats too Close to Shore or Docks | __1__ Excessive Speed |

__2__ No __9__ Don't Know/Not Sure __0__ No Answer (GO TO QUESTION 15)

15. While you were on the lake, did you happen to see an enforcement officer?

__1__ Yes (GO TO QUESTION 15A AND QUESTION 15B)

15A. (IF YES) What agency was the officer from?

- __1__ Sheriff's Department __2__ Conservation Officer __3__ Park Police __4__ Other __9__ Don't Know/Not Sure

15B. Were you spot checked by that officer?

- __1__ Yes __2__ No __9__ Don't Know/Not Sure

__2__ No __9__ Don't Know/Couldn't Tell For Sure (GO TO QUESTION 16)

NOW A FEW QUESTIONS ABOUT THIS ACCESS (IF PRIVATE ACCESS OR MARINA, SKIP TO QUESTION 23 ON NEXT PAGE)

16. Have you ever used this access before?

1 Yes 2 No 9 Don't Know/Not Sure

17. Was it well enough marked with directional signs for you to find it easily?

1 Yes 2 No 3 I don't need signs 9 Don't Know/Not Sure

18. Did you use a map to find this access today?

1 Yes (GO TO QUESTIONS 18A and 18B)

18A. (IF YES) Did you use one of these? (HOLD UP LAKE ACCESS GUIDES)

1 Yes (GO TO QUESTION 18B)

2 No 9 Don't Know/Not Sure (GO TO QUESTION 19)

18B. Was it detailed enough to help you find the access? 1 Yes 2 No
 3 Other (SPECIFY _____)

2 No 3 Don't Know/Not Sure (GO TO QUESTION 19)

19. How would you rate this access for launching and landing your boat? Do you feel it is (READ)

1 Excellent 2 Good 3 Fair 4 Poor 5 Very Poor

20. Did you have any particular problems using this access today?

1 Yes (GO TO QUESTION 20A)

20A. (IF YES, ASK) What was the problem? (DO NOT READ LIST, CIRCLE ALL THAT ARE MENTIONED)

1 Crowded access for parking 1 Inadequate signing
 1 Crowded access for launching/landing 1 Swimmers/Skiers near ramp
 1 Water too shallow 1 Ramp blocked by parked cars, campers, etc
 1 Ramp not well maintained or inadequate 1 Other (SPECIFY _____)

2 No 9 Don't Know/Not Sure (GO TO QUESTION 21)

21. What did you like about this access? (SPECIFY _____
 _____)

22. Which of the following improvements do you feel are needed at this launch site?
 (READ LIST, CIRCLE ALL YES ANSWERS)

1 Better Directional Signs to Access 1 Beacon Light Visible 1 Toilets
 1 Better Informational Signs at Access from Lake 1 Another Ramp
 1 A Dock to Ease Launching 1 Trash Containers 1 Better Enforcement
 1 Better Lighting of Access/Parking Area 1 Trash Pickup 1 Anything Else? (SPECIFY _____)

ASK OF ALL RESPONDENTS

23. Do you prefer a solid concrete, plank concrete or gravel ramp?

1 Solid Concrete 3 Gravel 5 Other (SPECIFY _____)
 2 Plank Concrete 4 No Difference 9 Not Sure/Don't Know

24. How many times have you used this access in the last 12 months? _____ times

25. How many times have you used free public accesses at other Minnesota lakes in the last 12 months? _____ times

26. What special boating use restrictions are there for this lake? (DO NOT READ LIST, CIRCLE ALL MENTIONED)

1 None 1 Boat type and size restrictions
 1 Speed restrictions/Quiet Waters 1 Area of lake restrictions
 1 Horsepower restrictions 1 Other (SPECIFY _____)
 1 Time restrictions 1 Don't Know/Not Sure

27. What special boating use restrictions do you feel are needed on this lake?
 (READ LIST, CIRCLE ALL YES ANSWERS)

1 Speed restrictions/Quiet Waters 1 Area of lake restrictions
 1 Horsepower restrictions 1 Other (SPECIFY _____)
 1 Time restrictions 1 None
 1 Boat type and size restrictions 1 Don't Know/Not Sure

28. How many wearable life jackets did you have on your boat? _____ (NUMBER)

29. How many boat cushions did you have? _____ (NUMBER)

30. What percent of the time were you wearing a life jacket? _____ %
 How about other members of your boating group? _____ % other adults
 _____ % teenagers
 _____ % children

31. Which of the following do you have on your boat? (READ LIST AND CIRCLE ALL YES ANSWERS)

1 Fire Extinguisher 1 Visual Signaler (flag, flare gun, etc.)
 1 Lights 1 Horn

32. What do you estimate to be the replacement value of your boat, motor, trailer and other attached equipment? _____ (DOLLARS)

JUST A FEW FINAL QUESTIONS

33. About how much money did your group spend on this particular boating activity including gas for your boat, bait, rental, food or drink?
 \$ _____

34. Which category on the blue card best describes your total household income before taxes last year. Please give me the letter. (CIRCLE ONE LETTER)

- | | | |
|--|---|--|
| <input type="checkbox"/> A Less than \$ 5,000 (01) | <input type="checkbox"/> E \$20,000 - \$29,999 (05) | <input type="checkbox"/> I \$75,000 Or More (09) |
| <input type="checkbox"/> B \$ 5,000 - 9,999 (02) | <input type="checkbox"/> F 30,000 - 39,999 (06) | <input type="checkbox"/> 98 Refused to Answer |
| <input type="checkbox"/> C 10,000 - 14,999 (03) | <input type="checkbox"/> G 40,000 - 49,999 (07) | <input type="checkbox"/> 99 Don't Know |
| <input type="checkbox"/> D 15,000 - 19,999 (04) | <input type="checkbox"/> H 50,000 - 74,999 (08) | |

35. Which of the beverages on the white card did you have with you on the boat today? Just give me the letters. (CIRCLE ALL MENTIONED)

- | | | |
|---|--|--|
| <input type="checkbox"/> A-1 Soft drinks | <input type="checkbox"/> D-1 Beer | <input type="checkbox"/> G-1 None |
| <input type="checkbox"/> B-1 Coffee/Tea/Water | <input type="checkbox"/> E-1 Wine | <input type="checkbox"/> H-1 Refused to Answer |
| <input type="checkbox"/> C-1 Other Nonalcoholic | <input type="checkbox"/> F-1 Other Alcoholic | <input type="checkbox"/> I-1 Don't Know/Not Sure |

36. Which number on the yellow card best describes the type of beverage use you personally feel is appropriate for boat operators? Just give one number. (CIRCLE ONE NUMBER)

- 1 Nonalcoholic beverages only
- 2 Beer or wine only
- 3 Any alcoholic beverage
- 9 Don't Know/ No Opinion

IF RESPONDENT REPLY'S "IN MODERATION" CHECK HERE

(EITHER OBSERVE OR ASK BOAT TYPE AND BOAT LICENSE NUMBER)

BOAT TYPE ____ (1 = Fishing; 2 = Runabout; 3 = Sail; 4 = Pontoon; 5 = Canoe; 6 = Other _____)

BOAT LICENSE NO. _____ (ASK FOR HOME TOWN AND ZIPCODE IF LICENSE IS UNREADABLE OR OUT OF STATE)

HOME TOWN _____

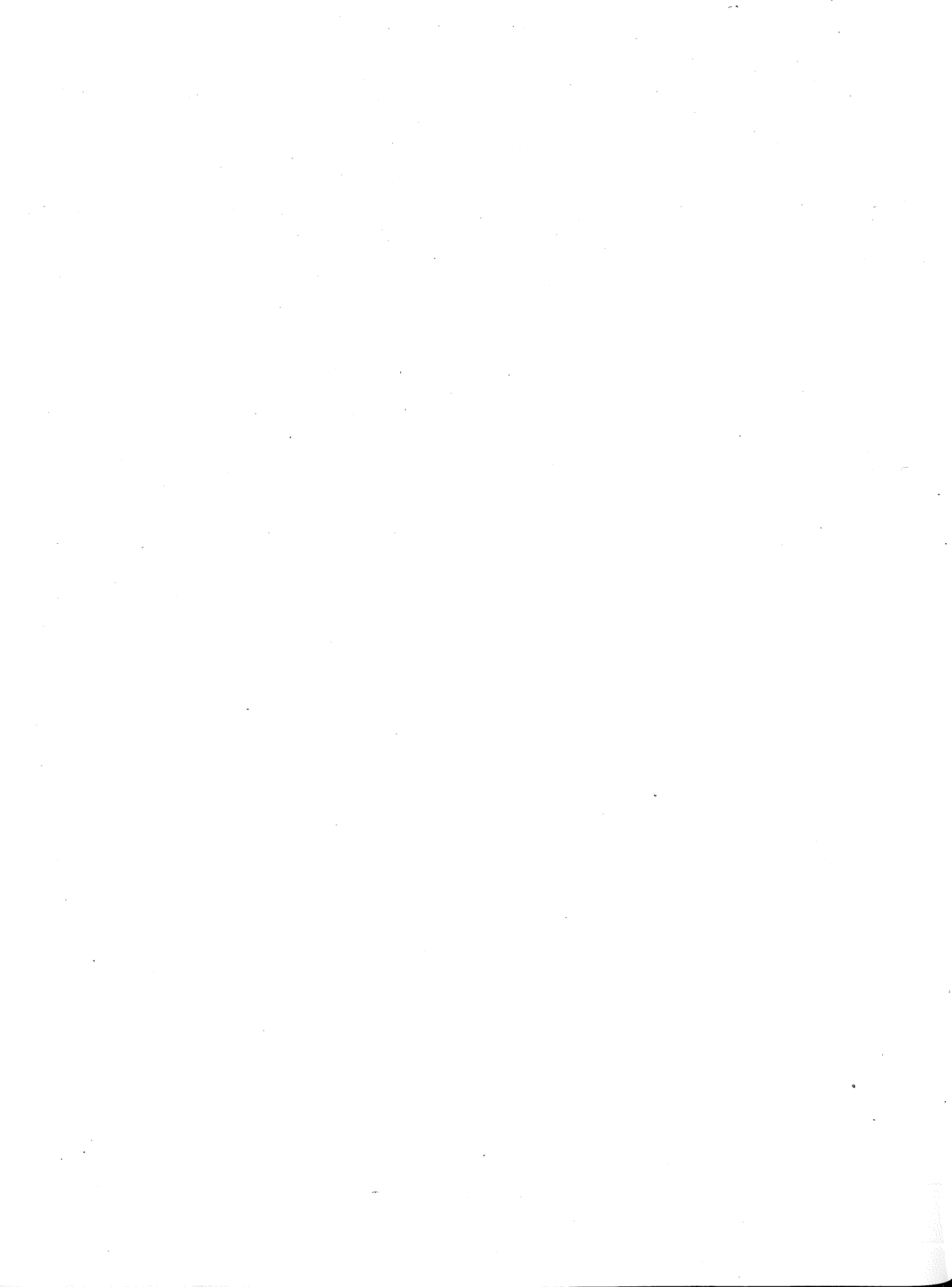
ZIP CODE _____

THAT'S THE END OF THE QUESTIONS. THANK YOU VERY MUCH.

INTERVIEW ENDING TIME _____ AM PM (CIRCLE ONE)



APPENDIX C
RESORT QUESTIONNAIRE



RESORT INTERVIEW

INTERVIEW INFORMATION

DATE _____

INTERVIEWER _____

LAKE _____

RESPONDENT QUALIFICATIONS: Must own, rent or operate a boat (any type) that is docked or moored on this lake. Must be at least 18 years of age, have been out on this lake at least once during this boating season, and at least sometimes operate the boat themselves.

=====

HELLO. MY NAME IS _____. I'M CONDUCTING A SURVEY OF BOATERS ON THIS LAKE. I'D LIKE TO ASK A FEW QUESTIONS OF ANYONE 18 YEARS OR OLDER WHO STAYS HERE AND HAS OPERATED A BOAT ON THIS LAKE THIS YEAR.

- ① How many of each of the following types of boats did you bring with you?
(READ LIST AND RECORD NUMBER OF BOATS FOR EACH TYPE)

_____ Didn't bring any boats with us (0)

_____ Fishing Boats (1) _____ Pontoons (4)

_____ Runabouts (2) _____ Canoes (5)

_____ Sailboats (3) _____ Other (6) (SPECIFY _____)

- ② When was the last time you used a boat on this lake? _____ (DAY, DATE)

- ③ Approximately what time did you leave from shore? _____ AM PM (CIRCLE ONE)

Approximately what time did you return here? _____ AM PM (CIRCLE ONE)

That means you were on the lake about _____ hours. Is that correct?

- ④ Did you yourself operate the boat for any of that time?

__1__ Yes __2__ No

- ⑤ How many people including yourself were in the boat that day? _____

- ⑥ What was your group's primary activity while boating? (CIRCLE ONE ANSWER)

__1__ Fishing __3__ Sailing __5__ Cruising
__2__ Water Skiing __4__ Canoeing __6__ Transportation To/From (SPECIFY _____)

- ⑦ On that day, what type of boat did you use? _____ (1=Fishing; 2=Runabout; 3=Sail; 4=Pontoon; 5=canoe; 6=Other _____)

- ⑧ What is the length of the boat? _____ feet

- ⑨ What size motor did you have? _____ horsepower (____000__ no motor, __999__ don't know)

- ⑩ Approximately how many gallons of gas did you use while boating that day? _____ gallons (____000__ no motor,

NOW WE HAVE SOME QUESTIONS ABOUT BOATING SAFETY.

11. Have you yourself ever taken a course in boating safety?

1 Yes 2 No 3 Don't Know/Not Sure 4 Other (Specify _____)

12. Has anybody else who lives at this address ever taken a boating safety course?

1 Yes 2 No 9 Don't Know/Not Sure

13. From a safety standpoint, how did you feel about the number of boats on this lake the last time you were boating? Was the lake....?(READ CATEGORIES AND CIRCLE ONE)

1 About Right 2 Crowded or 3 Far Too Crowded to be Safe? (4 Few Boats Here
 9 Don't Know/No Response)

14. Again from a safety standpoint, do you feel the lake is usually....? (READ CATEGORIES AND CIRCLE ONE)

1 About Right 2 Crowded or 3 Far Too Crowded to be Safe?

15. The last time you were boating, did you see any specific incidents that you considered to be safety problems?

1 Yes (GO TO QUESTION 15A)

15A. (IF YES) Tell me what you saw. (DO NOT READ LIST, CIRCLE ALL THAT ARE MENTIONED)

<input type="checkbox"/> 1 Near Miss or Collision	<input type="checkbox"/> 1 Use of Alcohol
<input type="checkbox"/> 1 High Wakes	<input type="checkbox"/> 1 Boats not Yielding Right-of-Way
<input type="checkbox"/> 1 Overloaded Boat	<input type="checkbox"/> 1 Other Carelessness (Describe _____)
<input type="checkbox"/> 1 Boats too Close to Shore/Docks	<input type="checkbox"/> 1 Excessive Speed

2 No 9 Don't Know/Not Sure 0 No Answer (GO TO QUESTION 16)

16. While you were on the lake that day, did you happen to see an enforcement officer?

1 Yes (GO TO QUESTION 16A AND QUESTION 16B)

16A. (IF YES) What agency was the officer from?

1 Sheriff's Department 2 Conservation Officer 3 Park Police 4 Other 9 Don't Know/Not Sure

16B. Were you spot checked by that officer?

1 Yes 2 No 9 Don't Know/Not Sure

2 No 9 Don't Know/Couldn't Tell For Sure (GO TO QUESTION 17)

17. How many times have you used free public accesses at other Minnesota lakes in the last 12 months? _____ times

18. Have you ever used a map to find a public access on a Minnesota lake?

1 Yes (GO TO QUESTIONS 18A and 18B)

18A. (IF YES) Did you use one of these? (HOLD UP LAKE ACCESS GUIDES)

1 Yes (GO TO QUESTION 18B)

2 No 9 Don't Know/Not Sure (GO TO QUESTION 19)

18B. Was it detailed enough to help you find the access? 1 Yes 2 No
 3 Other (SPECIFY _____)

2 No 3 Don't Know/Not Sure (GO TO QUESTION 19)

19. What special boating use restrictions are there for this lake? (DO NOT READ LIST, CIRCLE ALL MENTIONED)

1 None 1 Boat type and size restrictions
 1 Speed restrictions/Quiet Waters 1 Area of lake restrictions
 1 Horsepower restrictions 1 Other (SPECIFY _____)
 1 Time restrictions 1 Don't Know/Not Sure

20. What special boating use restrictions do you feel are needed on this lake? (READ LIST, CIRCLE ALL YES ANSWERS)

1 None 1 Boat type and size restrictions
 1 Speed restrictions/Quiet Waters 1 Area of lake restrictions
 1 Horsepower restrictions 1 Other (SPECIFY _____)
 1 Time restrictions 1 Don't Know/Not Sure

21. Approximately what percent of your boating activity occurs on week days? _____%

on Saturday? _____%

on Sunday? _____%

(TOTAL = 100%)

22. During what hours do you boat most frequently on week days? _____ (Probe for specific time period)
Example: 8-10 AM

on Saturday? _____

on Sunday? _____

23. Do crowded conditions cause you to boat less frequently or at different times than you would otherwise?

1 Yes (Explain how your boating use has changed because of crowding _____)

2 No

24. Which of the following do you have on your boat? (READ LIST, CIRCLE ALL YES ANSWERS)

1 Fire Extinguisher 1 Visual Signaler (flag, flare gun, etc.) 5 Wearable Life Jackets
 1 Lights 1 Horn 6 Boat Cushions

JUST A FEW FINAL QUESTIONS

25. What do you estimate to be the replacement value of your boat, motor, trailer and other attached equipment? _____ (DOLLARS)
26. Which category on the blue card best describes your total household income before taxes last year. Please give me the letter. (CIRCLE ONE LETTER)

<input type="checkbox"/> A Less than \$ 5,000 (01)	<input type="checkbox"/> E \$20,000 - \$29,999 (05)	<input type="checkbox"/> I \$75,000 Or More (09)
<input type="checkbox"/> B \$ 5,000 - 9,999 (02)	<input type="checkbox"/> F 30,000 - 39,999 (06)	<input type="checkbox"/> 98 Refused to Answer
<input type="checkbox"/> C 10,000 - 14,999 (03)	<input type="checkbox"/> G 40,000 - 49,999 (07)	<input type="checkbox"/> 99 Don't Know
<input type="checkbox"/> D 15,000 - 19,999 (04)	<input type="checkbox"/> H 50,000 - 74,999 (08)	

27. Which of the beverages on the white card did you have with you on the boat the last time you were out? Just give me the letters. (CIRCLE ALL MENTIONED)

<input type="checkbox"/> A Soft drinks (1)	<input type="checkbox"/> D Beer (4)	<input type="checkbox"/> G None (7)
<input type="checkbox"/> B Coffee/Tea/Water (2)	<input type="checkbox"/> E Wine (5)	<input type="checkbox"/> 8 Refused to Answer
<input type="checkbox"/> C Other Nonalcoholic (3)	<input type="checkbox"/> F Other Alcoholic (6)	<input type="checkbox"/> 9 Don't Know/Not Sure

28. Which number on the yellow card best describes the type of beverage use you personally feel is appropriate for boat operators? Just give one number. (CIRCLE ONE LETTER)

1 Nonalcoholic beverages only

2 Beer or wine only

3 Any alcoholic beverage

9 Don't Know/ No Opinion

IF RESPONDENT REPLY "IN MODERATION" CHECK HERE

29. How far did you travel to get to this resort? _____ (MILES)

30. How many days will you stay at this resort? _____ (DAYS)

31. Where did you launch your boat? (READ LIST AND CIRCLE NUMBER)

<input type="checkbox"/> 0 Rented or borrowed boat, did not launch	<input type="checkbox"/> 1 Public Access
<input type="checkbox"/> 2 Resort Access	<input type="checkbox"/> 3 Other Private Access

32. How many times will you or your party use a boat during your stay? _____

THAT'S THE END OF THE QUESTIONS. THANK YOU VERY MUCH.

=====

ADDRESS _____

CITY _____

INTERVIEW ENDING TIME _____ AM PM (CIRCLE ONE)

APPENDIX D
RESIDENT QUESTIONNAIRE



INTERVIEW INFORMATION

DATE _____

INTERVIEWER _____

LAKE _____

RESPONDENT QUALIFICATIONS: Must own or regularly operate a boat (any type) that is docked or moored on this lake for the summer on their own or friends property - cannot keep it in a marina or at other commercial establishment. Must be at least 18 years of age, have been out on this lake at least once during this boating season, and at least sometimes operate the boat themselves.

=====

HELLO. MY NAME IS _____. I'M CONDUCTING A SURVEY OF BOATERS ON THIS LAKE. I'D LIKE TO ASK A FEW QUESTIONS OF ANYONE 18 YEARS OR OLDER WHO LIVES HERE AND HAS OPERATED A BOAT ON THIS LAKE THIS YEAR.

1. How many of each of the following types of boats are normally kept on this property during the boating season?
(READ LIST AND RECORD NUMBER OF BOATS FOR EACH TYPE)

____ Fishing Boats (1) ____ Pontoons (4)
 ____ Runabouts (2) ____ Canoes (5)
 ____ Sailboats (3) ____ Other (6) (SPECIFY _____)

2. When was the last time you used a boat on this lake? _____ (DAY, DATE)
3. Approximately what time did you leave from shore? _____ AM PM (CIRCLE ONE)
 Approximately what time did you return home? _____ AM PM (CIRCLE ONE)
 That means you were on the lake about _____ hours. Is that correct?

4. Did you yourself operate the boat for any of that time?

__1__ Yes __2__ No

5. How many people including yourself were in your boat that day? _____

6. What was your group's primary activity while boating? (CIRCLE ONE ANSWER)

__1__ Fishing __3__ Sailing __5__ Boat Ride
 __2__ Water Skiing __4__ Canoeing __6__ Transportation To/From (SPECIFY _____)

7. On that day, what type of boat did you use? _____ (1=Fishing; 2=Runabout; 3=Sail; 4=Pontoon; 5=canoe; 6=Other _____)

8. What is the length of your boat? _____ feet

9. What size motor did you have? _____ horsepower (__000__ no motor, __999__ don't know)

10. Approximately how many gallons of gas did you use while boating that day? _____ gallons (__000__ no motor, __999__ don't know)

NOW WE HAVE SOME QUESTIONS ABOUT BOATING SAFETY.

11. Have you yourself ever taken a course in boating safety?

1 Yes 2 No 3 Don't Know/Not Sure 4 Other (Specify _____)

12. Has anybody else who lives at this address ever taken a boating safety course?

1 Yes 2 No 9 Don't Know/Not Sure

13. From a safety standpoint, how did you feel about the number of boats on this lake the last time you were boating? Was the lake....? (READ CATEGORIES AND CIRCLE ONE)

1 About Right 2 Crowded or 3 Far Too Crowded to be Safe? (4 Few Boats Here
 9 Don't Know/No Response)

14. Again from a safety standpoint, do you feel the lake is usually....? (READ CATEGORIES AND CIRCLE ONE)

1 About Right 2 Crowded or 3 Far Too Crowded to be Safe?

15. The last time you were boating, did you see any specific incidents that you considered to be safety problems?

1 Yes (GO TO QUESTION 15A)

15A. (IF YES) Tell me what you saw. (DO NOT READ LIST, CIRCLE ALL THAT ARE MENTIONED)

<input type="checkbox"/> 1 Near Miss or Collision	<input type="checkbox"/> 1 Use of Alcohol
<input type="checkbox"/> 1 High Wakes	<input type="checkbox"/> 1 Boats not Yielding Right-of-Way
<input type="checkbox"/> 1 Overloaded Boat	<input type="checkbox"/> 1 Other Carelessness (Describe _____)
<input type="checkbox"/> 1 Boats too Close to Shore/Docks	<input type="checkbox"/> 1 Excessive Speed

2 No 9 Don't Know/Not Sure 0 No Answer (GO TO QUESTION 16)

16. While you were on the lake that day, did you happen to see an enforcement officer?

1 Yes (GO TO QUESTION 16A AND QUESTION 16B)

16A. (IF YES) What agency was the officer from?

1 Sheriff's Department 2 Conservation Officer 3 Park Police 4 Other 9 Don't Know/Not Sure

16B. Were you spot checked by that officer?

1 Yes 2 No 9 Don't Know/Not Sure

2 No 9 Don't Know/Couldn't Tell For Sure (GO TO QUESTION 17)

17. How many times have you used free public accesses at other Minnesota lakes in the last 12 months? _____ times

18. Have you ever used a map to find a public access on a Minnesota lake?

1 Yes (GO TO QUESTIONS 18A and 18B)

18A. (IF YES) Did you use one of these? (HOLD UP LAKE ACCESS GUIDES)

1 Yes (GO TO QUESTION 18B)

2 No 9 Don't Know/Not Sure (GO TO QUESTION 19)

18B. Was it detailed enough to help you find the access? 1 Yes 2 No
 3 Other (SPECIFY _____)

2 No 3 Don't Know/Not Sure (GO TO QUESTION 19)

19. What special boating use restrictions are there for this lake? (DO NOT READ LIST, CIRCLE ALL MENTIONED)

1 None 1 Boat type and size restrictions
 1 Speed restrictions/Quiet Waters 1 Area of lake restrictions
 1 Horsepower restrictions 1 Other (SPECIFY _____)
 1 Time restrictions 1 Don't Know/Not Sure

20. What special boating use restrictions do you feel are needed on this lake? (READ LIST, CIRCLE ALL YES ANSWERS)

1 None 1 Boat type and size restrictions
 1 Speed restrictions/Quiet Waters 1 Area of lake restrictions
 1 Horsepower restrictions 1 Other (SPECIFY _____)
 1 Time restrictions 1 Don't Know/Not Sure

21. Approximately what percent of your boating activity occurs on week days? _____%

on Saturday? _____%

on Sunday? _____%

(TOTAL = 100%)

22. During what hours do you boat most frequently on week days? _____ (Probe for specific time period)

Example: 8-10 AM

on Saturday? _____

on Sunday? _____

23. Do crowded conditions cause you to boat less frequently or at different times than you would otherwise?

1 Yes (Explain how your boating use has changed because of crowding _____)

2 No

24. Which of the following do you have on your boat? (READ LIST, CIRCLE ALL YES ANSWERS)

1 Fire Extinguisher 1 Visual Signaler (flag, flare gun, etc.) 5 Wearable Life Jackets
 1 Lights 1 Horn 6 Boat Cushions

JUST A FEW FINAL QUESTIONS

25. What do you estimate to be the replacement value of your boat, motor, trailer and other attached equipment? _____ (DOLLARS)

26. Which category on the blue card best describes your total household income before taxes last year. Please give me the letter. (CIRCLE ONE LETTER)

- | | | |
|--|---|--|
| <input type="checkbox"/> A Less than \$ 5,000 (01) | <input type="checkbox"/> E \$20,000 - \$29,999 (05) | <input type="checkbox"/> I \$75,000 Or More (09) |
| <input type="checkbox"/> B \$ 5,000 - 9,999 (02) | <input type="checkbox"/> F 30,000 - 39,999 (06) | <input type="checkbox"/> 98 Refused to Answer |
| <input type="checkbox"/> C 10,000 - 14,999 (03) | <input type="checkbox"/> G 40,000 - 49,999 (07) | <input type="checkbox"/> 99 Don't Know |
| <input type="checkbox"/> D 15,000 - 19,999 (04) | <input type="checkbox"/> H 50,000 - 74,999 (08) | |

27. Which of the beverages on the white card did you have with you on the boat the last time you were out? Just give me the letters. (CIRCLE ALL MENTIONED)

- | | | |
|---|--|--|
| <input type="checkbox"/> A-1 Soft drinks | <input type="checkbox"/> D-1 Beer | <input type="checkbox"/> G-1 None |
| <input type="checkbox"/> B-1 Coffee/Tea/Water | <input type="checkbox"/> E-1 Wine | <input type="checkbox"/> H-1 Refused to Answer |
| <input type="checkbox"/> C-1 Other Nonalcoholic | <input type="checkbox"/> F-1 Other Alcoholic | <input type="checkbox"/> I-1 Don't Know/Not Sure |

28. Which number on the yellow card best describes the type of beverage use you personally feel is appropriate for boat operators? Just give one number. (CIRCLE ONE NUMBER)

1 Nonalcoholic beverages only

2 Beer or wine only

!IF RESPONDENT REPLYS "IN MODERATION" !

! CHECK HERE !

3 Any alcoholic beverage

9 Don't Know/ No Opinion

29. Is this your permanent home? 1 Yes 2 No

THAT'S THE END OF THE QUESTIONS. THANK YOU VERY MUCH.

INTERVIEW ENDING TIME _____ AM PM (CIRCLE ONE)

APPENDIX E
SUMMARY OF INTERVIEW RESULTS

DATA ITEM	RESULTS OF ACCESS SURVEY (Administered at Designated Public Accesses)		RESULTS OF RESORT SURVEY (Administered at Selected Resorts)		RESULTS OF RESIDENT SURVEY (Administered to Lakeshore Residents)	
	LAKE CATEGORY		LAKE CATEGORY		LAKE CATEGORY	
	1	Other	1	Other	1	Other
AVERAGE NUMBER OF BOAT OCCUPANTS	(117)	(122)	(75)	(66)	(236)	(316)
Adults/Boat	2.2	1.9				
Teens/Boat	0.2	0.1				
Children/Boat	0.3	0.1				
Total/Boat			2.7	2.4	2.7	2.5
% of Boat Occupants Wearing Life Jackets	(114)	(115)				
Adults	2.7%	4.7%				
Teens	0.0%	7.5%				
Children	58.3%	58.6%				
Question 1 -Where Launched	(117)	(122)				
This Access	99.1%	100.0%				
Another Public Access						
Private Access						
Resort - Campground	0.9%					
Friend's						
Other						
Question 2 - % Who Paid to Launch	(113)	(122)				
	0.9%	0.0%				
Question 3 -Parking Location	(115)	(122)				
Lot at Access	90.4%	78.7%				
Other Lot		0.8%				
Friend's House	5.2%	6.6%				
At Home	1.7%	4.1%				
Resort or Campground	2.6%	4.1%				
Other		5.7%				
Question 3A -Average Distance to Parking; in Miles (For those not parking at lot)	(7)	(21)				
	2.4	0.8				
Question 4 -% That Launched Today	(115)	(122)				
	86.1%	81.1%				
Question 4 -Average Hours on Lake	(99)	(95)	(75)	(66)	(237)	(317)
	4.7	4.2	3.5	2.5	2.8	2.3
Question 4 -Day Launched (For those not launching today)	(16)	(23)				
Yesterday	12.5%	39.1%				
2-7 Days Ago	50.0%	43.5%				
8-14 Days Ago	12.5%					
Before 14 Days Ago	25.0%	17.4%				

DATA ITEM	RESULTS OF ACCESS SURVEY (Administered at Designated Public Accesses)		RESULTS OF RESORT SURVEY (Administered at Selected Resorts)		RESULTS OF RESIDENT SURV (Administered to Lakeshore Residents)	
	LAKE CATEGORY		LAKE CATEGORY		LAKE CATEGORY	
	1	Other	1	Other	1	Other
Question 5 -Primary Activity	(117)	(122)	(77)	(66)	(236)	(317)
Fishing	63.2%	81.1%	66.2%	77.3%	53.0%	59.3%
Water Skiing	5.1%	1.6%	5.2%	6.1%	2.1%	11.4%
Boat Ride	25.6%	5.7%		15.2%	34.7%	26.5%
Removing Boat	6.0%	11.5%				
Sailing				1.5%	2.5%	0.9%
Canoeing			3.9%		0.4%	0.9%
Transportation			24.7%		7.2%	0.9%
Question 5C -Primary Activity Time Before Taking Boat Out	(117)	(122)				
Fishing	42.9%	78.6%				
Water Skiing	28.6%	14.3%				
Boat Ride	28.6%	7.1%				
Removing Boat						
Sailing						
Canoeing						
Transportation						
Question 6 -Average Length of Boat(Feet)	(117)	(121)	(76)	(65)	(237)	(317)
	16.1	15.6	16.2	15.3	17.2	16
Question 7 -Average Size of Motor	(116)	(120)	(66)	(65)	(229)	(289)
	64.2	43.3	57.0	41.7	71.3	24.3
% with second smaller motor	6.9%	2				
Question 8 Average Gallons of Gas Used	(108)	(120)	(63)	(58)	(211)	(272)
	3.7	2.4	2.3	1.5	2.9	1.7
Question 9- Respondents with Lake Cabins/ Residences	(117)	(122)				
	8.5%	18.0%				
Question 9a-Average Miles to Primary Residence	(102)	(97)	(77)	(65)		
	93.2	108.8	150.0	340.4		
Question 9b -Average Miles Driven to Access	(101)	(98)				
	33	24.3				
Question 10 -Boat Safety Course Respondant Yes	(107)	(100)	(77)	(65)	(237)	(316)
	18.7%	17.0%	27.3%	26.2%	24.5%	21.2%
Question 11 -Boat Safety Course Other	(104)	(100)	(77)	(65)	(235)	(305)
	13.5%	9.0%	23.4%	10.8%	20.9%	16.4%

DATA ITEM	RESULTS OF ACCESS SURVEY (Administered at Designated Public Accesses)		RESULTS OF RESORT SURVEY (Administered at Selected Resorts)		RESULTS OF RESIDENT SURVEY (Administered to Lakeshore Residents)	
	LAKE CATEGORY		LAKE CATEGORY		LAKE CATEGORY	
	1	Other	1	Other	1	Other
Question 12 -Safety of Number of Boats	(107)	(100)	(76)	(66)	(236)	(317)
Few Boats	22.4%	25.0%	40.8%	42.4%	55.5%	43.5%
About Right	69.2%	73.0%	55.3%	54.5%	38.6%	50.5%
Crowded	6.5%	2.0%	3.9%	3.0%	5.9%	5.7%
Far Too Crowded	0.9%					0.3%
Question 13 -Return If Same Conditions	(107)	(100)				
No	3.7%	1.0%				
Question 14 -Safety Incidents Today	(107)	(98)	(77)	(66)	(237)	(317)
Yes	10.3%	5.1%	11.7%	13.6%	17.3%	15.5%
Question 14A -What Incidents? (% of those observing incidents)	(11)	(5)	(9)	(9)	(41)	(49)
Near Miss or Collision	54.5%		11.1%	22.3%	9.8%	10.2%
High Wakes	18.2%		33.3%	11.1%	41.5%	32.6%
Boats Not Yielding	18.2%	40.0%	11.1%		9.8%	8.2%
Other Carelessness	27.3%	80.0%	77.8%	66.8%	48.8%	36.7%
Excessive Speed	9.0%	40.0%	11.1%	22.3%	51.2%	44.9%
Overloaded Boats			11.1%		14.6%	8.2%
Boats Too Close to Shore			11.1%	22.3%	22.0%	28.6%
Use of Alcohol					7.3%	2.0%
Question 15 -See Enforcement Officer?	(107)	(100)	(77)	(66)	(234)	(317)
Yes	1.9%	3.0%	3.9%	4.5%	8.1%	3.2%
Question 15A -Officer's Agency (% of those observing an officer)	(2)	(3)	(3)	(3)	(18)	(10)
Sheriff	50.0%	66.7%		66.7%	72.2%	60.0%
Conservation		33.3%	100.0%	33.3%	27.8%	40.0%
Don't Know	50.0%					
Question 15B -Spot Checked?	(107)	(100)	(77)	(66)	(234)	(317)
Yes	0.9%	2.0%	3.9%	3.0%	1.3%	0.6%
Question 16 -Used This Access Before	(107)	(100)				
Yes	75.7%	74.0%				
Question 17 -Adequate Directional Signs	(107)	(100)				
Yes	79.4%	62.0%				
	(Significance = .0093)					
Question 18 -Use of a Map	(104)	(99)	(77)	(66)	(235)	(316)
Yes	5.8%	10.1%	13.0%	10.6%	5.5%	13.3%

DATA ITEM	RESULTS OF ACCESS SURVEY (Administered at Designated Public Accesses)		RESULTS OF RESORT SURVEY (Administered at Selected Resorts)		RESULTS OF RESIDENT SURV (Administered to Lakeshore Residents)	
	LAKE CATEGORY		LAKE CATEGORY		LAKE CATEGORY	
	1	Other	1	Other	1	Other
Question 18A -Use DNR Map (% of those using maps)	(6)	(10)	(6)	(5)	(13)	(42)
Yes	0.0%	20.0%	33.3%	40.0%	30.8%	23.8%
Question 18B -Detailed Enough? (% using DNR map)		(2)	(2)	(3)	(4)	(10)
Yes		50.0%	100.0%	100.0%	100.0%	100.0%
Question 19 -Access Rating	(107)	(99)				
Excellent	54.2%	27.3%				
Good	32.7%	50.5%				
Fair	10.3%	20.2%				
Poor	2.8%	2.0%				
Question 20 -Access Problems Today? (% of Those who had Problems)	(106)	(98)				
Yes	11.3%	16.3%				
Question 20A -Use Problems	(12)	(16)				
Crowded Access for Parking	16.7%	12.5%				
Crowded Access for Launching	25.0%	6.2%				
Water Too Shallow	33.3%	31.2%				
Ramp Not Well Maintained	16.7%	12.5%				
Inadequate Signing		18.8%				
Other	41.7%	25.0%				
Question 21 -Liked About Access	(90)	(82)				
Handy	3.3%	1.2%				
Good Drop	10.0%	13.4%				
Big, Wide Ramp	11.1%	1.2%				
Ramp Type	13.3%	20.7%				
Good Ramp	5.6%	9.8%				
Easy for Launching	10.0%	11.0%				
Parking	20.0%	31.7%				
Not Crowded	5.6%	4.9%				
Ramp Design	3.3%	11.0%				
Access Design	3.3%	1.2%				
Parking Design	4.4%					
Free	5.6%					
Location	8.9%	7.3%				
Beach	1.1%					
Dock	13.3%	6.1%				
Clean	8.9%	2.4%				
Nothing Particular	1.1%	2.4%				
Other	4.4%	6.1%				

DATA ITEM	RESULTS OF ACCESS SURVEY (Administered at Designated Public Accesses)		RESULTS OF RESORT SURVEY (Administered at Selected Resorts)		RESULTS OF RESIDENT SURVEY (Administered to Lakeshore Residents)	
	LAKE CATEGORY		LAKE CATEGORY		LAKE CATEGORY	
	1	Other	1	Other	1	Other
Question 22 -Improvements Needed at Access	(63)	(93)				
Directional Signs	9.5%	33.3%				
Informational Signs	3.2%	12.9%				
Dock for Launching	31.7%	21.5%				
Better Area Lighting	19.0%	10.8%				
Beacon Light	36.5%	18.3%				
Trash Containers	28.6%	74.2%				
Trash Pickup	31.7%	39.8%				
Toilets	14.3%	59.1%				
Another Ramp	25.4%	7.5%				
Better Enforcement	4.8%	4.3%				
Other Improvements	11.1%	8.6%				
Question 23 -Ramp Type Preference	(105)	(100)				
Solid Concrete	41.0%	53.0%				
Plank Concrete	58.1%	41.0%				
Gravel		3.0%				
No Difference	10.0%	3.0%				
Question 24 -Average Use of This Access in the Prior 12 Months	(105) 6	(95) 4.2				
Question 25 -Average Use of Other Minnesota Public Access Last 12 Months Median use of other accesses	(103) 16.4 8.0	(95) 32.7 15.0	(76) 5.9 2.0	(66) 6.3 0.0	(235) 1.8 0.0	(313) 3.0 0.0
Question 26 -Boating Use Restrictions	(103)	(97)	(77)	(65)	(221)	(313)
No Restrictions	59.2%	63.9%	44.1%	27.7%	44.3%	47.3%
Speed	5.8%	7.2%	11.7%	6.2%	31.7%	13.4%
Horsepower						
Time			1.3%		0.9%	0.3%
Boat Type and Size					0.4%	0.3%
Area of Lake			5.2%	3.1%	11.8%	1.6%
Other	2.9%		1.3%	3.1%	4.1%	1.0%
Don't Know	32.0%	28.9%	39.0%	64.6%	24.9%	37.1%
Question 27 -Needed Use Restrictions	(104)	(91)	(77)	(66)	(222)	(316)
Speed	4.8%	11.0%	14.3%	9.1%	33.8%	19.3%
Horsepower	1.0%	3.3%	6.5%	6.1%	12.6%	10.1%
Time	1.0%	1.1%		4.5%	9.0%	6.6%
Boat Type and Size	3.8%	2.2%	6.5%	12.1%	10.4%	5.4%
Area of Lake			2.6%	7.8%	21.2%	10.1%
Other	4.8%	2.2%	5.2%	7.8%	25.2%	10.4%
No Restrictions Needed	84.6%	83.5%	61.0%	42.4%	41.4%	50.3%
Don't Know	2.9%	2.2%	14.3%	30.3%	5.4%	8.2%
Question 28 -Average # Wearable Life Jacket	(106) 3.4	(99) 2.8				

DATA ITEM	RESULTS OF ACCESS SURVEY (Administered at Designated Public Accesses)		RESULTS OF RESORT SURVEY (Administered at Selected Resorts)		RESULTS OF RESIDENT SURVEY (Administered to Lakeshore Residents)	
	LAKE CATEGORY		LAKE CATEGORY		LAKE CATEGORY	
	1	Other	1	Other	1	Other
Question 29 -Average # of Boat Cushions	(104) 1.6	(99) 1.5				
Question 30 -Average % of Time Life Jackets Worn	(104)	(99)				
By Operator	3.5% (73)	7.4% (84)				
Other Adults	4.8% (23)	10.6% (28)				
Teenagers	2.4% (27)	7.0% (34)				
Children	40.7%	24.1%				
Question 31 -Boat Safety Equipment	(107)	(100)	(76)	(65)	(222)	(317)
Fire Extinguisher	38.3%	25.0%	38.2%	36.9%	64.9%	36.3%
Lights	80.4%	76.0%	64.5%	63.1%	91.4%	68.4%
Visual Signaler	19.6%	10.0%	15.8%	9.2%	23.9%	4.7%
Horn	37.4%	19.0%	39.5%	24.6%	63.9%	30.6%
Life Jackets (Resort & Residents Only)			96.0%	90.8%	100.0%	94.6%
Boat Cushion (Resort & Residents Only)			84.2%	84.6%	91.4%	83.9%
Question 32 -Average Boat Replacement Value	(106) \$5,999	(100) \$4,303	(54) \$5,134	(34) \$3,554	(235) \$5,668	(317) \$3,645
Question 33 -Average Money Spent by Group	(106)	(99)				
Car Expenses Excluded	\$21.30 (98)	\$21.07 (97)				
Car Expenses Included @ \$.27/Mile	\$29.67	\$27.89				
Question 34 -Cumulative Income Categories	(85)	(84)	(52)	(47)	(188)	(238)
Under \$5,000	4.7%	2.4%	0.0%	4.3%	3.2%	2.9%
Under \$10,000	5.9%	3.6%	1.9%	8.6%	8.5%	6.7%
Under \$15,000	10.6%	13.1%	7.7%	23.5%	22.3%	14.3%
Under \$20,000	18.8%	29.8%	19.2%	36.3%	31.9%	30.7%
Under \$30,000	44.7%	50.0%	46.1%	55.4%	45.2%	55.5%
Under \$40,000	69.4%	76.2%	73.0%	83.1%	63.3%	73.6%
Under \$50,000	88.2%	85.7%	82.6%	89.5%	79.3%	85.4%
Under \$75,000	95.3%	96.4%	98.0%	98.0%	90.5%	93.4%
Question 35 -Drinks on Board	(97)	(95)	(73)	(65)	(222)	(314)
Soft Drinks	76.3%	71.6%	50.7%	46.2%	47.8%	42.4%
Coffee, Tea or Water	30.9%	16.8%	19.2%	23.1%	28.8%	15.0%
Other Nonalcoholic	2.1%		6.8%		3.2%	2.2%
Beer	18.6%	38.9%	22.0%	13.8%	21.6%	15.3%
Wine	1.0%		1.4%	1.5%	3.6%	1.3%
Other Alcoholic		1.0%	2.7%		4.5%	0.6%
None	11.3%	12.6%	31.5%	44.6%	39.2%	47.8%
Don't Know	2.1%	1.0%	2.7%			

DATA ITEM	RESULTS OF ACCESS SURVEY (Administered at Designated Public Accesses)		RESULTS OF RESORT SURVEY (Administered at Selected Resorts)		RESULTS OF RESIDENT SURVEY (Administered to Lakeshore Residents)	
	LAKE CATEGORY		LAKE CATEGORY		LAKE CATEGORY	
	1	Other	1	Other	1	Other
Question 36 -Appropriate Beverage for Operators	(107)	(100)	(71)	(63)	(233)	(302)
Nonalcoholic	72.0%	56.0%	71.8%	82.5%	73.0%	80.5%
Beer, Wine Only	10.3%	24.0%	18.3%	6.3%	14.6%	11.6%
Any Alcoholic	7.5%	12.0%	9.9%	11.1%	12.4%	7.9%
No Opinion	10.3%	8.0%				
Alcohol In Moderation - % of Beer/Wine/Alcoholic Responses	47.4%	47.2%	55.0%	100.0%	61.9%	57.6%
Boat Type Used	(101)	(97)	(76)	(65)	(235)	(317)
Fishing	50.5%	78.4%	59.2%	72.3%	42.1%	49.2%
Runabout	49.5%	21.6%	26.3%	26.2%	41.3%	28.1%
Sail				1.5%	2.1%	0.9%
Pontoon			5.3%		12.3%	19.2%
Canoe			5.3%		0.4%	1.6%
Other			3.9%		1.7%	0.9%

RESULTS OF RESORT SURVEY
(Administered at Selected
Resorts)

RESULTS OF RESIDENT SURVEY
(Administered to
Lakeshore Residents)

	LAKE CATEGORY		LAKE CATEGORY	
	1	2	1	2
ADDITIONAL RESORT/RESIDENT QUESTIONS				
Question 1 -Average Number of Boats				
	(77)	(66)	(237)	(317)
Fishing	0.32	0.35	0.85	0.97
Runabout	0.27	0.14	0.61	0.42
Sail	0.00	0.00	0.13	0.14
Pontoon	0.04	0.00	0.19	0.33
Canoe	0.01	0.00	0.12	0.24
Other	0.01	0.02	0.08	0.06
Question 14 -Usual Safety of Boat Numbers				
	(74)	(65)	(236)	(316)
About Right	91.9%	98.5%	80.1%	88.3%
Crowded	6.8%	1.5%	16.5%	8.9%
Too Crowded	1.4%		3.4%	1.6%
Question 21 -% of Boating activity				
Weekday	(74)	(63)	(237)	(307)
	40.2%	47.6%	45.8%	43.7%
Saturday	(71)	(55)	(233)	(300)
	36.6%	32.4%	29.2%	30.6%
Sunday	(70)	(55)	(234)	(304)
	30.9%	27.2%	25.7%	28.9%
Question 23 -Adjust Boating Activity				
	(75)	(63)	(236)	(314)
Yes	24.0%	7.9%	26.3%	20.4%
Avoid Weekends	31.3%	40.0%	29.0%	27.9%
Avoid Holidays	6.3%		11.3%	11.5%
Avoid Crowds	43.8%	20.0%	35.5%	34.4%
Hard to Fish	6.3%		4.8%	11.5%
Crowded With Skiers		40.0%	12.9%	9.8%
Unsafe	12.5%			1.6%
Use Less Frequently			3.2%	
Go Out After Crowds			3.2%	3.3%
Question 29 -Average Distance Traveled to Resort				
	(77)	(65)		
1-50 Miles	5.2%	1.5%		
51-100 Miles	19.5%	18.3%		
101-150 Miles	39.0%	19.9%		
151-200 Miles	11.7%	21.3%		
201-250 Miles	1.3%	3.0%		
251-500 Miles	10.4%	13.7%		
Over 500 Miles	13.0%	21.5%		

RESULTS OF RESORT SURVEY
(Administered at Selected
Resorts)

RESULTS OF RESIDENT SURVEY
(Administered to
Lakeshore Residents)

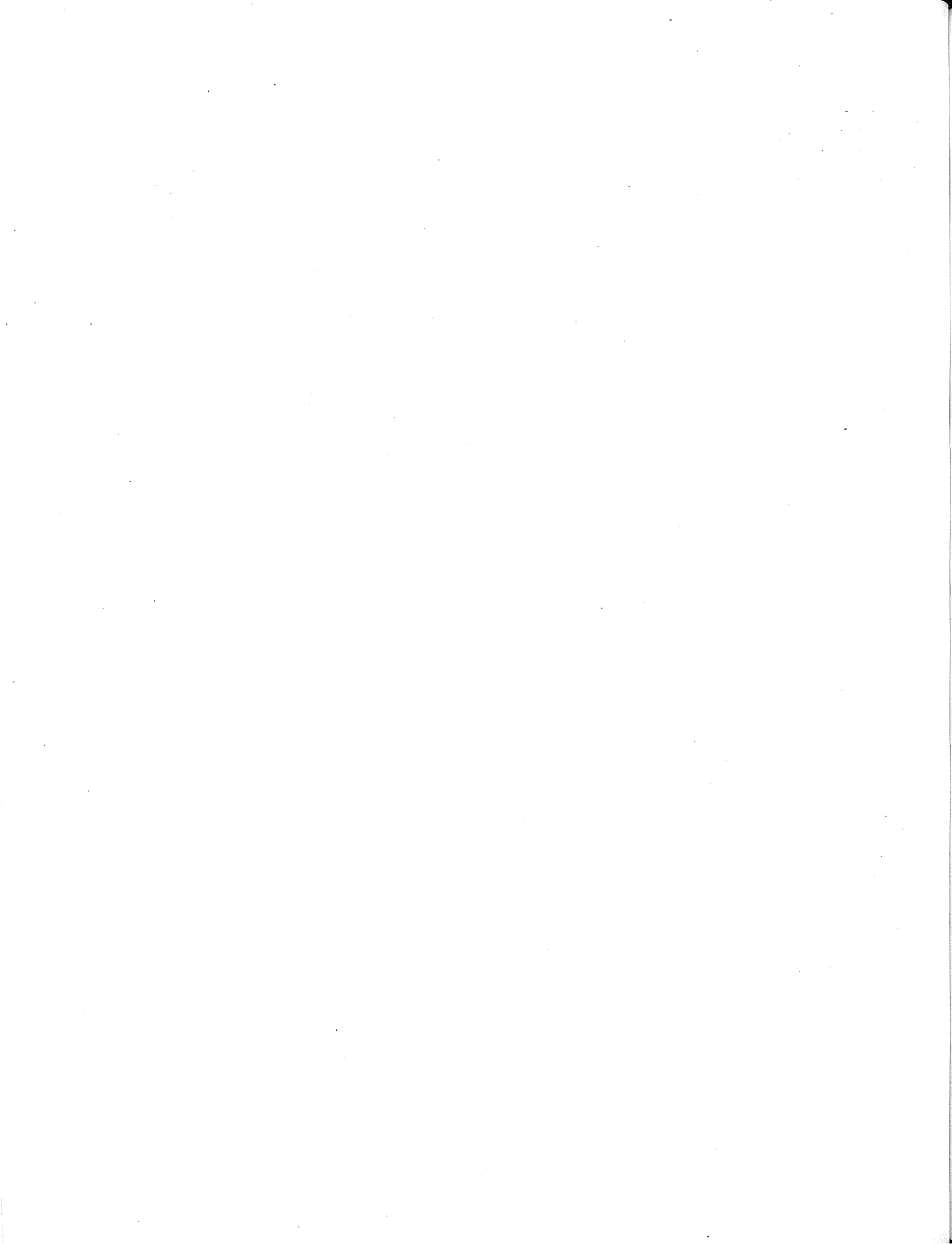
	LAKE CATEGORY	
	1	2
Question 30 -Average Days at Resort	(77) 21.7	(65) 6.7

	LAKE CATEGORY	
	1	2

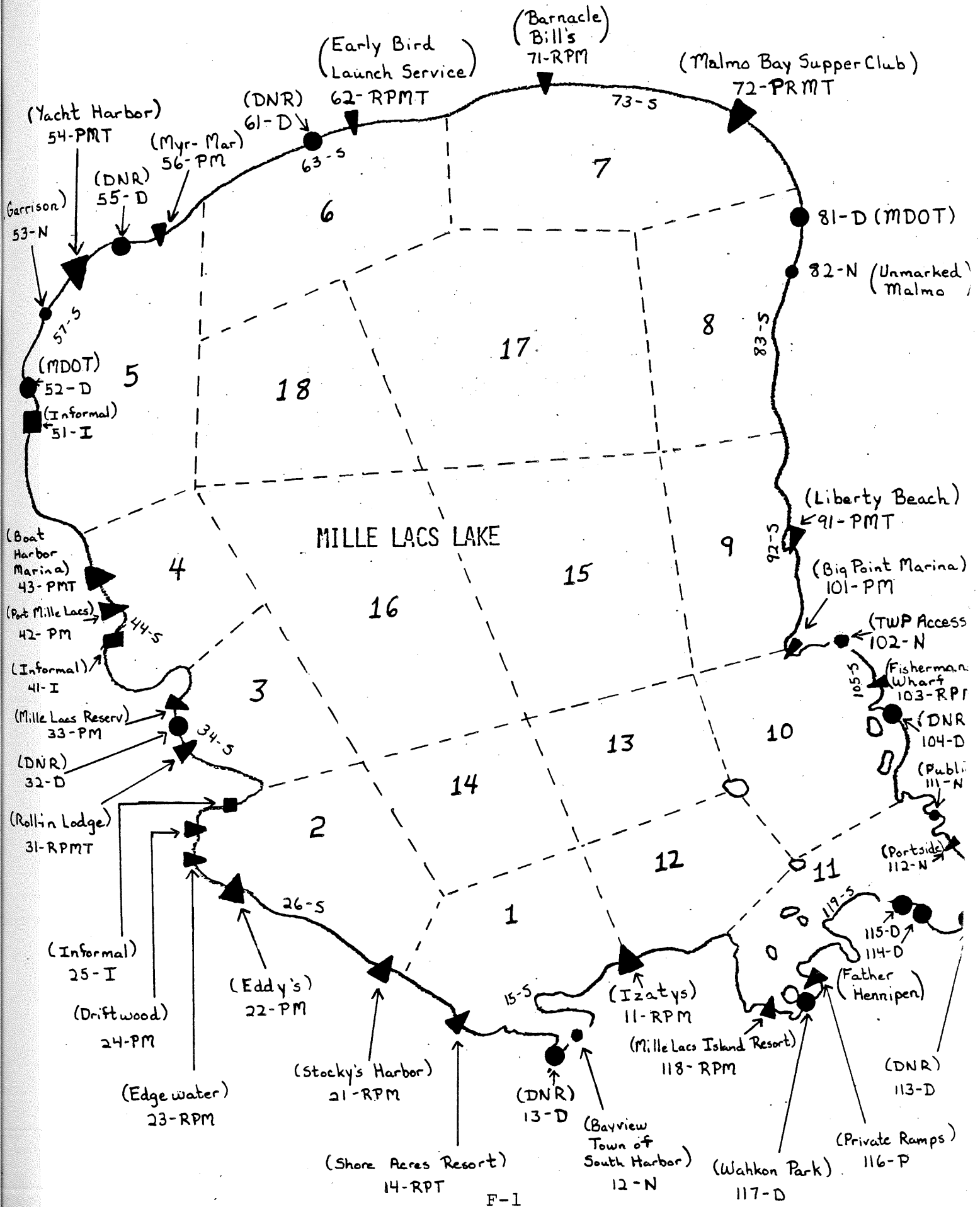
Question 31 - Where Did You Launch		
	(77)	(65)
Rented	36.4%	49.2%
Resort Access	42.9%	36.9%
Public Access	6.5%	6.2%
Other Private Access	14.3%	7.7%

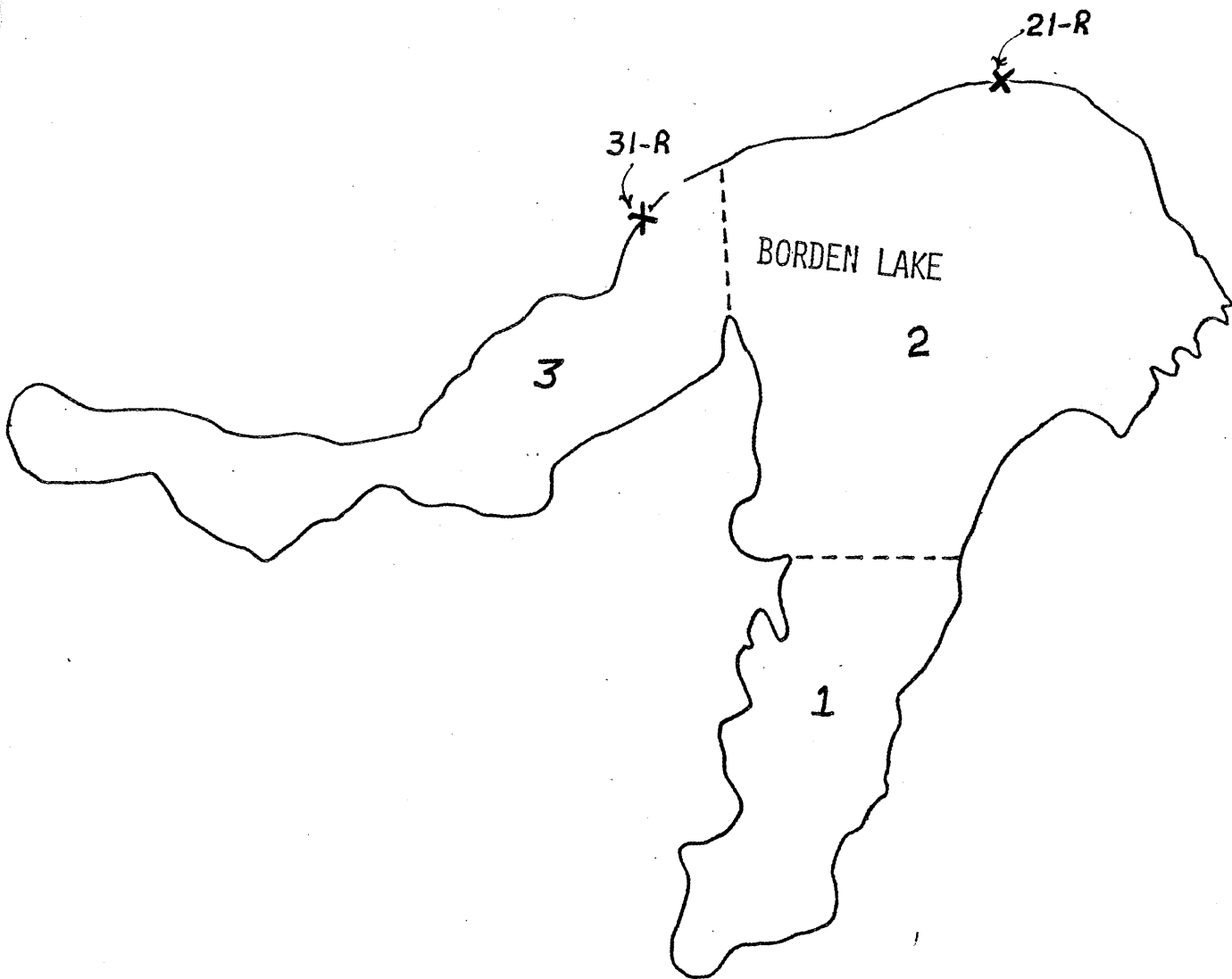
Question 32 -Number of Boating Occasions		
	(68)	(64)
Average	10.7	19.4
Median	5	10

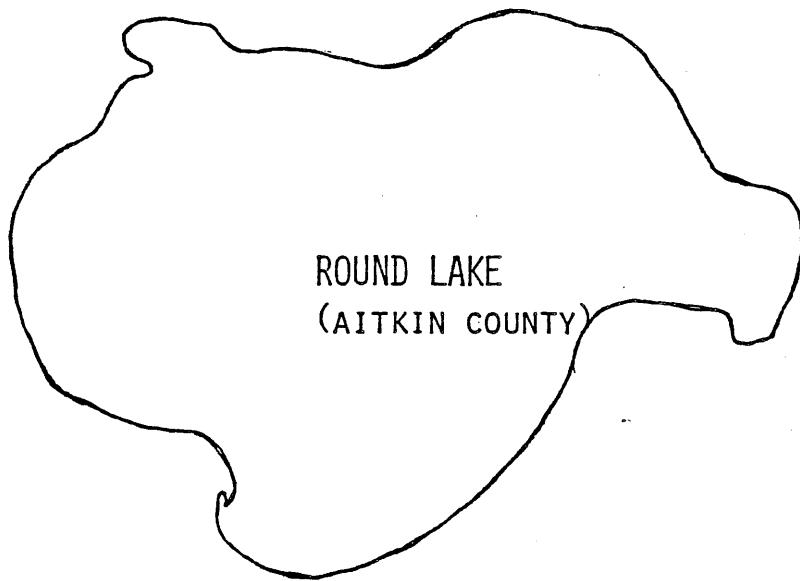
Numbers in parentheses indicate the number of valid responses.



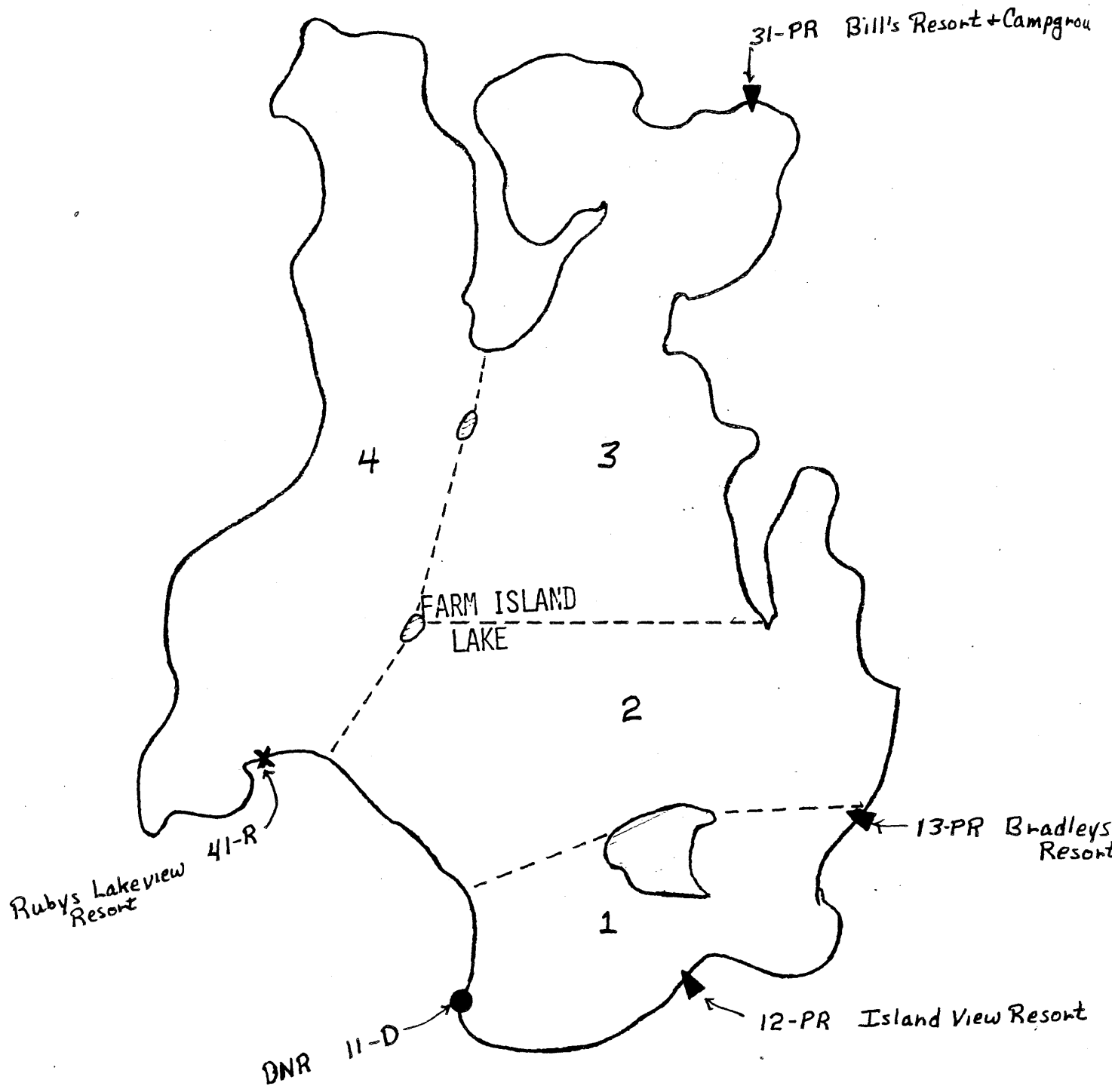
APPENDIX F
MAPS OF LAKES

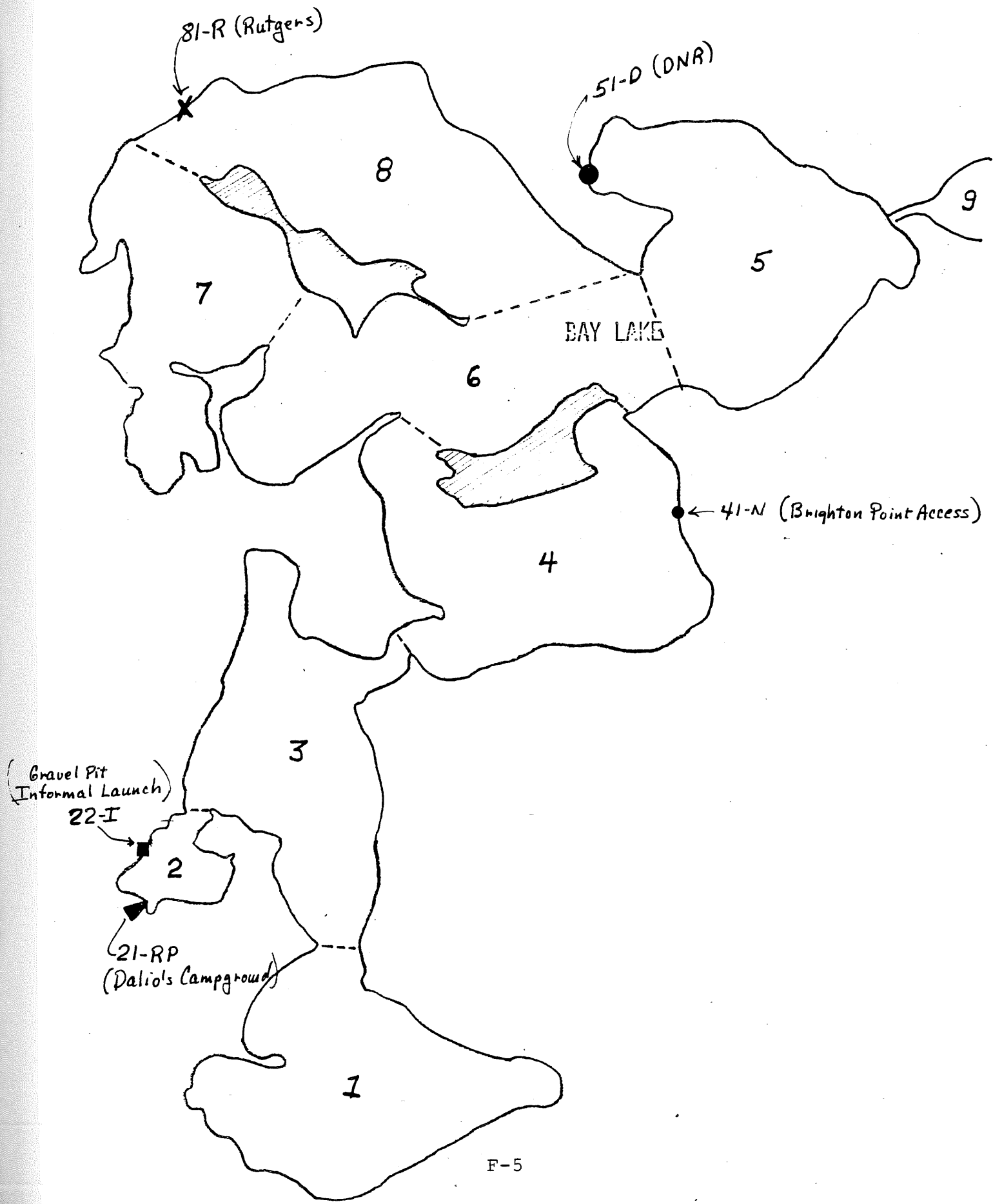


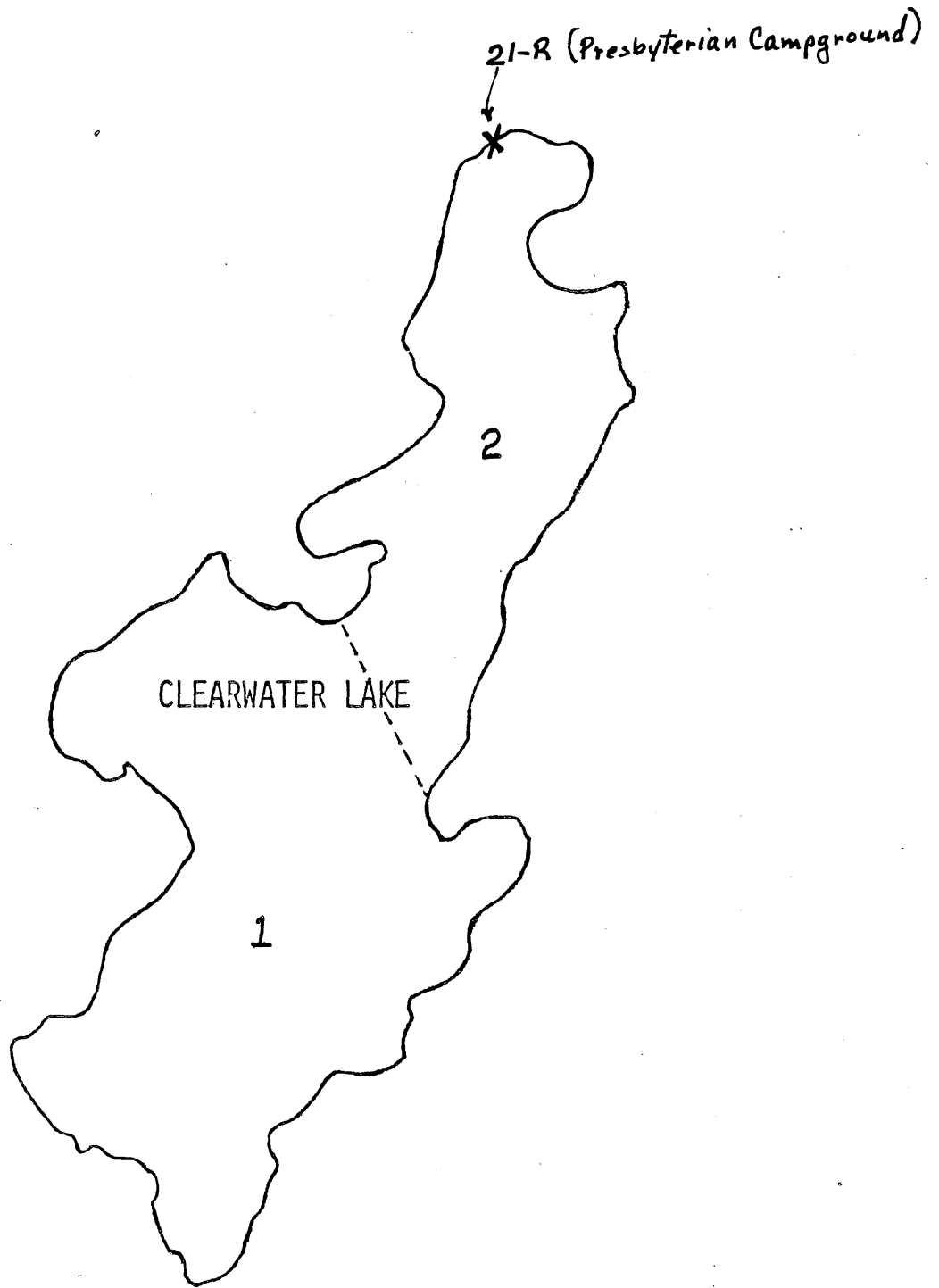




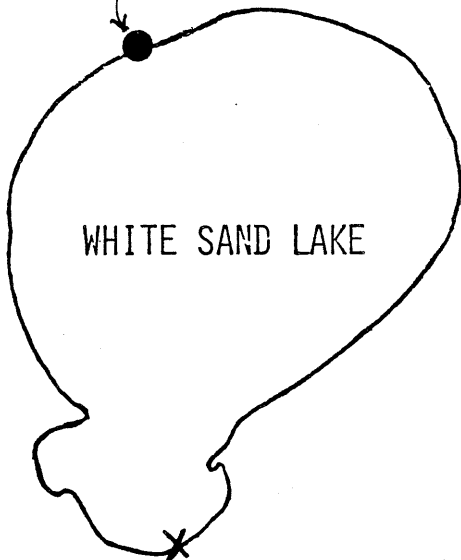
ROUND LAKE
(AITKIN COUNTY)





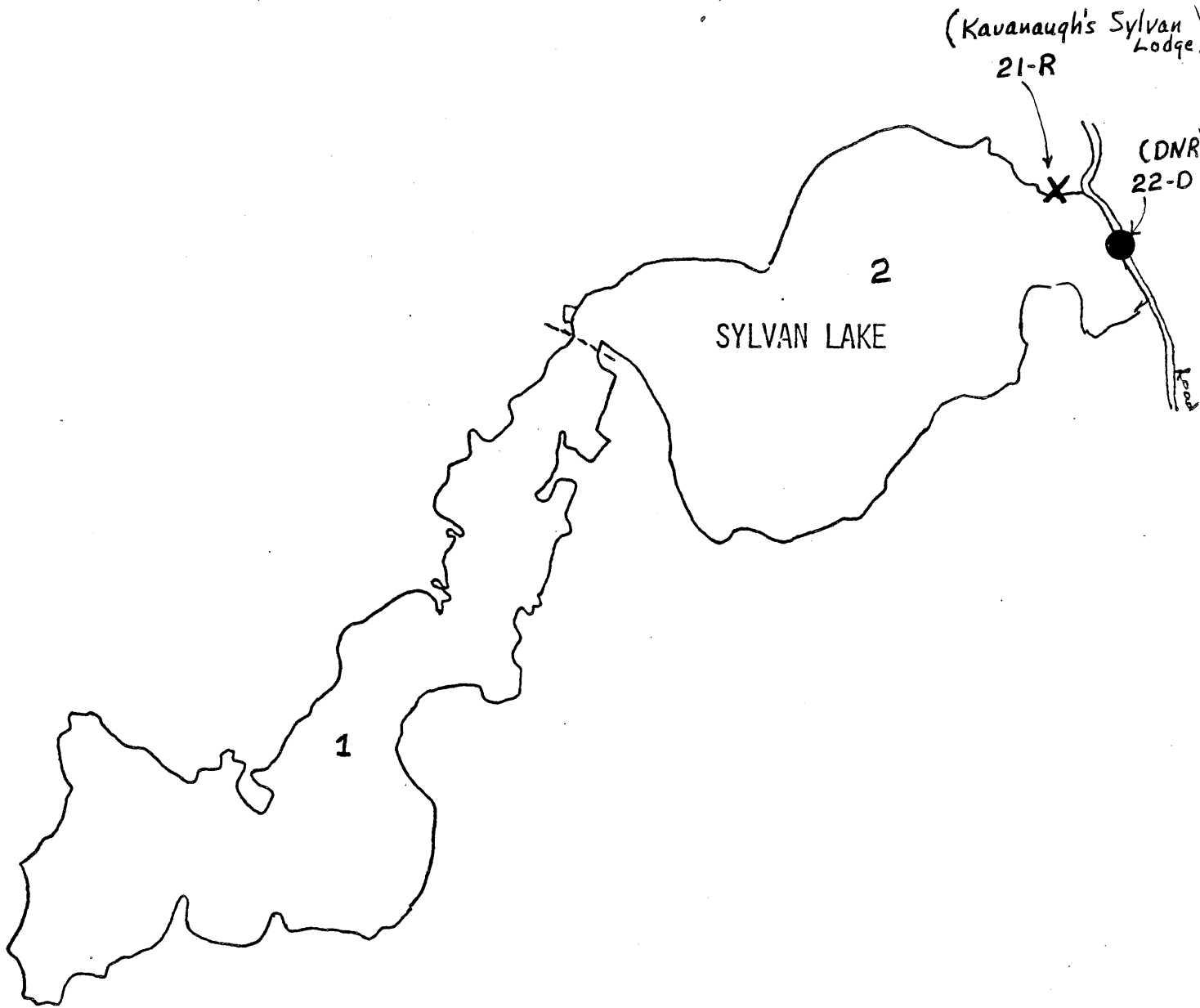


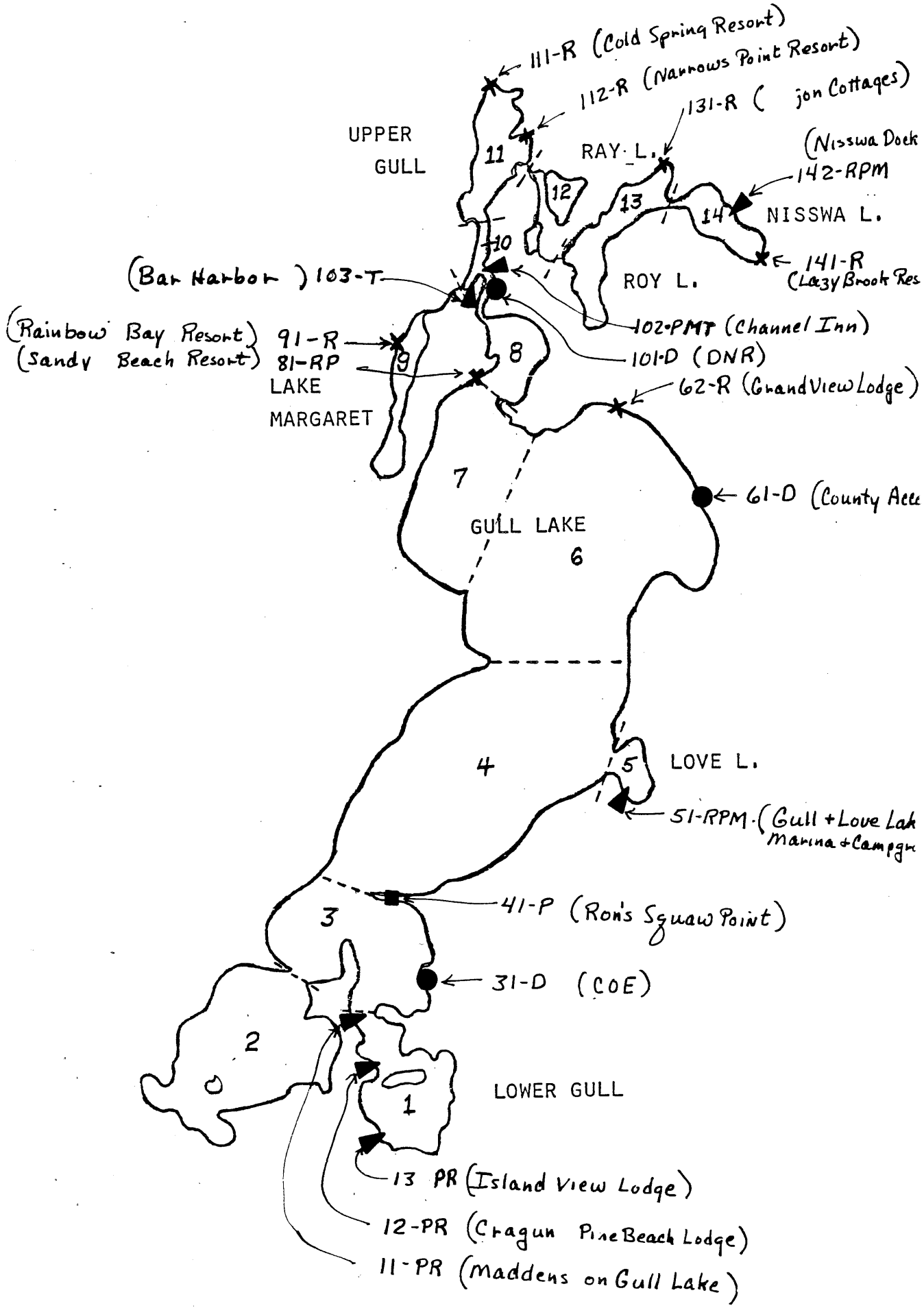
11-D (DNR)

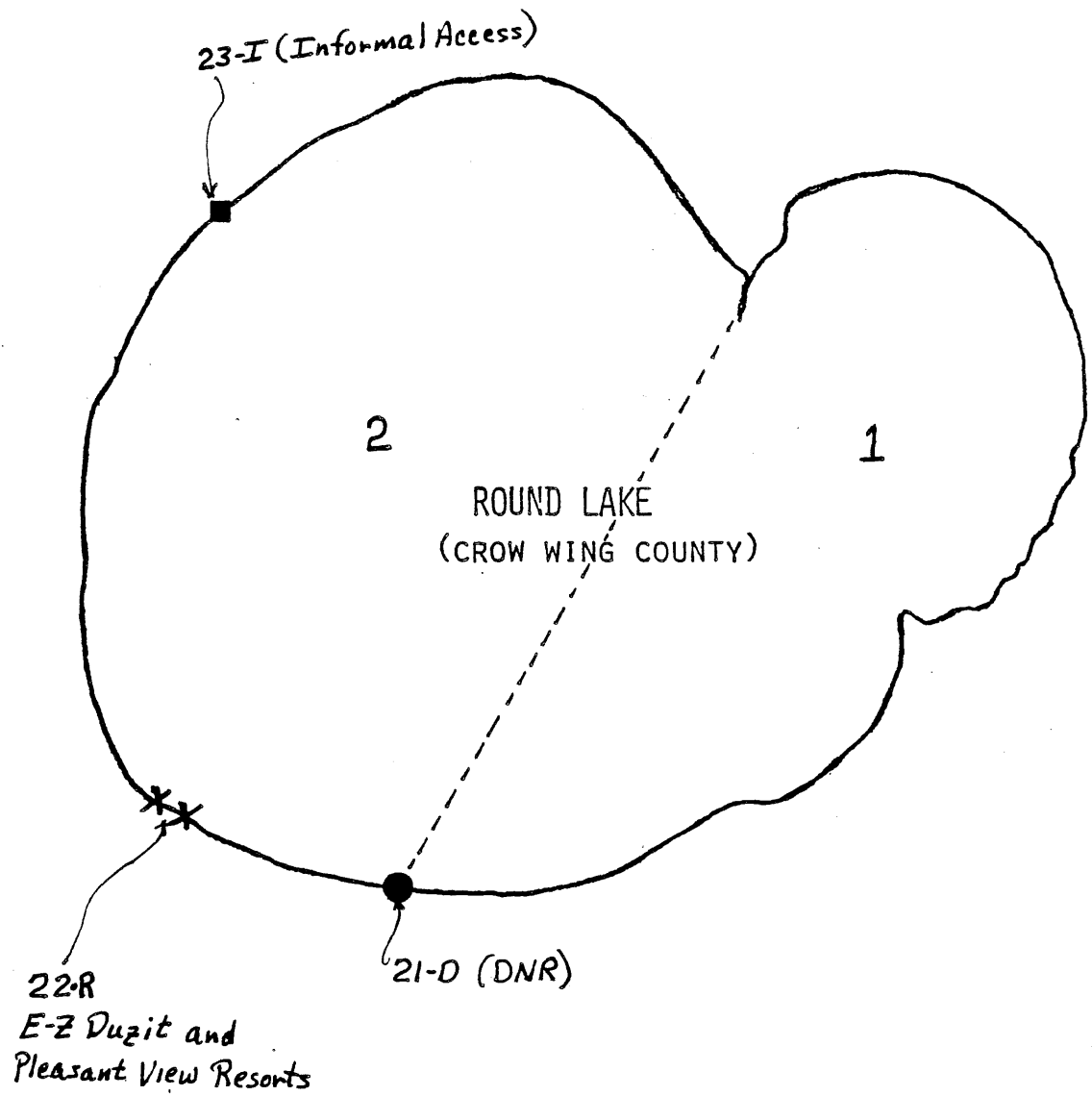


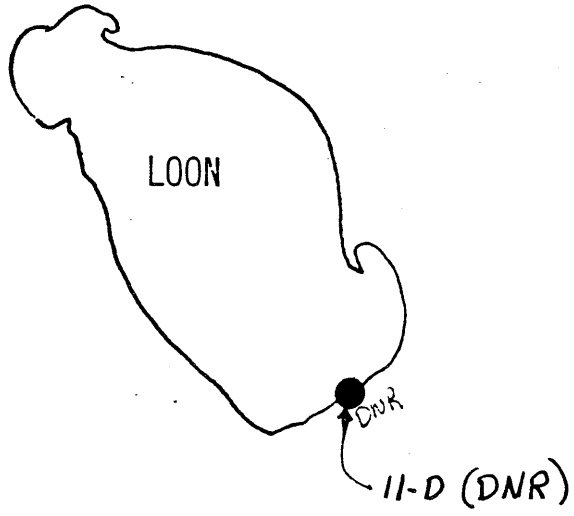
WHITE SAND LAKE

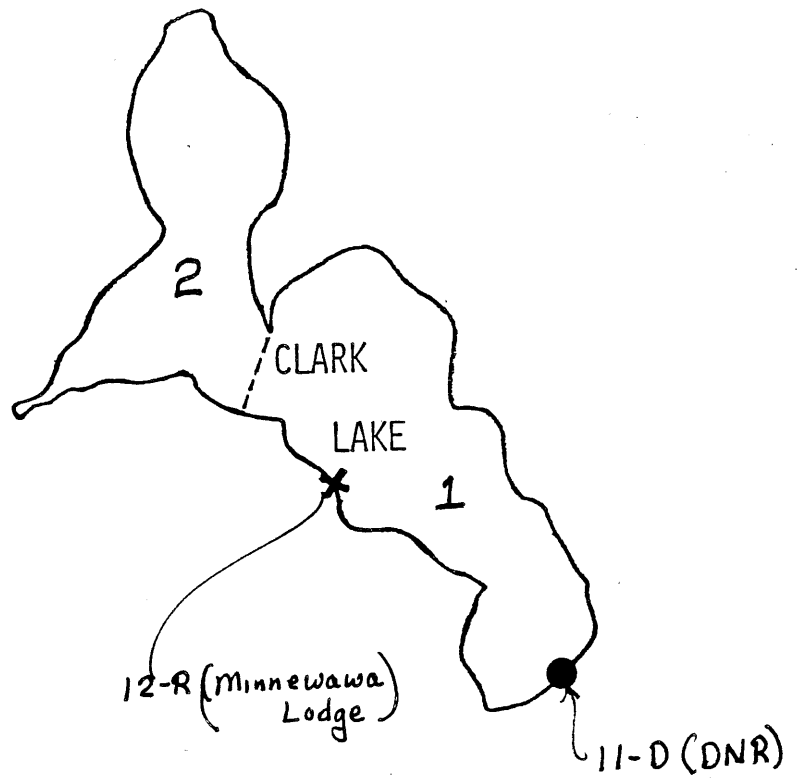
12-R (White Sands Shores Resort)

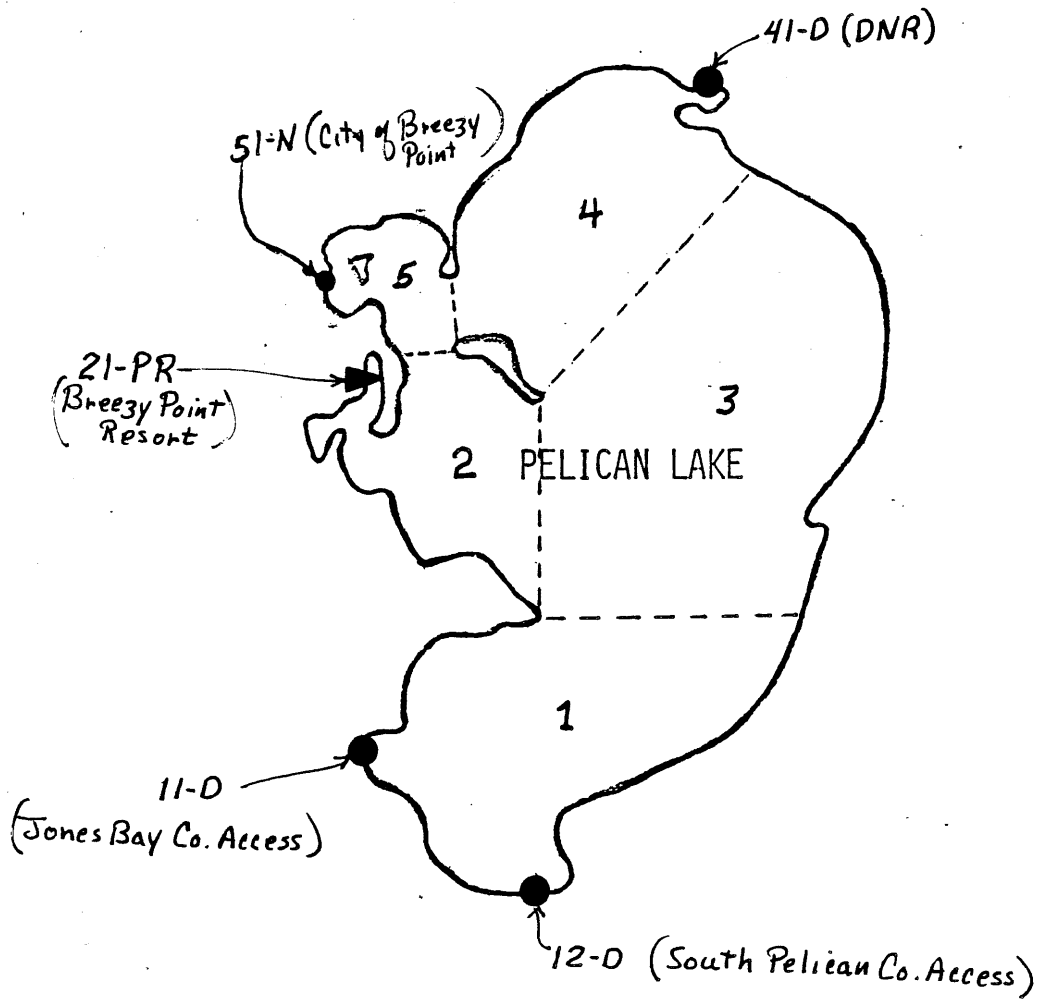


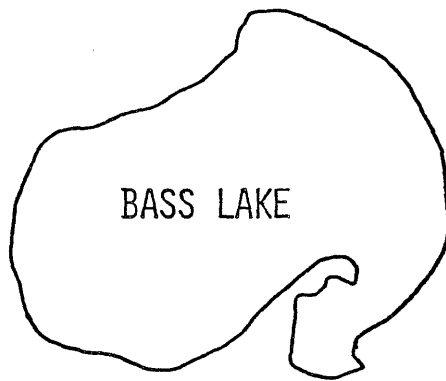


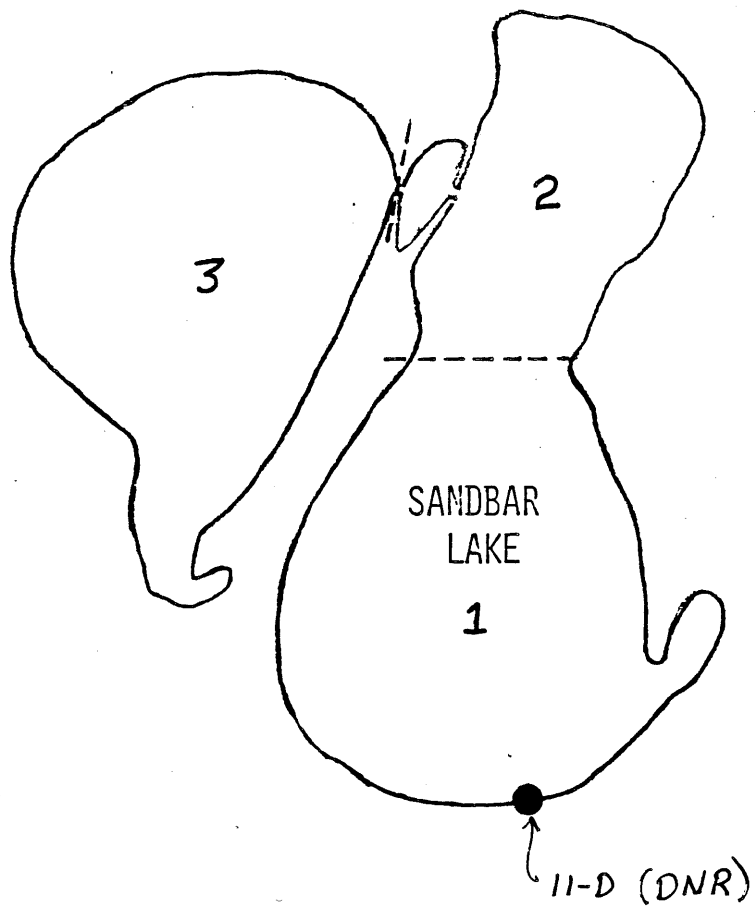


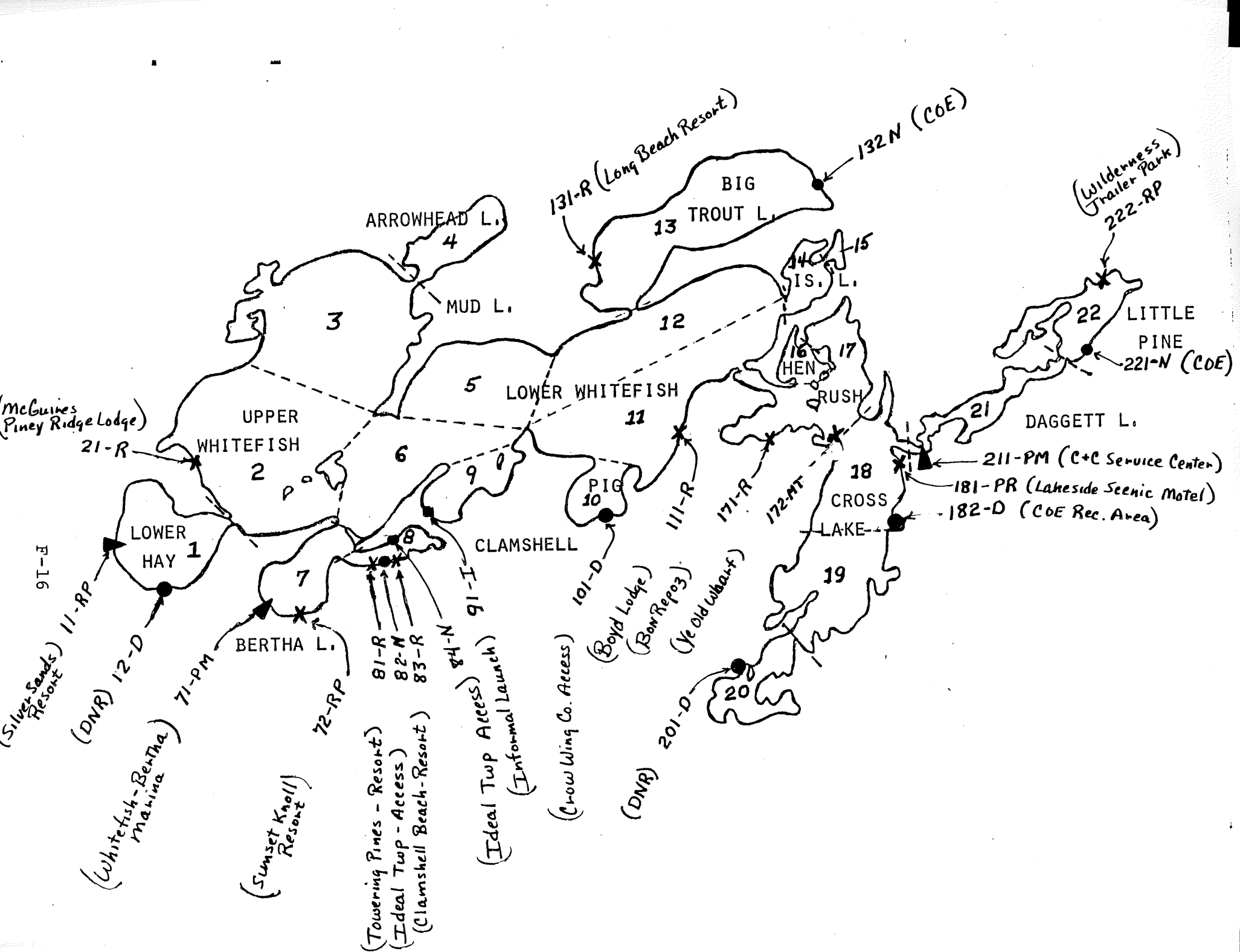


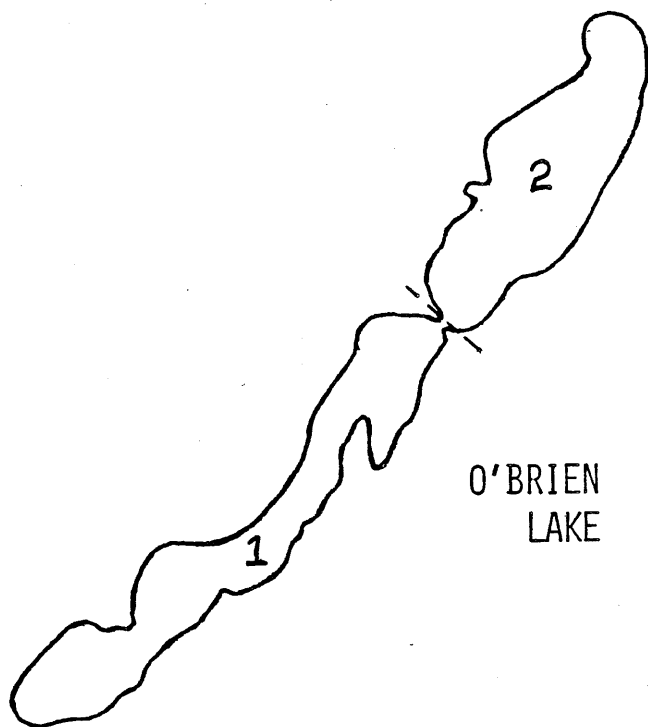


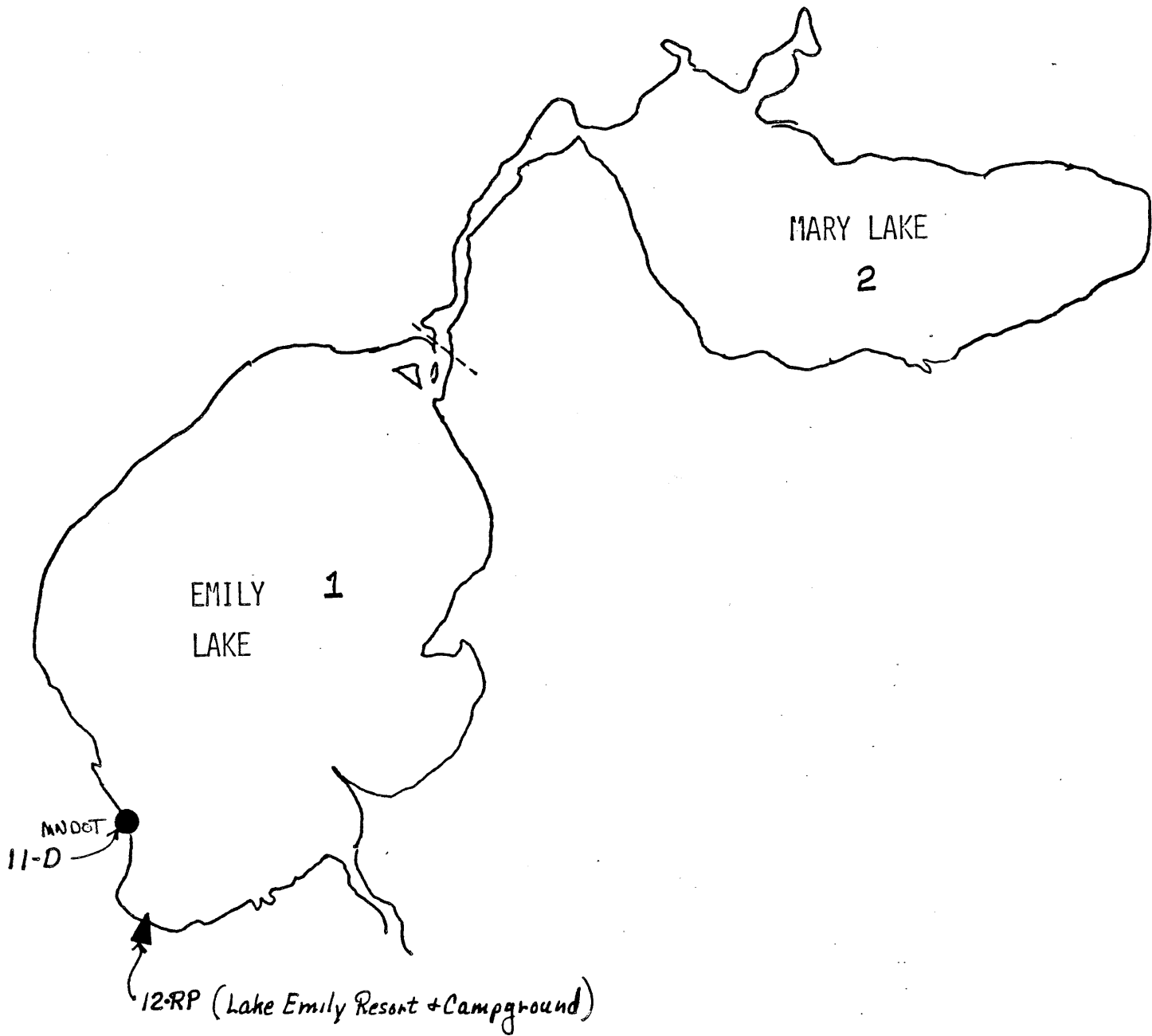


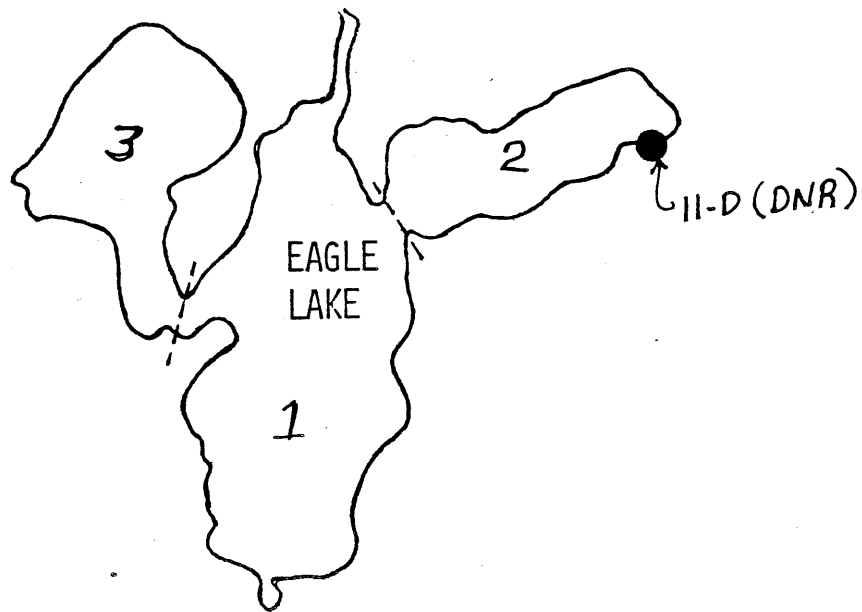


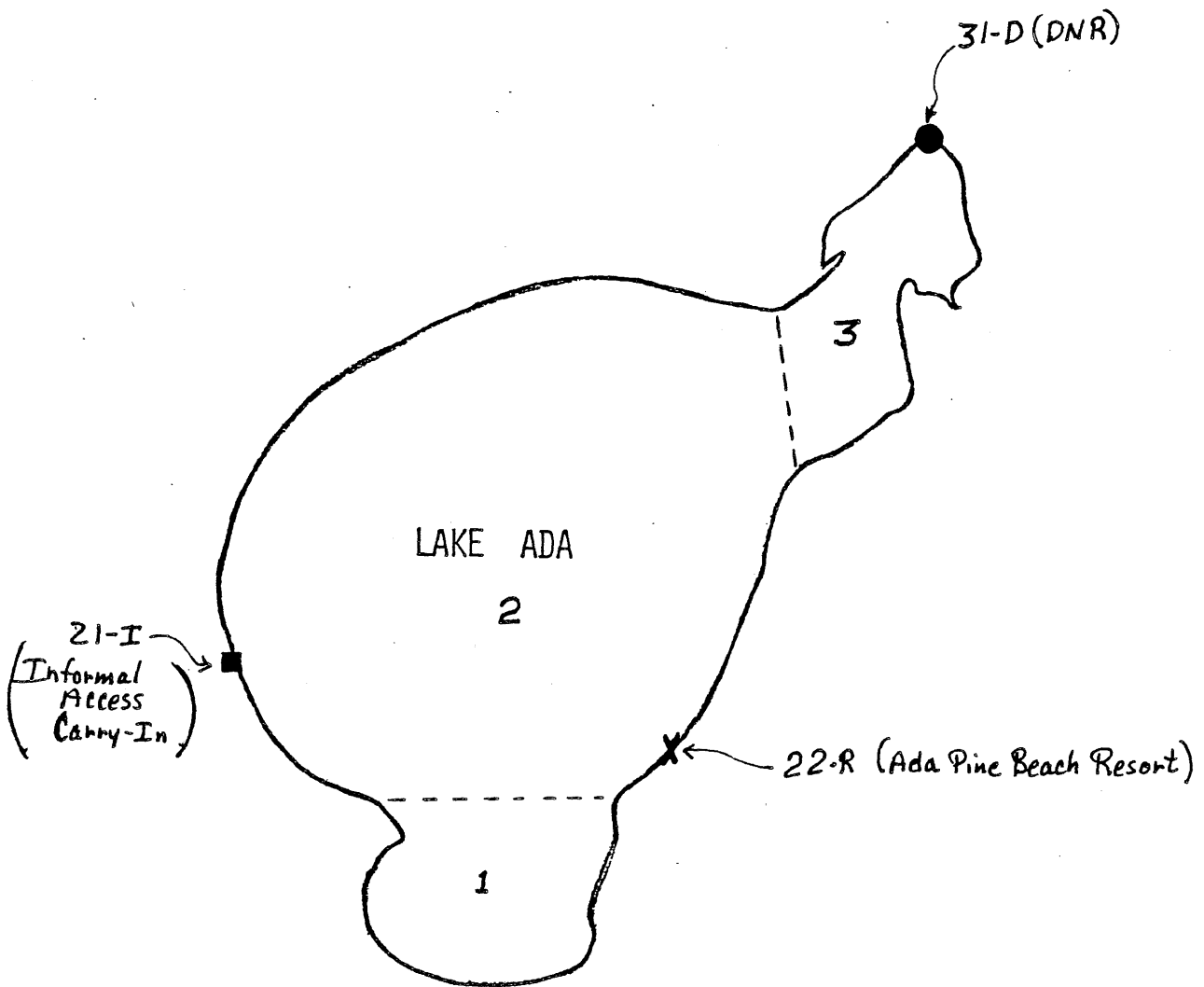


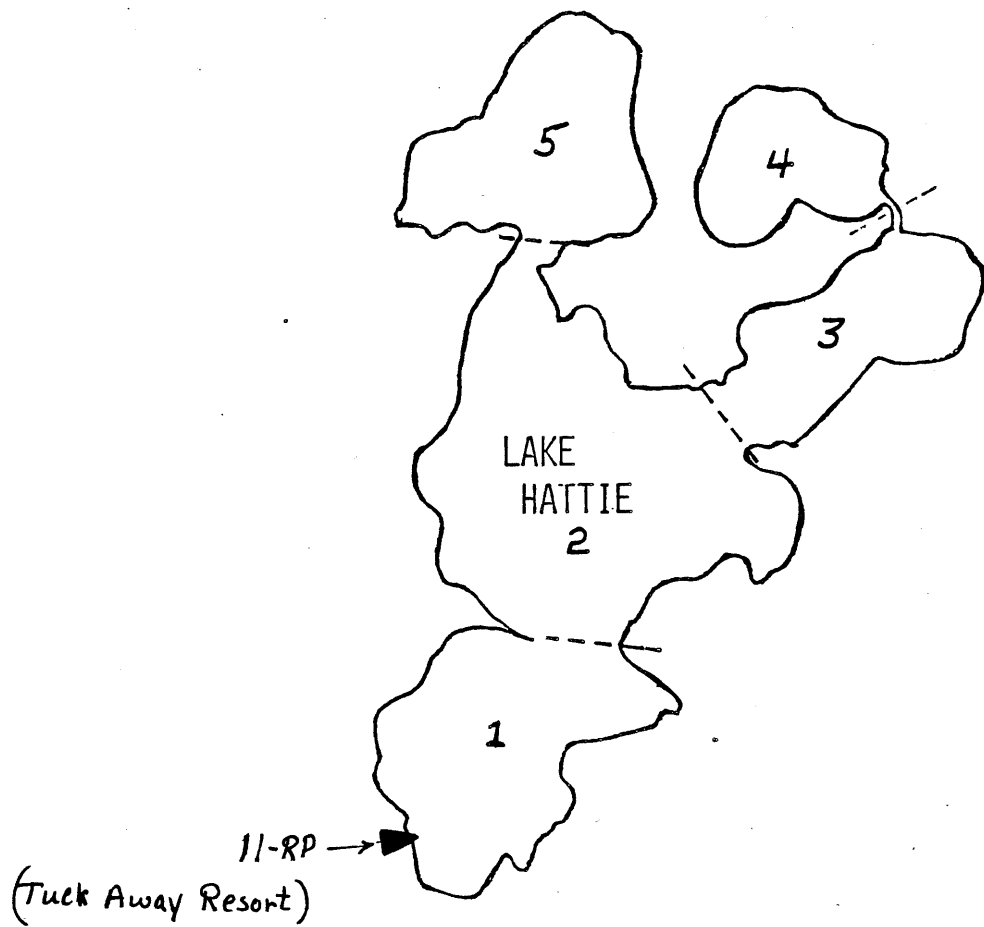


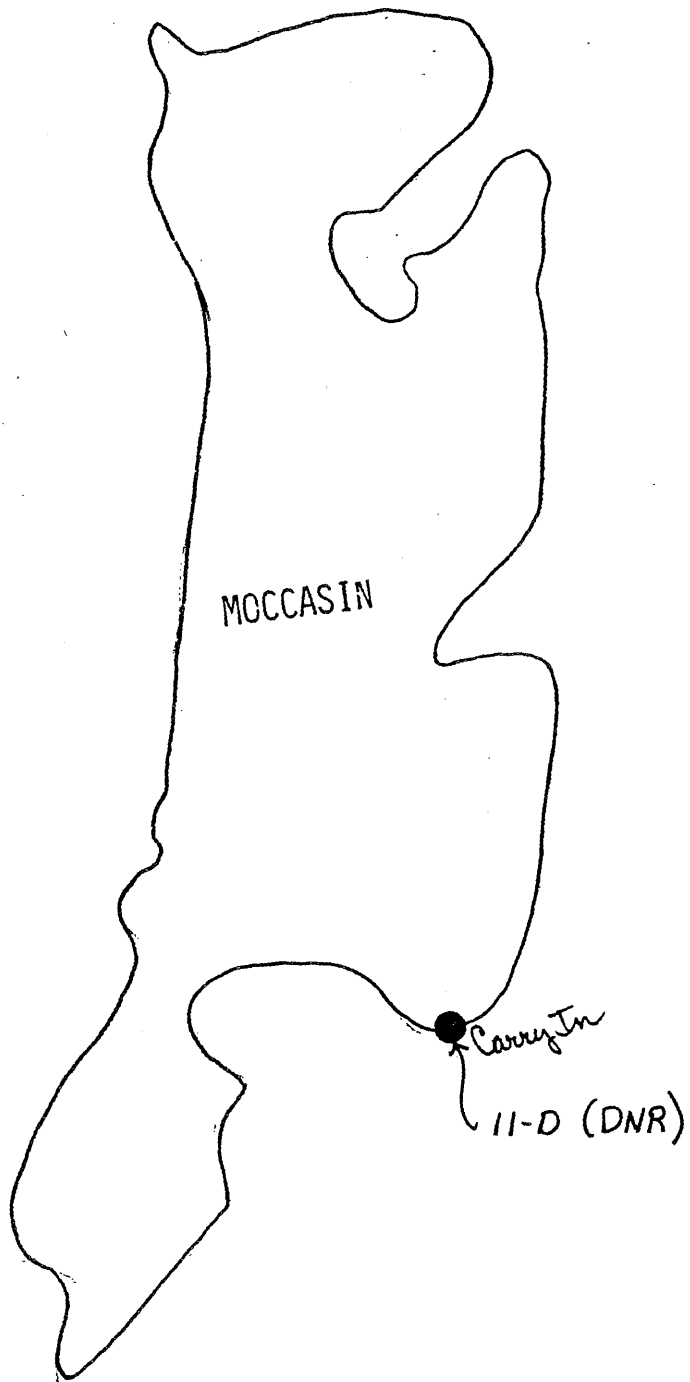


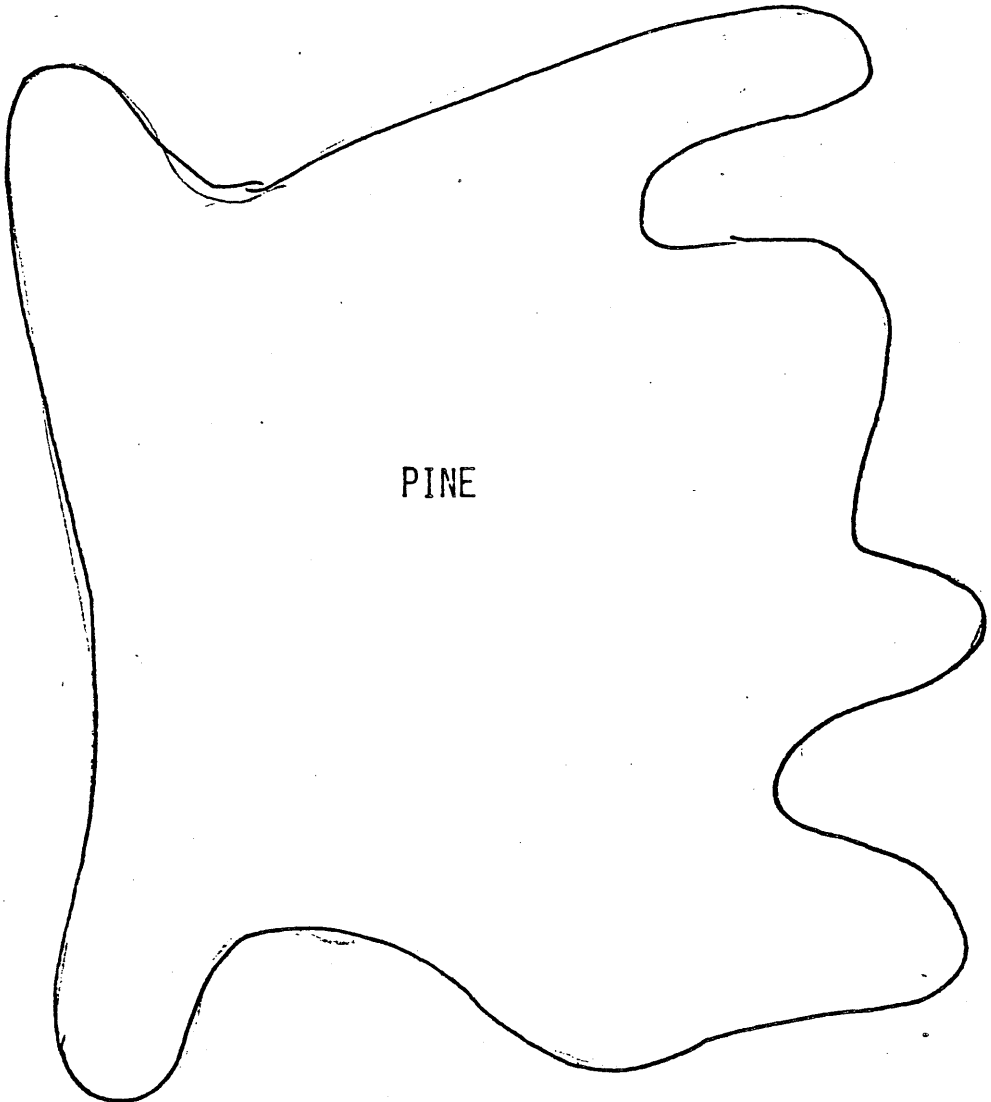


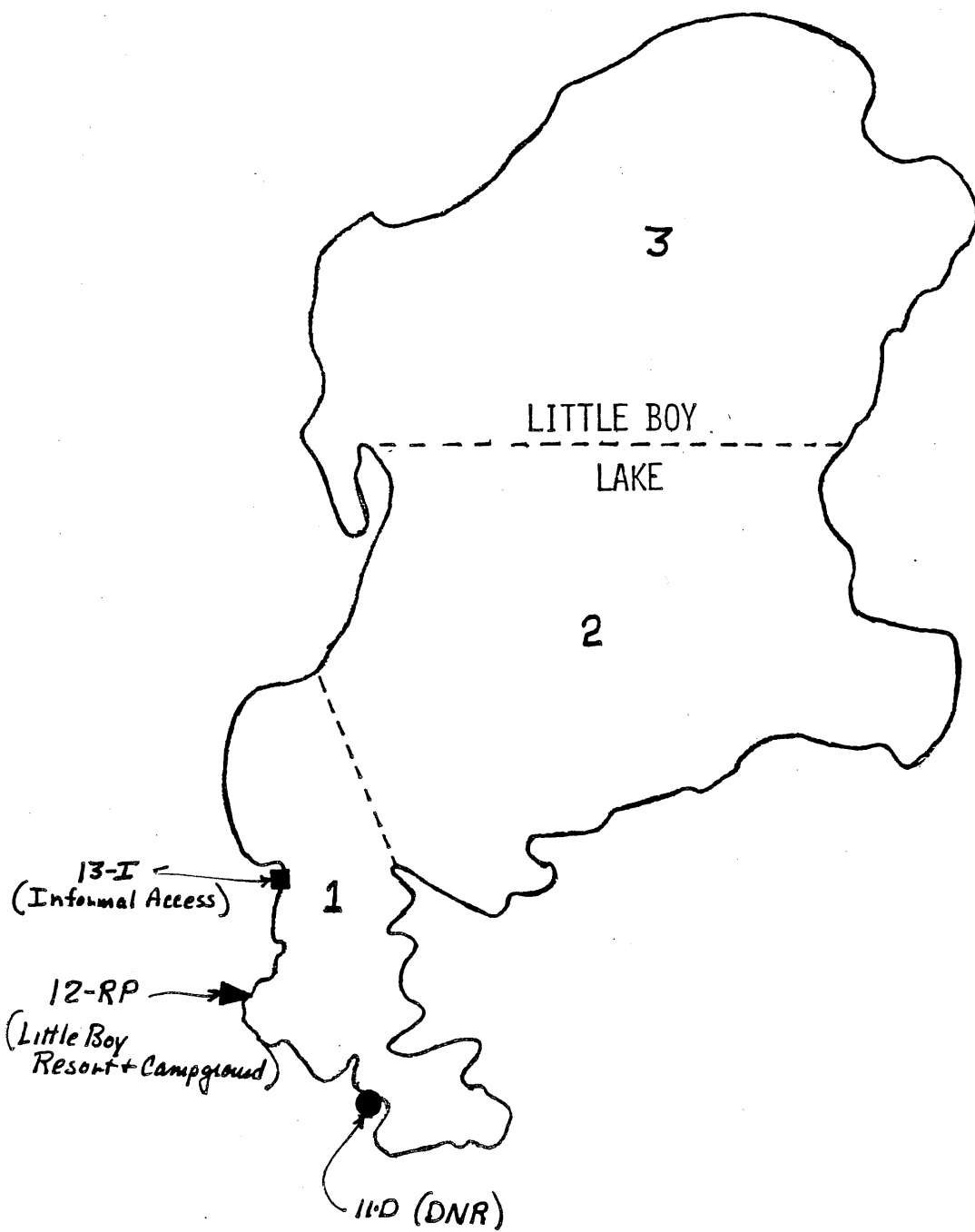


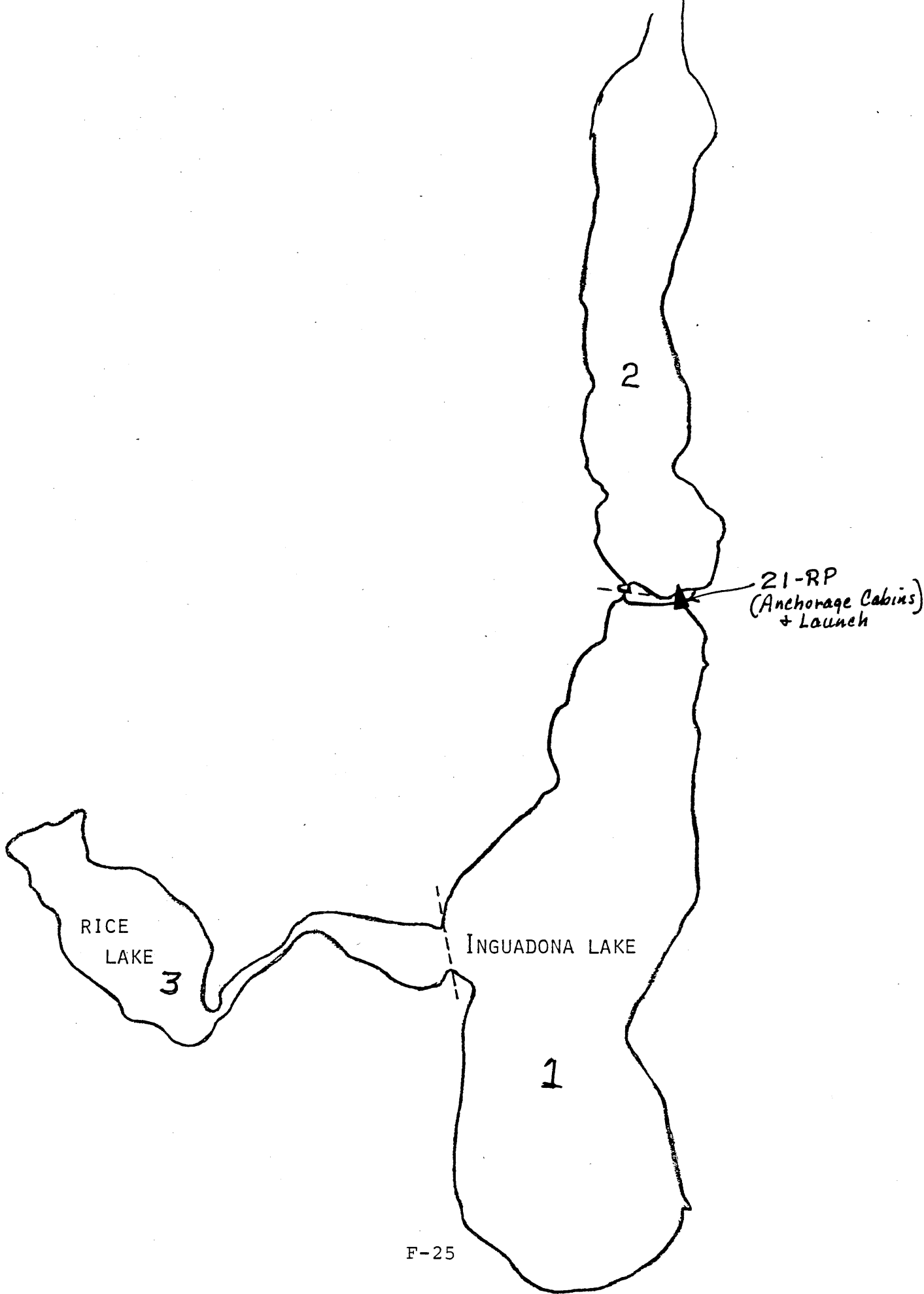












RICE
LAKE

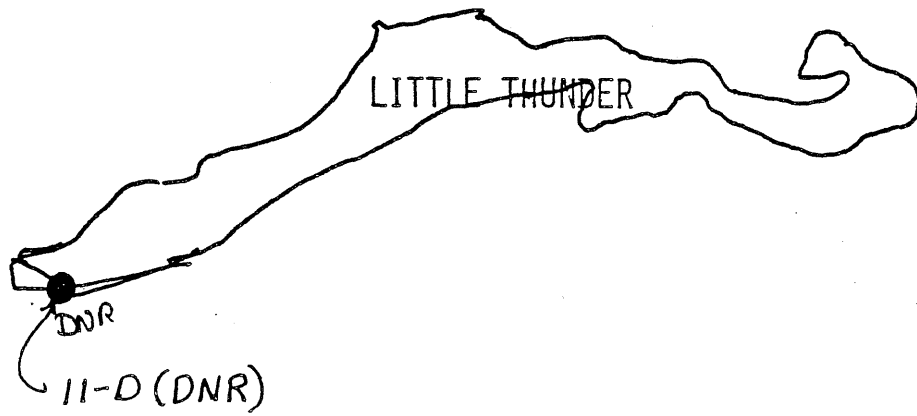
3

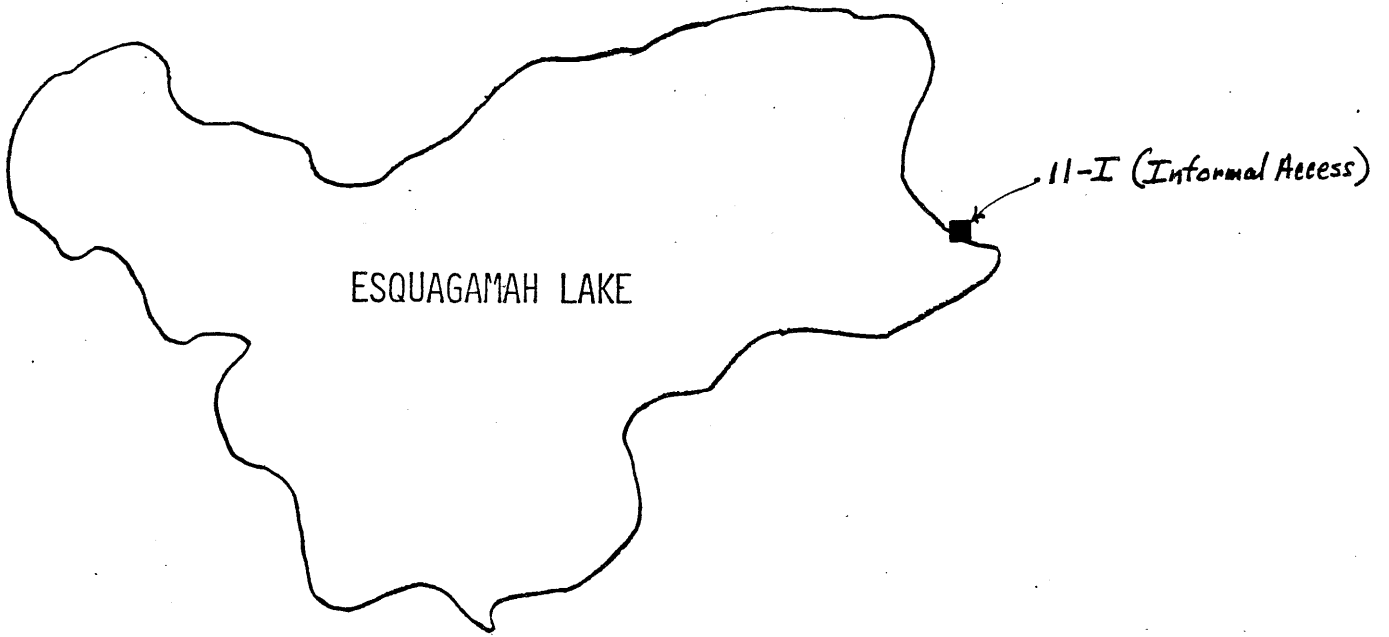
INGUADONA LAKE

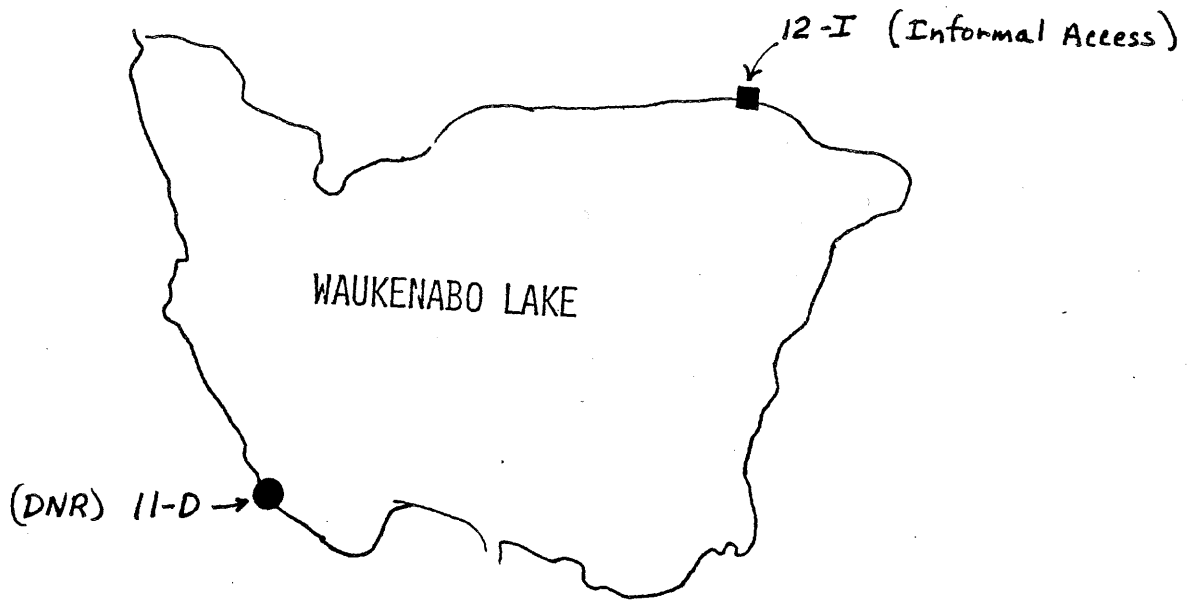
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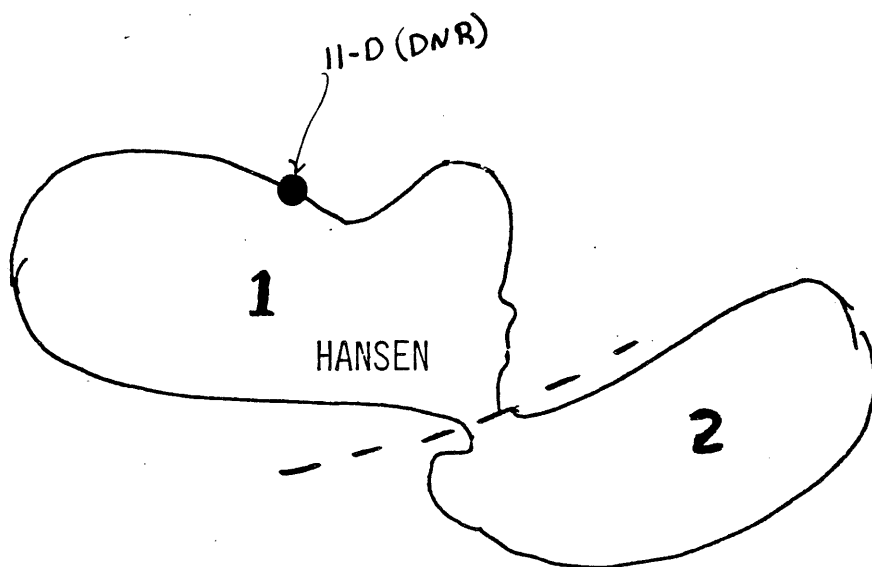
21-RP
(Anchorage Cabins)
+ Launch

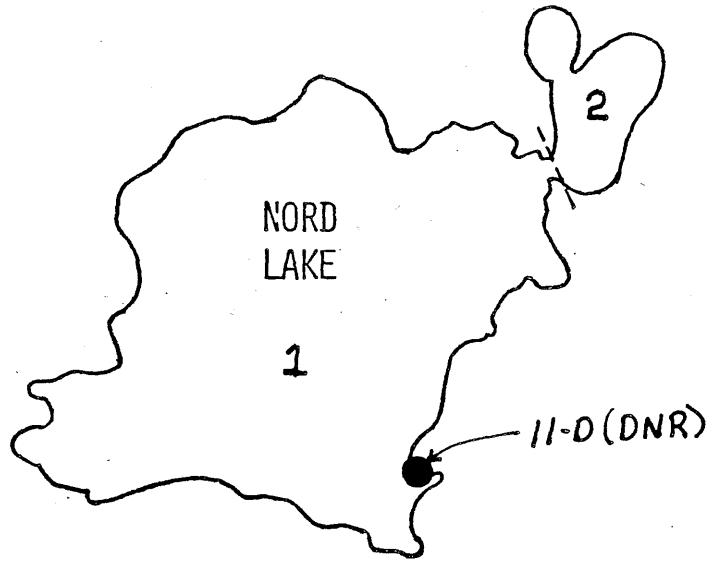
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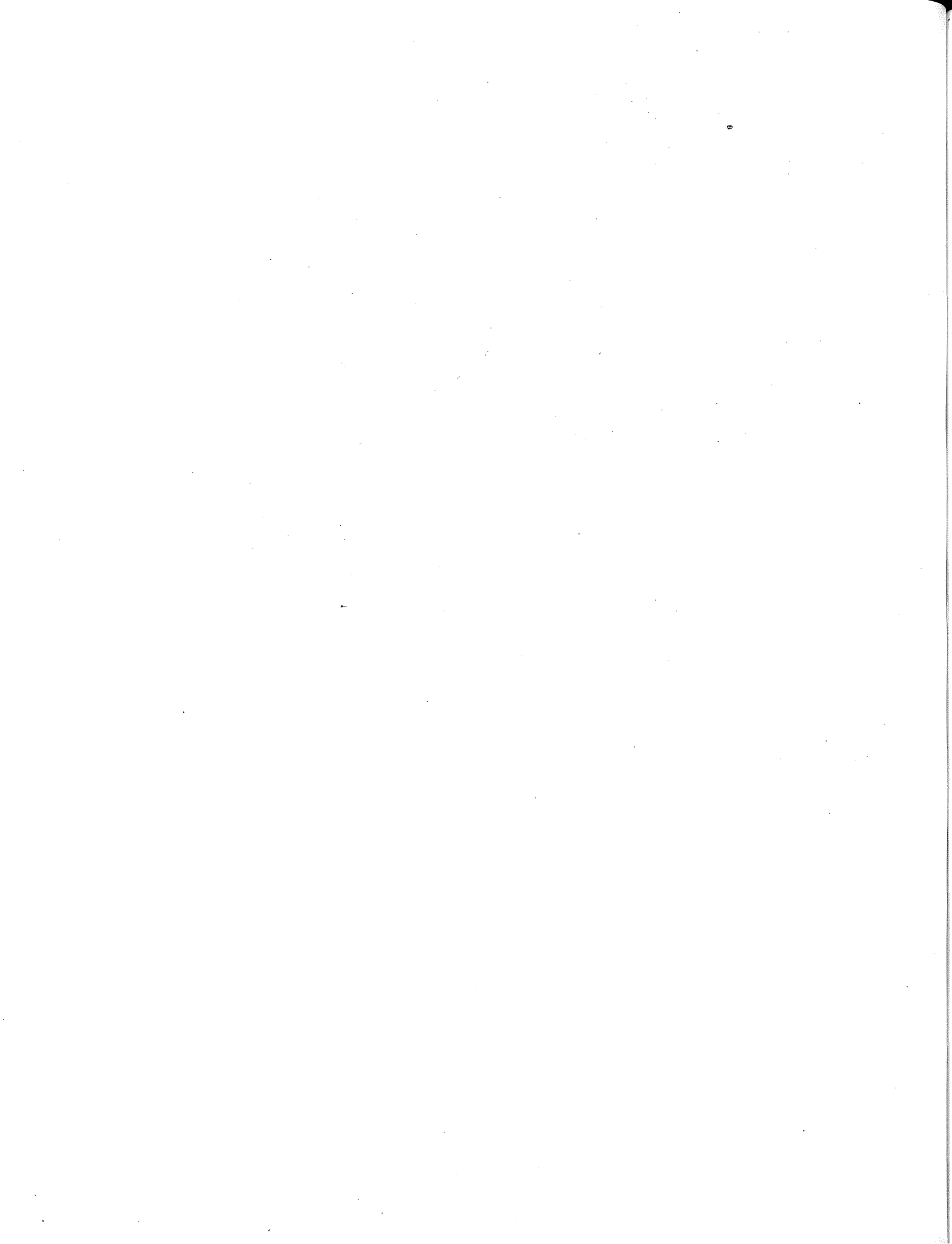












APPENDIX G
AERIAL OVERFLIGHT RECORDING FORM

Name of Lake MILLE LACS

Date: _____

Lake Category I

Day: _____

Section of Lake	Time	Boats With Wakes			Boats Without Wakes			TOTAL	
		Other	With Skiers	Beached Boats	Sailed	Canoe	Other		
1	Time								
	TOTAL								
2	Time								
	TOTAL								
ACCESS	Time	Trailers	Pick Up	Other	ACCESS	Time	Trailers	Pick Up	Other
IZATY'S					Stocky's				
Public Acc.					Eddy's				
DNR					Edgewater				
Shore Acres					Drift Inn				
Area 1					Area 2				

APPENDIX H

BOAT COUNTS BY DATE, LAKE AND
TYPE OF BOATING ACTIVITY

APPENDIX H
Boat Counts by Date, Lake and Type of Boating Activity

Lake/Flight Date	Boats With Wakes			Beached Boats	Boats Without Wakes				Lake Total
	Other	With Skiers	Total		Sailed	Canoe	Other	Total	
DATE: May 18, 1985 - Saturday									
Mille Lacs	268	0	268	16	0	6	4591	4613	4881
Gull Chain	84	0	84	22	0	1	531	554	638
Whitefish Chain	78	1	79	23	0	4	324	351	430
Pelican	14	0	14	0	1	2	117	120	134
TOTAL CATEGORY I	444	1	445	61	1	13	5563	5638	6083
Ada	4	0	4	0	1	0	8	9	13
Bay	9	0	9	0	0	1	81	82	91
Farø Island	14	0	14	0	0	1	205	206	220
Round (Crow Wing)	4	0	4	0	0	0	34	34	38
Sandbar	4	0	4	0	0	0	12	12	16
Sylvan	2	0	2	0	0	3	20	23	25
Borden	2	0	2	0	0	2	27	29	31
Clearwater	2	0	2	0	0	0	14	14	16
Inguadona	2	0	2	0	0	0	29	29	31
Round (Atkin)	0	0	0	0	0	0	2	2	2
TOTAL CATEGORY II	43	0	43	0	1	7	432	440	483
Clark	1	1	2	0	0	0	3	3	5
Emily/Mary	6	1	7	0	0	0	55	55	62
Little Boy	5	0	5	20	0	0	38	58	63
Nord	0	0	0	3	0	0	5	8	8
Waukenabo	4	0	4	3	0	0	33	36	40
Esquagamah	0	0	0	4	0	0	17	21	21
Hattie	1	0	1	0	0	0	8	8	9
Moccasin	0	0	0	3	0	0	3	6	6
O'Brien	0	0	0	0	0	0	2	2	2
TOTAL CATEGORY III	17	2	19	33	0	0	164	197	216
Eagle	0	0	0	0	0	1	8	9	9
Hansen	0	0	0	0	0	0	3	3	3
Little Thunder	0	0	0	0	0	0	4	4	4
Loon	0	0	0	0	0	0	2	2	2
White Sand	0	0	0	0	0	1	12	13	13
Hanging Kettle	2	0	2	0	0	0	9	9	11
Bass	0	0	0	0	0	0	8	8	8
Pine	0	0	0	0	0	0	4	4	4
TOTAL CATEGORY IV	2	0	2	0	0	2	50	52	54

APPENDIX H (cont.)
Boat Counts by Date, Lake and Type of Boating Activity

Lake/Flight Date	Boats With Makes			Boats Without Makes					Lake Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
DATE: June 1, 1985 - Saturday									
Mille Lacs	68	0	68	0	0	0	677	677	745
Gull Chain	28	0	28	10	0	2	112	124	152
Whitefish Chain	21	0	21	10	1	1	59	71	92
Pelican	1	0	1	0	0	0	25	25	26
TOTAL CATEGORY I	118	0	118	20	1	3	873	897	1015

Ada	3	0	3	0	0	0	6	6	9
Bay	5	0	5	0	0	0	34	34	39
Fara Island	5	0	5	0	0	0	49	49	54
Round (Crow Wing)	1	0	1	0	0	0	3	3	4
Sandbar	5	0	5	0	0	0	6	6	11
Sylvan	1	0	1	0	0	0	7	7	8
Borden	2	0	2	0	0	0	13	13	15
Clearwater	0	0	0	0	0	0	8	8	8
Inguadona	1	0	1	0	0	0	8	8	9
Round (Atkin)	0	0	0	0	0	0	5	5	5
TOTAL CATEGORY II	23	0	23	0	0	0	139	139	162

Clark	0	0	0	0	0	0	0	0	0
Emily/Mary	0	0	0	0	0	0	7	7	7
Little Boy	1	0	1	0	0	0	4	4	5
Nord	1	0	1	0	0	0	10	10	11
Waukenabo	0	0	0	0	0	0	15	15	15
Esquagamah	0	0	0	0	0	0	8	8	8
Hattie	0	0	0	0	0	0	4	4	4
Moccasin	0	0	0	0	0	1	0	1	1
O'Brien	0	0	0	0	0	0	2	2	2
TOTAL CATEGORY III	2	0	2	0	0	1	50	51	53

Eagle	0	0	0	0	0	0	5	5	5
Hansen	0	0	0	0	0	0	5	5	5
Little Thunder	1	0	1	0	0	0	0	0	1
Loon	2	0	2	0	0	0	0	0	2
White Sand	0	0	0	0	0	0	3	3	3
Hanging Kettle	0	0	0	0	0	0	5	5	5
Bass	1	0	1	0	0	0	2	2	3
Pine	0	0	0	0	0	0	0	0	0
TOTAL CATEGORY IV	4	0	4	0	0	0	20	20	24

APPENDIX H (cont.)
Boat Counts by Date, Lake and Type of Boating Activity

Lake/Flight Date	Boats With Wakes			Boats Without Wakes					Lake Total
	Other	With Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
DATE: June 19, 1985 - Wednesday									
Mille Lacs	23	0	23	0	0	0	176	176	199
Gull Chain	41	1	42	8	5	0	93	106	148
Whitefish Chain	32	1	33	13	3	0	101	117	150
Pelican	5	1	6	0	0	0	28	28	34
TOTAL CATEGORY I	101	3	104	21	8	0	398	427	531
Ada	0	0	0	0	1	0	9	10	10
Bay	4	1	5	1	0	2	12	15	20
Farm Island	4	0	4	0	0	0	18	18	22
Round (Crow Wing)	0	0	0	0	0	0	8	8	8
Sandbar	0	0	0	0	0	0	10	10	10
Sylvan	3	0	3	0	0	0	8	8	11
Borden	2	0	2	0	0	0	4	4	6
Clearwater	0	0	0	0	0	0	6	6	6
Inquadona	1	0	1	0	0	0	5	5	6
Round (Atkin)	1	0	1	0	0	0	1	1	2
TOTAL CATEGORY II	15	1	16	1	1	2	81	85	101
Clark	0	0	0	0	1	0	2	3	3
Emily/Mary	2	0	2	0	0	0	7	7	9
Little Boy	0	0	0	0	3	0	8	11	11
Nord	0	0	0	0	0	0	3	3	3
Waukenabo	0	0	0	1	0	0	3	4	4
Esquagamah	0	0	0	0	0	0	2	2	2
Hattie	1	0	1	0	0	0	7	7	8
Moccasin	0	0	0	2	0	0	1	3	3
O'Brien	0	0	0	0	0	0	2	2	2
TOTAL CATEGORY III	3	0	3	3	4	0	35	42	45
Eagle	0	0	0	0	0	0	5	5	5
Hansen	0	0	0	0	0	0	0	0	0
Little Thunder	0	0	0	0	0	0	0	0	0
Loon	0	0	0	0	0	0	3	3	3
White Sand	0	0	0	0	0	0	5	5	5
Hanging Kettle	0	0	0	0	0	0	2	2	2
Bass	0	0	0	0	0	0	4	4	4
Pine	0	0	0	0	0	0	2	2	2
TOTAL CATEGORY IV	0	0	0	0	0	0	21	21	21

APPENDIX H (cont.)
Boat Counts by Date, Lake and Type of Boating Activity

Lake/Flight Date	Boats With Wakes			Boats Without Wakes					Lake Total
	Other	With Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
DATE: June 29, 1985 - Saturday									
Mille Lacs	73	0	73	5	3	0	486	494	567
Bull Chain	70	4	74	32	5	3	153	193	267
Whitefish Chain	86	5	91	42	6	4	131	183	274
Pelican	15	1	16	1	2	0	44	47	63
TOTAL CATEGORY I	244	10	254	80	16	7	814	917	1171
Ada	4	0	4	0	0	0	4	4	8
Bay	12	0	12	0	1	2	24	27	39
Farø Island	2	0	2	0	0	1	24	25	27
Round (Crow Wing)	4	0	4	0	0	0	11	11	15
Sandbar	0	0	0	1	1	0	10	12	12
Sylvan	2	1	3	0	1	2	12	15	18
Borden	2	0	2	0	0	0	8	8	10
Clearwater	3	0	3	4	0	0	4	8	11
Inguadona	3	0	3	0	1	0	17	18	21
Round (Atkin)	1	0	1	0	0	0	4	4	5
TOTAL CATEGORY II	33	1	34	5	4	5	118	132	166
Clark	1	0	1	0	0	0	1	1	2
Emily/Mary	4	0	4	0	0	0	10	10	14
Little Boy	3	0	3	0	0	0	26	26	29
Nord	0	0	0	0	0	0	2	2	2
Waukenabo	0	0	0	0	0	0	3	3	3
Esquagamah	0	0	0	0	0	0	9	9	9
Hattie	0	0	0	0	2	0	7	9	9
Moccasin	0	0	0	0	0	0	1	1	1
O'Brien	2	0	2	0	0	0	2	2	4
TOTAL CATEGORY III	10	0	10	0	2	0	61	63	73
Eagle	1	0	1	0	0	0	12	12	13
Hansen	0	0	0	0	0	0	1	1	1
Little Thunder	0	0	0	0	0	0	1	1	1
Loon	1	0	1	0	0	1	3	4	5
White Sand	2	0	2	0	0	0	2	2	4
Hanging Kettle	1	0	1	0	0	0	8	8	9
Bass	2	0	2	0	0	0	4	4	6
Pine	0	0	0	0	0	0	5	5	5
TOTAL CATEGORY IV	7	0	7	0	0	1	36	37	44

APPENDIX H (cont.)
Boat Counts by Date, Lake and Type of Boating Activity

Lake/Flight Date	Boats With Wakes			Beached Boats	Boats Without Wakes				Lake Total
	Other	With Skiers	Total		Sailed	Canoe	Other	Total	
DATE: July 13, 1985 - Saturday									
Mille Lacs	63	3	66	40	8	0	273	321	387
Gull Chain	81	10	91	39	15	6	88	148	239
Whitefish Chain	102	8	110	53	8	14	112	187	297
Pelican	17	5	22	0	3	2	25	30	52
TOTAL CATEGORY I	263	26	289	132	34	22	498	686	975

Ada	6	1	7	0	0	0	8	8	15
Bay	15	5	20	2	2	2	31	37	57
Farm Island	9	2	11	2	1	0	31	34	45
Round (Crow Wing)	11	1	12	0	4	2	18	24	36
Sandbar	5	2	7	0	0	0	13	13	20
Sylvan	5	1	6	0	2	1	9	12	18
Borden	2	1	3	0	0	0	13	13	16
Clearwater	1	0	1	0	1	2	5	8	9
Inquadona	1	0	1	0	0	0	7	7	8
Round (Atkin)	0	1	1	0	0	0	6	6	7
TOTAL CATEGORY II	55	14	69	4	10	7	141	162	231

Clark	1	0	1	0	1	0	2	3	4
Emily/Mary	4	0	4	0	1	0	9	10	14
Little Boy	1	0	1	0	4	1	9	14	15
Nord	1	0	1	0	0	0	3	3	4
Waukenabo	0	0	0	0	0	0	1	1	1
Esquagamah	0	0	0	0	0	0	4	4	4
Hattie	1	0	1	0	0	1	9	10	11
Moccasin	0	0	0	5	0	1	3	9	9
O'Brien	3	0	3	0	0	0	2	2	5
TOTAL CATEGORY III	11	0	11	5	6	3	42	56	67

Eagle	0	0	0	0	0	0	5	5	5
Hansen	0	0	0	0	0	0	3	3	3
Little Thunder	0	0	0	0	0	0	2	2	2
Loon	0	0	0	0	0	0	1	1	1
White Sand	0	0	0	0	0	0	0	0	0
Hanging Kettle	0	0	0	0	2	0	6	8	8
Bass	2	0	2	0	0	0	5	5	7
Pine	0	0	0	0	0	0	2	2	2
TOTAL CATEGORY IV	2	0	2	0	2	0	24	26	28

APPENDIX H (cont.)
Boat Counts by Date, Lake and Type of Boating Activity

Lake/Flight Date	Boats With Wakes			Boats Without Wakes					Lake Total
	Other	With Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
DATE: July 23, 1985 - Tuesday									
Mille Lacs	8	2	10	0	0	0	49	49	59
Gull Chain	30	1	31	4	5	2	23	34	65
Whitefish Chain	37	5	42	47	10	0	42	99	141
Pelican	8	0	8	0	1	0	11	12	20
TOTAL CATEGORY I	83	8	91	51	16	2	125	194	285
Ada	0	0	0	0	0	0	5	5	5
Bay	5	0	5	3	1	0	19	23	28
Farm Island	3	0	3	0	1	0	6	7	10
Round (Crow Wing)	0	0	0	0	0	1	6	7	7
Sandbar	1	0	1	0	0	0	4	4	5
Sylvan	3	0	3	0	0	1	2	3	6
Borden	0	0	0	0	0	0	3	3	3
Clearwater	2	0	2	0	0	0	0	0	2
Inquadona	0	1	1	0	0	0	3	3	4
Round (Atkin)	0	0	0	0	0	0	1	1	1
TOTAL CATEGORY II	14	1	15	3	2	2	49	56	71
Clark	0	0	0	0	0	0	2	2	2
Emily/Mary	0	0	0	0	0	0	2	2	2
Little Boy	0	0	0	0	0	0	3	3	3
Nord	0	0	0	0	0	0	0	0	0
Waukenabo	0	0	0	0	0	0	2	2	2
Esquagamah	0	0	0	0	0	0	3	3	3
Hattie	0	0	0	0	0	0	3	3	3
Moccasin	0	0	0	0	0	0	1	1	1
O'Brien	1	0	1	0	0	0	1	1	1
TOTAL CATEGORY III	1	0	1	0	0	0	17	17	18
Eagle	0	0	0	0	0	0	1	1	1
Hansen	0	0	0	0	0	0	0	0	0
Little Thunder	0	0	0	0	0	0	0	0	0
Loon	0	0	0	0	0	0	1	1	1
White Sand	0	0	0	0	1	0	1	2	2
Hanging Kettle	1	0	1	0	0	0	0	0	1
Bass	0	0	0	0	0	0	0	0	0
Pine	0	0	0	0	0	0	1	1	1
TOTAL CATEGORY IV	1	0	1	0	1	0	4	5	5

APPENDIX H (cont.)
Boat Counts by Date, Lake and Type of Boating Activity

Lake/Flight Date	Boats With Wakes			Boats Without Wakes					Lake Total
	Other	With Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
DATE: July 28, 1985 - Sunday									
Mille Lacs	69	8	77	5	19	4	161	189	266
Gull Chain	116	19	135	70	35	1	98	204	339
Whitefish Chain	89	14	103	47	11	3	50	111	214
Pelican	18	5	23	5	7	0	27	39	62
TOTAL CATEGORY I	292	46	338	127	72	8	336	543	881
Ada	2	1	3	0	1	0	3	4	7
Bay	26	4	30	0	6	0	24	30	60
Farm Island	12	4	16	0	4	1	16	21	37
Round (Crow Wing)	3	1	4	0	1	0	17	18	22
Sandbar	4	2	6	0	2	1	7	10	16
Sylvan	4	1	5	0	0	1	11	12	17
Borden	0	0	0	0	0	1	3	4	4
Clearwater	1	0	1	0	0	0	3	3	4
Inguadona	1	0	1	0	0	0	1	1	2
Round (Atkin)	1	2	3	0	0	0	5	5	8
TOTAL CATEGORY II	54	15	69	0	14	4	90	108	177
Clark	1	1	2	0	0	0	2	2	4
Emily/Mary	1	0	1	0	0	0	0	0	1
Little Boy	2	0	2	0	0	0	4	4	6
Nord	0	0	0	0	0	0	1	1	1
Waukenabo	0	0	0	0	0	0	2	2	2
Esquagamah	0	0	0	0	0	0	4	4	4
Hattie	5	0	5	0	0	0	1	1	6
Moccasin	1	0	1	0	0	0	2	2	3
O'Brien	2	1	3	0	0	0	1	1	4
TOTAL CATEGORY III	12	2	14	0	0	0	17	17	31
Eagle	1	0	1	0	0	0	0	0	1
Hansen	0	0	0	0	0	0	0	0	0
Little Thunder	2	0	2	0	0	0	0	0	2
Loon	0	0	0	0	0	0	1	1	1
White Sand	0	1	1	0	0	1	3	4	5
Hanging Kettle	0	0	0	0	0	0	2	2	2
Bass	0	0	0	0	0	0	0	0	0
Pine	1	0	1	0	0	1	2	3	4
TOTAL CATEGORY IV	4	1	5	0	0	2	8	10	15

APPENDIX H (cont.)
Boat Counts by Date, Lake and Type of Boating Activity

Lake/Flight Date	Boats With Wakes			Boats Without Wakes					Lake Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
DATE: August 11, 1985 - Sunday									
Mille Lacs	45	1	46	4	3	3	245	255	301
Gull Chain	96	13	109	20	25	1	65	111	220
Whitefish Chain	115	19	134	52	29	9	90	180	314
Pelican	18	4	22	4	17	1	27	49	71
TOTAL CATEGORY I	274	37	311	80	74	14	427	595	906
Ada	6	1	7	0	2	0	4	6	13
Bay	22	7	29	0	5	1	23	29	58
Farm Island	5	2	7	0	2	0	38	40	47
Round (Crow Wing)	4	0	4	0	1	0	11	12	16
Sandbar	4	1	5	0	1	0	7	8	13
Sylvan	7	1	8	0	2	1	7	10	18
Borden	3	0	3	0	0	0	5	5	8
Clearwater	0	0	0	0	0	1	5	6	6
Inquadona	2	1	3	0	1	0	2	3	6
Round (Atkin)	1	0	1	0	0	0	3	3	4
TOTAL CATEGORY II	54	13	67	0	14	3	105	122	189
Clark	0	0	0	0	0	0	4	4	4
Emily/Mary	2	0	2	0	0	0	4	4	6
Little Boy	2	0	2	0	1	0	22	23	25
Nord	0	0	0	0	0	0	6	6	6
Waukenabo	2	0	2	0	0	0	2	2	4
Esquagamah	0	0	0	0	0	1	5	6	6
Hattie	2	0	2	0	0	0	9	9	11
Moccasin	1	0	1	0	0	0	1	1	2
O'Brien	0	0	0	0	0	0	1	1	1
TOTAL CATEGORY III	9	0	9	0	1	1	54	56	65
Eagle	0	0	0	0	0	0	8	8	8
Hansen	0	0	0	0	0	0	3	3	3
Little Thunder	3	0	3	0	0	0	3	3	6
Loon	0	1	1	0	0	1	0	1	2
White Sand	2	1	3	0	1	0	1	2	5
Hanging Kettle	2	0	2	0	0	0	1	1	3
Bass	1	1	2	0	0	0	0	0	2
Pine	0	0	0	0	0	0	0	0	0
TOTAL CATEGORY IV	8	3	11	0	1	1	16	18	29

APPENDIX H (cont.)
Boat Counts by Date, Lake and Type of Boating Activity

Lake/Flight Date	Boats With Wakes			Boats Without Wakes					Lake Total
	Other	With Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
DATE: August 15, 1985 - Thursday									
Mille Lacs	15	0	15	2	2	0	69	73	88
Gull Chain	56	21	77	9	6	3	71	89	166
Whitefish Chain	72	13	85	34	11	10	82	137	222
Pelican	19	8	27	6	4	1	32	43	70
TOTAL CATEGORY I	162	42	204	51	23	14	254	342	546
Ada	0	2	2	0	0	0	8	8	10
Bay	11	3	14	0	0	4	14	18	32
Farm Island	1	0	1	0	0	0	15	15	16
Round (Crow Wing)	5	2	7	0	1	0	13	14	21
Sandbar	1	0	1	0	0	1	5	6	7
Sylvan	4	2	6	0	1	0	7	8	14
Borden	0	0	0	0	0	0	4	4	4
Clearwater	0	0	0	0	0	0	3	3	3
Inquadona	2	0	2	0	0	0	10	10	12
Round (Atkin)	1	0	1	0	0	0	5	5	6
TOTAL CATEGORY II	25	9	34	0	2	5	84	91	125
Clark	2	0	2	0	0	1	5	6	8
Emily/Mary	1	0	1	0	0	0	5	5	6
Little Boy	2	0	2	0	0	0	15	15	17
Nord	0	0	0	0	0	0	2	2	2
Waukenabo	0	0	0	0	0	0	0	0	0
Esquagamah	1	0	1	0	0	0	4	4	5
Hattie	2	0	2	0	0	0	3	3	5
Moccasin	0	0	0	0	0	0	2	2	2
O'Brien	0	1	1	0	0	0	1	1	2
TOTAL CATEGORY III	8	1	9	0	0	1	37	38	47
Eagle	2	0	2	0	0	0	5	5	7
Hansen	0	0	0	0	0	0	1	1	1
Little Thunder	0	0	0	0	0	1	1	2	2
Loon	0	0	0	0	0	1	4	5	5
White Sand	1	0	1	0	0	0	4	4	5
Hanging Kettle	0	0	0	0	0	0	1	1	1
Bass	0	0	0	0	0	0	0	0	0
Pine	0	0	0	0	0	0	2	2	2
TOTAL CATEGORY IV	3	0	3	0	0	2	18	20	23

APPENDIX H (cont.)
Boat Counts by Date, Lake and Type of Boating Activity

Lake/Flight Date	Boats With Wakes			Beached Boats	Boats Without Wakes				Lake Total
	Other	With Skiers	Total		Sailed	Canoe	Other	Total	
DATE: August 25, 1985 - Sunday									
Mille Lacs	46	0	46	1	5	1	258	265	311
Gull Chain	89	10	99	15	9	4	79	107	206
Whitefish Chain	136	14	150	31	8	3	64	106	256
Pelican	26	4	30	0	7	0	19	26	56
TOTAL CATEGORY I	297	28	325	47	29	8	420	504	829
Ada	2	1	3	0	1	0	7	8	11
Bay	27	3	30	6	5	2	13	26	56
Farm Island	7	3	10	0	1	3	20	24	34
Round (Crow Wing)	2	0	2	0	0	0	11	11	13
Sandbar	4	1	5	0	0	0	6	6	11
Sylvan	3	0	3	0	0	2	11	13	16
Borden	1	0	1	0	0	0	9	9	10
Clearwater	0	0	0	0	0	0	6	6	6
Inguadona	3	0	3	0	0	0	13	13	16
Round (Atkin)	2	0	2	0	0	0	7	7	9
TOTAL CATEGORY II	51	8	59	6	7	7	103	123	182
Clark	0	0	0	0	0	0	2	2	2
Emily/Mary	3	0	3	0	0	0	8	8	11
Little Boy	1	0	1	0	0	0	8	8	9
Nord	1	0	1	0	0	0	1	1	2
Waukenabo	0	0	0	0	0	0	2	2	2
Esquagamah	0	0	0	0	0	0	4	4	4
Hattie	0	0	0	0	0	0	1	1	1
Moccasin	0	0	0	0	0	0	0	0	0
O'Brien	0	1	1	0	0	0	0	0	1
TOTAL CATEGORY III	5	1	6	0	0	0	26	26	32
Eagle	1	0	1	0	0	0	4	4	5
Hansen	1	0	1	0	0	0	0	0	1
Little Thunder	0	0	0	0	0	0	1	1	1
Loon	1	0	1	0	0	0	0	0	1
White Sand	0	0	0	0	1	0	4	5	5
Hanging Kettle	0	0	0	0	0	0	2	2	2
Bass	0	0	0	0	0	0	2	2	2
Pine	0	0	0	0	0	0	1	1	1
TOTAL CATEGORY IV	3	0	3	0	1	0	14	15	18

APPENDIX I

BOAT COUNT BY AREA OF LAKE, DATE
AND TYPE OF BOATING ACTIVITY

APPENDIX I
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: May 18, 1985 - Saturday

LAKE/AREA Mille Lacs	Boats With Wakes			Boats Without Wakes					Lake	Percent
	With			Beached					Area	of
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total	Total	Total
1	14	0	14	0	0	2	161	163	177	3.6%
2	27	0	27	0	0	0	411	411	438	9.0%
3	18	0	18	0	0	0	124	124	142	2.9%
4	12	0	12	0	0	0	307	307	319	6.5%
5	23	0	23	11	0	0	543	554	577	11.8%
6	25	0	25	5	0	0	353	358	383	7.8%
7	36	0	36	0	0	1	538	539	575	11.8%
8	30	0	30	0	0	0	536	536	566	11.6%
9	16	0	16	0	0	0	347	347	363	7.4%
10	12	0	12	0	0	2	254	256	268	5.5%
11	17	0	17	0	0	1	404	405	422	8.6%
12	20	0	20	0	0	0	362	362	382	7.8%
13	3	0	3	0	0	0	8	8	11	0.2%
14	1	0	1	0	0	0	0	0	1	.0%
15	2	0	2	0	0	0	99	99	101	2.1%
16	0	0	0	0	0	0	37	37	37	0.8%
17	5	0	5	0	0	0	41	41	46	0.9%
18	7	0	7	0	0	0	66	66	73	1.5%
TOTAL	268	0	268	16	0	6	4591	4613	4881	100.0%

DATE: June 1, 1985 - Saturday

LAKE/AREA Mille Lacs	Boats With Wakes			Boats Without Wakes					Lake	Percent
	With			Beached					Area	of
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total	Total	Total
1	9	0	9	0	0	0	62	62	71	9.5%
2	5	0	5	0	0	0	74	74	79	10.6%
3	6	0	6	0	0	0	65	65	71	9.5%
4	4	0	4	0	0	0	40	40	44	5.9%
5	8	0	8	0	0	0	104	104	112	15.0%
6	4	0	4	0	0	0	39	39	43	5.8%
7	11	0	11	0	0	0	74	74	85	11.4%
8	8	0	8	0	0	0	43	43	51	6.8%
9	3	0	3	0	0	0	34	34	37	5.0%
10	2	0	2	0	0	0	21	21	23	3.1%
11	5	0	5	0	0	0	102	102	107	14.4%
12	0	0	0	0	0	0	13	13	13	1.7%
13	1	0	1	0	0	0	3	3	4	0.5%
14	0	0	0	0	0	0	0	0	0	0.0%
15	0	0	0	0	0	0	1	1	1	0.1%
16	0	0	0	0	0	0	0	0	0	0.0%
17	2	0	2	0	0	0	2	2	4	0.5%
18	0	0	0	0	0	0	0	0	0	0.0%
TOTAL	68	0	68	0	0	0	677	677	745	100.0%

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: June 19, 1985 - Wednesday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Percent of Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total		
1	1	0	1	0	0	0	26	26	27	13.6%
2	2	0	2	0	0	0	27	27	29	14.6%
3	0	0	0	0	0	0	4	4	4	2.0%
4	2	0	2	0	0	0	2	2	4	2.0%
5	3	0	3	0	0	0	9	9	12	6.0%
6	0	0	0	0	0	0	6	6	6	3.0%
7	3	0	3	0	0	0	17	17	20	10.1%
8	0	0	0	0	0	0	11	11	11	5.5%
9	0	0	0	0	0	0	4	4	4	2.0%
10	1	0	1	0	0	0	12	12	13	6.5%
11	6	0	6	0	0	0	26	26	32	16.1%
12	4	0	4	0	0	0	19	19	23	11.6%
13	0	0	0	0	0	0	3	3	3	1.5%
14	0	0	0	0	0	0	0	0	0	0.0%
15	0	0	0	0	0	0	7	7	7	3.5%
16	0	0	0	0	0	0	3	3	3	1.5%
17	1	0	1	0	0	0	0	0	1	0.5%
18	0	0	0	0	0	0	0	0	0	0.0%
TOTAL	23	0	23	0	0	0	176	176	199	100.0%

DATE: June 29, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Percent of Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total		
1	5	0	5	0	0	0	45	45	50	8.8%
2	3	0	3	0	0	0	42	42	45	7.9%
3	4	0	4	0	0	0	7	7	11	1.9%
4	5	0	5	0	0	0	31	31	36	6.3%
5	6	0	6	1	0	0	17	18	24	4.2%
6	3	0	3	0	0	0	35	35	38	6.7%
7	3	0	3	0	1	0	24	25	28	4.9%
8	1	0	1	0	0	0	13	13	14	2.5%
9	5	0	5	0	0	0	14	14	19	3.4%
10	1	0	1	0	2	0	43	45	46	8.1%
11	16	0	16	4	0	0	71	75	91	16.0%
12	1	0	1	0	0	0	13	13	14	2.5%
13	1	0	1	0	0	0	7	7	8	1.4%
14	2	0	2	0	0	0	20	20	22	3.9%
15	7	0	7	0	0	0	16	16	23	4.1%
16	4	0	4	0	0	0	29	29	33	5.8%
17	3	0	3	0	0	0	43	43	46	8.1%
18	3	0	3	0	0	0	16	16	19	3.4%
TOTAL	73	0	73	5	3	0	486	494	567	100.0%

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: July 13, 1985 - Saturday

LAKE/AREA Mille Lacs	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total
	With			Beached						
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total		
1	5	0	5	1	2	0	19	22	27	7.0%
2	4	1	5	0	0	0	23	23	28	7.2%
3	4	0	4	0	0	0	2	2	6	1.6%
4	3	1	4	2	1	0	16	19	23	5.9%
5	3	0	3	0	3	0	15	18	21	5.4%
6	4	0	4	0	0	0	3	3	7	1.8%
7	2	0	2	0	1	0	5	6	8	2.1%
8	1	0	1	0	0	0	3	3	4	1.0%
9	1	1	2	0	0	0	19	19	21	5.4%
10	7	0	7	1	0	0	34	35	42	10.9%
11	17	0	17	36	0	0	80	116	133	34.4%
12	3	0	3	0	0	0	14	14	17	4.4%
13	2	0	2	0	0	0	3	3	5	1.3%
14	0	0	0	0	0	0	1	1	1	0.3%
15	2	0	2	0	0	0	15	15	17	4.4%
16	2	0	2	0	1	0	20	21	23	5.9%
17	3	0	3	0	0	0	0	0	3	0.8%
18	0	0	0	0	0	0	1	1	1	0.3%
TOTAL	63	3	66	40	8	0	273	321	387	100.0%

DATE: July 23, 1985 - Tuesday

LAKE/AREA Mille Lacs	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total
	With			Beached						
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total		
1	1	1	2	0	0	0	9	9	11	18.6%
2	0	0	0	0	0	0	7	7	7	11.9%
3	1	0	1	0	0	0	4	4	5	8.5%
4	0	0	0	0	0	0	3	3	3	5.1%
5	0	0	0	0	0	0	2	2	2	3.4%
6	0	0	0	0	0	0	0	0	0	0.0%
7	0	0	0	0	0	0	1	1	1	1.7%
8	0	0	0	0	0	0	3	3	3	5.1%
9	0	0	0	0	0	0	0	0	0	0.0%
10	0	0	0	0	0	0	4	4	4	6.8%
11	5	0	5	0	0	0	7	7	12	20.3%
12	1	1	2	0	0	0	2	2	4	6.8%
13	0	0	0	0	0	0	2	2	2	3.4%
14	0	0	0	0	0	0	0	0	0	0.0%
15	0	0	0	0	0	0	3	3	3	5.1%
16	0	0	0	0	0	0	0	0	0	0.0%
17	0	0	0	0	0	0	0	0	0	0.0%
18	0	0	0	0	0	0	2	2	2	3.4%
TOTAL	8	2	10	0	0	0	49	49	59	100.0%

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: July 28, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total
	With			Beached Boats	Sailed	Canoe	Other	Total		
	Other	Skiiers	Total							
1	3	2	5	0	2	3	14	19	24	9.0%
2	0	0	0	0	0	0	14	14	14	5.3%
3	2	0	2	0	1	0	9	10	12	4.5%
4	4	1	5	0	1	0	8	9	14	5.3%
5	4	3	7	3	4	0	12	19	26	9.8%
6	7	1	8	0	3	0	8	11	19	7.1%
7	4	0	4	2	1	0	3	6	10	3.8%
8	3	0	3	0	0	0	1	1	4	1.5%
9	7	0	7	0	0	1	15	16	23	8.6%
10	7	1	8	0	0	0	16	16	24	9.0%
11	13	0	13	0	6	0	13	19	32	12.0%
12	4	0	4	0	0	0	15	15	19	7.1%
13	1	0	1	0	0	0	3	3	4	1.5%
14	1	0	1	0	0	0	1	1	2	0.8%
15	3	0	3	0	0	0	12	12	15	5.6%
16	1	0	1	0	0	0	12	12	13	4.9%
17	1	0	1	0	0	0	3	3	4	1.5%
18	4	0	4	0	1	0	2	3	7	2.6%
TOTAL	69	8	77	5	19	4	161	189	266	100.0%

DATE: August 11, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total
	With			Beached Boats	Sailed	Canoe	Other	Total		
	Other	Skiiers	Total							
1	0	0	0	0	0	2	27	29	29	9.6%
2	2	0	2	0	0	0	14	14	16	5.3%
3	3	0	3	0	0	0	3	3	6	2.0%
4	5	0	5	0	1	0	2	3	8	2.7%
5	3	0	3	0	0	0	4	4	7	2.3%
6	1	0	1	0	0	0	4	4	5	1.7%
7	5	0	5	0	0	0	33	33	38	12.6%
8	4	0	4	0	0	0	17	17	21	7.0%
9	4	1	5	0	0	0	37	37	42	14.0%
10	4	0	4	0	0	0	15	15	19	6.3%
11	12	0	12	4	2	1	38	45	57	18.9%
12	1	0	1	0	0	0	41	41	42	14.0%
13	0	0	0	0	0	0	1	1	1	0.3%
14	0	0	0	0	0	0	1	1	1	0.3%
15	1	0	1	0	0	0	6	6	7	2.3%
16	0	0	0	0	0	0	2	2	2	0.7%
17	0	0	0	0	0	0	0	0	0	0.0%
18	0	0	0	0	0	0	0	0	0	0.0%
TOTAL	45	1	46	4	3	3	245	255	301	100.0%

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: August 15, 1985 - Thursday

LAKE/AREA Mille Lacs	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total
	With			Beached						
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total		
1	4	0	4	0	1	0	8	9	13	4.3%
2	2	0	2	0	0	0	8	8	10	3.3%
3	2	0	2	0	0	0	0	0	2	0.7%
4	0	0	0	0	0	0	3	3	3	3.4%
5	1	0	1	0	0	0	8	8	9	10.2%
6	0	0	0	0	0	0	3	3	3	3.4%
7	0	0	0	0	0	0	5	5	5	5.7%
8	0	0	0	0	0	0	3	3	3	3.4%
9	1	0	1	0	0	0	3	3	4	4.5%
10	0	0	0	0	0	0	6	6	6	6.8%
11	3	0	3	2	0	0	8	10	13	14.8%
12	1	0	1	0	1	0	7	8	9	10.2%
13	0	0	0	0	0	0	4	4	4	4.5%
14	1	0	1	0	0	0	1	1	2	2.3%
15	0	0	0	0	0	0	0	0	0	0.0%
16	0	0	0	0	0	0	0	0	0	0.0%
17	0	0	0	0	0	0	2	2	2	2.3%
18	0	0	0	0	0	0	0	0	0	0.0%
TOTAL	15	0	15	2	2	0	69	73	88	100.0%

DATE: August 25, 1985 - Sunday

LAKE/AREA Mille Lacs	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total
	With			Beached						
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total		
1	5	0	5	0	0	0	25	25	30	9.6%
2	4	0	4	0	0	0	17	17	21	6.8%
3	0	0	0	0	0	0	1	1	1	0.3%
4	2	0	2	0	1	0	7	8	10	3.2%
5	1	0	1	0	3	0	32	35	36	11.6%
6	4	0	4	0	0	0	17	17	21	6.8%
7	5	0	5	0	0	0	34	34	39	12.5%
8	3	0	3	0	0	0	27	27	30	9.6%
9	1	0	1	0	0	0	15	15	16	5.1%
10	4	0	4	0	0	0	30	30	34	10.9%
11	13	0	13	1	0	1	32	34	47	15.1%
12	3	0	3	0	0	0	5	5	8	2.6%
13	1	0	1	0	0	0	2	2	3	1.0%
14	0	0	0	0	0	0	0	0	0	0.0%
15	0	0	0	0	0	0	10	10	10	3.2%
16	0	0	0	0	0	0	3	3	3	1.0%
17	0	0	0	0	0	0	0	0	0	0.0%
18	0	0	0	0	1	0	1	2	2	0.6%
TOTAL	46	0	46	1	5	1	258	265	311	100.0%

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: May 18, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total	
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total			
Gull Chain											
Lower Gull	1	4	0	4	0	0	0	2	2	6	0.9%
Gull	2	1	0	1	0	0	1	41	42	43	6.7%
Gull	3	14	0	14	0	0	0	41	41	55	8.6%
Gull	4	19	0	19	0	0	0	98	98	117	18.3%
Love	5	3	0	3	0	0	0	15	15	18	2.8%
Gull	6	14	0	14	0	0	0	129	129	143	22.4%
Gull	7	13	0	13	0	0	0	109	109	122	19.1%
Gull	8	3	0	3	0	0	0	15	15	18	2.8%
Margaret	9	1	0	1	0	0	0	26	26	27	4.2%
Upper Gull	10	1	0	1	22	0	0	0	22	23	3.6%
Upper Gull	11	8	0	8	0	0	0	21	21	29	4.5%
Ray	12	2	0	2	0	0	0	11	11	13	2.0%
Roy	13	1	0	1	0	0	0	10	10	11	1.7%
Nisswa	14	0	0	0	0	0	0	13	13	13	2.0%
Total		84	0	84	22	0	1	531	554	638	100.0%

DATE: June 01, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total	
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total			
Gull Chain											
Lower Gull	1	5	0	5	0	0	0	14	14	19	12.5%
Gull	2	1	0	1	0	0	0	10	10	11	7.2%
Gull	3	4	0	4	3	0	0	5	8	12	7.9%
Gull	4	6	0	6	0	0	0	17	17	23	15.1%
Love	5	0	0	0	0	0	0	11	11	11	7.2%
Gull	6	1	0	1	0	0	1	5	6	7	4.6%
Gull	7	3	0	3	0	0	0	13	13	16	10.5%
Gull	8	2	0	2	0	0	0	11	11	13	8.6%
Margaret	9	1	0	1	0	0	1	6	7	8	5.3%
Upper Gull	10	3	0	3	7	0	0	4	11	14	9.2%
Upper Gull	11	0	0	0	0	0	0	3	3	3	2.0%
Ray	12	1	0	1	0	0	0	8	8	9	5.9%
Roy	13	0	0	0	0	0	0	3	3	3	2.0%
Nisswa	14	1	0	1	0	0	0	2	2	3	2.0%
Total		28	0	28	10	0	2	112	124	152	100.0%

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: June 19, 1985 - Wednesday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Percent of Total	
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total			
Gull Chain											
Lower Gull	1	4	1	5	0	3	0	7	10	15	10.1%
Gull	2	2	0	2	0	0	0	8	8	10	6.8%
Gull	3	7	0	7	0	0	0	11	11	18	12.2%
Gull	4	10	0	10	0	1	0	25	26	36	24.3%
Love	5	0	0	0	0	0	0	6	6	6	4.1%
Gull	6	1	0	1	0	1	0	8	9	10	6.8%
Gull	7	2	0	2	0	0	0	3	3	5	3.4%
Gull	8	6	0	6	0	0	0	6	6	12	8.1%
Margaret	9	0	0	0	0	0	0	4	4	4	2.7%
Upper Gull	10	2	0	2	8	0	0	1	9	11	7.4%
Upper Gull	11	1	0	1	0	0	0	3	3	4	2.7%
Rav	12	5	0	5	0	0	0	4	4	9	6.1%
Rov	13	1	0	1	0	0	0	4	4	5	3.4%
Nisswa	14	0	0	0	0	0	0	3	3	3	2.0%
Total		41	1	42	8	5	0	93	106	146	100.0%

DATE: June 29, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Percent of Total	
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total			
Gull Chain											
Lower Gull	1	3	0	3	1	0	1	8	10	13	4.9%
Gull	2	6	0	6	0	0	0	16	16	22	8.2%
Gull	3	8	0	8	0	0	0	13	13	21	7.9%
Gull	4	16	1	17	0	0	0	20	20	37	13.9%
Love	5	1	0	1	0	0	0	4	4	5	1.9%
Gull	6	6	2	8	14	2	0	52	68	76	28.5%
Gull	7	7	0	7	0	0	0	14	14	21	7.9%
Gull	8	7	0	7	0	0	0	6	6	13	4.9%
Margaret	9	1	1	2	0	0	2	2	4	6	2.2%
Upper Gull	10	5	0	5	17	0	0	2	19	24	9.0%
Upper Gull	11	6	0	6	0	1	0	9	10	16	6.0%
Rav	12	1	0	1	0	0	0	2	2	3	1.1%
Rov	13	2	0	2	0	0	0	5	5	7	2.6%
Nisswa	14	1	0	1	0	2	0	0	2	3	1.1%
Total		70	4	74	32	5	3	153	193	267	100.0%

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: July 13, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes				Lake Area	Percent of Total		
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other				
Gull Chain											
Lower Gull	1	7	2	9	0	3	2	13	18	27	11.3%
Gull	2	5	0	5	0	3	0	18	21	26	10.9%
Gull	3	9	0	9	6	4	1	8	19	28	11.7%
Gull	4	17	0	17	7	1	0	9	17	34	14.2%
Love	5	0	0	0	0	0	0	3	3	3	1.3%
Gull	6	11	1	12	0	1	0	10	11	23	9.6%
Gull	7	6	1	7	0	1	0	4	5	12	5.0%
Gull	8	7	0	7	0	1	0	6	7	14	5.9%
Margaret	9	8	0	8	0	1	1	7	9	17	7.1%
Upper Gull	10	3	0	3	26	0	0	0	26	29	12.1%
Upper Gull	11	1	3	4	0	0	2	4	6	10	4.2%
Rav	12	5	0	5	0	0	0	1	1	6	2.5%
Rov	13	2	1	3	0	0	0	3	3	6	2.5%
Nisswa	14	0	2	2	0	0	0	2	2	4	1.7%
Total		81	10	91	39	15	6	88	148	239	100.0%

DATE: July 23, 1985 - Tuesday

LAKE/AREA	Boats With Wakes			Boats Without Wakes				Lake Area	Percent of Total		
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other				
Gull Chain											
Lower Gull	1	4	0	4	0	1	0	2	3	7	10.8%
Gull	2	1	0	1	0	0	0	4	4	5	7.7%
Gull	3	7	0	7	0	0	1	2	3	10	15.4%
Gull	4	2	0	2	0	1	0	2	3	5	7.7%
Love	5	1	0	1	0	0	0	1	1	2	3.1%
Gull	6	2	0	2	0	0	0	1	1	3	4.6%
Gull	7	4	0	4	0	0	0	0	0	4	6.2%
Gull	8	1	0	1	0	0	0	5	5	6	9.2%
Margaret	9	1	0	1	0	0	0	2	2	3	4.6%
Upper Gull	10	1	0	1	4	3	0	1	8	9	13.8%
Upper Gull	11	1	0	1	0	0	0	2	2	3	4.6%
Rav	12	1	0	1	0	0	0	1	1	2	3.1%
Rov	13	3	0	3	0	0	0	0	0	3	4.6%
Nisswa	14	1	1	2	0	0	1	0	1	3	4.6%
Total		30	1	31	4	5	2	23	34	65	100.0%

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: July 28, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Percent of Total	
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total			
Gull Chain											
Lower Gull	1	10	6	16	0	5	0	14	19	35	10.3%
Gull	2	1	0	1	0	4	0	5	9	10	2.9%
Gull	3	17	1	18	44	3	0	8	55	73	21.5%
Gull	4	19	1	20	0	14	0	24	38	58	17.1%
Love	5	1	0	1	0	0	0	7	7	8	2.4%
Gull	6	9	1	10	0	3	0	3	6	16	4.7%
Gull	7	4	5	9	0	3	0	3	6	15	4.4%
Gull	8	16	0	16	0	1	0	5	6	22	6.5%
Margaret	9	6	3	9	0	0	1	5	6	15	4.4%
Upper Gull	10	11	0	11	26	2	0	5	33	44	13.0%
Upper Gull	11	7	2	9	0	0	0	6	6	15	4.4%
Ray	12	6	0	6	0	0	0	1	1	7	2.1%
Roy	13	4	0	4	0	0	0	7	7	11	3.2%
Nisswa	14	5	0	5	0	0	0	5	5	10	2.9%
Total		116	19	135	70	35	1	98	204	339	100.0%

DATE: August 11, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Percent of Total	
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total			
Gull Chain											
Lower Gull	1	7	1	8	0	3	0	8	11	19	8.6%
Gull	2	3	1	4	0	2	0	5	7	11	5.0%
Gull	3	5	1	6	0	2	0	11	13	19	8.6%
Gull	4	20	2	22	3	11	0	6	20	42	19.1%
Love	5	1	0	1	0	0	0	1	1	2	0.9%
Gull	6	5	1	6	0	1	0	8	9	15	6.8%
Gull	7	7	0	7	0	4	0	1	5	12	5.5%
Gull	8	11	1	12	0	1	1	3	5	17	7.7%
Margaret	9	8	3	11	0	1	0	7	8	19	8.6%
Upper Gull	10	12	0	12	17	0	0	3	20	32	14.5%
Upper Gull	11	4	2	6	0	0	0	4	4	10	4.5%
Ray	12	6	0	6	0	0	0	2	2	8	3.6%
Roy	13	6	1	7	0	0	0	2	2	9	4.1%
Nisswa	14	1	0	1	0	0	0	4	4	5	2.3%
Total		96	13	109	20	25	1	65	111	220	100.0%

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: August 15, 1985 - Thursday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total	
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total			
Lower Gull	1	5	7	12	0	0	2	7	9	21	12.7%
Gull	2	1	1	2	1	0	0	10	11	13	7.8%
Gull	3	7	1	8	0	1	0	10	11	19	11.4%
Gull	4	8	4	12	0	0	0	12	12	24	14.5%
Love	5	2	0	2	0	0	0	2	2	4	2.4%
Gull	6	13	2	15	0	5	0	6	11	26	15.7%
Gull	7	3	2	5	0	0	1	2	3	8	4.8%
Gull	8	4	0	4	0	0	0	4	4	8	4.8%
Margaret	9	3	2	5	0	0	0	3	3	8	4.8%
Upper Gull	10	3	0	3	8	0	0	0	8	11	6.6%
Upper Gull	11	1	1	2	0	0	0	4	4	6	3.6%
Ray	12	5	0	5	0	0	0	1	1	6	3.6%
Roy	13	0	0	0	0	0	0	6	6	6	3.6%
Nisswa	14	1	1	2	0	0	0	4	4	6	3.6%
Total		56	21	77	9	6	3	71	89	166	100.0%

DATE: August 25, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total	
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total			
Lower Gull	1	0	1	1	0	0	1	2	3	4	1.9%
Gull	2	7	2	9	0	1	1	5	7	16	7.8%
Gull	3	3	1	4	0	0	1	17	18	22	10.7%
Gull	4	25	0	25	0	1	0	15	16	41	19.9%
Love	5	1	1	2	0	0	0	1	1	3	1.5%
Gull	6	11	1	12	0	0	0	10	10	22	10.7%
Gull	7	5	0	5	0	7	0	12	19	24	11.7%
Gull	8	12	0	12	0	0	0	3	3	15	7.3%
Margaret	9	1	2	3	0	0	0	2	2	5	2.4%
Upper Gull	10	8	0	8	15	0	0	2	17	25	12.1%
Upper Gull	11	6	1	7	0	0	0	4	4	11	5.3%
Ray	12	0	0	0	0	0	0	2	2	2	1.0%
Roy	13	2	1	3	0	0	1	2	3	6	2.9%
Nisswa	14	8	0	8	0	0	0	2	2	10	4.9%
Total		89	10	99	15	9	4	79	107	206	100.0%

APPENDIX I (cont.)

Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: May 18, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total	
	With			Beached		Canoe	Other	Total			
	Other	Skiers	Total	Boats	Sailed						
Lower Hay	1	0	0	0	0	0	11	11	11	2.6%	
Upper Whitefish	2	4	0	4	0	0	17	17	21	4.9%	
Upper Whitefish	3	4	0	4	0	0	30	30	34	7.9%	
Arrowhead	4	0	0	0	0	0	18	18	18	4.2%	
Lower Whitefish	5	1	0	1	0	0	25	25	26	6.0%	
Lower Whitefish	6	8	0	8	0	0	14	14	22	5.1%	
Bertha	7	0	0	0	0	0	10	10	10	2.3%	
Clamshell	8	0	1	1	0	0	13	13	14	3.3%	
Lower Whitefish	9	0	0	0	0	0	5	5	5	1.2%	
Pig	10	0	0	0	0	1	7	8	8	1.9%	
Lower Whitefish	11	4	0	4	0	0	7	7	11	2.6%	
Lower Whitefish	12	5	0	5	0	0	27	27	32	7.4%	
Big Trout	13	7	0	7	0	1	15	16	23	5.3%	
Island	14	4	0	4	0	1	11	12	16	3.7%	
Loon	15	0	0	0	0	0	6	6	6	1.4%	
Hen	16	0	0	0	0	0	2	2	2	0.5%	
Rush	17	4	0	4	0	1	22	23	27	6.3%	
Cross	18	21	0	21	19	0	25	44	65	15.1%	
Cross	19	2	0	2	4	0	11	15	17	4.0%	
Cross	20	0	0	0	0	0	9	9	9	2.1%	
Daggett	21	14	0	14	0	0	13	13	27	6.3%	
Little Pine	22	0	0	0	0	0	26	26	26	6.0%	
Total		78	1	79	23	0	4	324	351	430	100.0%

DATE: June 01, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total
	With			Beached		Canoe	Other	Total		
	Other	Skiers	Total	Boats	Sailed					
Lower Hay	1	0	0	0	0	0	3	3	3	3.3%
Upper Whitefish	2	3	0	3	0	0	3	3	6	6.5%
Upper Whitefish	3	0	0	0	0	0	1	1	1	1.1%
Arrowhead	4	0	0	0	0	0	0	0	0	0.0%
Lower Whitefish	5	0	0	0	0	0	1	1	1	1.1%
Lower Whitefish	6	0	0	0	0	0	3	3	3	3.3%
Bertha	7	1	0	1	0	0	1	1	2	2.2%
Clamshell	8	3	0	3	0	0	6	6	9	9.8%
Lower Whitefish	9	0	0	0	1	0	0	1	1	1.1%
Pig	10	0	0	0	0	0	2	2	2	2.2%
Lower Whitefish	11	3	0	3	0	0	1	1	4	4.3%
Lower Whitefish	12	1	0	1	0	0	1	1	2	2.2%
Big Trout	13	1	0	1	0	0	3	3	4	4.3%
Island	14	2	0	2	0	0	3	3	5	5.4%
Loon	15	0	0	0	0	1	2	3	3	3.3%
Hen	16	1	0	1	0	0	4	4	5	5.4%
Rush	17	2	0	2	0	0	2	2	4	4.3%
Cross	18	0	0	0	10	0	7	17	17	18.5%
Cross	19	2	0	2	0	0	2	2	4	4.3%
Cross	20	0	0	0	0	0	4	4	4	4.3%
Daggett	21	2	0	2	0	0	5	5	7	7.6%
Little Pine	22	0	0	0	0	0	5	5	5	5.4%
Total		21	0	21	10	1	59	71	92	100.0%

APPENDIX I (cont.)

Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: June 19, 1985 - Wednesday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total	
	With			Beached							
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total			
Lower Hay	1	1	0	1	0	0	0	3	3	4	2.7%
Upper Whitefish	2	4	0	4	0	0	0	5	5	9	6.0%
Upper Whitefish	3	1	0	1	0	0	0	3	3	4	2.7%
Arrowhead	4	0	0	0	0	0	0	4	4	4	2.7%
Lower Whitefish	5	2	0	2	0	0	0	1	1	3	2.0%
Lower Whitefish	6	0	0	0	0	1	0	10	11	11	7.3%
Bertha	7	0	0	0	1	0	0	3	4	4	2.7%
Clamshell	8	1	1	2	0	0	0	4	4	6	4.0%
Lower Whitefish	9	1	0	1	0	0	0	3	3	4	2.7%
Piq	10	1	0	1	0	1	0	4	5	6	4.0%
Lower Whitefish	11	2	0	2	0	0	0	8	8	10	6.7%
Lower Whitefish	12	1	0	1	0	0	0	8	8	9	6.0%
Big Trout	13	1	0	1	0	1	0	5	6	7	4.7%
Island	14	3	0	3	0	0	0	3	3	6	4.0%
Loon	15	0	0	0	0	0	0	0	0	0	0.0%
Hen	16	0	0	0	0	0	0	0	0	0	0.0%
Rush	17	4	0	4	0	0	0	7	7	11	7.3%
Cross	18	3	0	3	12	0	0	12	24	27	18.0%
Cross	19	2	0	2	0	0	0	6	6	8	5.3%
Cross	20	1	0	1	0	0	0	4	4	5	3.3%
Daggett	21	2	0	2	0	0	0	5	5	7	4.7%
Little Pine	22	2	0	2	0	0	0	3	3	5	3.3%
Total		32	1	33	13	3	0	101	117	150	100.0%

DATE: June 29, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total	
	With			Beached							
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total			
Lower Hay	1	1	0	1	0	1	0	1	2	3	1.1%
Upper Whitefish	2	7	0	7	0	2	0	13	15	22	8.0%
Upper Whitefish	3	2	1	3	1	0	0	4	5	8	2.9%
Arrowhead	4	0	0	0	0	0	0	9	9	9	3.3%
Lower Whitefish	5	4	0	4	0	0	0	4	4	8	2.9%
Lower Whitefish	6	2	0	2	0	0	0	3	3	5	1.8%
Bertha	7	1	0	1	0	0	0	2	2	3	1.1%
Clamshell	8	2	1	3	0	1	0	3	4	7	2.6%
Lower Whitefish	9	1	0	1	0	0	0	2	2	3	1.1%
Piq	10	0	0	0	0	0	0	3	3	3	1.1%
Lower Whitefish	11	2	0	2	0	0	0	6	6	8	2.9%
Lower Whitefish	12	9	1	10	0	0	0	11	11	21	7.7%
Big Trout	13	4	0	4	0	1	1	7	9	13	4.7%
Island	14	0	0	0	0	0	0	3	3	3	1.1%
Loon	15	0	0	0	0	0	0	0	0	0	0.0%
Hen	16	0	1	1	0	0	0	6	6	7	2.6%
Rush	17	24	0	24	0	0	0	6	6	30	10.9%
Cross	18	4	0	4	39	0	2	8	49	53	19.3%
Cross	19	7	1	8	2	0	0	15	17	25	9.1%
Cross	20	2	0	2	0	0	0	9	9	11	4.0%
Daggett	21	10	0	10	0	1	0	6	7	17	6.2%
Little Pine	22	4	0	4	0	0	1	10	11	15	5.5%
Total		86	5	91	42	6	4	131	183	274	100.0%

Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: July 13, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Percent of	
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total			
Whitefish Chain											
Lower Hay	1	2	1	3	0	0	0	9	9	12	4.0%
Upper Whitefish	2	5	1	6	0	0	1	3	4	10	3.4%
Upper Whitefish	3	2	0	2	0	0	0	5	5	7	2.4%
Arrowhead	4	0	0	0	0	0	0	1	1	1	0.3%
Lower Whitefish	5	2	0	2	0	0	0	2	2	4	1.3%
Lower Whitefish	6	3	0	3	1	0	0	7	8	11	3.7%
Bertha	7	3	1	4	0	1	0	1	2	6	2.0%
Clamshell	8	3	0	3	0	0	0	4	4	7	2.4%
Lower Whitefish	9	2	0	2	0	0	0	1	1	3	1.0%
Pig	10	1	1	2	0	0	0	1	1	3	1.0%
Lower Whitefish	11	6	0	6	0	0	0	3	3	9	3.0%
Lower Whitefish	12	0	0	0	0	0	0	6	6	6	2.0%
Big Trout	13	9	2	11	0	1	11	19	31	42	14.1%
Island	14	0	0	0	0	2	1	3	6	6	2.0%
Loon	15	0	0	0	0	0	0	2	2	2	0.7%
Hen	16	0	0	0	0	0	0	2	2	2	0.7%
Rush	17	17	1	18	25	1	0	3	29	47	15.8%
Cross	18	9	0	9	19	0	0	3	22	31	10.4%
Cross	19	14	0	14	8	0	0	7	15	29	9.8%
Cross	20	6	0	6	0	1	0	11	12	18	6.1%
Daggett	21	15	1	16	0	1	0	8	9	25	8.4%
Little Pine	22	3	0	3	0	1	1	11	13	16	5.4%
Total		102	8	110	53	8	14	112	187	297	100.0%

DATE: July 23, 1985 - Tuesday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Percent of	
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total			
Whitefish Chain											
Lower Hay	1	1	0	1	0	0	0	1	1	2	1.4%
Upper Whitefish	2	1	0	1	0	0	0	3	3	4	2.8%
Upper Whitefish	3	0	0	0	0	1	0	0	1	1	0.7%
Arrowhead	4	1	0	1	0	0	0	1	1	2	1.4%
Lower Whitefish	5	0	0	0	0	1	0	0	1	1	0.7%
Lower Whitefish	6	2	0	2	0	0	0	1	1	3	2.1%
Bertha	7	1	0	1	0	0	0	2	2	3	2.1%
Clamshell	8	2	1	3	0	0	0	3	3	6	4.3%
Lower Whitefish	9	0	0	0	0	1	0	2	3	3	2.1%
Pig	10	1	0	1	0	0	0	2	2	3	2.1%
Lower Whitefish	11	3	0	3	0	0	0	5	5	8	5.7%
Lower Whitefish	12	0	0	0	0	0	0	1	1	1	0.7%
Big Trout	13	3	2	5	0	5	0	5	10	15	10.6%
Island	14	0	0	0	0	0	0	2	2	2	1.4%
Loon	15	0	0	0	0	0	0	0	0	0	0.0%
Hen	16	0	0	0	0	0	0	1	1	1	0.7%
Rush	17	7	0	7	0	1	0	5	6	13	9.2%
Cross	18	4	0	4	47	1	0	0	48	52	36.9%
Cross	19	0	2	2	0	0	0	3	3	5	3.5%
Cross	20	3	0	3	0	0	0	2	2	5	3.5%
Daggett	21	7	0	7	0	0	0	1	1	8	5.7%
Little Pine	22	1	0	1	0	0	0	2	2	3	2.1%
Total		37	5	42	47	10	0	42	99	141	100.0%

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: July 28, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Beached	Boats Without Wakes				Lake Area Total	Percent of Total	
	Other	Skiers	Total		Boats	Sailed	Canoe	Other			
Whitefish Chain	1	3	0	3	0	0	0	2	2	5	2.3%
Lower Hay	2	5	1	6	0	2	0	5	7	13	6.1%
Upper Whitefish	3	4	0	4	2	0	2	5	9	13	6.1%
Arrowhead	4	0	0	0	0	0	0	0	0	0	0.0%
Lower Whitefish	5	3	0	3	0	5	0	1	6	9	4.2%
Lower Whitefish	6	2	0	2	0	1	0	0	1	3	1.4%
Bertha	7	1	1	2	0	0	0	3	3	5	2.3%
Claashell	8	1	2	3	0	1	0	1	2	5	2.3%
Lower Whitefish	9	1	1	2	0	0	0	1	1	3	1.4%
Piq	10	3	0	3	0	0	0	4	4	7	3.3%
Lower Whitefish	11	9	0	9	0	0	0	1	1	10	4.7%
Lower Whitefish	12	3	1	4	0	1	0	1	2	6	2.8%
Big Trout	13	11	0	11	0	1	1	4	6	17	7.9%
Island	14	2	1	3	0	0	0	0	0	3	1.4%
Loon	15	0	0	0	0	0	0	0	0	0	0.0%
Hen	16	0	0	0	0	0	0	2	2	2	0.9%
Rush	17	8	4	12	0	0	0	6	6	18	8.4%
Cross	18	11	0	11	31	0	0	0	31	42	19.6%
Cross	19	8	2	10	13	0	0	2	15	25	11.7%
Cross	20	1	1	2	1	0	0	2	3	5	2.3%
Daggett	21	9	0	9	0	0	0	0	0	9	4.2%
Little Pine	22	4	0	4	0	0	0	10	10	14	6.5%
Total		89	14	103	47	11	3	50	111	214	100.0%

DATE: August 11, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Beached	Boats Without Wakes				Lake Area Total	Percent of Total	
	Other	Skiers	Total		Boats	Sailed	Canoe	Other			
Whitefish Chain	1	1	0	1	0	2	2	4	8	9	2.9%
Lower Hay	2	8	0	8	3	0	0	4	7	15	4.8%
Upper Whitefish	3	2	0	2	0	1	0	3	4	6	1.9%
Arrowhead	4	1	0	1	0	0	0	2	2	3	1.0%
Lower Whitefish	5	5	0	5	1	0	0	0	1	6	1.9%
Lower Whitefish	6	2	0	2	3	0	0	4	7	9	2.9%
Bertha	7	6	0	6	0	2	0	5	7	13	4.1%
Claashell	8	8	1	9	0	1	0	5	6	15	4.8%
Lower Whitefish	9	3	0	3	2	1	0	0	3	6	1.9%
Piq	10	1	1	2	0	0	0	2	2	4	1.3%
Lower Whitefish	11	8	2	10	3	3	0	5	11	21	6.7%
Lower Whitefish	12	3	0	3	0	3	0	4	7	10	3.2%
Big Trout	13	11	5	16	2	8	7	20	37	53	16.9%
Island	14	2	1	3	0	0	0	3	3	6	1.9%
Loon	15	0	0	0	0	0	0	1	1	1	0.3%
Hen	16	1	0	1	0	0	0	4	4	5	1.6%
Rush	17	17	1	18	11	2	0	14	27	45	14.3%
Cross	18	9	0	9	20	0	0	1	21	30	9.6%
Cross	19	8	2	10	7	3	0	4	14	24	7.6%
Cross	20	1	5	6	0	0	0	1	1	7	2.2%
Daggett	21	14	1	15	0	1	0	3	4	19	6.1%
Little Pine	22	4	0	4	0	2	0	1	3	7	2.2%
Total		115	19	134	52	29	9	90	180	314	100.0%

APPENDIX I (cont.)

Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: August 15, 1985 - Thursday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total		
Whitefish Chain	1	0	1	0	0	0	5	5	6	2.7%
Lower Hay	1	0	1	0	0	0	5	5	6	2.7%
Upper Whitefish	2	1	4	0	0	0	4	4	8	3.6%
Upper Whitefish	3	0	4	0	0	0	10	10	14	6.3%
Arrowhead	4	0	0	0	0	0	3	3	3	1.4%
Lower Whitefish	5	1	6	0	0	0	4	4	10	4.5%
Lower Whitefish	6	0	3	2	0	0	3	5	8	3.6%
Bertha	7	1	5	0	1	0	7	8	13	5.9%
Clamshell	8	2	6	0	0	2	2	4	10	4.5%
Lower Whitefish	9	0	0	0	0	0	4	4	4	1.8%
Pig	10	1	1	0	1	0	3	4	5	2.3%
Lower Whitefish	11	0	10	0	0	0	7	7	17	7.7%
Lower Whitefish	12	1	4	0	0	0	3	3	7	3.2%
Big Trout	13	0	5	0	0	0	4	4	9	4.1%
Island	14	2	5	0	7	5	4	16	21	9.5%
Loon	15	0	0	0	0	0	0	0	0	0.0%
Hen	16	0	0	0	0	0	1	1	1	0.5%
Rush	17	1	7	5	0	0	5	10	17	7.7%
Cross	18	1	7	17	1	2	3	23	30	13.5%
Cross	19	1	5	10	0	0	2	12	17	7.7%
Cross	20	0	2	0	1	1	0	2	4	1.8%
Daggett	21	1	8	0	0	0	3	3	11	5.0%
Little Pine	22	0	2	0	0	0	5	5	7	3.2%
Total	72	13	85	34	11	10	82	137	222	100.0%

DATE: August 25, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total	Percent of Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total		
Whitefish Chain	1	0	1	0	1	0	3	4	9	3.5%
Lower Hay	1	0	5	0	1	0	3	4	9	3.5%
Upper Whitefish	2	0	12	2	0	1	3	6	18	7.0%
Upper Whitefish	3	0	1	0	0	0	3	3	4	1.6%
Arrowhead	4	0	1	0	0	0	0	0	1	0.4%
Lower Whitefish	5	0	3	0	1	0	0	1	4	1.6%
Lower Whitefish	6	0	7	0	0	0	5	5	12	4.7%
Bertha	7	0	0	0	0	1	2	3	3	1.2%
Clamshell	8	0	4	0	0	0	4	4	8	3.1%
Lower Whitefish	9	1	1	0	0	0	2	2	3	1.2%
Pig	10	2	2	0	0	0	5	5	7	2.7%
Lower Whitefish	11	1	12	0	1	0	4	5	17	6.6%
Lower Whitefish	12	0	6	0	1	0	3	4	10	3.9%
Big Trout	13	1	9	0	1	0	3	4	13	5.1%
Island	14	0	4	0	0	0	5	5	9	3.5%
Loon	15	0	1	0	0	0	0	0	1	0.4%
Hen	16	0	0	0	0	0	2	2	2	0.8%
Rush	17	2	38	14	1	0	5	20	58	22.7%
Cross	18	0	16	5	0	0	6	11	27	10.5%
Cross	19	2	10	10	2	0	3	15	25	9.8%
Cross	20	3	6	0	0	0	3	3	9	3.5%
Daggett	21	1	10	0	0	1	2	3	13	5.1%
Little Pine	22	0	2	0	0	0	1	1	3	1.2%
Total	136	14	150	31	8	3	64	106	256	100.0%

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: May 18, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Percent of Total
	With			Beached						
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total		
1	2	0	2	0	0	0	21	21	23	17.2%
2	4	0	4	0	0	1	20	21	25	18.7%
3	3	0	3	0	1	0	34	35	38	28.4%
4	4	0	4	0	0	1	28	29	33	24.6%
5	1	0	1	0	0	0	14	14	15	11.2%
Total	14	0	14	0	1	2	117	120	134	100.0%

DATE: June 01, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Percent of Total
	With			Beached						
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total		
1	0	0	0	0	0	0	10	10	10	38.5%
2	0	0	0	0	0	0	3	3	3	11.5%
3	1	0	1	0	0	0	0	0	1	3.8%
4	0	0	0	0	0	0	9	9	9	34.6%
5	0	0	0	0	0	0	3	3	3	11.5%
Total	1	0	1	0	0	0	25	25	26	100.0%

DATE: June 19, 1985 - Wednesday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Percent of Total
	With			Beached						
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total		
1	2	0	2	0	0	0	9	9	11	32.4%
2	0	0	0	0	0	0	4	4	4	11.8%
3	1	0	1	0	0	0	3	3	4	11.8%
4	0	1	1	0	0	0	4	4	5	14.7%
5	2	0	2	0	0	0	8	8	10	29.4%
Total	5	1	6	0	0	0	28	28	34	100.0%

DATE: June 29, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Percent of Total
	With			Beached						
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total		
1	4	0	4	1	1	0	11	13	17	27.0%
2	3	0	3	0	0	0	5	5	8	12.7%
3	2	0	2	0	0	0	11	11	13	20.6%
4	3	0	3	0	1	0	3	4	7	11.1%
5	3	1	4	0	0	0	14	14	18	28.6%
Total	15	1	16	1	2	0	44	47	63	100.0%

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: July 13, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Beached	Boats Without Wakes				Total	Lake Area of Total	Percent of Total
	Other	Skiers	Total		Boats	Sailed	Canoe	Other			
1	3	2	5	0	3	1	6	10	15	28.8%	
2	1	1	2	0	0	0	10	10	12	23.1%	
3	1	0	1	0	0	0	4	4	5	9.6%	
4	9	1	10	0	0	1	3	4	14	26.9%	
5	3	1	4	0	0	0	2	2	6	11.5%	
Total	17	5	22	0	3	2	25	30	52	100.0%	

DATE: July 23, 1985 - Tuesday

LAKE/AREA	Boats With Wakes			Beached	Boats Without Wakes				Total	Lake Area of Total	Percent of Total
	Other	Skiers	Total		Boats	Sailed	Canoe	Other			
1	0	0	0	0	1	0	2	3	3	15.0%	
2	1	0	1	0	0	0	1	1	2	10.0%	
3	2	0	2	0	0	0	2	2	4	20.0%	
4	1	0	1	0	0	0	3	3	4	20.0%	
5	4	0	4	0	0	0	3	3	7	35.0%	
Total	8	0	8	0	1	0	11	12	20	100.0%	

DATE: July 28, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Beached	Boats Without Wakes				Total	Lake Area of Total	Percent of Total
	Other	Skiers	Total		Boats	Sailed	Canoe	Other			
1	3	2	5	0	3	0	9	12	17	27.4%	
2	11	1	12	0	1	0	13	14	26	41.9%	
3	2	0	2	0	1	0	0	1	3	4.8%	
4	2	2	4	5	2	0	5	12	16	25.8%	
5	0	0	0	0	0	0	0	0	0	0.0%	
Total	18	5	23	5	7	0	27	39	62	100.0%	

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: August 11, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Percent of Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total		
1	2	2	4	0	11	0	4	15	19	26.8%
2	4	0	4	0	2	0	5	7	11	15.5%
3	5	1	6	0	3	0	8	11	17	23.9%
4	3	0	3	4	0	0	0	4	7	9.9%
5	4	1	5	0	1	1	10	12	17	23.9%
Total	18	4	22	4	17	1	27	49	71	100.0%

DATE: August 15, 1985 - Thursday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Percent of Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total		
1	4	4	8	1	1	1	6	9	17	24.3%
2	4	0	4	0	0	0	4	4	8	11.4%
3	3	0	3	0	1	0	7	8	11	15.7%
4	4	0	4	5	1	0	8	14	18	25.7%
5	4	4	8	0	1	0	7	8	16	22.9%
Total	19	8	27	6	4	1	32	43	70	100.0%

DATE: August 25, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Percent of Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total		
1	8	2	10	0	1	0	7	8	18	32.1%
2	11	1	12	0	3	0	2	5	17	30.4%
3	5	1	6	0	2	0	8	10	16	28.6%
4	0	0	0	0	0	0	2	2	2	3.6%
5	2	0	2	0	1	0	0	1	3	5.4%
Total	26	4	30	0	7	0	19	26	56	100.0%

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: May 18, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total		
<u>Ada</u>										
1	0	0	0	0	0	0	2	2	2	
2	2	0	2	0	1	0	4	5	7	
3	2	0	2	0	0	0	2	2	4	
TOTAL	4	0	4	0	1	0	8	9	13	
<u>Bay</u>										
1	0	0	0	0	0	0	8	8	8	
2	2	0	2	0	0	0	5	5	7	
3	0	0	0	0	0	0	3	3	3	
4	5	0	5	0	0	1	19	20	25	
5	1	0	1	0	0	0	20	20	21	
6	0	0	0	0	0	0	7	7	7	
7	0	0	0	0	0	0	7	7	7	
8	0	0	0	0	0	0	10	10	10	
9	1	0	1	0	0	0	2	2	3	
TOTAL	9	0	9	0	0	1	81	82	91	
<u>Fara Island</u>										
1	0	0	0	0	0	1	14	15	15	
2	3	0	3	0	0	0	26	26	29	
3	7	0	7	0	0	0	73	73	80	
4	4	0	4	0	0	0	92	92	96	
TOTAL	14	0	14	0	0	1	205	206	220	
<u>Round (Crow Wing)</u>										
1	2	0	2	0	0	0	18	18	20	
2	2	0	2	0	0	0	16	16	18	
TOTAL	4	0	4	0	0	0	34	34	38	
<u>Sandbar</u>										
1	0	0	0	0	0	0	4	4	4	
2	1	0	1	0	0	0	6	6	7	
3	3	0	3	0	0	0	2	2	5	
TOTAL	4	0	4	0	0	0	12	12	16	
<u>Sylvan</u>										
1	1	0	1	0	0	2	13	15	16	
2	1	0	1	0	0	1	7	8	9	
TOTAL	2	0	2	0	0	3	20	23	25	
<u>Borden</u>										
1	0	0	0	0	0	2	14	16	16	
2	1	0	1	0	0	0	3	3	4	
3	1	0	1	0	0	0	10	10	11	
TOTAL	2	0	2	0	0	2	27	29	31	
<u>Clearwater</u>										
1	1	0	1	0	0	0	5	5	6	
2	1	0	1	0	0	0	9	9	10	
TOTAL	2	0	2	0	0	0	14	14	16	
<u>Inquadona</u>										
1	0	0	0	0	0	0	13	13	13	
2	1	0	1	0	0	0	13	13	14	
3	1	0	1	0	0	0	3	3	4	
TOTAL	2	0	2	0	0	0	29	29	31	
<u>Round (Aitkin)</u>										
TOTAL	0	0	0	0	0	0	2	2	2	

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: June 1, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Ada									
1	1	0	1	0	0	0	0	0	1
2	1	0	1	0	0	0	6	6	7
3	1	0	1	0	0	0	0	0	1
TOTAL	3	0	3	0	0	0	6	6	9
Bay									
1	1	0	1	0	0	0	6	6	7
2	0	0	0	0	0	0	3	3	3
3	0	0	0	0	0	0	5	5	5
4	2	0	2	0	0	0	3	3	5
5	0	0	0	0	0	0	0	0	0
6	2	0	2	0	0	0	5	5	7
7	0	0	0	0	0	0	3	3	3
8	0	0	0	0	0	0	7	7	7
9	0	0	0	0	0	0	2	2	2
TOTAL	5	0	5	0	0	0	34	34	39
Farm Island									
1	1	0	1	0	0	0	10	10	11
2	2	0	2	0	0	0	19	19	21
3	1	0	1	0	0	0	9	9	10
4	1	0	1	0	0	0	11	11	12
TOTAL	5	0	5	0	0	0	49	49	54
Round (Crow Wing)									
1	0	0	0	0	0	0	1	1	1
2	1	0	1	0	0	0	2	2	3
TOTAL	1	0	1	0	0	0	3	3	4
Sandbar									
1	3	0	3	0	0	0	3	3	6
2	0	0	0	0	0	0	2	2	2
3	2	0	2	0	0	0	1	1	3
TOTAL	5	0	5	0	0	0	6	6	11
Sylvan									
1	0	0	0	0	0	0	6	6	6
2	1	0	1	0	0	0	1	1	2
TOTAL	1	0	1	0	0	0	7	7	8
Borden									
1	2	0	2	0	0	0	1	1	3
2	0	0	0	0	0	0	3	3	3
3	0	0	0	0	0	0	9	9	9
TOTAL	2	0	2	0	0	0	13	13	15
Clearwater									
1	0	0	0	0	0	0	4	4	4
2	0	0	0	0	0	0	4	4	4
TOTAL	0	0	0	0	0	0	8	8	8
Inquadona									
1	1	0	1	0	0	0	3	3	4
2	0	0	0	0	0	0	4	4	4
3	0	0	0	0	0	0	1	1	1
TOTAL	1	0	1	0	0	0	8	8	9
Round (Aitkin)									
TOTAL	0	0	0	0	0	0	5	5	5

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: June 19, 1985 - Wednesday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Ada									
1	0	0	0	0	0	0	3	3	3
2	0	0	0	0	1	0	4	5	5
3	0	0	0	0	0	0	2	2	2
TOTAL	0	0	0	0	1	0	9	10	10
Bay									
1	0	0	0	0	0	0	2	2	2
2	0	0	0	0	0	0	0	0	0
3	2	1	3	0	0	0	1	1	4
4	0	0	0	0	0	1	2	3	3
5	1	0	1	1	0	0	0	1	2
6	1	0	1	0	0	0	1	1	2
7	0	0	0	0	0	1	1	2	2
8	0	0	0	0	0	0	1	1	1
9	0	0	0	0	0	0	4	4	4
TOTAL	4	1	5	1	0	2	12	15	20
Farm Island									
1	1	0	1	0	0	0	2	2	3
2	2	0	2	0	0	0	8	8	10
3	0	0	0	0	0	0	4	4	4
4	1	0	1	0	0	0	4	4	5
TOTAL	4	0	4	0	0	0	18	18	22
Round (Crow Wing)									
1	0	0	0	0	0	0	2	2	2
2	0	0	0	0	0	0	6	6	6
TOTAL	0	0	0	0	0	0	8	8	8
Sandbar									
1	0	0	0	0	0	0	6	6	6
2	0	0	0	0	0	0	1	1	1
3	0	0	0	0	0	0	3	3	3
TOTAL	0	0	0	0	0	0	10	10	10
Sylvan									
1	2	0	2	0	0	0	2	2	4
2	1	0	1	0	0	0	6	6	7
TOTAL	3	0	3	0	0	0	8	8	11
Borden									
1	0	0	0	0	0	0	0	0	0
2	1	0	1	0	0	0	2	2	3
3	1	0	1	0	0	0	2	2	3
TOTAL	2	0	2	0	0	0	4	4	6
Clearwater									
1	0	0	0	0	0	0	5	5	5
2	0	0	0	0	0	0	1	1	1
TOTAL	0	0	0	0	0	0	6	6	6
Inquadona									
1	1	0	1	0	0	0	4	4	5
2	0	0	0	0	0	0	1	1	1
3	0	0	0	0	0	0	0	0	0
TOTAL	1	0	1	0	0	0	5	5	6
Round (Aitkin)									
TOTAL	1	0	1	0	0	0	1	1	2

APPENDIX I (cont.)

Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: June 29, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
<u>Ada</u>									
1	1	0	1	0	0	0	1	1	2
2	3	0	3	0	0	0	2	2	5
3	0	0	0	0	0	0	1	1	1
TOTAL	4	0	4	0	0	0	4	4	8
<u>Bay</u>									
1	1	0	1	0	0	0	6	6	7
2	1	0	1	0	0	0	2	2	3
3	5	0	5	0	0	0	1	1	6
4	1	0	1	0	0	0	5	5	6
5	0	0	0	0	0	0	1	1	1
6	3	0	3	0	0	0	4	4	7
7	0	0	0	0	0	1	3	4	4
8	1	0	1	0	1	1	1	3	4
9	0	0	0	0	0	0	1	1	1
TOTAL	12	0	12	0	1	2	24	27	39
<u>Farm Island</u>									
1	0	0	0	0	0	1	7	8	8
2	1	0	1	0	0	0	6	6	7
3	1	0	1	0	0	0	4	4	5
4	0	0	0	0	0	0	7	7	7
TOTAL	2	0	2	0	0	1	24	25	27
<u>Round (Crow Wing)</u>									
1	0	0	0	0	0	0	9	9	9
2	4	0	4	0	0	0	2	2	6
TOTAL	4	0	4	0	0	0	11	11	15
<u>Sandbar</u>									
1	0	0	0	1	1	0	7	9	9
2	0	0	0	0	0	0	2	2	2
3	0	0	0	0	0	0	1	1	1
TOTAL	0	0	0	1	1	0	10	12	12
<u>Sylvan</u>									
1	1	0	1	0	0	1	3	4	5
2	1	1	2	0	1	1	9	11	13
TOTAL	2	1	3	0	1	2	12	15	18
<u>Borden</u>									
1	1	0	1	0	0	0	4	4	5
2	0	0	0	0	0	0	1	1	1
3	1	0	1	0	0	0	3	3	4
TOTAL	2	0	2	0	0	0	8	8	10
<u>Clearwater</u>									
1	2	0	2	0	0	0	2	2	4
2	1	0	1	4	0	0	2	6	7
TOTAL	3	0	3	4	0	0	4	8	11
<u>Inquadona</u>									
1	2	0	2	0	0	0	11	11	13
2	0	0	0	0	1	0	6	7	7
3	1	0	1	0	0	0	0	0	1
TOTAL	3	0	3	0	1	0	17	18	21
<u>Round (Aitkin)</u>									
TOTAL	1	0	1	0	0	0	4	4	5

APPENDIX I (cont.)

Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: July 13, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Ada									
1	3	0	3	0	0	0	0	0	3
2	1	1	2	0	0	0	6	6	8
3	2	0	2	0	0	0	2	2	4
TOTAL	6	1	7	0	0	0	8	8	15
Bay									
1	1	0	1	0	0	0	5	5	6
2	1	0	1	0	0	0	0	0	1
3	3	0	3	0	0	0	4	4	7
4	1	2	3	0	0	0	3	3	6
5	3	0	3	2	0	0	6	8	11
6	1	0	1	0	0	0	4	4	5
7	1	1	2	0	0	2	1	3	5
8	2	1	3	0	2	0	6	8	11
9	2	1	3	0	0	0	2	2	5
TOTAL	15	5	20	2	2	2	31	37	57
Farm Island									
1	0	2	2	2	0	0	7	9	11
2	3	0	3	0	0	0	9	9	12
3	4	0	4	0	0	0	5	5	9
4	2	0	2	0	1	0	10	11	13
TOTAL	9	2	11	2	1	0	31	34	45
Round (Crow Wing)									
1	3	1	4	0	0	2	7	9	13
2	8	0	8	0	4	0	11	15	23
TOTAL	11	1	12	0	4	2	18	24	36
Sandbar									
1	3	0	3	0	0	0	6	6	9
2	1	0	1	0	0	0	2	2	3
3	1	2	3	0	0	0	5	5	8
TOTAL	5	2	7	0	0	0	13	13	20
Sylvan									
1	4	0	4	0	0	0	4	4	8
2	1	1	2	0	2	1	5	8	10
TOTAL	5	1	6	0	2	1	9	12	18
Borden									
1	1	0	1	0	0	0	4	4	5
2	0	0	0	0	0	0	7	7	7
3	1	1	2	0	0	0	2	2	4
TOTAL	2	1	3	0	0	0	13	13	16
Clearwater									
1	0	0	0	0	0	0	1	1	1
2	1	0	1	0	1	2	4	7	8
TOTAL	1	0	1	0	1	2	5	8	9
Inquadona									
1	1	0	1	0	0	0	4	4	5
2	0	0	0	0	0	0	2	2	2
3	0	0	0	0	0	0	1	1	1
TOTAL	1	0	1	0	0	0	7	7	8
Round (Aitkin)									
TOTAL	0	1	1	0	0	0	6	6	7

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: July 23, 1985 - Tuesday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Ada									
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	4	4	4
3	0	0	0	0	0	0	1	1	1
TOTAL	0	0	0	0	0	0	5	5	5
Bay									
1	0	0	0	0	0	0	8	8	8
2	0	0	0	0	0	0	1	1	1
3	2	0	2	0	0	0	3	3	5
4	1	0	1	0	0	0	2	2	3
5	1	0	1	0	0	0	0	0	1
6	0	0	0	0	1	0	3	4	4
7	0	0	0	0	0	0	0	0	0
8	1	0	1	3	0	0	2	5	6
9	0	0	0	0	0	0	0	0	0
TOTAL	5	0	5	3	1	0	19	23	28
Farm Island									
1	1	0	1	0	1	0	4	5	6
2	2	0	2	0	0	0	0	0	2
3	0	0	0	0	0	0	1	1	1
4	0	0	0	0	0	0	1	1	1
TOTAL	3	0	3	0	1	0	6	7	10
Round (Crow Wing)									
1	0	0	0	0	0	0	3	3	3
2	0	0	0	0	0	1	3	4	4
TOTAL	0	0	0	0	0	1	6	7	7
Sandbar									
1	1	0	1	0	0	0	2	2	3
2	0	0	0	0	0	0	1	1	1
3	0	0	0	0	0	0	1	1	1
TOTAL	1	0	1	0	0	0	4	4	5
Sylvan									
1	1	0	1	0	0	0	1	1	2
2	2	0	2	0	0	1	1	2	4
TOTAL	3	0	3	0	0	1	2	3	6
Borden									
1	0	0	0	0	0	0	3	3	3
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	3	3	3
Clearwater									
1	0	0	0	0	0	0	0	0	0
2	2	0	2	0	0	0	0	0	2
TOTAL	2	0	2	0	0	0	0	0	2
Inquadona									
1	0	1	1	0	0	0	1	1	2
2	0	0	0	0	0	0	2	2	2
3	0	0	0	0	0	0	0	0	0
TOTAL	0	1	1	0	0	0	3	3	4
Round (Aitkin)									
TOTAL	0	0	0	0	0	0	1	1	1

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: July 28, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes				Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	
Ada								
1	0	0	0	0	0	0	0	0
2	2	1	3	0	1	0	3	4
3	0	0	0	0	0	0	0	0
TOTAL	2	1	3	0	1	0	3	4
Bay								
1	4	1	5	0	1	0	4	5
2	2	0	2	0	0	0	2	2
3	1	0	1	0	2	0	5	7
4	7	1	8	0	2	0	1	3
5	2	1	3	0	0	0	3	3
6	3	1	4	0	0	0	3	3
7	0	0	0	0	0	0	1	1
8	7	0	7	0	1	0	3	4
9	0	0	0	0	0	0	2	2
TOTAL	26	4	30	0	6	0	24	30
Farm Island								
1	2	2	4	0	1	0	5	6
2	3	1	4	0	3	0	3	6
3	3	0	3	0	0	1	4	5
4	4	1	5	0	0	0	4	4
TOTAL	12	4	16	0	4	1	16	21
Round (Crow Wing)								
1	1	0	1	0	1	0	5	6
2	2	1	3	0	0	0	12	12
TOTAL	3	1	4	0	1	0	17	18
Sandbar								
1	2	1	3	0	0	0	1	1
2	2	1	3	0	2	1	6	9
3	0	0	0	0	0	0	0	0
TOTAL	4	2	6	0	2	1	7	10
Sylvan								
1	3	0	3	0	0	0	6	6
2	1	1	2	0	0	1	5	6
TOTAL	4	1	5	0	0	1	11	12
Borden								
1	0	0	0	0	0	0	1	1
2	0	0	0	0	0	0	1	1
3	0	0	0	0	0	1	1	2
TOTAL	0	0	0	0	0	1	3	4
Clearwater								
1	1	0	1	0	0	0	1	1
2	0	0	0	0	0	0	2	2
TOTAL	1	0	1	0	0	0	3	3
Inquadona								
1	1	0	1	0	0	0	1	1
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
TOTAL	1	0	1	0	0	0	1	1
Round (Aitkin)								
TOTAL	1	2	3	0	0	0	5	5

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: August 11, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Ada									
1	3	1	4	0	1	0	2	3	7
2	2	0	2	0	1	0	0	1	3
3	1	0	1	0	0	0	2	2	3
TOTAL	6	1	7	0	2	0	4	6	13
Bay									
1	1	1	2	0	0	0	5	5	7
2	0	0	0	0	0	0	3	3	3
3	2	1	3	0	2	0	0	2	5
4	7	3	10	0	0	1	3	4	14
5	6	0	6	0	1	0	5	6	12
6	2	1	3	0	1	0	1	2	5
7	4	0	4	0	0	0	1	1	5
8	0	0	0	0	1	0	5	6	6
9	0	1	1	0	0	0	0	0	1
TOTAL	22	7	29	0	5	1	23	29	58
Fara Island									
1	0	2	2	0	1	0	3	4	6
2	1	0	1	0	0	0	10	10	11
3	3	0	3	0	0	0	9	9	12
4	1	0	1	0	1	0	16	17	18
TOTAL	5	2	7	0	2	0	38	40	47
Round (Crow Wing)									
1	2	0	2	0	0	0	4	4	6
2	2	0	2	0	1	0	7	8	10
TOTAL	4	0	4	0	1	0	11	12	16
Sandbar									
1	2	0	2	0	1	0	1	2	4
2	1	1	2	0	0	0	1	1	3
3	1	0	1	0	0	0	5	5	6
TOTAL	4	1	5	0	1	0	7	8	13
Sylvan									
1	3	0	3	0	2	1	2	5	8
2	4	1	5	0	0	0	5	5	10
TOTAL	7	1	8	0	2	1	7	10	18
Borden									
1	1	0	1	0	0	0	3	3	4
2	0	0	0	0	0	0	1	1	1
3	2	0	2	0	0	0	1	1	3
TOTAL	3	0	3	0	0	0	5	5	8
Clearwater									
1	0	0	0	0	0	1	2	3	3
2	0	0	0	0	0	0	3	3	3
TOTAL	0	0	0	0	0	1	5	6	6
Inquadona									
1	0	1	1	0	1	0	0	1	2
2	2	0	2	0	0	0	1	1	3
3	0	0	0	0	0	0	1	1	1
TOTAL	2	1	3	0	1	0	2	3	6
Round (Aitkin)									
TOTAL	1	0	1	0	0	0	3	3	4

APPENDIX I (cont.)

Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: August 15, 1985 - Thursday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
<u>Ada</u>									
1	0	1	1	0	0	0	2	2	3
2	0	1	1	0	0	0	6	6	7
3	0	0	0	0	0	0	0	0	0
TOTAL	0	2	2	0	0	0	8	8	10
<u>Bay</u>									
1	0	0	0	0	0	0	5	5	5
2	0	0	0	0	0	0	0	0	0
3	2	1	3	0	0	0	3	3	6
4	4	2	6	0	0	4	0	4	10
5	1	0	1	0	0	0	0	0	1
6	1	0	1	0	0	0	1	1	2
7	1	0	1	0	0	0	2	2	3
8	2	0	2	0	0	0	3	3	5
9	0	0	0	0	0	0	0	0	0
TOTAL	11	3	14	0	0	4	14	18	32
<u>Fara Island</u>									
1	0	0	0	0	0	0	4	4	4
2	0	0	0	0	0	0	5	5	5
3	1	0	1	0	0	0	4	4	5
4	0	0	0	0	0	0	2	2	2
TOTAL	1	0	1	0	0	0	15	15	16
<u>Round (Crow Wing)</u>									
1	3	1	4	0	0	0	4	4	8
2	2	1	3	0	1	0	9	10	13
TOTAL	5	2	7	0	1	0	13	14	21
<u>Sandbar</u>									
1	0	0	0	0	0	0	2	2	2
2	0	0	0	0	0	1	1	2	2
3	1	0	1	0	0	0	2	2	3
TOTAL	1	0	1	0	0	1	5	6	7
<u>Sylvan</u>									
1	1	0	1	0	0	0	3	3	4
2	3	2	5	0	1	0	4	5	10
TOTAL	4	2	6	0	1	0	7	8	14
<u>Borden</u>									
1	0	0	0	0	0	0	1	1	1
2	0	0	0	0	0	0	1	1	1
3	0	0	0	0	0	0	2	2	2
TOTAL	0	0	0	0	0	0	4	4	4
<u>Clearwater</u>									
1	0	0	0	0	0	0	1	1	1
2	0	0	0	0	0	0	2	2	2
TOTAL	0	0	0	0	0	0	3	3	3
<u>Inquadona</u>									
1	1	0	1	0	0	0	6	6	7
2	1	0	1	0	0	0	4	4	5
3	0	0	0	0	0	0	0	0	0
TOTAL	2	0	2	0	0	0	10	10	12
<u>Round (Aitkin)</u>									
TOTAL	1	0	1	0	0	0	5	5	6

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: August 25, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
<u>Ada</u>									
1	0	1	1	0	1	0	0	1	2
2	1	0	1	0	0	0	5	5	6
3	1	0	1	0	0	0	2	2	3
TOTAL	2	1	3	0	1	0	7	8	11
<u>Bay</u>									
1	0	1	1	0	1	1	1	3	4
2	3	0	3	2	0	0	0	2	5
3	8	1	9	0	0	0	2	2	11
4	9	0	9	0	2	0	2	4	13
5	1	1	2	0	2	0	1	3	5
6	2	0	2	4	0	0	1	5	7
7	0	0	0	0	0	0	3	3	3
8	4	0	4	0	0	1	2	3	7
9	0	0	0	0	0	0	1	1	1
TOTAL	27	3	30	6	5	2	13	26	56
<u>Farm Island</u>									
1	3	0	3	0	1	0	3	4	7
2	1	1	2	0	0	0	3	3	5
3	1	2	3	0	0	1	7	8	11
4	2	0	2	0	0	2	7	9	11
TOTAL	7	3	10	0	1	3	20	24	34
<u>Round (Crow Wing)</u>									
1	1	0	1	0	0	0	4	4	5
2	1	0	1	0	0	0	7	7	8
TOTAL	2	0	2	0	0	0	11	11	13
<u>Sandbar</u>									
1	0	1	1	0	0	0	3	3	4
2	1	0	1	0	0	0	2	2	3
3	3	0	3	0	0	0	1	1	4
TOTAL	4	1	5	0	0	0	6	6	11
<u>Sylvan</u>									
1	2	0	2	0	0	2	7	9	11
2	1	0	1	0	0	0	4	4	5
TOTAL	3	0	3	0	0	2	11	13	16
<u>Borden</u>									
1	0	0	0	0	0	0	6	6	6
2	1	0	1	0	0	0	1	1	2
3	0	0	0	0	0	0	2	2	2
TOTAL	1	0	1	0	0	0	9	9	10
<u>Clearwater</u>									
1	0	0	0	0	0	0	4	4	4
2	0	0	0	0	0	0	2	2	2
TOTAL	0	0	0	0	0	0	6	6	6
<u>Inquadona</u>									
1	2	0	2	0	0	0	1	1	3
2	0	0	0	0	0	0	11	11	11
3	1	0	1	0	0	0	1	1	2
TOTAL	3	0	3	0	0	0	13	13	16
<u>Round (Aitkin)</u>									
TOTAL	2	0	2	0	0	0	7	7	9

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: May 18, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes				Lake Area	Total	
	Oth Skiers	Total	Beached	Boats	Sailed	Canoe	Other			
Clark	1	0	1	1	0	0	0	2	2	3
	2	1	0	1	0	0	0	1	1	2
TOTAL	1	1	2	0	0	0	3	3	3	5
Emily/Mary	1	4	0	4	0	0	0	39	39	43
	2	2	1	3	0	0	0	16	16	19
Total	6	1	7	0	0	0	55	55	55	62
Little Boy	1	0	0	0	20	0	0	10	30	30
	2	4	0	4	0	0	0	13	13	17
	3	1	0	1	0	0	0	15	15	16
TOTAL	5	0	5	20	0	0	38	58	58	63
Nord	1	0	0	0	3	0	0	4	7	7
	2	0	0	0	0	0	0	1	1	1
TOTAL	0	0	0	3	0	0	5	8	8	8
Waukenabe	TOTAL	4	0	4	3	0	0	33	36	40
Esquagamaah	TOTAL	0	0	0	4	0	0	17	21	21
Hattie	1	0	0	0	0	0	0	1	1	1
	2	1	0	1	0	0	0	5	5	6
	3	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	2	2	2
	5	0	0	0	0	0	0	0	0	0
TOTAL	1	0	1	0	0	0	8	8	8	9
Moccasin	TOTAL	0	0	0	3	0	0	3	6	6
O'Brien	1	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	2	2	2
TOTAL	0	0	0	0	0	0	2	2	2	2

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: June 1, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes				Lake Area	Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other		
Clark									
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0
Emily/Mary									
1	0	0	0	0	0	0	6	6	6
2	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	7	7	7
Little Boy									
1	1	0	1	0	0	0	1	1	2
2	0	0	0	0	0	0	1	1	1
3	0	0	0	0	0	0	2	2	2
TOTAL	1	0	1	0	0	0	4	4	5
Nord									
1	1	0	1	0	0	0	8	8	9
2	0	0	0	0	0	0	2	2	2
TOTAL	1	0	1	0	0	0	10	10	11
Waukenabo									
TOTAL	0	0	0	0	0	0	15	15	15
Esquagamah									
TOTAL	0	0	0	0	0	0	8	8	8
Hattie									
1	0	0	0	0	0	0	2	2	2
2	0	0	0	0	0	0	1	1	1
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	1	1	1
TOTAL	0	0	0	0	0	0	4	4	4
Moccasin									
TOTAL	0	0	0	0	0	1	0	1	1
O'Brien									
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	2	2	2
TOTAL	0	0	0	0	0	0	2	2	2

APPENDIX I (cont.)

Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: June 19, 1985 - Wednesday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	With			Beached					
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total	Total
Clark									
1	0	0	0	0	1	0	1	2	2
2	0	0	0	0	0	0	1	1	1
TOTAL	0	0	0	0	1	0	2	3	3
Emily/Mary									
1	1	0	1	0	0	0	6	6	7
2	1	0	1	0	0	0	1	1	2
Total	2	0	2	0	0	0	7	7	9
Little Boy									
1	0	0	0	0	0	0	2	2	2
2	0	0	0	0	0	0	3	3	3
3	0	0	0	0	3	0	3	6	6
TOTAL	0	0	0	0	3	0	8	11	11
Nord									
1	0	0	0	0	0	0	3	3	3
2	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	3	3	3
Waukenabo									
TOTAL	0	0	0	1	0	0	3	4	4
Esquagamah									
TOTAL	0	0	0	0	0	0	2	2	2
Hattie									
1	0	0	0	0	0	0	3	3	3
2	1	0	1	0	0	0	1	1	2
3	0	0	0	0	0	0	1	1	1
4	0	0	0	0	0	0	2	2	2
5	0	0	0	0	0	0	0	0	0
TOTAL	1	0	1	0	0	0	7	7	8
Moccasin									
TOTAL	0	0	0	2	0	0	1	3	3
O'Brien									
1	0	0	0	0	0	0	1	1	1
2	0	0	0	0	0	0	1	1	1
TOTAL	0	0	0	0	0	0	2	2	2

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: June 29, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Clark									
1	1	0	1	0	0	0	0	0	1
2	0	0	0	0	0	0	1	1	1
TOTAL	1	0	1	0	0	0	1	1	2
Emily/Mary									
1	1	0	1	0	0	0	8	8	9
2	3	0	3	0	0	0	2	2	5
Total	4	0	4	0	0	0	10	10	14
Little Boy									
1	0	0	0	0	0	0	2	2	2
2	3	0	3	0	0	0	8	8	11
3	0	0	0	0	0	0	16	16	16
TOTAL	3	0	3	0	0	0	26	26	29
Nord									
1	0	0	0	0	0	0	2	2	2
2	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	2	2	2
Waukenabo									
TOTAL	0	0	0	0	0	0	3	3	3
Esquagamah									
TOTAL	0	0	0	0	0	0	9	9	9
Hattie									
1	0	0	0	0	0	0	1	1	1
2	0	0	0	0	1	0	3	4	4
3	0	0	0	0	0	0	1	1	1
4	0	0	0	0	0	0	1	1	1
5	0	0	0	0	1	0	1	2	2
TOTAL	0	0	0	0	2	0	7	9	9
Moccasin									
TOTAL	0	0	0	0	0	0	1	1	1
O'Brien									
1	1	0	1	0	0	0	1	1	2
2	1	0	1	0	0	0	1	1	2
TOTAL	2	0	2	0	0	0	2	2	4

APPENDIX I (cont.)

Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: July 13, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total		
Clark										
1	0	0	0	0	1	0	0	1	1	1
2	1	0	1	0	0	0	2	2	3	3
TOTAL	1	0	1	0	1	0	2	3	4	4
Emily/Mary										
1	0	0	0	0	0	0	6	6	6	6
2	4	0	4	0	1	0	3	4	8	8
Total	4	0	4	0	1	0	9	10	14	14
Little Boy										
1	0	0	0	0	0	0	0	0	0	0
2	1	0	1	0	0	0	7	7	8	8
3	0	0	0	0	4	1	2	7	7	7
TOTAL	1	0	1	0	4	1	9	14	15	15
Nord										
1	1	0	1	0	0	0	3	3	4	4
2	0	0	0	0	0	0	0	0	0	0
TOTAL	1	0	1	0	0	0	3	3	4	4
Waukenabo										
TOTAL	0	0	0	0	0	0	1	1	1	1
Esouagamah										
TOTAL	0	0	0	0	0	0	4	4	4	4
Hattie										
1	1	0	1	0	0	0	1	1	2	2
2	0	0	0	0	0	0	4	4	4	4
3	0	0	0	0	0	1	4	5	5	5
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
TOTAL	1	0	1	0	0	1	9	10	11	11
Moccasin										
TOTAL	0	0	0	5	0	1	3	9	9	9
O'Brien										
1	1	0	1	0	0	0	2	2	3	3
2	2	0	2	0	0	0	0	0	2	2
TOTAL	3	0	3	0	0	0	2	2	5	5

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: July 23, Tuesday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Clark									
1	0	0	0	0	0	0	1	1	1
2	0	0	0	0	0	0	1	1	1
TOTAL	0	0	0	0	0	0	2	2	2
Emily/Mary									
1	0	0	0	0	0	0	2	2	2
2	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	2	2
Little Boy									
1	0	0	0	0	0	0	2	2	2
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	1	1	1
TOTAL	0	0	0	0	0	0	3	3	3
Nord									
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0
Waukenabo									
TOTAL	0	0	0	0	0	0	2	2	2
Esquaquamah									
TOTAL	0	0	0	0	0	0	3	3	3
Hattie									
1	0	0	0	0	0	0	2	2	2
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	1	1	1
TOTAL	0	0	0	0	0	0	3	3	3
Moccasin									
TOTAL	0	0	0	0	0	0	1	1	1
O'Brien									
1	1	0	1	0	0	0	1	1	2
2	0	0	0	0	0	0	0	0	0
TOTAL	1	0	1	0	0	0	1	1	2

APPENDIX I (cont.)

Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: July 29, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	With			Beached					
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total	Total
Clark									
1	0	1	1	0	0	0	0	0	1
2	1	0	1	0	0	0	2	2	3
TOTAL	1	1	2	0	0	0	2	2	4
Emily/Mary									
1	0	0	0	0	0	0	0	0	0
2	1	0	1	0	0	0	0	0	1
Total	1	0	1	0	0	0	0	0	1
Little Boy									
1	1	0	1	0	0	0	1	1	2
2	0	0	0	0	0	0	1	1	1
3	1	0	1	0	0	0	2	2	3
TOTAL	2	0	2	0	0	0	4	4	6
Nord									
1	0	0	0	0	0	0	1	1	1
2	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	1	1	1
Waukenabo									
TOTAL	0	0	0	0	0	0	2	2	2
Esquaquanah									
TOTAL	0	0	0	0	0	0	4	4	4
Hattie									
1	0	0	0	0	0	0	0	0	0
2	3	0	3	0	0	0	1	1	4
3	2	0	2	0	0	0	0	0	2
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
TOTAL	5	0	5	0	0	0	1	1	6
Moccasin									
TOTAL	1	0	1	0	0	0	2	2	3
O'Brien									
1	1	1	2	0	0	0	1	1	3
2	1	0	1	0	0	0	0	0	1
TOTAL	2	1	3	0	0	0	1	1	4

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: August 11, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other		
Clark									
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	4	4	4
TOTAL	0	0	0	0	0	0	4	4	4
Emily/Mary									
1	1	0	1	0	0	0	1	1	2
2	1	0	1	0	0	0	3	3	4
Total	2	0	2	0	0	0	4	4	6
Little Boy									
1	0	0	0	0	0	0	3	3	3
2	2	0	2	0	1	0	9	10	12
3	0	0	0	0	0	0	10	10	10
TOTAL	2	0	2	0	1	0	22	23	25
Nord									
1	0	0	0	0	0	0	6	6	6
2	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	6	6	6
Waukenabo									
TOTAL	2	0	2	0	0	0	2	2	4
Esquagamah									
TOTAL	0	0	0	0	0	1	5	6	6
Hattie									
1	1	0	1	0	0	0	4	4	5
2	1	0	1	0	0	0	4	4	5
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	1	1	1
TOTAL	2	0	2	0	0	0	9	9	11
Moccasin									
TOTAL	1	0	1	0	0	0	1	1	2
D'Brien									
1	0	0	0	0	0	0	1	1	1
2	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	1	1	1

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: August 15, 1985 - Thursday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Clark									
1	1	0	1	0	0	1	5	6	7
2	1	0	1	0	0	0	0	0	1
TOTAL	2	0	2	0	0	1	5	6	8
Emily/Mary									
1	0	0	0	0	0	0	2	2	2
2	1	0	1	0	0	0	3	3	4
Total	1	0	1	0	0	0	5	5	6
Little Boy									
1	1	0	1	0	0	0	1	1	2
2	1	0	1	0	0	0	6	6	7
3	0	0	0	0	0	0	8	8	8
TOTAL	2	0	2	0	0	0	15	15	17
Nord									
1	0	0	0	0	0	0	2	2	2
2	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	2	2	2
Waukenabo									
TOTAL	0	0	0	0	0	0	0	0	0
Esquagamah									
TOTAL	1	0	1	0	0	0	4	4	5
Hattie									
1	0	0	0	0	0	0	0	0	0
2	1	0	1	0	0	0	1	1	2
3	1	0	1	0	0	0	0	0	1
4	0	0	0	0	0	0	1	1	1
5	0	0	0	0	0	0	1	1	1
TOTAL	2	0	2	0	0	0	3	3	5
Moccasin									
TOTAL	0	0	0	0	0	0	2	2	2
O'Brien									
1	0	0	0	0	0	0	0	0	0
2	0	1	1	0	0	0	1	1	2
TOTAL	0	1	1	0	0	0	1	1	2

APPENDIX I (cont.)
 Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: August 25, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Clark									
1	0	0	0	0	0	0	2	2	2
2	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	2	2	2
Emily/Mary									
1	1	0	1	0	0	0	4	4	5
2	2	0	2	0	0	0	4	4	6
Total	3	0	3	0	0	0	8	8	11
Little Boy									
1	0	0	0	0	0	0	1	1	1
2	0	0	0	0	0	0	2	2	2
3	1	0	1	0	0	0	5	5	6
TOTAL	1	0	1	0	0	0	8	8	9
Nord									
1	1	0	1	0	0	0	1	1	2
2	0	0	0	0	0	0	0	0	0
TOTAL	1	0	1	0	0	0	1	1	2
Waukenabo									
TOTAL	0	0	0	0	0	0	2	2	2
Esouaganah									
TOTAL	0	0	0	0	0	0	4	4	4
Hattie									
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	1	1	1
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	1	1	1
Moccasin									
TOTAL	0	0	0	0	0	0	0	0	0
O'Brien									
1	0	1	1	0	0	0	0	0	1
2	0	0	0	0	0	0	0	0	0
TOTAL	0	1	1	0	0	0	0	0	1

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: May 18, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Eagle									
1	0	0	0	0	0	1	3	4	4
2	0	0	0	0	0	0	4	4	4
3	0	0	0	0	0	0	1	1	1
TOTAL	0	0	0	0	0	1	8	9	9
Hansen									
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	3	3	3
TOTAL	0	0	0	0	0	0	3	3	3
Little Thunder									
TOTAL	0	0	0	0	0	0	4	4	4
Loon									
TOTAL	0	0	0	0	0	0	2	2	2
White Sand									
TOTAL	0	0	0	0	0	1	12	13	13
Hanging Kettle									
TOTAL	2	0	2	0	0	0	9	9	11
Bass									
TOTAL	0	0	0	0	0	0	8	8	8
Pine									
TOTAL	0	0	0	0	0	0	4	4	4

DATE: June 1, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Eagle									
1	0	0	0	0	0	0	3	3	3
2	0	0	0	0	0	0	2	2	2
3	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	5	5	5
Hansen									
1	0	0	0	0	0	0	2	2	2
2	0	0	0	0	0	0	3	3	3
TOTAL	0	0	0	0	0	0	5	5	5
Little Thunder									
TOTAL	1	0	1	0	0	0	0	0	1
Loon									
TOTAL	2	0	2	0	0	0	0	0	2
White Sand									
TOTAL	0	0	0	0	0	0	3	3	3
Hanging Kettle									
TOTAL	0	0	0	0	0	0	5	5	5
Bass									
TOTAL	1	0	1	0	0	0	2	2	3
Pine									
TOTAL	0	0	0	0	0	0	0	0	0

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: June 19, 1985 - Wednesday

LAKE/AREA	Boats With Wakes			Beached	Boats Without Wakes				Lake Area Total
	Other	With Skiers	Total		Boats	Sailed	Canoe	Other	
Eagle									
1	0	0	0	0	0	0	0	2	2
2	0	0	0	0	0	0	0	2	2
3	0	0	0	0	0	0	0	1	1
TOTAL	0	0	0	0	0	0	0	5	5
Hansen									
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0
Little Thunder									
TOTAL	0	0	0	0	0	0	0	0	0
Loon									
TOTAL	0	0	0	0	0	0	0	3	3
White Sand									
TOTAL	0	0	0	0	0	0	0	5	5
Hanging Kettle									
TOTAL	0	0	0	0	0	0	0	2	2
Bass									
TOTAL	0	0	0	0	0	0	0	4	4
Pine									
TOTAL	0	0	0	0	0	0	0	2	2

DATE: June 29, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Beached	Boats Without Wakes				Lake Area Total
	Other	With Skiers	Total		Boats	Sailed	Canoe	Other	
Eagle									
1	0	0	0	0	0	0	0	11	11
2	0	0	0	0	0	0	0	1	1
3	1	0	1	0	0	0	0	0	1
TOTAL	1	0	1	0	0	0	0	12	13
Hansen									
1	0	0	0	0	0	0	0	1	1
2	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	1	1
Little Thunder									
TOTAL	0	0	0	0	0	0	0	1	1
Loon									
TOTAL	1	0	1	0	0	1	3	4	5
White Sand									
TOTAL	2	0	2	0	0	0	2	2	4
Hanging Kettle									
TOTAL	1	0	1	0	0	0	8	8	9
Bass									
TOTAL	2	0	2	0	0	0	4	4	6
Pine									
TOTAL	0	0	0	0	0	0	5	5	5

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: July 13, 1985 - Saturday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Eagle									
1	0	0	0	0	0	0	2	2	2
2	0	0	0	0	0	0	1	1	1
3	0	0	0	0	0	0	2	2	2
TOTAL	0	0	0	0	0	0	5	5	5
Hansen									
1	0	0	0	0	0	0	2	2	2
2	0	0	0	0	0	0	1	1	1
TOTAL	0	0	0	0	0	0	3	3	3
Little Thunder									
TOTAL	0	0	0	0	0	0	2	2	2
Loon									
TOTAL	0	0	0	0	0	0	1	1	1
White Sand									
TOTAL	0	0	0	0	0	0	0	0	0
Hanging Kettle									
TOTAL	0	0	0	0	2	0	6	8	8
Bass									
TOTAL	2	0	2	0	0	0	5	5	7
Pine									
TOTAL	0	0	0	0	0	0	2	2	2

DATE: July 23, 1985 - Tuesday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Eagle									
1	0	0	0	0	0	0	1	1	1
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	1	1	1
Hansen									
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0
Little Thunder									
TOTAL	0	0	0	0	0	0	0	0	0
Loon									
TOTAL	0	0	0	0	0	0	1	1	1
White Sand									
TOTAL	0	0	0	0	1	0	1	2	2
Hanging Kettle									
TOTAL	1	0	1	0	0	0	0	0	1
Bass									
TOTAL	0	0	0	0	0	0	0	0	0
Pine									
TOTAL	0	0	0	0	0	0	1	1	1

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: July 28, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	With Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Eagle									
1	1	0	1	0	0	0	0	0	1
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
TOTAL	1	0	1	0	0	0	0	0	1
Hansen									
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0
Little Thunder									
TOTAL	2	0	2	0	0	0	0	0	2
Loon									
TOTAL	0	0	0	0	0	0	1	1	1
White Sand									
TOTAL	0	1	1	0	0	1	3	4	5
Hanging Kettle									
TOTAL	0	0	0	0	0	0	2	2	2
Bass									
TOTAL	0	0	0	0	0	0	0	0	0
Pine									
TOTAL	1	0	1	0	0	1	2	3	4

DATE: August 11, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	With Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Eagle									
1	0	0	0	0	0	0	5	5	5
2	0	0	0	0	0	0	2	2	2
3	0	0	0	0	0	0	1	1	1
TOTAL	0	0	0	0	0	0	8	8	8
Hansen									
1	0	0	0	0	0	0	1	1	1
2	0	0	0	0	0	0	2	2	2
TOTAL	0	0	0	0	0	0	3	3	3
Little Thunder									
TOTAL	3	0	3	0	0	0	3	3	6
Loon									
TOTAL	0	1	1	0	0	1	0	1	2
White Sand									
TOTAL	2	1	3	0	1	0	1	2	5
Hanging Kettle									
TOTAL	2	0	2	0	0	0	1	1	3
Bass									
TOTAL	1	1	2	0	0	0	0	0	2
Pine									
TOTAL	0	0	0	0	0	0	0	0	0

APPENDIX I (cont.)
Boat Count by Area of Lake, Date and Type of Boating Activity

DATE: August 15, 1985 - Thursday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Eagle									
1	1	0	1	0	0	0	3	3	4
2	1	0	1	0	0	0	2	2	3
3	0	0	0	0	0	0	0	0	0
TOTAL	2	0	2	0	0	0	5	5	7
Hansen									
1	0	0	0	0	0	0	1	1	1
2	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	1	1	1
Little Thunder									
TOTAL	0	0	0	0	0	1	1	2	2
Loon									
TOTAL	0	0	0	0	0	1	4	5	5
White Sand									
TOTAL	1	0	1	0	0	0	4	4	5
Hanging Kettle									
TOTAL	0	0	0	0	0	0	1	1	1
Bass									
TOTAL	0	0	0	0	0	0	0	0	0
Pine									
TOTAL	0	0	0	0	0	0	2	2	2

DATE: August 25, 1985 - Sunday

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Eagle									
1	0	0	0	0	0	0	3	3	3
2	1	0	1	0	0	0	0	0	1
3	0	0	0	0	0	0	1	1	1
TOTAL	1	0	1	0	0	0	4	4	5
Hansen									
1	1	0	1	0	0	0	0	0	1
2	0	0	0	0	0	0	0	0	0
TOTAL	1	0	1	0	0	0	0	0	1
Little Thunder									
TOTAL	0	0	0	0	0	0	1	1	1
Loon									
TOTAL	1	0	1	0	0	0	0	0	1
White Sand									
TOTAL	0	0	0	0	1	0	4	5	5
Hanging Kettle									
TOTAL	0	0	0	0	0	0	2	2	2
Bass									
TOTAL	0	0	0	0	0	0	2	2	2
Pine									
TOTAL	0	0	0	0	0	0	1	1	1

APPENDIX J

AVERAGE WEEKEND AND WEEKDAY BOAT COUNTS BY
AREA OF LAKE, DATE AND TYPE OF BOATING ACTIVITY

APPENDIX J
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

MILLE LACS AVERAGES

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake
	With			Beached					Area
MILLE LACS	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total	Total
Average Weekends									
1	5.9	0.3	6.1	0.1	0.6	1.0	50.4	52.1	58.3
2	6.4	0.1	6.6	0.0	0.0	0.0	85.0	85.0	91.6
3	5.3	0.0	5.3	0.0	0.1	0.0	30.1	30.3	35.6
4	5.0	0.3	5.3	0.3	0.6	0.0	58.7	59.6	64.9
5	6.9	0.4	7.3	2.1	1.4	0.0	103.9	107.4	114.7
6	6.9	0.1	7.0	0.7	0.4	0.0	65.6	66.7	73.7
7	9.4	0.0	9.4	0.3	0.4	0.1	101.6	102.4	111.9
8	7.1	0.0	7.1	0.0	0.0	0.0	91.4	91.4	98.6
9	5.3	0.3	5.6	0.0	0.0	0.1	68.7	68.9	74.4
10	5.3	0.1	5.4	0.1	0.3	0.3	59.0	59.7	65.1
11	13.3	0.0	13.3	6.4	1.1	0.4	105.7	113.7	127.0
12	4.6	0.0	4.6	0.0	0.0	0.0	66.1	66.1	70.7
13	1.3	0.0	1.3	0.0	0.0	0.0	3.9	3.9	5.1
14	0.6	0.0	0.6	0.0	0.0	0.0	3.3	3.3	3.9
15	2.1	0.0	2.1	0.0	0.0	0.0	22.7	22.7	24.9
16	1.0	0.0	1.0	0.0	0.1	0.0	14.7	14.9	15.9
17	2.0	0.0	2.0	0.0	0.0	0.0	12.7	12.7	14.7
18	2.0	0.0	2.0	0.0	0.3	0.0	12.3	12.6	14.6
TOTAL	90.3	1.7	92.0	10.1	5.4	2.0	955.9	973.4	1065.4

MILLE LACS

Average Weekend Without Fishing Opener (May 18, 1985)

1	4.5	0.3	4.8	0.2	0.7	0.8	32.0	33.7	38.5
2	3.0	0.2	3.2	0.0	0.0	0.0	30.7	30.7	33.8
3	3.2	0.0	3.2	0.0	0.2	0.0	14.5	14.7	17.8
4	3.8	0.3	4.2	0.3	0.7	0.0	17.3	18.3	22.5
5	4.2	0.5	4.7	0.7	1.7	0.0	30.7	33.0	37.7
6	3.8	0.2	4.0	0.0	0.5	0.0	17.7	18.2	22.2
7	5.0	0.0	5.0	0.3	0.5	0.0	28.8	29.7	34.7
8	3.3	0.0	3.3	0.0	0.0	0.0	17.3	17.3	20.7
9	3.5	0.3	3.8	0.0	0.0	0.2	22.3	22.5	26.3
10	4.2	0.2	4.3	0.2	0.3	0.0	26.5	27.0	31.3
11	12.7	0.0	12.7	7.5	1.3	0.3	56.0	65.2	77.8
12	2.0	0.0	2.0	0.0	0.0	0.0	16.8	16.8	18.8
13	1.0	0.0	1.0	0.0	0.0	0.0	3.2	3.2	4.2
14	0.5	0.0	0.5	0.0	0.0	0.0	3.8	3.8	4.3
15	2.2	0.0	2.2	0.0	0.0	0.0	10.0	10.0	12.2
16	1.2	0.0	1.2	0.0	0.2	0.0	11.0	11.2	12.3
17	1.5	0.0	1.5	0.0	0.0	0.0	8.0	8.0	9.5
18	1.2	0.0	1.2	0.0	0.3	0.0	3.3	3.7	4.8
TOTAL	60.7	2.0	62.7	9.2	6.3	1.3	350.0	366.8	429.5

APPENDIX J (cont.)
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

MILLE LACS AVERAGES

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake
	With			Beached					Area
MILLE LACS	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total	Total
Average Weekday									
1	2.0	0.3	2.3	0.0	0.3	0.0	14.3	14.7	17.0
2	1.3	0.0	1.3	0.0	0.0	0.0	14.0	14.0	15.3
3	1.0	0.0	1.0	0.0	0.0	0.0	2.7	2.7	3.7
4	0.7	0.0	0.7	0.0	0.0	0.0	2.7	2.7	3.3
5	1.3	0.0	1.3	0.0	0.0	0.0	6.3	6.3	7.7
6	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
7	1.0	0.0	1.0	0.0	0.0	0.0	7.7	7.7	8.7
8	0.0	0.0	0.0	0.0	0.0	0.0	5.7	5.7	5.7
9	0.3	0.0	0.3	0.0	0.0	0.0	2.3	2.3	2.7
10	0.3	0.0	0.3	0.0	0.0	0.0	7.3	7.3	7.7
11	4.7	0.0	4.7	0.7	0.0	0.0	13.7	14.3	19.0
12	2.0	0.3	2.3	0.0	0.3	0.0	9.3	9.7	12.0
13	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
14	0.3	0.0	0.3	0.0	0.0	0.0	0.3	0.3	0.7
15	0.0	0.0	0.0	0.0	0.0	0.0	3.3	3.3	3.3
16	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
17	0.3	0.0	0.3	0.0	0.0	0.0	1.0	1.0	1.3
18	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7
TOTAL	15.3	0.7	16.0	0.7	0.7	0.0	98.3	99.7	115.7

APPENDIX J (cont.)
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

GULL CHAIN AVERAGE WEEKEND AND WEEKDAY

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake	
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	Area	
Average Weekend										
Lower Gull	1	5.1	1.4	6.6	0.1	1.6	0.6	8.7	11.0	17.6
Gull	2	3.4	0.4	3.9	0.0	1.4	0.3	14.3	16.0	19.9
Gull	3	8.6	0.4	9.0	7.6	1.3	0.3	14.7	23.9	32.9
Gull	4	17.4	0.6	18.0	1.4	3.9	0.0	27.0	32.3	50.3
Love	5	1.0	0.1	1.1	0.0	0.0	0.0	6.0	6.0	7.1
Gull	6	8.1	0.9	9.0	2.0	1.0	0.1	31.0	34.1	43.1
Gull	7	6.4	0.9	7.3	0.0	2.1	0.0	22.3	24.4	31.7
Gull	8	8.3	0.1	8.4	0.0	0.4	0.1	7.0	7.6	16.0
Margaret	9	3.7	1.3	5.0	0.0	0.3	0.7	7.9	8.9	13.9
Upper Gull	10	6.1	0.0	6.1	18.6	0.3	0.0	2.3	21.1	27.3
Upper Gull	11	4.6	1.1	5.7	0.0	0.1	0.3	7.3	7.7	13.4
Ray	12	3.0	0.0	3.0	0.0	0.0	0.0	3.9	3.9	6.9
Roy	13	2.4	0.4	2.9	0.0	0.0	0.1	4.6	4.7	7.6
Nisswa	14	2.3	0.3	2.6	0.0	0.3	0.0	4.0	4.3	6.9
TOTAL		80.6	8.0	88.6	29.7	12.7	2.6	160.9	205.9	294.4
GULL CHAIN										
Average Weekend Without Fishing Opener (May 18, 1985)										
Lower Gull	1	5.3	1.7	7.0	0.2	1.8	0.7	9.8	12.5	19.5
Gull	2	3.8	0.5	4.3	0.0	1.7	0.2	9.8	11.7	16.0
Gull	3	7.7	0.5	8.2	8.8	1.5	0.3	10.3	21.0	29.2
Gull	4	17.2	0.7	17.8	1.7	4.5	0.0	15.2	21.3	39.2
Love	5	0.7	0.2	0.8	0.0	0.0	0.0	4.5	4.5	5.3
Gull	6	7.2	1.0	8.2	2.3	1.2	0.2	14.7	18.3	26.5
Gull	7	5.3	1.0	6.3	0.0	2.5	0.0	7.8	10.3	16.7
Gull	8	9.2	0.2	9.3	0.0	0.5	0.2	5.7	6.3	15.7
Margaret	9	4.2	1.5	5.7	0.0	0.3	0.8	4.8	6.0	11.7
Upper Gull	10	7.0	0.0	7.0	18.0	0.3	0.0	2.7	21.0	28.0
Upper Gull	11	4.0	1.3	5.3	0.0	0.2	0.3	5.0	5.5	10.8
Ray	12	3.2	0.0	3.2	0.0	0.0	0.0	2.7	2.7	5.8
Roy	13	2.7	0.5	3.2	0.0	0.0	0.2	3.7	3.8	7.0
Nisswa	14	2.7	0.3	3.0	0.0	0.3	0.0	2.5	2.8	5.8
TOTAL		80.0	9.3	89.3	31.0	14.8	2.8	99.2	147.8	237.2
GULL CHAIN										
Average Weekday										
Lower Gull	1	4.3	2.7	7.0	0.0	1.3	0.7	5.3	7.3	14.3
Gull	2	1.3	0.3	1.7	0.3	0.0	0.0	7.3	7.7	9.3
Gull	3	7.0	0.3	7.3	0.0	0.3	0.3	7.7	8.3	15.7
Gull	4	6.7	1.3	8.0	0.0	0.7	0.0	13.0	13.7	21.7
Love	5	1.0	0.0	1.0	0.0	0.0	0.0	3.0	3.0	4.0
Gull	6	5.3	0.7	6.0	0.0	2.0	0.0	5.0	7.0	13.0
Gull	7	3.0	0.7	3.7	0.0	0.0	0.3	1.7	2.0	5.7
Gull	8	3.7	0.0	3.7	0.0	0.0	0.0	5.0	5.0	8.7
Margaret	9	1.3	0.7	2.0	0.0	0.0	0.0	3.0	3.0	5.0
Upper Gull	10	2.0	0.0	2.0	6.7	1.0	0.0	0.7	8.3	10.3
Upper Gull	11	1.0	0.3	1.3	0.0	0.0	0.0	3.0	3.0	4.3
Ray	12	3.7	0.0	3.7	0.0	0.0	0.0	2.0	2.0	5.7
Roy	13	1.3	0.0	1.3	0.0	0.0	0.0	3.3	3.3	4.7
Nisswa	14	0.7	0.7	1.3	0.0	0.0	0.3	2.3	2.7	4.0
TOTAL		42.3	7.7	50.0	7.0	5.3	1.7	62.3	76.3	126.3

APPENDIX J (cont.)
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

WHITEFISH CHAIN AVERAGE WEEKEND AND WEEKDAY

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total		
WHITEFISH CHAIN										
Average Weekend										
Lower Hay	1	1.6	0.3	1.9	0.0	0.6	0.3	4.7	5.6	7.4
Upper Whitefish	2	6.3	0.3	6.6	0.7	0.6	0.3	6.9	8.4	15.0
Upper Whitefish	3	2.1	0.1	2.3	0.4	0.1	0.3	7.3	8.1	10.4
Arrowhead	4	0.3	0.0	0.3	0.0	0.0	0.0	4.3	4.3	4.6
Lower Whitefish	5	2.6	0.0	2.6	0.1	0.9	0.0	4.7	5.7	8.3
Lower Whitefish	6	3.4	0.0	3.4	0.6	0.1	0.0	5.1	5.9	9.3
Bertha	7	1.7	0.3	2.0	0.0	0.4	0.1	3.4	4.0	6.0
Clamshell	8	3.0	0.7	3.7	0.0	0.4	0.0	5.1	5.6	9.3
Lower Whitefish	9	1.0	0.3	1.3	0.3	0.3	0.0	1.6	2.1	3.4
Pig	10	0.7	0.6	1.3	0.0	0.0	0.1	3.4	3.6	4.9
Lower Whitefish	11	6.1	0.4	6.6	0.4	0.6	0.0	3.9	4.9	11.4
Lower Whitefish	12	3.9	0.3	4.1	0.0	0.7	0.0	7.6	8.3	12.4
Big Trout	13	7.3	1.1	8.4	0.3	1.7	3.0	10.1	15.1	23.6
Island	14	2.0	0.3	2.3	0.0	0.3	0.3	4.0	4.6	6.9
Loon	15	0.1	0.0	0.1	5.6	0.0	0.0	1.4	7.0	7.1
Hen	16	0.3	0.1	0.4	0.0	0.0	0.0	2.6	2.6	3.0
Rush	17	15.4	1.1	16.6	7.1	0.6	0.1	8.3	16.1	32.7
Cross	18	10.0	0.0	10.0	14.9	0.0	0.3	7.1	22.3	32.3
Cross	19	7.0	1.0	8.0	6.3	0.7	0.0	6.3	13.3	21.3
Cross	20	1.9	1.3	3.1	0.1	0.1	0.0	5.6	5.9	9.0
Daggett	21	10.4	0.4	10.9	0.0	0.4	0.1	5.3	5.9	16.7
Little Pine	22	2.4	0.0	2.4	0.0	0.4	0.3	9.1	9.9	12.3
TOTAL		89.6	8.7	98.3	36.9	9.0	5.3	117.9	169.0	267.3

WHITEFISH CHAIN

Average Weekend Without Fishing Opener (May 18, 1985)										
Lower Hay	1	1.8	0.3	2.2	0.0	0.7	0.3	3.7	4.7	6.8
Upper Whitefish	2	6.7	0.3	7.0	0.8	0.7	0.3	5.2	7.0	14.0
Upper Whitefish	3	1.8	0.2	2.0	0.5	0.2	0.3	3.5	4.5	6.5
Arrowhead	4	0.3	0.0	0.3	0.0	0.0	0.0	2.0	2.0	2.3
Lower Whitefish	5	2.8	0.0	2.8	0.2	1.0	0.0	1.3	2.5	5.3
Lower Whitefish	6	2.7	0.0	2.7	0.7	0.2	0.0	3.7	4.5	7.2
Bertha	7	2.0	0.3	2.3	0.0	0.5	0.2	2.3	3.0	5.3
Clamshell	8	3.5	0.7	4.2	0.0	0.5	0.0	3.8	4.3	8.5
Lower Whitefish	9	1.2	0.3	1.5	0.3	0.3	0.0	1.0	1.7	3.2
Pig	10	0.8	0.7	1.5	0.0	0.0	0.0	2.8	2.8	4.3
Lower Whitefish	11	6.5	0.5	7.0	0.5	0.7	0.0	3.3	4.5	11.5
Lower Whitefish	12	3.7	0.3	4.0	0.0	0.8	0.0	4.3	5.2	9.2
Big Trout	13	7.3	1.3	8.7	0.3	2.0	3.3	9.3	15.0	23.7
Island	14	1.7	0.3	2.0	0.0	0.3	0.2	2.8	3.3	5.3
Loon	15	0.2	0.0	0.2	0.0	0.0	0.2	0.6	1.0	1.2
Hen	16	0.3	0.2	0.5	0.0	0.0	0.0	3.3	3.3	3.8
Rush	17	17.3	1.3	18.7	8.3	0.7	0.0	6.0	15.0	33.7
Cross	18	8.2	0.0	8.2	20.6	0.0	0.3	4.2	24.6	33.3
Cross	19	7.8	1.2	9.0	6.7	0.8	0.0	5.5	13.0	22.0
Cross	20	2.2	1.5	3.7	0.2	0.2	0.0	5.0	5.3	9.0
Daggett	21	9.8	0.5	10.3	0.0	0.5	0.2	4.0	4.7	15.0
Little Pine	22	2.8	0.0	2.8	0.0	0.5	0.3	6.3	7.2	10.0
TOTAL		91.5	10.0	101.5	39.1	10.5	5.7	84.2	139.0	241.1

APPENDIX J (cont.)
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

WHITEFISH CHAIN AVERAGE WEEKEND AND WEEKDAY

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total		
Average Weekday										
Lower Hav	1	1.0	0.0	1.0	0.0	0.0	0.0	3.0	3.0	4.0
Upper Whitefish	2	2.7	0.3	3.0	0.0	0.0	0.0	4.0	4.0	7.0
Upper Whitefish	3	1.7	0.0	1.7	0.0	0.3	0.0	4.3	4.7	6.3
Arrowhead	4	0.3	0.0	0.3	0.0	0.0	0.0	2.7	2.7	3.0
Lower Whitefish	5	2.3	0.3	2.7	0.0	0.3	0.0	1.7	2.0	4.7
Lower Whitefish	6	1.7	0.0	1.7	0.7	0.3	0.0	4.7	5.7	7.3
Bertha	7	1.7	0.3	2.0	0.3	0.3	0.0	4.0	4.7	6.7
Clamshell	8	2.3	1.3	3.7	0.0	0.0	0.7	3.0	3.7	7.3
Lower Whitefish	9	0.3	0.0	0.3	0.0	0.3	0.0	3.0	3.3	3.7
Pig	10	0.7	0.3	1.0	0.0	0.7	0.0	3.0	3.7	4.7
Lower Whitefish	11	5.0	0.0	5.0	0.0	0.0	0.0	6.7	6.7	11.7
Lower Whitefish	12	1.3	0.3	1.7	0.0	0.0	0.0	4.0	4.0	5.7
Big Trout	13	3.0	0.7	3.7	0.0	2.0	0.0	4.7	6.7	10.3
Island	14	2.0	0.7	2.7	0.0	2.3	1.7	3.0	7.0	9.7
Loon	15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hen	16	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7
Rush	17	5.7	0.3	6.0	1.7	0.3	0.0	5.7	7.7	13.7
Cross	18	4.3	0.3	4.7	25.3	0.7	0.7	5.0	31.7	36.3
Cross	19	2.0	1.0	3.0	3.3	0.0	0.0	3.7	7.0	10.0
Cross	20	2.0	0.0	2.0	0.0	0.3	0.3	2.0	2.7	4.7
Daggett	21	5.3	0.3	5.7	0.0	0.0	0.0	3.0	3.0	8.7
Little Pine	22	1.7	0.0	1.7	0.0	0.0	0.0	3.3	3.3	5.0
TOTAL		47.0	6.3	53.3	31.3	8.0	3.3	75.0	117.7	171.0

APPENDIX J (cont.)
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

PELICAN AVERAGE WEEKEND AND AVERAGE WEEKDAY

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	Other	Skiers	Total	Beached Boats	Sailed	Canoe	Other	Total	
Average Weekend									
1	3.1	1.1	4.3	0.1	2.7	0.1	9.7	12.7	17.0
2	4.9	0.4	5.3	0.0	0.9	0.1	8.3	9.3	14.6
3	2.7	0.3	3.0	0.0	1.0	0.0	9.3	10.3	13.3
4	3.0	0.4	3.4	1.3	0.4	0.3	7.1	9.1	12.6
5	1.9	0.4	2.3	0.0	0.3	0.1	6.1	6.6	8.9
TOTAL	15.6	2.7	18.3	1.4	5.3	0.7	40.6	48.0	66.3

PELICAN

Average Weekend Without Fishing Opener									
1	3.3	1.3	4.7	0.2	3.2	0.2	7.8	11.3	16.0
2	5.0	0.5	5.5	0.0	1.0	0.0	6.3	7.3	12.8
3	2.7	0.3	3.0	0.0	1.0	0.0	5.2	6.2	9.2
4	2.8	0.5	3.3	1.5	0.5	0.2	3.7	5.8	9.2
5	2.0	0.5	2.5	0.0	0.3	0.2	4.8	5.3	7.8
TOTAL	15.8	3.2	19.0	1.7	6.0	0.5	27.8	36.0	55.0

PELICAN

Average Weekday									
1	2.0	1.3	3.3	0.3	0.7	0.3	5.7	7.0	10.3
2	1.7	0.0	1.7	0.0	0.0	0.0	3.0	3.0	4.7
3	2.0	0.0	2.0	0.0	0.3	0.0	4.0	4.3	6.3
4	1.7	0.3	2.0	1.7	0.3	0.0	5.0	7.0	9.0
5	3.3	1.3	4.7	0.0	0.3	0.0	6.0	6.3	11.0
TOTAL	10.7	3.0	13.7	2.0	1.7	0.3	23.7	27.7	41.3

APPENDIX J (cont.)
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

CATEGORY II LAKES

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total
	With			Beached					
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total	
ADA									
Average Weekend									
1	1.1	0.3	1.4	0.0	0.3	0.0	0.7	1.0	2.4
2	1.7	0.3	2.0	0.0	0.4	0.0	3.7	4.1	6.1
3	1.0	0.0	1.0	0.0	0.0	0.0	1.3	1.3	2.3
TOTAL	3.9	0.6	4.4	0.0	0.7	0.0	5.7	6.4	10.9
Average Weekend Without Fishing Opener (May 18, 1985)									
1	1.3	0.3	1.7	0.0	0.3	0.0	0.5	0.8	2.5
2	1.7	0.3	2.0	0.0	0.3	0.0	3.7	4.0	6.0
3	0.8	0.0	0.8	0.0	0.0	0.0	1.2	1.2	2.0
TOTAL	3.8	0.7	4.5	0.0	0.7	0.0	5.3	6.0	10.5
Average Weekday									
1	0.0	0.3	0.3	0.0	0.0	0.0	1.7	1.7	2.0
2	0.0	0.3	0.3	0.0	0.3	0.0	4.7	5.0	5.3
3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
TOTAL	0.0	0.7	0.7	0.0	0.3	0.0	7.3	7.7	8.3
BAY									
Average Weekend									
1	1.1	0.4	1.6	0.0	0.3	0.1	5.0	5.4	7.0
2	1.3	0.0	1.3	0.3	0.0	0.0	2.1	2.4	3.7
3	2.7	0.3	3.0	0.0	0.6	0.0	2.9	3.4	6.4
4	4.6	0.9	5.4	0.0	0.6	0.3	5.1	6.0	11.4
5	1.9	0.3	2.1	0.3	0.4	0.0	5.1	5.9	8.0
6	1.9	0.3	2.1	0.6	0.1	0.0	3.6	4.3	6.4
7	0.7	0.1	0.9	0.0	0.0	0.4	2.7	3.1	4.0
8	2.0	0.1	2.1	0.0	0.7	0.3	4.9	5.9	8.0
9	0.4	0.3	0.7	0.0	0.0	0.0	1.4	1.4	2.1
TOTAL	16.6	2.7	19.3	1.1	2.7	1.1	32.9	37.9	57.1
Average Weekend Without Fishing Opener (May 18, 15)									
1	1.3	0.5	1.8	0.0	0.3	0.2	4.5	5.0	6.8
2	1.2	0.0	1.2	0.3	0.0	0.0	1.7	2.0	3.2
3	3.2	0.3	3.5	0.0	0.7	0.0	2.8	3.5	7.0
4	4.5	1.0	5.5	0.0	0.7	0.2	2.8	3.7	9.2
5	2.0	0.3	2.3	0.3	0.5	0.0	2.7	3.5	5.8
6	2.2	0.3	2.5	0.7	0.2	0.0	3.0	3.8	6.3
7	0.8	0.2	1.0	0.0	0.0	0.5	2.0	2.5	3.5
8	2.3	0.2	2.5	0.0	0.8	0.3	4.0	5.2	7.7
9	0.3	0.3	0.7	0.0	0.0	0.0	1.3	1.3	2.0
TOTAL	17.8	3.2	21.0	1.3	3.2	1.2	24.8	30.5	51.5
Average Weekday									
1	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	5.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3
3	2.0	0.7	2.7	0.0	0.0	0.0	2.3	2.3	5.0
4	1.7	0.7	2.3	0.0	0.0	1.7	1.3	3.0	5.3
5	1.0	0.0	1.0	0.3	0.0	0.0	0.0	0.3	1.3
6	0.7	0.0	0.7	0.0	0.3	0.0	1.7	2.0	2.7
7	0.3	0.0	0.3	0.0	0.0	0.3	1.0	1.3	1.7
8	1.0	0.0	1.0	1.0	0.0	0.0	2.0	3.0	4.0
9	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3
TOTAL	6.7	1.3	8.0	1.3	0.3	2.0	15.0	18.7	26.7

APPENDIX J (cont.)
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

CATEGORY II LAKES

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total
	With			Beached					
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total	
FARM ISLAND									
Average Weekend									
1	0.9	0.9	1.7	0.3	0.4	0.3	7.0	8.0	9.7
2	2.0	0.3	2.3	0.0	0.4	0.0	10.9	11.3	13.6
3	2.9	0.3	3.1	0.0	0.0	0.3	15.9	16.1	19.3
4	2.0	0.1	2.1	0.0	0.3	0.3	21.0	21.6	23.7
TOTAL	7.7	1.6	9.3	0.3	1.1	0.9	54.7	57.0	66.3

Average Weekend Without Fishing Opener (May 18, 1955)

1	1.0	1.0	2.0	0.3	0.5	0.2	5.8	6.8	8.8
2	1.8	0.3	2.2	0.0	0.5	0.0	8.3	8.8	11.0
3	2.2	0.3	2.5	0.0	0.0	0.3	6.3	6.7	9.2
4	1.7	0.2	1.8	0.0	0.3	0.3	9.2	9.8	11.7
TOTAL	6.7	1.8	8.5	0.3	1.3	0.8	29.7	32.2	40.7

Average Weekday

1	0.7	0.0	0.7	0.0	0.3	0.0	3.3	3.7	4.3
2	1.3	0.0	1.3	0.0	0.0	0.0	4.3	4.3	5.7
3	0.3	0.0	0.3	0.0	0.0	0.0	3.0	3.0	3.3
4	0.3	0.0	0.3	0.0	0.0	0.0	2.3	2.3	2.7
TOTAL	2.7	0.0	2.7	0.0	0.3	0.0	13.0	13.3	16.0

ROUND-CROW WING

Average Weekend									
1	1.3	0.1	1.4	0.0	0.1	0.3	6.9	7.3	8.7
2	2.9	0.1	3.0	0.0	0.7	0.0	8.1	8.9	11.9
TOTAL	4.1	0.3	4.4	0.0	0.9	0.3	15.0	16.1	20.6

Average Weekend Without Fishing Opener (May 18, 1955)

1	1.2	0.2	1.3	0.0	0.2	0.3	5.0	5.5	6.8
2	3.0	0.2	3.2	0.0	0.8	0.0	6.8	7.7	10.8
TOTAL	4.2	0.3	4.5	0.0	1.0	0.3	11.8	13.2	17.7

Average Weekday

1	1.0	0.3	1.3	0.0	0.0	0.0	3.0	3.0	4.3
2	0.7	0.3	1.0	0.0	0.3	0.3	6.0	6.7	7.7
TOTAL	1.7	0.7	2.3	0.0	0.3	0.3	9.0	9.7	12.0

SANDBAR

Average Weekend									
1	1.4	0.3	1.7	0.1	0.3	0.0	3.6	4.0	5.7
2	0.9	0.3	1.1	0.0	0.3	0.1	3.0	3.4	4.6
3	1.4	0.3	1.7	0.0	0.0	0.0	2.1	2.1	3.9
TOTAL	3.7	0.9	4.6	0.1	0.6	0.1	8.7	9.6	14.1

Average Weekend Without Fishing Opener (May 18, 1955)

1	1.7	0.3	2.0	0.2	0.3	0.0	3.5	4.0	6.0
2	0.8	0.3	1.2	0.0	0.3	0.2	2.5	3.0	4.2
3	1.2	0.3	1.5	0.0	0.0	0.0	2.2	2.2	3.7
TOTAL	3.7	1.0	4.7	0.2	0.7	0.2	8.2	9.2	13.8

Average weekday

1	0.3	0.0	0.3	0.0	0.0	0.0	3.3	3.3	3.7
2	0.0	0.0	0.0	0.0	0.0	0.3	1.0	1.3	1.3
3	0.3	0.0	0.3	0.0	0.0	0.0	2.0	2.0	2.3
TOTAL	0.7	0.0	0.7	0.0	0.0	0.3	6.3	6.7	7.3

CATEGORY II LAKES

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total
	With			Beached					
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total	
FARM ISLAND									
Average Weekend									
1	0.9	0.9	1.7	0.3	0.4	0.3	7.0	8.0	9.7
2	2.0	0.3	2.3	0.0	0.4	0.0	10.9	11.3	13.6
3	2.9	0.3	3.1	0.0	0.0	0.3	15.9	16.1	19.3
4	2.0	0.1	2.1	0.0	0.3	0.3	21.0	21.6	23.7
TOTAL	7.7	1.6	9.3	0.3	1.1	0.9	54.7	57.0	66.3

Average Weekend Without Fishing Opener (May 18, 1985)

1	1.0	1.0	2.0	0.3	0.5	0.2	5.8	6.8	8.8
2	1.8	0.3	2.2	0.0	0.5	0.0	8.3	8.8	11.0
3	2.2	0.3	2.5	0.0	0.0	0.3	6.3	6.7	9.2
4	1.7	0.2	1.8	0.0	0.3	0.3	9.2	9.8	11.7
TOTAL	6.7	1.8	8.5	0.3	1.3	0.8	29.7	32.2	40.7

Average Weekday

1	0.7	0.0	0.7	0.0	0.3	0.0	3.3	3.7	4.3
2	1.3	0.0	1.3	0.0	0.0	0.0	4.3	4.3	5.7
3	0.3	0.0	0.3	0.0	0.0	0.0	3.0	3.0	3.3
4	0.3	0.0	0.3	0.0	0.0	0.0	2.3	2.3	2.7
TOTAL	2.7	0.0	2.7	0.0	0.3	0.0	13.0	13.3	16.0

ROUND-CROW WING

Average Weekend

1	1.3	0.1	1.4	0.0	0.1	0.3	6.9	7.3	8.7
2	2.9	0.1	3.0	0.0	0.7	0.0	8.1	8.9	11.9
TOTAL	4.1	0.3	4.4	0.0	0.9	0.3	15.0	16.1	20.6

Average Weekend Without Fishing Opener (May 18, 1985)

1	1.2	0.2	1.3	0.0	0.2	0.3	5.0	5.5	6.8
2	3.0	0.2	3.2	0.0	0.8	0.0	6.8	7.7	10.8
TOTAL	4.2	0.3	4.5	0.0	1.0	0.3	11.8	13.2	17.7

Average Weekday

1	1.0	0.3	1.3	0.0	0.0	0.0	3.0	3.0	4.3
2	0.7	0.3	1.0	0.0	0.3	0.3	6.0	6.7	7.7
TOTAL	1.7	0.7	2.3	0.0	0.3	0.3	9.0	9.7	12.0

SANDBAR

Average Weekend

1	1.4	0.3	1.7	0.1	0.3	0.0	3.6	4.0	5.7
2	0.9	0.3	1.1	0.0	0.3	0.1	3.0	3.4	4.6
3	1.4	0.3	1.7	0.0	0.0	0.0	2.1	2.1	3.9
TOTAL	3.7	0.9	4.6	0.1	0.6	0.1	8.7	9.6	14.1

Average Weekend Without Fishing Opener (May 18, 1985)

1	1.7	0.3	2.0	0.2	0.3	0.0	3.5	4.0	6.0
2	0.8	0.3	1.2	0.0	0.3	0.2	2.5	3.0	4.2
3	1.2	0.3	1.5	0.0	0.0	0.0	2.2	2.2	3.7
TOTAL	3.7	1.0	4.7	0.2	0.7	0.2	8.2	9.2	13.8

Average weekday

1	0.3	0.0	0.3	0.0	0.0	0.0	3.3	3.3	3.7
2	0.0	0.0	0.0	0.0	0.0	0.3	1.0	1.3	1.3
3	0.3	0.0	0.3	0.0	0.0	0.0	2.0	2.0	2.3
TOTAL	0.7	0.0	0.7	0.0	0.0	0.3	6.3	6.7	7.3

APPENDIX J (cont.)
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

CATEGORY II LAKES

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total
	With			Beached		Sailed			
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total	
FARN ISLAND									
Average Weekend									
1	0.9	0.9	1.7	0.3	0.4	0.3	7.0	8.0	9.7
2	2.0	0.3	2.3	0.0	0.4	0.0	10.9	11.3	13.6
3	2.9	0.3	3.1	0.0	0.0	0.3	15.9	16.1	19.3
4	2.0	0.1	2.1	0.0	0.3	0.3	21.0	21.6	23.7
TOTAL	7.7	1.6	9.3	0.3	1.1	0.9	54.7	57.0	66.3

Average Weekend Without Fishing Opener (May 18, 1985)

1	1.0	1.0	2.0	0.3	0.5	0.2	5.8	6.8	8.8
2	1.8	0.3	2.2	0.0	0.5	0.0	8.3	8.8	11.0
3	2.2	0.3	2.5	0.0	0.0	0.3	6.3	6.7	9.2
4	1.7	0.2	1.8	0.0	0.3	0.3	9.2	9.8	11.7
TOTAL	6.7	1.8	8.5	0.3	1.3	0.8	29.7	32.2	40.7

Average Weekday

1	0.7	0.0	0.7	0.0	0.3	0.0	3.3	3.7	4.3
2	1.3	0.0	1.3	0.0	0.0	0.0	4.3	4.3	5.7
3	0.3	0.0	0.3	0.0	0.0	0.0	3.0	3.0	3.3
4	0.3	0.0	0.3	0.0	0.0	0.0	2.3	2.3	2.7
TOTAL	2.7	0.0	2.7	0.0	0.3	0.0	13.0	13.3	16.0

ROUND-CROWN WING

Average Weekend

1	1.3	0.1	1.4	0.0	0.1	0.3	6.9	7.3	8.7
2	2.9	0.1	3.0	0.0	0.7	0.0	8.1	8.9	11.9
TOTAL	4.1	0.3	4.4	0.0	0.9	0.3	15.0	16.1	20.6

Average Weekend Without Fishing Opener (May 18, 1985)

1	1.2	0.2	1.3	0.0	0.2	0.3	5.0	5.5	6.8
2	3.0	0.2	3.2	0.0	0.8	0.0	6.8	7.7	10.8
TOTAL	4.2	0.3	4.5	0.0	1.0	0.3	11.8	13.2	17.7

Average Weekday

1	1.0	0.3	1.3	0.0	0.0	0.0	3.0	3.0	4.3
2	0.7	0.3	1.0	0.0	0.3	0.3	6.0	6.7	7.7
TOTAL	1.7	0.7	2.3	0.0	0.3	0.3	9.0	9.7	12.0

SANDBAR

Average Weekend

1	1.4	0.3	1.7	0.1	0.3	0.0	3.6	4.0	5.7
2	0.9	0.3	1.1	0.0	0.3	0.1	3.0	3.4	4.6
3	1.4	0.3	1.7	0.0	0.0	0.0	2.1	2.1	3.9
TOTAL	3.7	0.9	4.6	0.1	0.6	0.1	8.7	9.6	14.1

Average Weekend Without Fishing Opener (May 18, 1985)

1	1.7	0.3	2.0	0.2	0.3	0.0	3.5	4.0	6.0
2	0.8	0.3	1.2	0.0	0.3	0.2	2.5	3.0	4.2
3	1.2	0.3	1.5	0.0	0.0	0.0	2.2	2.2	3.7
TOTAL	3.7	1.0	4.7	0.2	0.7	0.2	8.2	9.2	13.8

Average weekday

1	0.3	0.0	0.3	0.0	0.0	0.0	3.3	3.3	3.7
2	0.0	0.0	0.0	0.0	0.0	0.3	1.0	1.3	1.3
3	0.3	0.0	0.3	0.0	0.0	0.0	2.0	2.0	2.3
TOTAL	0.7	0.0	0.7	0.0	0.0	0.3	6.3	6.7	7.3

APPENDIX J (cont.)
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

CATEGORY II LAKES

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total
	With			Beached					
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total	
SYLVAN									
Average Weekend									
1	2.0	0.0	2.0	0.0	0.3	0.9	5.9	7.0	9.0
2	1.4	0.6	2.0	0.0	0.4	0.6	5.1	6.1	8.1
TOTAL	3.4	0.6	4.0	0.0	0.7	1.4	11.0	13.1	17.1

Average Weekend Without Fishing Opener (May 18, 195)

1	2.2	0.0	2.2	0.0	0.3	0.7	4.7	5.7	7.8
2	1.5	0.7	2.2	0.0	0.5	0.5	4.8	5.8	8.0
TOTAL	3.7	0.7	4.3	0.0	0.8	1.2	9.5	11.5	15.8

Average Weekday

1	1.3	0.0	1.3	0.0	0.0	0.0	2.0	2.0	3.3
2	2.0	0.7	2.7	0.0	0.3	0.3	3.7	4.3	7.0
TOTAL	3.3	0.7	4.0	0.0	0.3	0.3	5.7	6.3	10.3

BORDEN

Average Weekend

1	0.7	0.0	0.7	0.0	0.0	0.3	4.7	5.0	5.7
2	0.3	0.0	0.3	0.0	0.0	0.0	2.4	2.4	2.7
3	0.7	0.1	0.9	0.0	0.0	0.1	4.0	4.1	5.0
TOTAL	1.7	0.1	1.9	0.0	0.0	0.4	11.1	11.6	13.4

Average Weekend Without Fishing Opener (May 18, 195)

1	0.8	0.0	0.8	0.0	0.0	0.0	3.2	3.2	4.0
2	0.2	0.0	0.2	0.0	0.0	0.0	2.3	2.3	2.5
3	0.7	0.2	0.8	0.0	0.0	0.2	3.0	3.2	4.0
TOTAL	1.7	0.2	1.8	0.0	0.0	0.2	8.5	8.7	10.5

Average Weekday

1	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3
2	0.3	0.0	0.3	0.0	0.0	0.0	1.0	1.0	1.3
3	0.3	0.0	0.3	0.0	0.0	0.0	1.3	1.3	1.7
TOTAL	0.7	0.0	0.7	0.0	0.0	0.0	3.7	3.7	4.3

APPENDIX J (cont.)
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

CATEGORY II LAKES

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area
	With			Beached					
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total	
CLEARWATER									
Average Weekend									
1	0.6	0.0	0.6	0.0	0.0	0.1	2.7	2.9	3.4
2	0.4	0.0	0.4	0.6	0.1	0.3	3.7	4.7	5.1
TOTAL	1.0	0.0	1.0	0.6	0.1	0.4	6.4	7.6	8.6

Average Weekend Without Fishing Opener (May 18, 1985)

1	0.5	0.0	0.5	0.0	0.0	0.2	2.3	2.5	3.0
2	0.3	0.0	0.3	0.7	0.2	0.3	2.8	4.0	4.3
TOTAL	0.8	0.0	0.8	0.7	0.2	0.5	5.2	6.5	7.3

Average Weekday

1	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
2	0.7	0.0	0.7	0.0	0.0	0.0	1.0	1.0	1.7
TOTAL	0.7	0.0	0.7	0.0	0.0	0.0	3.0	3.0	3.7

INGSUADONA

Average Weekend									
1	1.0	0.1	1.1	0.0	0.1	0.0	4.7	4.9	6.0
2	0.4	0.0	0.4	0.0	0.1	0.0	5.3	5.4	5.9
3	0.4	0.0	0.4	0.0	0.0	0.0	1.0	1.0	1.4
TOTAL	1.9	0.1	2.0	0.0	0.3	0.0	11.0	11.3	13.3

Average Weekend Without Fishing Opener (May 18, 1985)

1	1.2	0.2	1.3	0.0	0.2	0.0	3.3	3.5	4.8
2	0.3	0.0	0.3	0.0	0.2	0.0	4.0	4.2	4.5
3	0.3	0.0	0.3	0.0	0.0	0.0	0.7	0.7	1.0
TOTAL	1.8	0.2	2.0	0.0	0.3	0.0	8.0	8.3	10.3

Average Weekday

1	0.7	0.3	1.0	0.0	0.0	0.0	3.7	3.7	4.7
2	0.3	0.0	0.3	0.0	0.0	0.0	2.3	2.3	2.7
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	1.0	0.3	1.3	0.0	0.0	0.0	6.0	6.0	7.3

ROUND-AITKIN

Average Weekend									
TOTAL	0.7	0.4	1.1	0.0	0.0	0.0	4.6	4.6	5.7

Average Weekend Without Fishing Opener (May 18, 1985)

TOTAL	0.8	0.5	1.3	0.0	0.0	0.0	5.0	5.0	6.3
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Average Weekday									
	0.7	0.0	0.7	0.0	0.0	0.0	2.3	2.3	3.0

APPENDIX J (cont.)
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

CATEGORY III LAKES

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area	
	Other	With		Beached	Sailed	Cance-	Other	Total		
		Skiers	Total							Boats
<u>CLARK</u>										
Average Weekend										
1	0.1	0.3	0.4	0.0	0.1	0.0	0.6	0.7	1.1	
2	0.4	0.0	0.4	0.0	0.0	0.0	1.4	1.4	1.9	
TOTAL	0.6	0.3	0.9	0.0	0.1	0.0	2.0	2.1	3.0	
Average Weekend Without Fishing Opener (May 18, 1985)										
1	0.2	0.2	0.3	0.0	0.2	0.0	0.3	0.5	0.8	
2	0.3	0.0	0.3	0.0	0.0	0.0	1.5	1.5	1.8	
TOTAL	0.5	0.2	0.7	0.0	0.2	0.0	1.8	2.0	2.7	
Average Weekday										
1	0.3	0.0	0.3	0.0	0.3	0.3	2.3	3.0	3.3	
2	0.3	0.0	0.3	0.0	0.0	0.0	0.7	0.7	1.0	
TOTAL	0.7	0.0	0.7	0.0	0.3	0.3	3.0	3.7	4.3	
<u>EMILY/MARY</u>										
Average Weekend										
1	1.0	0.0	1.0	0.0	0.0	0.0	9.1	9.1	10.1	
2	1.9	0.1	2.0	0.0	0.1	0.0	4.1	4.3	6.3	
TOTAL	2.9	0.1	3.0	0.0	0.1	0.0	13.3	13.4	16.4	
Average Weekend Without Fishing Opener (May 18, 1985)										
1	0.5	0.0	0.5	0.0	0.0	0.0	4.2	4.2	4.7	
2	1.8	0.0	1.8	0.0	0.2	0.0	2.2	2.3	4.2	
Total	2.3	0.0	2.3	0.0	0.2	0.0	6.3	6.5	8.8	
Average Weekday										
1	0.3	0.0	0.3	0.0	0.0	0.0	3.3	3.3	3.7	
2	0.7	0.0	0.7	0.0	0.0	0.0	1.3	1.3	2.0	
TOTAL	1.0	0.0	1.0	0.0	0.0	0.0	4.7	4.7	5.7	
<u>LITTLE BOY</u>										
Average Weekend										
1	0.3	0.0	0.3	2.9	0.0	0.0	2.6	5.4	5.7	
2	1.4	0.0	1.4	0.0	0.1	0.0	5.9	6.0	7.4	
3	0.4	0.0	0.4	0.0	0.6	0.1	7.4	8.1	8.6	
TOTAL	2.1	0.0	2.1	2.9	0.7	0.1	15.9	19.6	21.7	
Average Weekend Without Fishing Opener (May 18, 1985)										
1	0.3	0.0	0.3	0.0	0.0	0.0	1.3	1.3	1.7	
2	1.0	0.0	1.0	0.0	0.2	0.0	4.7	4.8	5.8	
3	0.3	0.0	0.3	0.0	0.7	0.2	6.2	7.0	7.3	
TOTAL	1.7	0.0	1.7	0.0	0.8	0.2	12.2	13.2	14.8	
Average Weekday										
1	0.3	0.0	0.3	0.0	0.0	0.0	1.7	1.7	2.0	
2	0.3	0.0	0.3	0.0	0.0	0.0	3.0	3.0	3.3	
3	0.0	0.0	0.0	0.0	1.0	0.0	4.0	5.0	5.0	
TOTAL	0.7	0.0	0.7	0.0	1.0	0.0	8.7	9.7	10.3	

APPENDIX J (cont.)
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

CATEGORY III LAKES

LAKE/AREA	Boats With Wakes			Boats Without Wakes				Lake Area Total
	With			Beached				
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	
<u>NORD</u>								
Average Weekend								
1	0.4	0.0	0.4	0.4	0.0	0.0	3.6	4.4
2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4
TOTAL	0.4	0.0	0.4	0.4	0.0	0.0	4.0	4.9

Average Weekend Without Fishing Opener (May 18, 1985)

1	0.5	0.0	0.5	0.0	0.0	0.0	3.5	3.5	4.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3
TOTAL	0.5	0.0	0.5	0.0	0.0	0.0	3.8	3.8	4.3

Average Weekday

1	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7

WAUKENABO

Average Weekend	0.9	0.0	0.9	0.4	0.0	0.0	8.3	8.7	9.6
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Average Weekend Without Fishing Opener (May 18, 1985)

	0.3	0.0	0.3	0.0	0.0	0.0	4.2	4.2	4.5
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Average Weekday

	0.0	0.0	0.0	0.3	0.0	0.0	1.7	2.0	2.0
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ESQUABAMAH

Average Weekend	0.0	0.0	0.0	0.6	0.0	0.1	7.3	8.0	8.0
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Average Weekend Without Fishing Opener (May 18, 1985)

	0.0	0.0	0.0	0.0	0.0	0.2	5.7	5.8	5.8
--	-----	-----	-----	-----	-----	-----	-----	-----	-----

Average Weekday

	0.3	0.0	0.3	0.0	0.0	0.0	3.0	3.0	3.3
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APPENDIX J (cont.)
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

CATEGORY III LAKES

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total
	With			Beached					
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total	
HATTIE									
Average Weekend									
1	0.3	0.0	0.3	0.0	0.0	0.0	1.3	1.3	1.6
2	0.7	0.0	0.7	0.0	0.1	0.0	2.7	2.9	3.6
3	0.3	0.0	0.3	0.0	0.0	0.1	0.7	0.9	1.1
4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4
5	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.6	0.6
TOTAL	1.3	0.0	1.3	0.0	0.3	0.1	5.6	6.0	7.3
Average Weekend Without Fishing Opener (May 18, 1985)									
1	0.3	0.0	0.3	0.0	0.0	0.0	1.3	1.3	1.7
2	0.7	0.0	0.7	0.0	0.2	0.0	2.3	2.5	3.2
3	0.3	0.0	0.3	0.0	0.0	0.2	0.8	1.0	1.3
4	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2
5	0.0	0.0	0.0	0.0	0.2	0.0	0.5	0.7	0.7
TOTAL	1.3	0.0	1.3	0.0	0.3	0.2	5.2	5.7	7.0
Average Weekday									
1	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7
2	0.7	0.0	0.7	0.0	0.0	0.0	0.7	0.7	1.3
3	0.3	0.0	0.3	0.0	0.0	0.0	0.3	0.3	0.7
4	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7
TOTAL	1.0	0.0	1.0	0.0	0.0	0.0	4.3	4.3	5.3
MOCCASIN									
Average Weekend	0.3	0.0	0.3	1.1	0.0	0.3	1.4	2.9	3.1
Average Weekend Without Fishing Opener (May 18, 1985)									
	0.3	0.0	0.3	0.8	0.0	0.3	1.2	2.3	2.7
Average Weekday									
	0.0	0.0	0.0	0.7	0.0	0.0	1.3	2.0	2.0
O'BRIEN									
Average Weekend									
1	0.4	0.3	0.7	0.0	0.0	0.0	0.7	0.7	1.4
2	0.6	0.0	0.6	0.0	0.0	0.0	0.7	0.7	1.3
TOTAL	1.0	0.3	1.3	0.0	0.0	0.0	1.4	1.4	2.7
Average Weekend Without Fishing Opener (May 18, 1985)									
1	0.5	0.3	0.8	0.0	0.0	0.0	0.8	0.8	1.7
2	0.7	0.0	0.7	0.0	0.0	0.0	0.5	0.5	1.2
TOTAL	1.2	0.3	1.5	0.0	0.0	0.0	1.3	1.3	2.8
Average Weekday									
1	0.3	0.0	0.3	0.0	0.0	0.0	0.7	0.7	1.0
2	0.0	0.3	0.3	0.0	0.0	0.0	0.7	0.7	1.0
TOTAL	0.3	0.3	0.7	0.0	0.0	0.0	1.3	1.3	2.0

APPENDIX J (cont.)
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

CATEGORY IV LAKES

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total
	With			Beached					
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total	
EAGLE									
Average Weekend									
1	0.1	0.0	0.1	0.0	0.0	0.1	3.9	4.0	4.1
2	0.1	0.0	0.1	0.0	0.0	0.0	1.4	1.4	1.6
3	0.1	0.0	0.1	0.0	0.0	0.0	0.7	0.7	0.9
TOTAL	0.4	0.0	0.4	0.0	0.0	0.1	6.0	6.1	6.6

Average Weekend Without Fishing Opener (May 18, 1985)									
1	0.2	0.0	0.2	0.0	0.0	0.0	4.0	4.0	4.2
2	0.2	0.0	0.2	0.0	0.0	0.0	1.0	1.0	1.2
3	0.2	0.0	0.2	0.0	0.0	0.0	0.7	0.7	0.8
TOTAL	0.5	0.0	0.5	0.0	0.0	0.0	5.7	5.7	6.2

Average Weekday									
1	0.3	0.0	0.3	0.0	0.0	0.0	2.0	2.0	2.3
2	0.3	0.0	0.3	0.0	0.0	0.0	1.3	1.3	1.7
3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3
TOTAL	0.7	0.0	0.7	0.0	0.0	0.0	3.7	3.7	4.3

HANSEN									
Average Weekend									
1	0.1	0.0	0.1	0.0	0.0	0.0	0.9	0.9	1.0
2	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3
TOTAL	0.1	0.0	0.1	0.0	0.0	0.0	2.1	2.1	2.3

Average Weekend Without Fishing Opener (May 18, 1985)									
1	0.2	0.0	0.2	0.0	0.0	0.0	1.0	1.0	1.2
2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
TOTAL	0.2	0.0	0.2	0.0	0.0	0.0	2.0	2.0	2.2

Average Weekday									
1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3

LITTLE THUNDER									
Average Weekend	0.9	0.0	0.9	0.0	0.0	0.0	1.6	1.6	2.4

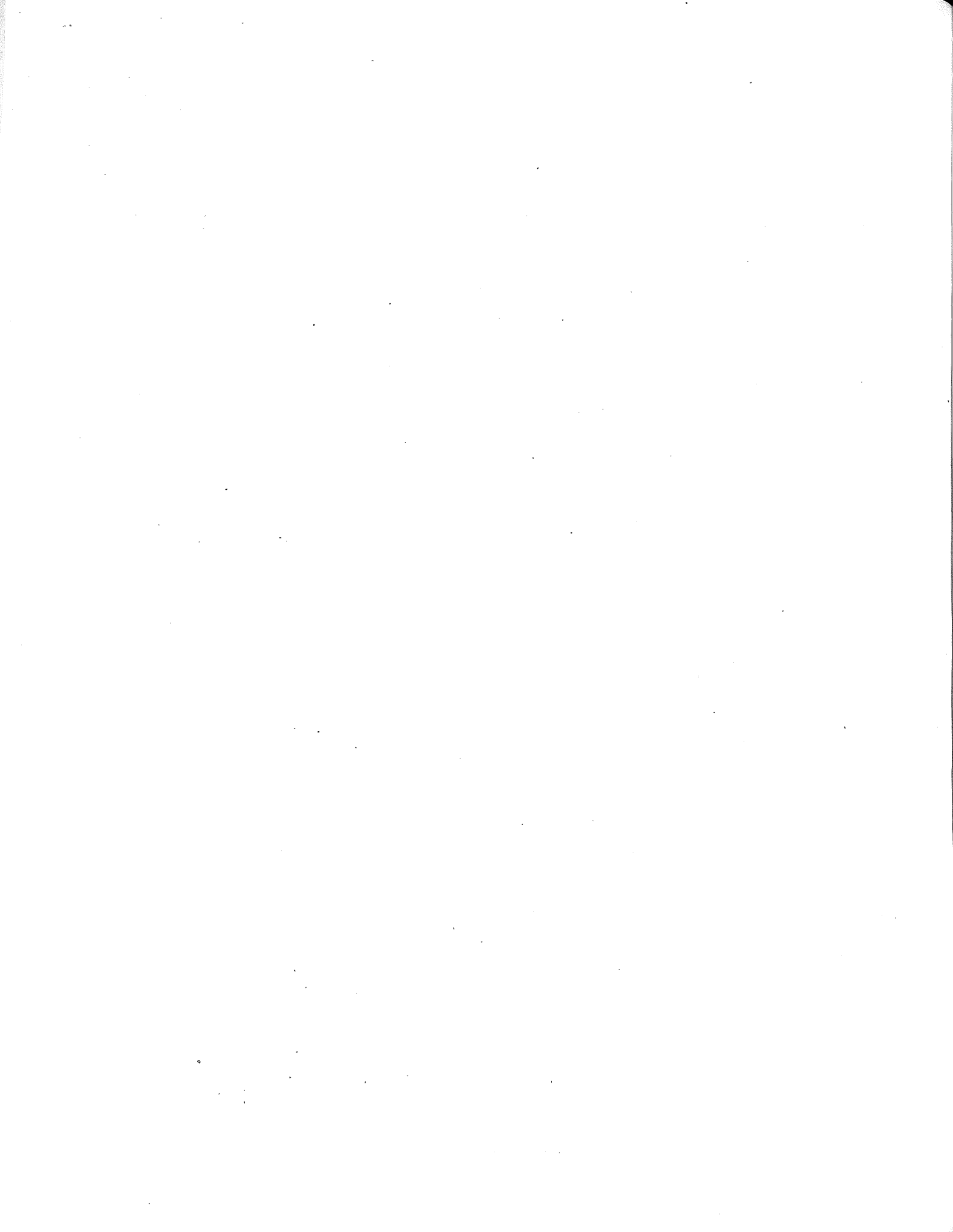
Average Weekend Without Fishing Opener (May 18, 1985)									
	1.0	0.0	1.0	0.0	0.0	0.0	1.2	1.2	2.2

Average Weekday	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.7	0.7
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APPENDIX J (cont.)
Average Weekend and Weekday Boat Counts by Area of Lake,
Date and Type of Boating Activity

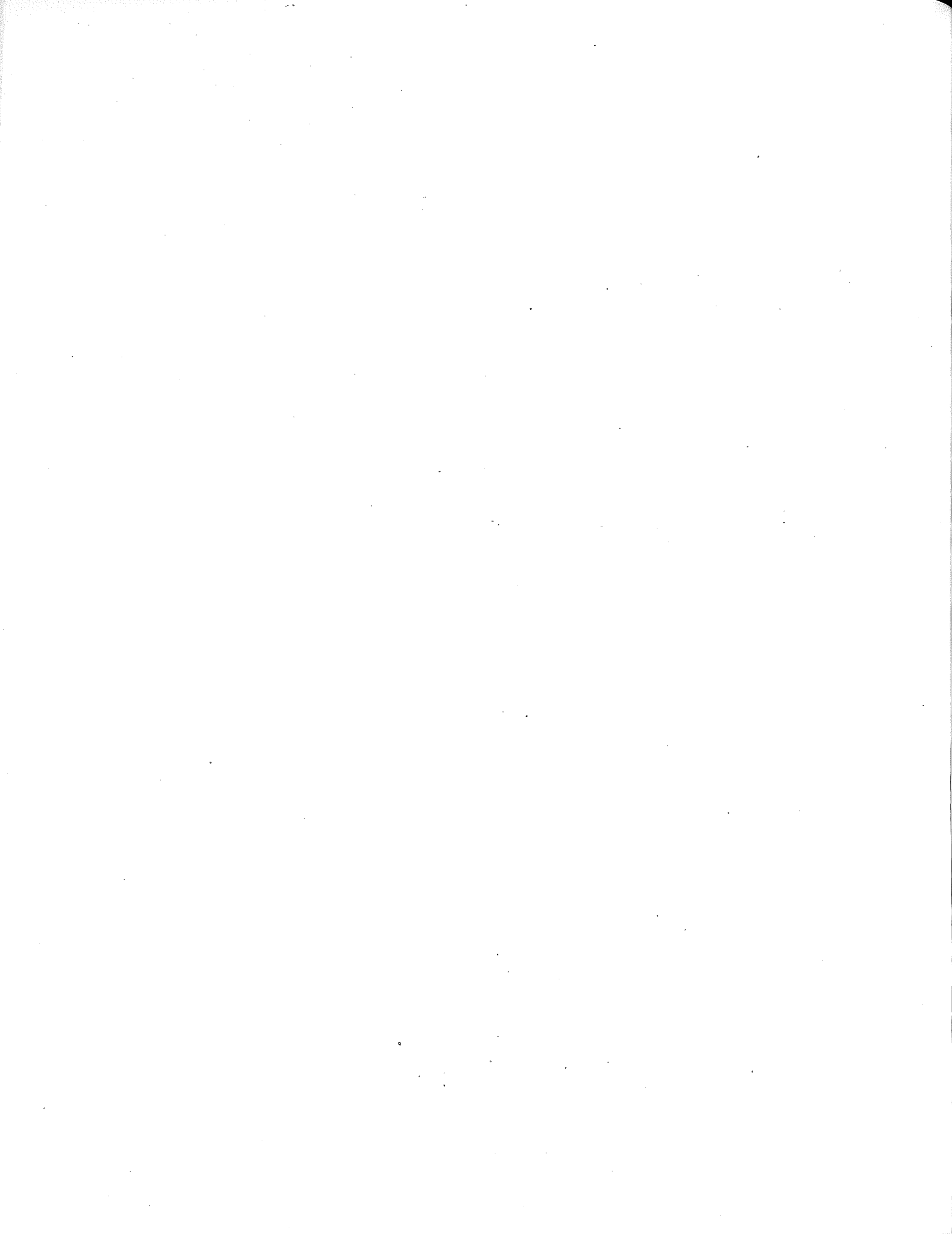
CATEGORY IV LAKES

LAKE/AREA	Boats With Wakes			Boats Without Wakes					Lake Area Total
	With			Beached					
	Other	Skiers	Total	Boats	Sailed	Canoe	Other	Total	
LOON									
Average Weekend	0.6	0.1	0.7	0.0	0.0	0.3	1.0	1.3	2.0
Average Weekend Without Fishing Opener (May 18, 1985)									
	0.7	0.2	0.8	0.0	0.0	0.3	0.8	1.2	2.0
Average Weekday	0.0	0.0	0.0	0.0	0.0	0.3	2.7	3.0	3.0
WHITE SAND									
Average Weekend	0.6	0.3	0.9	0.0	0.3	0.3	3.6	4.1	5.0
Average Weekend Without Fishing Opener (May 18, 1985)									
	0.7	0.3	1.0	0.0	0.3	0.2	2.2	2.7	3.7
Average Weekday	0.3	0.0	0.3	0.0	0.3	0.0	3.3	3.7	4.0
HANGING KETTLE									
Average Weekend	0.7	0.0	0.7	0.0	0.3	0.0	4.7	5.0	5.7
Average Weekend Without Fishing Opener (May 18, 1985)									
	0.5	0.0	0.5	0.0	0.3	0.0	4.0	4.3	4.8
Average weekday	0.3	0.0	0.3	0.0	0.0	0.0	1.0	1.0	1.3
BASS									
Average Weekend	0.9	0.1	1.0	0.0	0.0	0.0	3.0	3.0	4.0
Average Weekend Without Fishing Opener (May 18, 1985)									
	1.0	0.2	1.2	0.0	0.0	0.0	2.2	2.2	3.3
Average weekday	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3
PINE									
Average Weekend	0.1	0.0	0.1	0.0	0.0	0.1	2.0	2.1	2.3
Average Weekend Without Fishing Opener (May 18, 1985)									
	0.2	0.0	0.2	0.0	0.0	0.2	1.7	1.8	2.0
Average weekday	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7



APPENDIX K

BOAT COUNT FROM VARIOUS ACCESS TYPES



APPENDIX K
Boat Counts from Various Access Types

CATEGORY 1 LAKES	Flight Time	Designated	Other	Resort &	Resident,	TOTAL
		Public	Public	Private	Seasonal	
		Accesses	Access	Access	Usage	
May 18, Week-end						
Mille Lacs	(9:32-10:39)	772	1,994	1,004	1,111	4,881
Gull Chain	(2:29-2:47)	110		210	318	638
Whitefish	(1:58-2:21)	43	13	131	243	430
Pelican	(1:47)	48		*	86	134
TOTAL		973	2,007	1,345	1,758	6,083
		16.0%	33.0%	22.1%	28.9%	100.0%

June 1, Week-end		64 DEGREES, SOUTH WIND 8 KNOTS				
Mille Lacs	(9:32-10:39)	179	187	232	147	745
Gull Chain	(2:29-2:49)	41		50	61	152
Whitefish	(2:03-2:21)	19	3	28	42	92
Pelican	(1:47-1:55)	10		*	16	26
TOTAL		249	190	310	266	1,015
		24.5%	18.7%	30.5%	26.2%	100.0%

June 19, Weekday		PARTLY CLOUDY, NORTHWEST WIND 9 KNOTS				
Mille Lacs	(5:17-6:20)	37	57	45	60	199
Gull Chain	(1:15-1:41)	20		75	53	148
Whitefish	(2:02-2:33)	17	1	71	61	150
Pelican	(1:47-1:57)	2		*	32	34
TOTAL		76	58	191	206	531
		14.3%	10.9%	36.0%	38.8%	100.0%

June 29, Week-end		60 DEGREES, PARTLY CLOUDY, W-NW WIND 5 KNOTS				
Mille Lacs	(6:33-7:34)	115	85	150	217	567
Gull Chain	(5:42-6:10)	89		60	118	267
Whitefish	(3:36-4:03)	55	6	64	149	274
Pelican	(4:24-4:29)	10		*	53	63
TOTAL		269	91	274	537	1,171
		23.0%	7.8%	23.4%	45.9%	100.0%

July 13, Week-end		92 DEGREES, HAZY 5,000 FEET, S-SW WIND 5 KNOTS				
Mille Lacs	(6:33-7:34)	80	70	104	133	387
Gull Chain	(5:42-6:10)	34		72	133	239
Whitefish	(3:36-4:03)	77	12	77	131	297
Pelican	(4:24-4:29)	5		*	47	52
TOTAL		196	82	253	444	975
		20.1%	8.4%	25.9%	45.5%	100.0%

July 23, Weekday		70 DEGREES, CLEAR, SOUTH WIND 10-15 KNOTS				
Mille Lacs	(10:33-11:27)	17	6	13	23	59
Gull Chain	(1:08-1:38)	16		27	22	65
Whitefish	(2:04-2:36)	57		64	20	141
Pelican	(1:48-1:57)	1			19	20
TOTAL		91	6	104	84	285
		31.9%	2.1%	36.5%	29.5%	100.0%

**APPENDIX K (cont.)
Boat Counts from Various Access Types**

CATEGORY 1 LAKES	Flight Time	Designated	Other	Resort &	Resident,	TOTAL
		Public Accesses	Public Access	Private Access	Seasonal Usage	
July 28, Week-end		75 DEGREES, CLEAR, WEST WIND 10 KNOTS				
Mille Lacs	(1:02-2:13)	64	54	115	33	266
Gull Chain	(3:50-4:28)	92		84	163	339
Whitefish	(4:53-5:26)	47	4	86	77	214
Pelican	(4:34-4:40)	12		*	50	62
TOTAL		215	58	285	323	881
		24.4%	6.6%	32.3%	36.7%	100.0%
August 11, Week-end		66 DEGREES, CLEAR, SOUTH EAST WIND 5 KNOTS				
Mille Lacs	(10:21-11:18)	51	32	36	182	301
Gull Chain	(3:18-3:51)	32		92	96	220
Whitefish	(2:04-2:41)	54	2	91	167	314
Pelican	(2:59-3:10)	2		*	69	71
TOTAL		139	34	219	514	906
		15.3%	3.8%	24.2%	56.7%	100.0%
August 15, Weekday		70 DEGREES, CLEAR, WEST WIND 8 KNOTS				
Mille Lacs	(10:22-11:25)	18	3	23	44	88
Gull Chain	(2:43-4:15)	16		54	96	166
Whitefish	(1:44-2:11)	36	2	76	108	222
Pelican	(2:26-2:35)	4		*	66	70
TOTAL		74	5	153	314	546
		13.6%	0.9%	28.0%	57.5%	100.0%
August 25, Week-end		65 DEGREES, SCATTERED CLOUDS, NE WIND 10 KNOTS				
Mille Lacs	(12:07-1:00)	74	23	94	120	311
Gull Chain	(2:06-2:29)	42		90	74	206
Whitefish	(2:56-3:00)	23		76	157	256
Pelican	(2:37-2:40)	8		*	48	56
TOTAL		147	23	260	399	829
		17.7%	2.8%	31.4%	48.1%	100.0%

**APPENDIX K (cont.)
Boat Counts from Various Access Types**

CATEGORY 2 LAKES	Flight Time	Designated	Other	Resort &	Resident,	TOTAL
		Public Accesses	Public Access	Private Access	Seasonal Usage	
May 18, Week-end						
Ada	(12:24)	2		4	7	13
Bay	(10:51-10:58)	16	8	18	49	91
Farm Island	(10:59)	29		62	129	220
Round	(1:39)	14	4	6	14	38
Sandbar	(12:43)	1		1	14	16
Sylvan	(2:53)	7		5	13	25
TOTAL PUBLIC ACCESS LAKES		69	12	96	226	403
		17.1%	3.0%	23.8%	56.1%	100.0%
Borden	(10:42)	**	**	**	31	31
Clearwater	(10:47)	**	3	2	11	16
Inquadona	(11:58)	**	**	0	31	31
Round (Atkin)	(10:46)	**	**	**	2	2
TOTAL ALL LAKES		69	15	98	301	483
		14.3%	3.1%	20.3%	62.3%	100.0%
June 1, Week-end 64 DEGREES, SOUTH WIND 8 KNOTS						
Ada	(12:24)	3		3	3	9
Bay	(10:51)	4	2	12	21	39
Farm Island	(10:59)	9		15	30	54
Round	(1:39)	3			1	4
Sandbar	(12:43)	1		1	9	11
Sylvan	(2:53)	2		4	2	8
TOTAL PUBLIC ACCESS LAKES		22	2	35	66	125
		17.6%	1.6%	28.0%	52.8%	100.0%
Borden	(10:42)	**	**	**	15	15
Clearwater	(10:47)	**	2	1	5	8
Inquadona	(11:58)	**	**	0	9	9
Round (Atkin)	(10:45)	**	**	**	5	5
TOTAL ALL LAKES		22	4	36	100	162
		13.6%	2.5%	22.2%	61.7%	100.0%
June 19, Weekday PARTLY CLOUDY, NORTHWEST WIND 9 KNOTS						
Ada	(2:54)	0	0	2	8	10
Bay	(4:46)	3	1	4	12	20
Farm Island	(4:54)	1		3	18	22
Round	(1:24)	2	0	1	5	8
Sandbar	(1:51)	0		1	9	10
Sylvan	(1:12)	6		3	2	11
TOTAL PUBLIC ACCESS LAKES		12	1	14	54	81
		14.8%	1.2%	17.3%	66.7%	100.0%
Borden	(5:11)	**	**	88	6	6
Clearwater	(4:44)	**	6	0	0	6
Inquadona	(3:16)	**	**		6	6
Round (Atkin)	(5:10)	**	**	**	2	2
TOTAL ALL LAKES		12	7	14	68	101
		11.9%	6.9%	13.9%	67.3%	100.0%

**APPENDIX K (cont.)
Boat Counts from Various Access Types**

CATEGORY 2 LAKES	Flight Time	Designated	Other	Resort &	Resident,	TOTAL
		Public Accesses	Public Access	Private Access	Seasonal Usage	
June 29, Week-end						
60 DEGREES, PARTLY CLOUDY, W-NW WIND 5 KNOTS						
Ada	(2:53)	0	0	2	6	8
Bay	(11:15)	6	0	8	25	39
Farm Island	(11:21)	4		8	15	27
Round	(12:04)	6	0	2	7	15
Sandbar	(11:58)	3		1	8	12
Sylvan	(1:07)	4		3	11	18
TOTAL PUBLIC ACCESS LAKES		23	0	24	72	119
		19.3%	0.0%	20.2%	60.5%	100.0%
Borden	(11:06)	**	**	**	10	10
Clearwater	(11:11)	**	2	2	5	9
Inquadona	(2:44)	**	**	0	21	21
Round (Atkin)	(11:06)	**	**	**	5	5
TOTAL ALL LAKES		23	2	26	113	164
		14.0%	1.2%	15.9%	68.9%	100.0%
July 13, Week-end						
92 DEGREES, HAZY 5,000 FEET, S-SW WIND 5 KNOTS						
Ada	(3:29)	2	1	5	7	15
Bay	(2:18)	5	0	11	41	57
Farm Island	(2:28)	9		13	23	45
Round	(6:12)	8	0	6	22	36
Sandbar	(4:21)	2		2	16	20
Sylvan	(5:39)	3		3	12	18
TOTAL PUBLIC ACCESS LAKES		29	1	40	121	191
		15.2%	0.5%	20.9%	63.4%	100.0%
Borden	(2:09)	**	**	**	16	16
Clearwater	(2:14)	**	4	1	4	9
Inquadona	(3:07)	**	**	0	8	8
Round (Atkin)	(2:07)	**	**	**	7	7
TOTAL ALL LAKES		29	5	41	156	231
		12.6%	2.2%	17.7%	67.5%	100.0%
July 23, Weekday						
70 DEGREES, CLEAR, SOUTH WIND 10-15 KNOTS						
Ada	(2:56)	0	0	1	4	5
Bay	(11:39)	0	0	6	22	28
Farm Island	(11:33)	3		2	5	10
Round	(1:20)	4	0	1	2	7
Sandbar	(1:54)	0		0	5	5
Sylvan	(1:05)	5		1	0	6
TOTAL PUBLIC ACCESS LAKES		12	0	11	38	61
		19.7%	0.0%	18.0%	62.3%	100.0%
Borden	(11:29)	**	**	**	3	3
Clearwater	(11:46)	**	0	0	2	2
Inquadona	(3:16)	**	**	0	4	4
Round (Atkin)	(11:31)	**	**	**	1	1
TOTAL ALL LAKES		12	0	11	48	71
		16.9%	0.0%	15.5%	67.6%	100.0%

APPENDIX K (cont.)
Boat Counts from Various Access Types

CATEGORY 2 LAKES	Flight Time	Designated	Other	Resort &	Resident,	TOTAL	
		Public Accesses	Public Access	Private Access	Seasonal Usage		
July 28, Week-end		75 DEGREES, CLEAR, WEST WIND 10 KNOTS					
Ada	(5:48)	0	3	2	4	9	
Bay	(2:30)	10	0	7	43	60	
Farm Island	(2:24)	8		8	21	37	
Round	(4:08)	15	0	2	5	22	
Sandbar	(4:45)	1		1	14	16	
Sylvan	(3:46)	5		2	10	17	
TOTAL PUBLIC ACCESS LAKES		39	3	22	97	161	
		24.2%	1.9%	13.7%	60.2%	100.0%	
Borden		(2:17)	**	**	**	4	4
Clearwater		(2:39)	**	1	1	2	4
Inquadona		(6:12)	**	**	0	2	2
Round (Atkin)		(2:21)	**	**	**	8	8
TOTAL ALL LAKES			39	4	23	113	179
			21.8%	2.2%	12.8%	63.1%	100.0%
August 11, Week-end		66 DEGREES, CLEAR, SOUTH EAST WIND 5 KNOTS					
Ada	(1:56)	0	0	5	8	13	
Bay	(4:13)	3	0	16	39	58	
Farm Island	(11:30)	10		17	20	47	
Round	(3:28)	1	0	4	11	16	
Sandbar	(3:02)	2		1	10	13	
Sylvan	(3:53)	5		5	8	18	
TOTAL PUBLIC ACCESS LAKES		21	0	48	96	165	
		12.7%	0.0%	29.1%	58.2%	100.0%	
Borden		(4:25)	**	**	**	8	8
Clearwater		(4:10)	**	1	1	4	6
Inquadona		(1:34)	**	**	0	6	6
Round (Atkin)		(10:40)	**	**	**	4	4
TOTAL ALL LAKES			21	1	49	118	189
			11.1%	0.5%	25.9%	62.4%	100.0%
August 15, Weekday		70 DEGREES, CLEAR, WEST WIND 8 KNOTS					
Ada	(1:37)	1	1	1	7	10	
Bay	(4:10)	1	0	7	24	32	
Farm Island	(11:29)	3		1	12	16	
Round	(2:50)	1	0	1	19	21	
Sandbar	(2:29)	0		1	6	7	
Sylvan	(3:17)	1		4	9	14	
TOTAL PUBLIC ACCESS LAKES		7	1	15	77	100	
		7.0%	1.0%	15.0%	77.0%	100.0%	
Borden		(4:19)	**	**	**	4	4
Clearwater		(4:07)	**	1	1	1	3
Inquadona		(12:06)	**	**	0	12	12
Round (Atkin)		(10:44)	**	**	**	6	6
TOTAL ALL LAKES			7	2	16	100	125
			5.6%	1.6%	12.8%	80.0%	100.0%

APPENDIX K (cont.)
Boat Counts from Various Access Types

CATEGORY 2 LAKES	Flight Time	Designated	Other	Resort &	Resident,	TOTAL
		Public	Public	Private	Seasonal	
		Accesses	Access	Access	Usage	
August 25, Week-end		65 DEGREES, SCATTERED CLOUDS, NE WIND 10 KNOTS				
Ada	(3:25)	0	0	3	8	11
Bay	(1:12)	2	0	15	39	56
Farm Island	(1:06)	2		9	23	34
Round	(2:16)	5	0	2	6	13
Sandbar	(2:43)	0		1	10	11
Sylvan	(2:02)	0		5	11	16
TOTAL PUBLIC ACCESS LAKES		9	0	35	97	141
		6.4%	0.0%	24.8%	68.8%	100.0%
Borden	(12:22)	**	**	**	10	10
Clearwater	(1:19)	**	3	1	2	6
Inquadona	(3:44)	**	**	0	16	16
Round (Atkin)	(12:26)	**	**	**	9	9
TOTAL ALL LAKES		9	3	36	134	182
		4.9%	1.6%	19.8%	73.6%	100.0%

APPENDIX K (cont.)
Boat Counts from Various Access Types

CATEGORY 3 LAKES	Flight Time	Designated	Other	Resort &	Resident,	TOTAL
		Public Accesses	Public Access	Private Access	Seasonal Usage	
<u>May 18, Week-end</u>						
Clark	(1:02)	0		3	2	5
Emily/Mary	(3:13)	25		8	29	62
Little Boy	(3:55)	15	0	22	26	63
Nord	(4:36)	2			6	8
Waukenabo	(4:21)	18	0		22	40
TOTAL PUBLIC ACCESS LAKES		60	0	33	85	178
		33.7%	0.0%	18.5%	47.8%	100.0%
Esquaganah	(4:20)	**	5	**	16	21
Hattie	(3:31)	**	**	4	5	9
Moccasin	(3:39)	1	**	**	5	6
O'Brien	(3:09)	**	**	**	2	2
TOTAL ALL LAKES		61	5	37	113	216
		28.2%	2.3%	17.1%	52.3%	100.0%
<u>June 1, Week-end</u>						
		64 DEGREES, SOUTH WIND 8 KNOTS				
Clark	(1:43)	0		0	0	0
Emily/Mary	(12:37)	3		3	1	7
Little Boy	(12:01)	6	0	0	0	6
Nord	(11:10)	0			11	11
Waukenabo	(11:32)	8	0		7	15
TOTAL PUBLIC ACCESS LAKES		17	0	3	19	39
		43.6%	0.0%	7.7%	48.7%	100.0%
Esquaganah	(11:36)	**	3	**	5	8
Hattie	(12:22)	**	**	2	2	4
Moccasin	(12:16)	0	**	**	1	1
O'Brien	(12:40)	**	**	**	2	2
TOTAL ALL LAKES		17	3	5	29	54
		31.5%	5.6%	9.3%	53.7%	100.0%
<u>June 19, Weekday</u>						
		PARTLY CLOUDY, NORTHWEST WIND 9 KNOTS				
Clark	(1:43)	0		2	1	3
Emily/Mary	(2:40)	2		4	3	9
Little Boy	(3:13)	1	1	3	6	11
Nord	(5:01)	0			3	3
Waukenabo	(3:36)	3	0		1	4
TOTAL PUBLIC ACCESS LAKES		6	1	9	14	30
		20.0%	3.3%	30.0%	46.7%	100.0%
Esquaganah	(3:35)	**	2	**	0	2
Hattie	(2:57)	**	**	3	5	8
Moccasin	(3:05)	3	**	**	0	3
O'Brien	(2:36)	**	**	**	2	2
TOTAL ALL LAKES		9	3	12	21	45
		20.0%	6.7%	26.7%	46.7%	100.0%

APPENDIX K (cont.)
Boat Counts from Various Access Types

CATEGORY 3 LAKES	Flight Time	Designated	Other	Resort &	Resident,	TOTAL
		Public	Public	Private	Seasonal	
		Accesses	Access	Access	Usage	
June 29, Week-end		60 DEGREES, PARTLY CLOUDY, W-NW WIND 5 KNOTS				
Clark	(12:03)	0		1	1	2
Emily/Mary	(11:46)	1	0	5	8	14
Little Boy	(2:47)	5	0	11	13	29
Nord	(11:27)	1			1	2
Waukenabo	(11:39)	2	0		1	3
TOTAL PUBLIC ACCESS LAKES		9	0	17	24	50
		18.0%	0.0%	34.0%	48.0%	100.0%
Esquaganah	(11:40)	**	4	**	5	9
Hattie	(2:54)	**	**	4	5	9
Moccasin	(3:03)	0	**	**	1	1
O'Brien	(11:54)	**	**	**	4	4
TOTAL ALL LAKES		9	4	21	39	73
		12.3%	5.5%	28.8%	53.4%	100.0%
July 13, Week-end		92 DEGREES, HAZY 5,000 FEET, S-SW WIND 5 KNOTS				
Clark	(4:38)	0		2	2	4
Emily/Mary	(4:12)	4		5	5	14
Little Boy	(3:10)	4	0	4	7	15
Nord	(2:35)	0			4	4
Waukenabo	(2:44)	0	0		1	1
TOTAL PUBLIC ACCESS LAKES		8	0	11	19	38
		21.1%	0.0%	28.9%	50.0%	100.0%
Esquaganah	(2:49)	**	1	**	3	4
Hattie	(3:27)	**	**	4	7	11
Moccasin	(3:21)	2	**	**	7	9
O'Brien	(4:17)	**	**	**	5	5
TOTAL ALL LAKES		10	1	15	41	67
		14.9%	1.5%	22.4%	61.2%	100.0%
July 23, Weekday		70 DEGREES, CLEAR, SOUTH WIND 10-15 KNOTS				
Clark	(1:40)	0		2	0	2
Emily/Mary	(2:44)	2		0	0	2
Little Boy	(3:13)	2	0	0	1	3
Nord	(3:47)	0			0	0
Waukenabo	(3:35)	0	0		2	2
TOTAL PUBLIC ACCESS LAKES		4	0	2	3	9
		44.4%	0.0%	22.2%	33.3%	100.0%
Esquaganah	(3:34)	**	3	**	0	3
Hattie	(3:00)	**	**	1	2	3
Moccasin	(3:06)	0	**	0	1	1
O'Brien	(2:41)	**	**	**	2	2
TOTAL ALL LAKES		4	3	3	8	18
		22.2%	16.7%	16.7%	44.4%	100.0%

APPENDIX K (cont.)
Boat Counts from Various Access Types

CATEGORY 3 LAKES	Flight Time	Designated	Other	Resort &	Resident,	TOTAL
		Public Accesses	Public Access	Private Access	Seasonal Usage	
July 28, Week-end		75 DEGREES, CLEAR, WEST WIND 10 KNOTS				
Clark	(4:30)	0		3	1	4
Emily/Mary	(5:36)	1		0	0	1
Little Boy	(6:10)	1	0	2	3	6
Nord	(6:38)	0			1	1
Waukenabo	(6:29)	1	0		1	2
TOTAL PUBLIC ACCESS LAKES		3	0	5	6	14
		21.4%	0.0%	35.7%	42.9%	100.0%
Esquagamah	(6:28)	**	4	**	0	4
Hattie	(5:54)	**	**	2	4	6
Moccasin	(6:02)	2	**	0	1	3
O'Brien	(5:31)	**	**	**	4	4
TOTAL ALL LAKES		5	4	7	15	31
		16.1%	12.9%	22.6%	48.4%	100.0%
August 11, Week-end		66 DEGREES, CLEAR, SOUTH EAST WIND 5 KNOTS				
Clark	(3:24)	0		3	1	4
Emily/Mary	(2:50)	0		5	1	6
Little Boy	(1:36)	5	0	4	16	25
Nord	(11:39)	2			4	6
Waukenabo	(11:50)	1	0		3	4
TOTAL PUBLIC ACCESS LAKES		8	0	12	25	45
		17.8%	0.0%	26.7%	55.6%	100.0%
Esquagamah	(11:54)	**	1	**	5	6
Hattie	(1:53)	**	**	4	7	11
Moccasin	(1:46)	0	**	**	2	2
O'Brien	(2:55)	**	**	**	1	1
TOTAL ALL LAKES		8	1	16	40	65
		12.3%	1.5%	24.6%	61.5%	100.0%
August 15, Week-day		70 DEGREES, CLEAR, WEST WIND 8 KNOTS				
Clark	(2:48)	0		2	6	8
Emily/Mary	(2:18)	3		3	0	6
Little Boy	(12:08)	0	0	3	14	17
Nord	(11:36)	1			1	2
Waukenabo	(11:46)	0	0		0	0
TOTAL PUBLIC ACCESS LAKES		4	0	8	21	33
		12.1%	0.0%	24.2%	63.6%	100.0%
Esquagamah	(11:48)	**	2	**	3	5
Hattie	(1:34)	**	**	3	2	5
Moccasin	(1:28)	2	**	**	0	2
O'Brien	(2:22)	**	**	**	2	2
TOTAL ALL LAKES		6	2	11	28	47
		12.8%	4.3%	23.4%	59.6%	100.0%

APPENDIX K (cont.)
Boat Counts from Various Access Types

CATEGORY 3 LAKES	Flight Time	Designated	Other	Resort &	Resident,	TOTAL
		Public Accesses	Public Access	Private Access	Seasonal Usage	
August 25, Week-end		65 DEGREES, SCATTERED CLOUDS, NE WIND 10 KNOTS				
Clark	(2:17)	1		0	1	2
Emily/Mary	(2:50)	5		0	6	11
Little Boy	(3:41)	2	0	0	7	9
Nord	(4:12)	2		0	0	2
Waukenabo	(4:01)	1	0	0	1	2
TOTAL PUBLIC ACCESS LAKES		11	0	0	15	26
		42.3%	0.0%	0.0%	57.7%	100.0%
Esquaquamah	(4:00)	**	2	**	2	4
Hattie	(3:28)	**	**	0	1	1
Moccasin	(3:35)	0	**	0	0	0
O'Brien	(2:48)	**	**	**	1	1
TOTAL ALL LAKES		11	2	0	19	32
		34.4%	6.3%	0.0%	59.4%	100.0%

APPENDIX K (cont.)
Boat Counts from Various Access Types

CATEGORY 4 LAKES	Flight Time	Designated Public Accesses	Other Public Access	Resort & Private Access	Resident, Seasonal Usage	TOTAL
<u>May 18, Week-end</u>						
Eagle	(12:33)	2	**	**	7	9
Hansen	(11:11)	0	**	**	3	3
Little Thunder	(11:51)	2	**	**	2	4
Loon	(2:27)	0	**	0	2	2
White Sand	(2:57)	6	**	2	5	13
TOTAL PUBLIC ACCESS LAKES		10	0	2	19	31
		32.3%	0.0%	6.5%	61.3%	100.0%
Hanginq Kettle	(11:08)	**	**	**	11	11
Bass	(1:49)	**	**	**	8	8
Pine	(12:14)	**	**	3	1	4
TOTAL ALL LAKES		10	0	5	39	54
		18.5%	0.0%	9.3%	72.2%	100.0%
<u>June 1, Week-end</u>						
64 DEGREES, SOUTH WIND 8 KNOTS						
Eagle	(12:33)	3	**	**	2	5
Hansen	(11:11)	6	**	**	0	6
Little Thunder	(11:51)	0	**	**	1	1
Loon	(2:27)	0	**	0	2	2
White Sand	(2:57)	3	**	0	0	3
TOTAL PUBLIC ACCESS LAKES		12	0	0	5	17
		70.6%	0.0%	0.0%	29.4%	100.0%
Hanginq Kettle	(11:08)	**	**	**	5	5
Bass	(1:49)	**	**	**	3	3
Pine	(12:14)	**	**	0	0	0
TOTAL ALL LAKES		12	0	0	13	25
		48.0%	0.0%	0.0%	52.0%	100.0%
<u>June 19, Weekday</u>						
PARTLY CLOUDY, NORTHWEST WIND 9 KNOTS						
Eagle	(2:45)	1	**	**	4	5
Hansen	(5:03)	0	**	**	0	0
Little Thunder	(3:27)	0	**	**	0	0
Loon	(1:36)	0	**	0	3	3
White Sand	(1:07)	3	**	1	1	5
TOTAL PUBLIC ACCESS LAKES		4	0	1	8	13
		30.8%	0.0%	7.7%	61.5%	100.0%
Hanginq Kettle	(5:00)	**	**	**	2	2
Bass	(1:53)	**	**	**	4	4
Pine	(3:07)	**	**	2	0	2
TOTAL ALL LAKES		4	0	3	14	21
		19.0%	0.0%	14.3%	66.7%	100.0%

APPENDIX K (cont.)
Boat Counts from Various Access Types

CATEGORY 4 LAKES	Flight Time	Designated	Other	Resort &	Resident,	TOTAL
		Public	Public	Private	Seasonal	
		Accesses	Access	Access	Usage	
June 29, Week-end		60 DEGREES, PARTLY CLOUDY, W-NW WIND 5 KNOTS				
Eagle	(11:52)	1	**	**	12	13
Hansen	(11:29)	1	**	**	0	1
Little Thunder	(2:38)	0	**	**	1	1
Loon	(1:37)	1	**	2	2	5
White Sand	(1:03)	3	**	1	0	4
TOTAL PUBLIC ACCESS LAKES		6	0	3	15	24
		25.0%	0.0%	12.5%	62.5%	100.0%
Hanging Kettle	(11:26)	**	**	**	9	9
Bass	(11:59)	**	**	**	6	6
Pine	(3:03)	**	**	3	2	5
TOTAL ALL LAKES		6	0	6	32	44
		13.6%	0.0%	13.6%	72.7%	100.0%
July 13, Week-end		92 DEGREES, HAZY 5,000 FEET, S-SW WIND 5 KNOTS				
Eagle	(4:08)	0	**	**	5	5
Hansen	(2:37)	3	**	**	0	3
Little Thunder	(2:58)	0	**	**	2	2
Loon	(4:35)	1	**	0	0	1
White Sand	(5:34)	0	**	0	0	0
TOTAL PUBLIC ACCESS LAKES		4	0	0	7	11
		36.4%	0.0%	0.0%	63.6%	100.0%
Hanging Kettle	(2:34)	**	**	**	8	8
Bass	(4:22)	**	**	**	7	7
Pine	(3:19)	**	**	2	0	2
TOTAL ALL LAKES		4	0	2	22	28
		14.3%	0.0%	7.1%	78.6%	100.0%
July 23, Weekday		70 DEGREES, CLEAR, SOUTH WIND 10-15 KNOTS				
Eagle	(2:49)	0	**	**	1	1
Hansen	(3:46)	0	**	**	0	0
Little Thunder	(3:25)	0	**	**	0	0
Loon	(1:43)	0	**	0	1	1
White Sand	(1:03)	0	**	0	2	2
TOTAL PUBLIC ACCESS LAKES		0	0	0	4	4
		0.0%	0.0%	0.0%	100.0%	100.0%
Hanging Kettle	(3:48)	**	**	**	1	1
Bass	(1:55)	**	**	**	0	0
Pine	(3:07)	**	**	1	0	1
TOTAL ALL LAKES		0	0	1	5	6
		0.0%	0.0%	16.7%	83.3%	100.0%

APPENDIX K (cont.)
Boat Counts from Various Access Types

CATEGORY 4 LAKES	Flight Time	Designated	Other	Resort &	Resident,	TOTAL
		Public Accesses	Public Access	Private Access	Seasonal Usage	
July 28, Week-end		75 DEGREES, CLEAR, WEST WIND 10 KNOTS				
Eagle	(5:40)	0	**	**	1	1
Hansen	(6:37)	0	**	**	0	0
Little Thunder	(6:19)	0	**	**	2	2
Loon	(4:32)	1	**	0	0	1
White Sand	(3:42)	2	**	1	2	5
TOTAL PUBLIC ACCESS LAKES		3	0	1	5	9
		33.3%	0.0%	11.1%	55.6%	100.0%
Hanging Kettle	(6:40)	**	**	**	2	2
Bass	(4:46)	**	**	**	0	0
Pine	(6:04)	**	**	3	1	4
TOTAL ALL LAKES		3	0	4	8	15
		20.0%	0.0%	26.7%	53.3%	100.0%
August 11, Week-end		66 DEGREES, CLEAR, SOUTH EAST WIND 5 KNOTS				
Eagle	(2:46)	1	**	**	7	8
Hansen	(11:41)	3	**	**	0	3
Little Thunder	(12:02)	2	**	**	4	6
Loon	(3:17)	0	**	0	2	2
White Sand	(3:59)	0	**	0	5	5
TOTAL PUBLIC ACCESS LAKES		6	0	0	18	24
		25.0%	0.0%	0.0%	75.0%	100.0%
Hanging Kettle	(11:37)	**	**	**	3	3
Bass	(3:04)	**	**	**	2	2
Pine	(1:45)	**	**	0	0	0
TOTAL ALL LAKES		6	0	0	23	29
		20.7%	0.0%	0.0%	79.3%	100.0%
August 15, Weekday		70 DEGREES, CLEAR, WEST WIND 8 KNOTS				
Eagle	(2:14)	1	**	**	6	7
Hansen	(11:37)	1	**	**	0	1
Little Thunder	(12:00)	0	**	**	2	2
Loon	(2:42)	0	**	1	4	5
White Sand	(3:23)	1	**	2	2	5
TOTAL PUBLIC ACCESS LAKES		3	0	3	14	20
		15.0%	0.0%	15.0%	70.0%	100.0%
Hanging Kettle	(11:34)	**	**	**	1	1
Bass	(2:30)	**	**	**	0	0
Pine	(1:27)	**	**	2	0	2
TOTAL ALL LAKES		3	0	5	15	23
		13.0%	0.0%	21.7%	65.2%	100.0%

APPENDIX K (cont.)
Boat Counts from Various Access Types

CATEGORY 4 LAKES	Flight Time	Designated	Other	Resort &	Resident,	TOTAL
		Public Accesses	Public Access	Private Access	Seasonal Usage	
August 25, Week-end		65 DEGREES, SCATTERED CLOUDS, NE WIND 10 KNOTS				
Eagle	(2:55)	0	**	**	5	5
Hansen	(4:10)	1	**	**	0	1
Little Thunder	(3:51)	0	**	**	1	1
Loon	(2:32)	0	**	0	1	1
White Sand	(2:00)	1	**	2	2	5
TOTAL PUBLIC ACCESS LAKES		2	0	2	9	13
		15.4%	0.0%	15.4%	69.2%	100.0%
Hanging Kettle	(4:14)	**	**	**	2	2
Bass	(2:45)	**	**	**	2	2
Pine	(3:36)	**	**	1	0	1
TOTAL ALL LAKES		2	0	3	13	18
		11.1%	0.0%	16.7%	72.2%	100.0%

APPENDIX L

ACCESS ACTIVITY RECORDING FORM

AM INTERVIEWS

‡ VEHICLES PARKED IN LOT (WITH = VEHICLES WITH BOAT TRAILERS OR CARTOP CARRIERS OR PICKUPS CAPABLE OF CARRYING A BOAT)
 (W/O = FOUR-WHEELED VEHICLES WITHOUT TRAILERS, ETC.)

TIME: <u>8:30 AM</u>	TIME: <u>9:00 AM</u>	TIME: <u>10:00 AM</u>	TIME: <u>11:00 AM</u>	TIME: <u>12: Noon</u>	TIME: <u>1:00 PM</u>	TIME: <u>2:00 PM</u>	TIME: <u>3:00</u>
TOTAL WITH	TOTAL WITH	TOTAL WITH	TOTAL WITH	TOTAL WITH	TOTAL WITH	TOTAL WITH	TOTAL WITH
TOTAL W/O	TOTAL W/O	TOTAL W/O	TOTAL W/O	TOTAL W/O	TOTAL W/O	TOTAL W/O	TOTAL W/O
NUMBER OF BOATS LAUNCHED FROM ACCESS							
<u>8:30-9:00</u>	<u>9:00-10:00</u>	<u>10:00-11:00</u>	<u>11:00-Noon</u>	<u>Noon-1:00</u>	<u>1:00-2:00</u>	<u>2:00-3:00</u>	
TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
RECORD IF VEHICLES PARK IN LOT AFTER LAUNCHING							
<u>8:30-9:00</u>	<u>9:00-10:00</u>	<u>10:00-11:00</u>	<u>11:00-Noon</u>	<u>Noon-1:00</u>	<u>1:00-2:00</u>	<u>2:00-3:00</u>	
TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL
NUMBER OF BOATS LANDING AT ACCESS							
<u>8:30-9:00</u>	<u>10:00-11:00</u>	<u>10:00-11:00</u>	<u>11:00-Noon</u>	<u>Noon-1:00</u>	<u>1:00-2:00</u>	<u>2:00-3:00</u>	
TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL	TOTAL

I-1

PM INTERVIEWS

VEHICLES PARKED IN LOT (WITH = VEHICLES WITH BOAT TRAILERS OR CARTOP CARRIERS OR PICKUPS CAPABLE OF CARRYING A BOAT)
 (W/O = FOUR-WHEELED VEHICLES WITHOUT TRAILERS, ETC.)

	TIME: 3:00 PM	TIME: 4:00 PM	TIME: 5:00 PM	TIME: 6:00 PM	TIME: 7:00 PM	TIME: 8:00 PM	TIME: 9:00 PM	TIME: Dark
	TOTAL WITH TOTAL W/O	TOTAL WITH TOTAL W/O	TOTAL WITH TOTAL W/O	TOTAL WITH TOTAL W/O	TOTAL WITH TOTAL W/O	TOTAL WITH TOTAL W/O	TOTAL WITH TOTAL W/O	TOTAL WITH TOTAL W/O
NUMBER OF BOATS LAUNCHED FROM ACCESS	3:00-4:00 TOTAL	4:00-5:00 TOTAL	5:00-6:00 TOTAL	6:00-7:00 TOTAL	7:00-8:00 TOTAL	8:00-9:00 TOTAL	9:00-Dark TOTAL	
RECORD IF VEHICLES PARK IN LOT AFTER LAUNCHING	3:00-4:00 TOTAL	4:00-5:00 TOTAL	5:00-6:00 TOTAL	6:00-7:00 TOTAL	7:00-8:00 TOTAL	8:00-9:00 TOTAL	9:00-Dark TOTAL	
NUMBER OF BOATS LANDING AT ACCESS	3:00-4:00 TOTAL	4:00-5:00 TOTAL	5:00-6:00 TOTAL	6:00-7:00 TOTAL	7:00-8:00 TOTAL	8:00-9:00 TOTAL	9:00-Dark TOTAL	

ACCESS INFORMATION

LAKE _____ ACCESS _____

DATE _____ INTERVIEWER _____

TIME ARRIVED _____ AM PM (CIRCLE ONE)

TIME DEPARTED _____ AM PM (CIRCLE ONE)

WEATHER CONDITIONS

	AT ARRIVAL		AT DEPARTURE	
WHITECAPS	<u> 1 </u> YES	<u> 2 </u> NO	<u> 1 </u> YES	<u> 2 </u> NO
RAINING	<u> 1 </u> YES	<u> 2 </u> NO	<u> 1 </u> YES	<u> 2 </u> NO
CLOUD COVER	<u> 1 </u> CLOUDY	<u> 2 </u> PARTLY CLOUDY	<u> 1 </u> CLOUDY	<u> 2 </u> PARTLY CLOUDY
	<u> 3 </u> CLEAR		<u> 3 </u> CLEAR	
TEMPERATURE (Degrees F.)	<u> </u> °F.		<u> </u> °F.	



